2022 NOS Landfill Annual Groundwater Report

North Omaha Station NOS Ash Landfill

Omaha, Nebraska
January 31, 2023

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Professional Engineer Certification

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

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

Print Name: Megan B. Seymour

Signature: Megan B. Seymour

Date: 1-31-2023

License #: E-15931

My license renewal date is December 31, 2024.

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Executive Summary

Omaha Public Power District (OPPD) owns and operates a five-unit fuel-fired generating plant at the North Omaha Station (NOS) in Omaha, Nebraska. Units 1, 2, and 3 were converted to natural gas, while Units 4 and 5 operate as coal-burning units. NOS is located east of Pershing Drive and Craig Street, approximately 3.5 miles northwest of Eppley Airfield, along the west bank of the Missouri River at river mile 625.2. On April 17, 2015, the United States Environmental Protection Agency published the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act. The rule is formally promulgated in the U.S. Code of Federal Regulations (CFR), Title 40, Part 257. The purpose of this report is to provide a summary of CCR groundwater monitoring system activities for calendar year 2022 for the assessment monitoring program under 40 CFR §257.95.

The NOS Ash Landfill transitioned from detection monitoring to assessment monitoring following the November 2017 sampling event due to statistically significant increases (SSIs) above the background threshold values in downgradient monitoring wells. OPPD evaluated an alternate source demonstration (ASD) for the SSIs, but the ASD was unsuccessful and OPPD initiated assessment monitoring in June 2018 and a subsequent event in October 2018. Results indicated multiple Appendix IV constituents at statistically significant levels (SSLs) above the groundwater protection standards (GWPS). OPPD published a notification of the exceedances on February 14, 2019, and a notification of initiation of assessment of corrective measures (ACM) on May 30, 2019 (HDR, 2019a). An initial ACM Report was completed on July 5, 2019.

Additional site information to better understand the hydrogeologic system near the NOS Ash Landfill was obtained through the following studies and reports:

- NDEE Title 132: Nature and Extent Investigation Report (HDR, 2019b)
- Hydrogeologic and Geochemical Conceptual Site Model (HDR, 2020b)
- Groundwater Flow Model and Corrective Measures Evaluation Report (HDR, 2020c)
- Evaluation of Potential Groundwater Impacts to Missouri River (HDR, 2021a)
- Groundwater Fate & Transport Model and Corrective Measures Evaluation Report (HDR, 2021b)

Results of the investigations and modeling were presented at a public meeting with interested and affected parties on September 22, 2021. NDEE provided final approval for long-term groundwater monitoring and post-closure landfill capping for the final remedy on October 19, 2021. The Remedy Selection Report [RSR] (HDR, 2021d) dated December 13, 2021 was provided to NDEE. In an e-mail dated March 21, 2022, the NDEE provided comments on the RSR. NDEE comments indicated unusable coal could not be disposed of in the landfill unit. In response to NDEE's March 21, 2022 comments and due to changes in the remedy, the RSR was revised into a Remedial Action Plan / Remedy Selection Report [RAP/RSR] (dated November 17, 2022) and submitted to NDEE. In an e-mail dated November 30, 2022, the NDEE provided comments on the RAP/RSR. Responses to NDEE's November 30, 2022 comments are in progress.

Two semi-annual sampling events were conducted in 2022: one sampling event in April 2022 and one sampling event in October 2022. Results of the April 2022 analysis indicated 42 SSIs for Appendix III and Appendix IV constituents and 11 SSLs for Appendix IV constituents. No new SSLs were identified during the April 2022 sampling event. Results of the October 2022 analysis indicated 42 SSIs for Appendix III and Appendix IV constituents and 11 SSLs for Appendix IV constituents. No new SSLs were identified during the October 2022 sampling event. Results of the 2022 SSIs and SSLs are summarized in the table below.

The Site will continue to be monitored in accordance with the assessment monitoring program as specified in 40 CFR §257.96(b), and the next semi-annual sampling event is anticipated to occur in April 2023. As specified in 40 CFR §257.90(e)(6), a section must be included at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. The following table summarizes the requested information under 40 CFR §257.90(e)(6).

Summary of 40 CFR Section § 257.90(e)(6) Groundwater Monitoring System Requirements and Site-Specific Compliance			
§257.90(e)(6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:		**NOS Ash Disposal Area**	
§257.90(e)(6)(i)	At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.	Assessment Monitoring Program	
§257.90(e)(6)(ii)	At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.	Assessment Monitoring Program	
		Compliance Monitoring Event	
		April 2022	October 2022
§257.90(e)(6)(iii)	If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):	Yes	Yes
§257.90(e)(6)(iii)(A)	Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase.	• MW-2 – boron, calcium, sulfate, TDS • MW-5 – boron, calcium, sulfate, TDS • MW-6 – boron, calcium, chloride, sulfate, TDS • MW-8 – boron, sulfate • MW-13 – boron, sulfate, TDS • MW-15 – boron, calcium, sulfate • MW-17 – boron, calcium, sulfate, TDS	• MW-2 – boron, calcium, sulfate, TDS • MW-5 – boron, calcium, sulfate, TDS • MW-6 – boron, calcium, chloride, sulfate, TDS • MW-8 – boron, pH, sulfate • MW-13 – boron, sulfate, TDS • MW-15 – boron, calcium, sulfate • MW-17 – boron, calcium, sulfate, TDS
§257.90(e)(6)(iii)(B)	Provide the date when the assessment monitoring program was initiated for the CCR unit.	June 5, 2018	

Summary of 40 CFR Section § 257.90(e)(6) Groundwater Monitoring System Requirements and Site-Specific Compliance			
§257.90(e)(6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:		**NOS Ash Disposal Area**	
§257.90(e)(6)(iv)	If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to §257.95(g) include all of the following:	Yes	Yes
§257.90(e)(6)(iv)(A)	Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase.	• MW-2 – arsenic • MW-5 – arsenic, lithium • MW-6 – arsenic • MW-13 – arsenic, molybdenum • MW-15 – molybdenum, selenium • MW-17 – arsenic, cobalt, lithium	• MW-2 – arsenic • MW-5 – arsenic, lithium • MW-6 – arsenic • MW-13 – arsenic, molybdenum • MW-15 – molybdenum, selenium • MW-17 – arsenic, cobalt, lithium
§257.90(e)(6)(iv)(B)	Provide the date when the assessment of corrective measures was initiated for the CCR unit.	May 1, 2019: Initiation of assessment of corrective measures May 30, 2019 – Assessment of Corrective Measures	
§257.90(e)(6)(iv)(C)	Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.	September 22, 2021	
§257.90(e)(6)(iv)(D)	Provide the date when the assessment of corrective measures was completed for the CCR unit.	December 13, 2021 – Remedy Selection Report	
§257.90(e)(6)(v)	Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection.	NDEE Title 132 Remedial Action Plan: Pending response to NDEE comments dated November 30, 2022	
§257.90(e)(6)(vi)	(vi) Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.	Remedial activities have been initiated. Landfill closure design and permit modifications to the NDEE Title 132 permit has been initiated.	

1 Introduction

On April 17, 2015, the United States Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act. Disposal of CCR from Electric Utilities final rule is formally promulgated in the U.S. Code of Federal Regulations (CFR), Title 40, Part 257 (EPA, 2015). The rule – effective on October 19, 2015 – applies to electric utilities and independent power producers that fall within North American Industry Classification System code 221112, and facilities that produce or store CCR materials in surface impoundments or landfills. The CCR rule defines a set of requirements for the disposal and handling of CCR within units (defined as either landfills or surface impoundments). This regulation applies to the Omaha Public Power District (OPPD) North Omaha Station (NOS).

1.1 Purpose

Specified in 40 CFR §257.90(e), an owner or operator of an existing CCR landfill must prepare an annual groundwater monitoring and corrective action report to summarize any key actions completed, problems encountered, and upcoming activities related to the groundwater monitoring system. The information included in this report complies with the requirements established in 40 CFR §257.90(e) and provides a summary of CCR groundwater monitoring system activities for calendar year 2022.

1.2 Facility Information

OPPD owns and operates a five-unit fuel-fired generating plant at NOS, herein referenced as “Station” or “Site”, in Omaha, Nebraska. Units 1, 2, and 3 were converted to natural gas, while units 4 and 5 were retrofitted with air pollution control equipment and are operating as coal-burning units. The Station is located east of Pershing Drive and Craig Street, approximately 3.5 miles northwest of Eppley Airfield, along the west bank of the Missouri River at river mile 625.2 (**Figure 1**). The first generating unit was placed in service in July 1954, and the fifth unit was placed in operation in 1968. Beneficial use and disposal of the fossil fuel combustion ash has occurred on the Site since the 1950s.

This Station has one existing active CCR landfill. The NOS Ash Landfill is permitted under the current Nebraska Department of Environment and Energy (NDEE) Title 132 regulations for fossil fuel combustion ash disposal areas (NDEE Permit No. NE0054739, Facility ID 59763). The NOS Ash Landfill consists of an unlined active CCR landfill of approximately 18 acres and a 1.4-acre undeveloped portion. **Figure 2** identifies the relevant CCR unit for this report and the supporting monitoring well network.

2 Monitoring Program Summary

The groundwater monitoring system currently includes ten monitoring wells consisting of three upgradient/background monitoring wells (MW-9, MW-18, MW-19) and seven downgradient/ compliance monitoring wells (MW-2, MW-5, MW-6, MW-8, MW-13, MW-15, and MW-17) (HDR, 2020a). Monitoring well details for the monitoring network, including the date of installation, is

provided in **Table 1**. The location of the monitoring wells in the groundwater monitoring program with respect to the NOS Ash Landfill are shown in **Figure 2**.

2.1 Transition of Monitoring Programs

On January 31, 2018, OPPD published statistically significant increases (SSIs) detected in November 2017 in downgradient monitoring wells at the NOS Ash Landfill for 17 monitoring well/constituent pairs. These SSIs were noted in multiple wells and included boron, calcium, chloride, sulfate, and total dissolved solids (TDS) from the Appendix III constituents. OPPD conducted an alternate source demonstration (ASD) for the SSIs to evaluate potential error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The ASD was unsuccessful and OPPD published a notification (dated May 29, 2018) stating the facility had initiated an assessment monitoring program in accordance with 40 CFR §257.95.

Assessment monitoring was initiated in June 2018 and a subsequent event was conducted in October 2018. During each event, background and compliance monitoring wells were sampled, and samples were analyzed for both 40 CFR §257 Appendix III and 40 CFR §257 Appendix IV constituents. Results of the statistical analysis of the data indicated multiple Appendix IV constituents were detected at statistically significant levels (SSLs) above the groundwater protection standards (GWPS). OPPD published a notification of the SSLs on February 14, 2019 (OPPD, 2019), and a notification of initiation of assessment of corrective measures (ACM). An initial ACM report was completed on July 5, 2019 (HDR, 2019a). During the completion of the report, data gaps were identified. Additional site information was obtained and submitted in the NDEE Title 132 Nature & Extent Report (HDR, 2019b).

Following the initial ACM Report, additional information necessary to understand the hydrogeologic system at the NOS Ash Landfill was obtained. A Conceptual Site Model (CSM) was prepared to describe the site-specific geologic and hydrogeologic regimes (HDR, 2020b). Using the CSM, a groundwater flow model was prepared to create a digital representation of the groundwater flow system (HDR, 2020c). The groundwater flow model was used to develop a transient model that simulated the fate and transport of constituents of interest (COIs) at the Site (HDR, 2021b). During the 2021 reporting period, semi-annual updates describing the progress in selecting a corrective action at the NOS Ash Landfill were completed on January 4, 2021 and July 2, 2021. Results of the investigations and modeling were presented at a public meeting with interested and affected parties on September 22, 2021. The Remedy Selection Report [RSR] (HDR, 2021d) was completed on December 13, 2021. In an e-mail dated March 21, 2022, the NDEE provided comments on the RSR. NDEE comments indicated unusable coal could not be disposed of in the landfill unit. In response to NDEE's March 21, 2022 comments, the RSR was revised into a Remedial Action Plan / Remedy Selection Report [RAP/RSR] (dated November 17, 2022) and submitted to NDEE. In an e-mail dated November 30, 2022, the NDEE provided comments on the RAP/RSR. Responses to NDEE's November 30, 2022 comments are in progress.

2.2 Groundwater Monitoring Network Condition Assessment

OPPD personnel evaluated the condition of each monitoring well in the groundwater monitoring network during the semi-annual sampling events in April 2022 and October 2022. During this

2022 reporting period, no repairs were required. The wells were noted in good working condition, concrete pads were intact, and no damage was observed to the protective well casings. No monitoring wells were added to or abandoned from the certified groundwater monitoring system in 2022.

3 Data Evaluation and Summary

3.1 Summary of Sampling Activities

Groundwater sampling events were conducted by OPPD personnel in April 2022 and October 2022 as continuation of the assessment monitoring program in accordance with 40 CFR §257.96(b). Samples were collected in compliance with 40 CFR §257.90(c), which requires groundwater monitoring be conducted throughout the active life and post-closure care period of the CCR unit for each current background and downgradient well in the monitoring network. The number of samples collected for each background and downgradient well during each groundwater sample event, whether the sample was collected during detection or assessment monitoring programs, and the date of each event is summarized in **Table 2**.

Groundwater sampling was conducted by OPPD personnel in accordance with the facility's NDEE Title 132 Groundwater Sampling and Analysis Plan (HDR, 2019c) and the CCR Groundwater Monitoring System Certification (HDR, 2020a). Samples were analyzed for Appendix III and Appendix IV constituents during both semi-annual sampling events. Field sampling forms from these sampling events are provided in **Appendix A**. The collected groundwater samples were analyzed by Eurofins, and laboratory analytical reports are provided in **Appendix B**.

3.2 Groundwater Elevations & Flow Direction

Static groundwater level measurements were recorded at the monitoring wells specified in **Table 1** prior to purging and sampling activities conducted during the groundwater sampling events. Groundwater measurements from both monitoring network wells and water level only wells, as specified in **Table 1**, were used to develop groundwater contours for semi-annual sampling events in 2022. Monitoring well static groundwater elevations are provided in **Table 3**. Groundwater measurements collected during the April 2022 sampling event indicated a flow direction to the east/northeast, with an average flow velocity of 0.00432 ft/day to 0.299 ft/day (**Figure 3**). Groundwater measurements collected during the October 2022 sampling event indicated a flow direction to the east/northeast with an average flow velocity of 0.00281 ft/day to 0.195 ft/day (**Figure 4**). The flow velocities are based on a range of hydraulic conductivity at the Site of 0.0544 ft/day to 3.77 ft/day (HDR, 2020a).

3.3 Assessment Monitoring Groundwater Sampling

The NOS Ash Landfill was monitored semi-annually in 2022 as continuation of the assessment monitoring program in accordance with 40 CFR §257.96(b). Appendix III and Appendix IV constituents were analyzed for both the April 2022 and October 2022 sampling events, meeting the requirements of 40 CFR §257.95. The results of the assessment monitoring events are presented in **Table 4** (Appendix III constituents) and **Table 5** (Appendix IV constituents).

3.4 Statistical Analysis Results

In the assessment monitoring program, Appendix III and IV constituents are statistically analyzed to evaluate for SSIs above the calculated background threshold values (BTVs), and Appendix IV constituents are statistically analyzed to evaluate for statistically significant levels (SSLs) above the GWPS. Statistical analyses were performed using Sanitas™ statistical analysis software in accordance with the methods described in the Groundwater Monitoring Statistical Methods Certification (HDR, 2021c). Statistically derived BTVs for Appendix III and IV constituents are provided in **Table 6**. BTVs are updated every two years or during a monitoring program transition, in accordance with Chapter 21 of the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance (EPA, 2009). The BTVs were updated as part of the October 2021 statistical analysis. The established GWPS on all Appendix IV constituents are provided in **Table 7**. Results of the statistical analysis of designated in-network downgradient monitoring wells from the April 2022 and October 2022 sampling events are provided in **Appendix C**.

Two semi-annual sampling events were conducted in 2022: one sampling event in April 2022 and one sampling event in October 2022. Results of the April 2022 analysis indicated 42 SSIs for Appendix III and Appendix IV constituents, as follows:

- Arsenic in MW-2, MW-5, MW-6, MW-13, and MW-17
- Boron in MW-2, MW-5, MW-6, MW-8, MW-13, MW-15, and MW-17
- Calcium in MW-2, MW-5, MW-6, MW-15, and MW-17
- Chloride in MW-6
- Chromium in MW-15
- Cobalt in MW-6 and MW-17
- Lithium in MW-5 and MW-17
- Molybdenum in MW-6, MW-8, MW-13, MW-15, and MW-17
- Selenium in MW-13 and MW-15
- Sulfate in MW-2, MW-5, MW-6, MW-8, MW-13, MW-15, and MW-17
- TDS in MW-2, MW-5, MW-6, MW-13, and MW-17

No new SSLs were identified during the April 2022 sampling event. Analysis of the Appendix IV constituents indicated 11 SSLs detected above the GWPS during the April 2022 sampling event:

- Arsenic in MW-2, MW-5, MW-6, MW-13, and MW-17
- Cobalt in MW-17
- Lithium in MW-5 and MW-17
- Molybdenum in MW-13 and MW-15
- Selenium in MW-15

Results of the October 2022 analysis indicated 42 SSIs for Appendix III and Appendix IV constituents, as follows:

- Arsenic in MW-2, MW-5, MW-6, MW-13, and MW-17
- Boron in MW-2, MW-5, MW-6, MW-8, MW-13, MW-15, and MW-17

- Calcium in MW-2, MW-5, MW-6, MW-15, and MW-17
- Chloride in MW-6
- Cobalt in MW-6 and MW-17
- Lithium in MW-5 and MW-17
- Molybdenum in MW-6, MW-8, MW-13, MW-15, and MW-17
- pH in MW-8
- Selenium in MW-13 and MW-15
- Sulfate in MW-2, MW-5, MW-6, MW-8, MW-13, MW-15, and MW-17
- TDS in MW-2, MW-5, MW-6, MW-13, and MW-17

No new SSLs were identified during the October 2022 sampling event. Analysis of the Appendix IV constituents indicated 11 SSLs detected above the GWPS during the October 2022 sampling event:

- Arsenic in MW-2, MW-5, MW-6, MW-13, and MW-17
- Cobalt in MW-17
- Lithium in MW-5 and MW-17
- Molybdenum in MW-13 and MW-15
- Selenium in MW-15

3.5 Other Information Required under 40 CFR §257.90-98

OPPD has continued to comply with CCR Rule regulations and selected a remedy at the NOS Ash Landfill as noted in the RSR (HDR, 2021d) dated December 13, 2021. During the 2022 reporting period, OPPD received comments from NDEE on the RSR dated March 21, 2022. In response to NDEE's comments, the RSR was revised into the RAP/RSR dated November 17, 2022. In an e-mail dated November 30, 2022, the NDEE provided comments on the RAP/RSR. OPPD is drafting a response to the NDEE's November 2022 comments to obtain approval of the recommended corrective action for the CCR unit under NDEE Title 132 regulations.

OPPD has initiated progress for the selected remedy with initiation of the landfill closure design and modifications to the existing NDEE Title 132 permit. No other information is required under 40 CFR §257.90-98 at this time.

4 Key Activities for Upcoming Year

OPPD will continue to work with the NDEE to obtain approval of the corrective action for the Site's CCR unit. Following NDEE approval of the selected remedy for the Site, OPPD will implement the selected remedy in accordance with the schedule outlined in the version of the RAP/RSR approved by NDEE. The Site will continue to be monitored in accordance with the assessment monitoring program as specified in 40 CFR §257.96(b), and the next semi-annual sampling event is anticipated to occur in April 2023.

5 References

EPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance*. Environmental Protection Agency Office of Resource Conservation and Recovery. EPA 530/R-09-007. March 2009.

EPA, 2015. 40 CFR Part 257; *Disposal of Coal Combustion Residuals from Electric Utilities*; Final Rule, Federal Register vol. 80, no. 74. Environmental Protection Agency. April 17, 2015.

HDR, 2019a. *Assessment of Corrective Measures for Groundwater at Omaha Public Power District (OPPD) North Omaha Station*. Omaha, Nebraska. July 5, 2019.

HDR, 2019b. *Title 132 Nature & Extent Report*. North Omaha Station Ash Disposal Area. Omaha, Nebraska. December 18, 2019.

HDR, 2019c. *Groundwater Sampling and Analysis Plan*. North Omaha Station Ash Disposal Area. Omaha, Nebraska. September 2019. Revised December 2019

HDR, 2020a. *CCR Groundwater Monitoring System Certification (rev. 3)*. North Omaha Station Ash Disposal Area. Omaha, Nebraska. Amended January 24, 2020.

HDR, 2020b. *Hydrogeologic and Geochemical Conceptual Site Model*. NOS Ash Disposal Area. Omaha, Nebraska. May 5, 2020.

HDR, 2020c. *Groundwater Flow Model and Corrective Measures Evaluation Report*. NOS Ash Disposal Area. Omaha, Nebraska. June 18, 2020.

HDR, 2021a. *Evaluation of Potential Groundwater Impacts to Missouri River*. NOS Ash Disposal Area. Omaha, Nebraska. March 9, 2021.

HDR, 2021b. *Groundwater Fate & Transport Model and Corrective Measures Evaluation Report*. NOS Ash Disposal Area. Omaha, Nebraska. May 11, 2021.

HDR, 2021c. *Groundwater Monitoring Statistical Methods Certification*. NOS Ash Disposal Area. Omaha,
Nebraska. Revised December 2021.

HDR, 2021d. *Groundwater Remedy Selection Report*. NOS Ash Disposal Area. Omaha, Nebraska. December 13, 2021.

HDR, 2022. *Remedial Action Plan / Remedy Selection Report*. NOS Ash Disposal Area. Omaha, Nebraska. November 17, 2022.

OPPD, 2019. Memorandum. *Notification of Appendix IV SSLs exceeding the GWPS*. NOS Ash Disposal Area. Omaha, Nebraska. February 14, 2019.

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Figures

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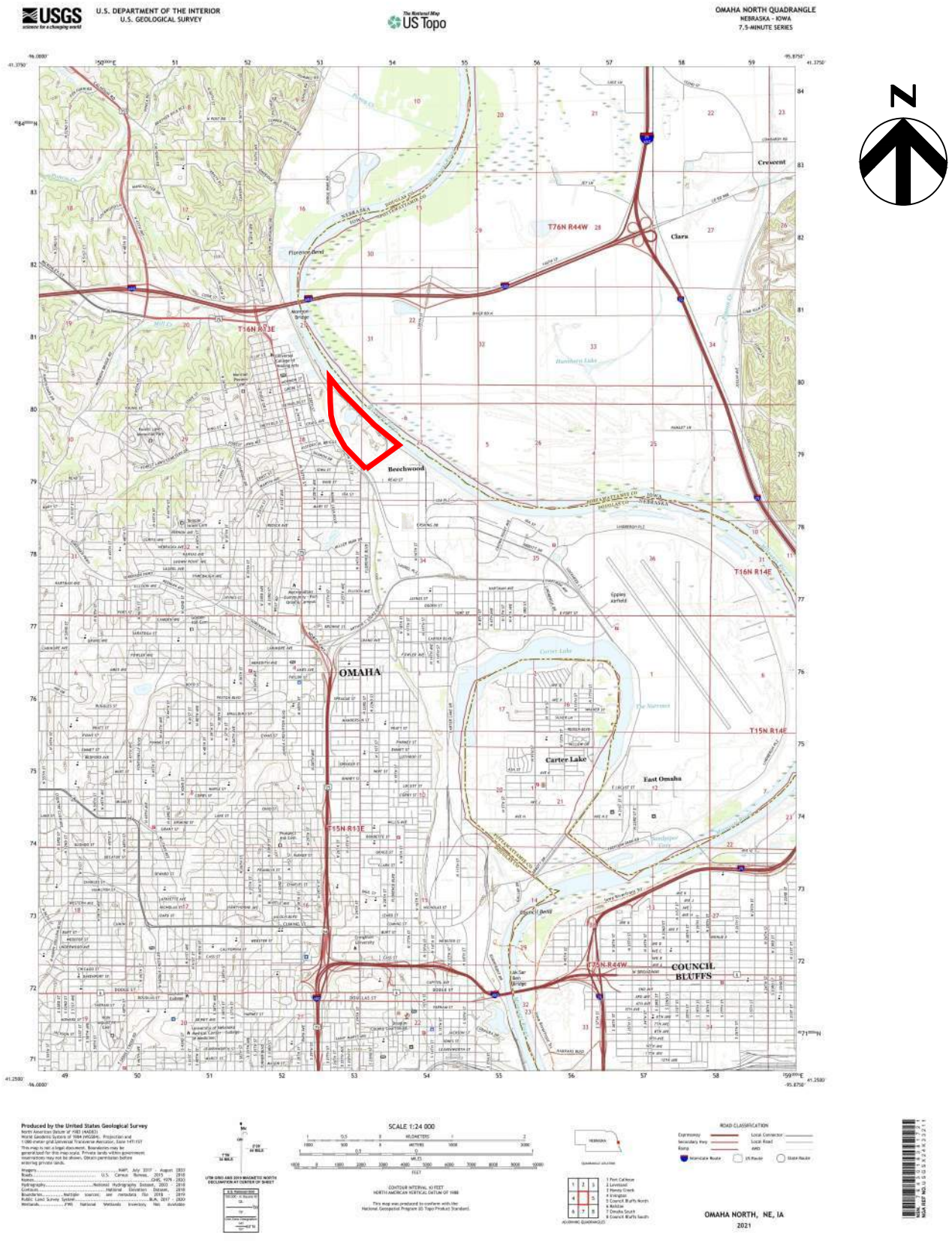

Site Boundary

SITE LOCATION MAP

OPPD - NORTH OMAHA STATION

FIGURE 1

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LEGEND

- MW-6 MONITORING WELL
- ACTIVE LANDFILL AREA BOUNDARY
- CLOSED LANDFILL AREA BOUNDARY

COMPLIANCE AND BACKGROUND MONITORING WELLS

WELL ID	NORTHING	EASTING	SURFACE ELEVATION (FEET AMSL)	TOP OF CASING ELEVATION (FEET AMSL)	INSTALL DATE	COMMENTS
MW-2	572580	2753258	998.30	1001.41	3/6/1995	DOWNGRADIENT
MW-5	571959.9	2754084	998.10	1000.96	3/2/1995	DOWNGRADIENT
MW-6	571316.1	2753000	999.60	1002.65	3/8/1995	DOWNGRADIENT
MW-8	571331.8	2753467	1000.30	1003.59	3/7/1995	DOWNGRADIENT
MW-9	571328	2752624	1027.10	1026.47	5/4/1996	BACKGROUND
MW-13	572808.9	2752986	999.02	1001.91	4/12/2001	DOWNGRADIENT
MW-15	571747.9	2753132	1002.80	1005.39	4/12/2001	DOWNGRADIENT
MW-17	572087.4	2753785	999.60	1002.54	5/10/2007	DOWNGRADIENT
MW-18	572600.9	2752267	1037.10	1037.00	12/1/2015	BACKGROUND
MW-19*	571927.2	2752407	1037.30	1037.10	1/20/2016	BACKGROUND

NOTES:

1. * FLUSH MOUNT WELL.
2. AMSL - ABOVE MEAN SEA LEVEL.

Omaha Public Power District

OMAHA PUBLIC POWER DISTRICT
NORTH OMAHA STATION - ASH LANDFILL
MONITORING WELL LOCATION MAP

2022 GROUNDWATER MONITORING

DATE
NOVEMBER 2022

FIGURE
2

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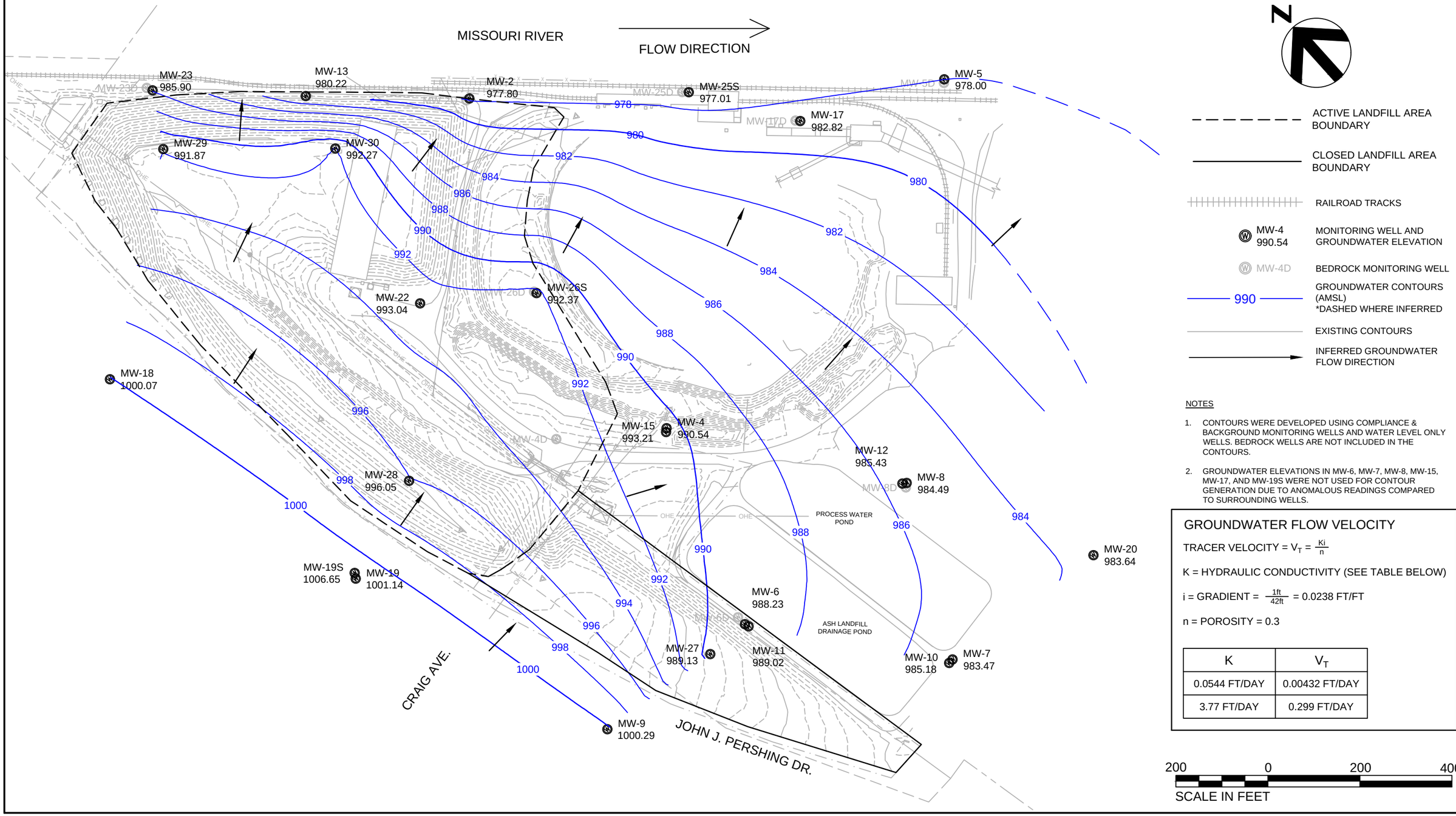

NOTES

1. CONTOURS WERE DEVELOPED USING COMPLIANCE & BACKGROUND MONITORING WELLS AND WATER LEVEL ONLY WELLS. BEDROCK WELLS ARE NOT INCLUDED IN THE CONTOURS.
2. GROUNDWATER ELEVATIONS IN MW-6, MW-7, MW-8, MW-15, MW-17, AND MW-19S WERE NOT USED FOR CONTOUR GENERATION DUE TO ANOMALOUS READINGS COMPARED TO SURROUNDING WELLS.

GROUNDWATER FLOW VELOCITY

TRACER VELOCITY = $V_T = \frac{Ki}{n}$

K = HYDRAULIC CONDUCTIVITY (SEE TABLE BELOW)

i = GRADIENT = $\frac{1ft}{42ft}$ = 0.0238 FT/FT

n = POROSITY = 0.3

K	V_T
0.0544 FT/DAY	0.00432 FT/DAY
3.77 FT/DAY	0.299 FT/DAY

Omaha Public Power District

OMAHA PUBLIC POWER DISTRICT
NORTH OMAHA STATION - ASH LANDFILL
GROUNDWATER CONTOUR MAP - APRIL 2022

2022 GROUNDWATER MONITORING

DATE
JUNE 2022

FIGURE
3

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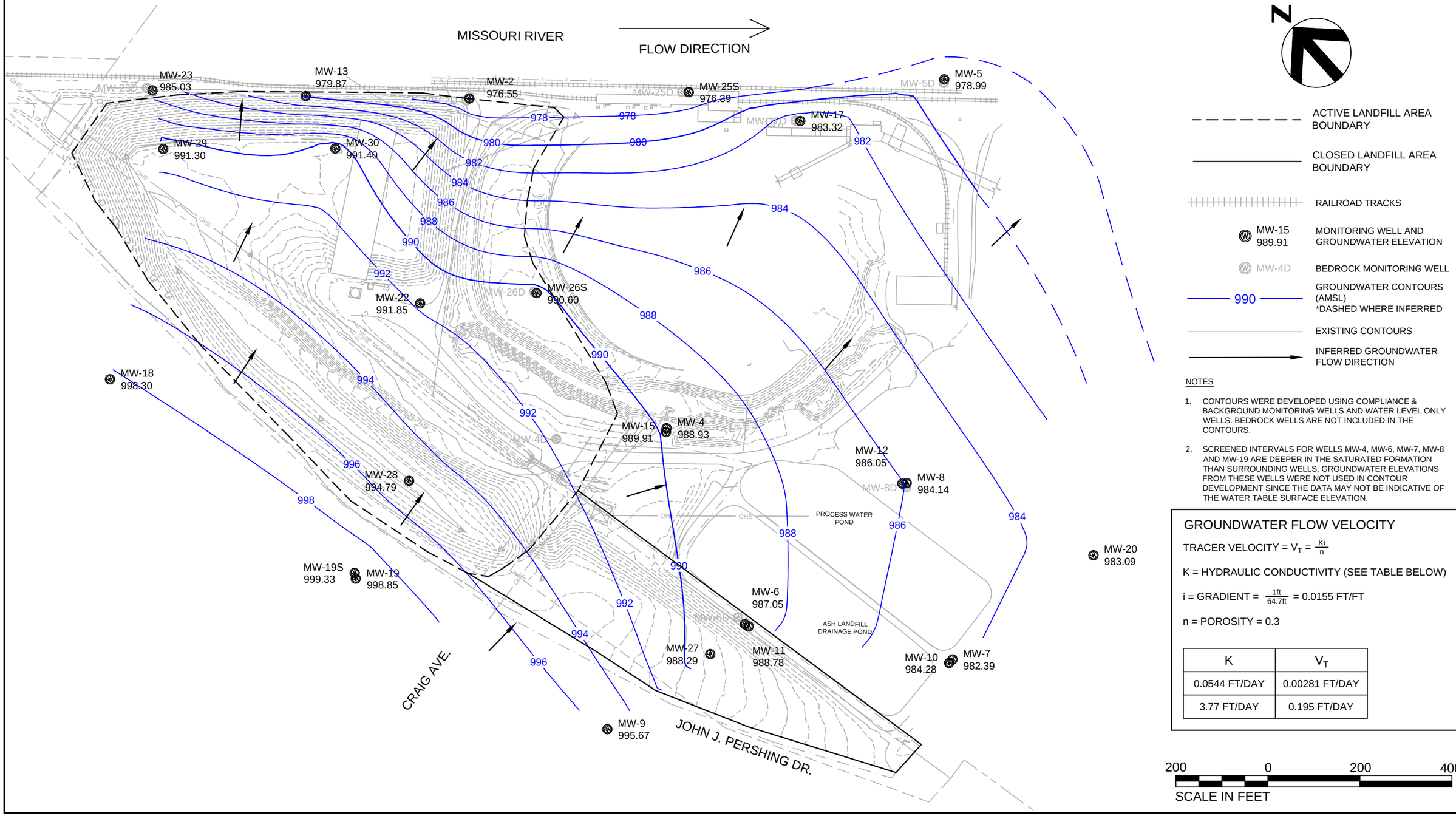

NOTES

1. CONTOURS WERE DEVELOPED USING COMPLIANCE & BACKGROUND MONITORING WELLS AND WATER LEVEL ONLY WELLS. BEDROCK WELLS ARE NOT INCLUDED IN THE CONTOURS.
2. SCREENED INTERVALS FOR WELLS MW-4, MW-6, MW-7, MW-8 AND MW-19 ARE DEEPER IN THE SATURATED FORMATION THAN SURROUNDING WELLS, GROUNDWATER ELEVATIONS FROM THESE WELLS WERE NOT USED IN CONTOUR DEVELOPMENT SINCE THE DATA MAY NOT BE INDICATIVE OF THE WATER TABLE SURFACE ELEVATION.

GROUNDWATER FLOW VELOCITY

TRACER VELOCITY = $V_T = \frac{Ki}{n}$

K = HYDRAULIC CONDUCTIVITY (SEE TABLE BELOW)

i = GRADIENT = $\frac{1ft}{64.7ft}$ = 0.0155 FT/FT

n = POROSITY = 0.3

K	V_T
0.0544 FT/DAY	0.00281 FT/DAY
3.77 FT/DAY	0.195 FT/DAY

Omaha Public Power District

OMAHA PUBLIC POWER DISTRICT
NORTH OMAHA STATION - ASH LANDFILL
GROUNDWATER CONTOUR MAP - OCTOBER 2022

2022 GROUNDWATER MONITORING

DATE
NOVEMBER 2022

FIGURE
4

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Tables

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Table 1 - Groundwater Monitoring System
Omaha Public Power District - NOS Ash Landfill

Monitoring Well ID	Date Installed	Well Depth[1] (feet bgs)	Location w/respect to NOS Ash Landfill	Ground Surface Elevation (feet AMSL)	Top of Well Casing Elevation[2] (feet AMSL)
CCR Monitoring Network Wells					
MW-2	3/6/1995	30	Downgradient	998.30	1001.41
MW-5	3/2/1995	30	Downgradient	998.10	1000.96
MW-6	3/8/1995	31	Cross-gradient	999.60	1002.65
MW-8	3/7/1995	30	Cross-gradient	1000.30	1003.59
MW-9	5/4/1996	63	Background/Upgradient	1027.10	1026.47
MW-13	4/12/2001	30	Downgradient	999.02	1001.91
MW-15	4/12/2001	15	Downgradient	1002.80	1005.39
MW-17	5/10/2007	30	Downgradient	999.60	1002.54
MW-18	12/1/2015	71	Background/Upgradient	1037.10	1036.70
MW-19	1/20/2016	76	Background/Upgradient	1037.30	1036.91
Water Level Only Wells					
MW-4	3/6/1995	33	Water Level Only Well	1001.30	1004.59
MW-7	3/81995	30	Water Level Only Well	999.10	1001.85
MW-10	4/11/2001	15	Water Level Only Well	1000.13	1002.48
MW-11	4/11/2001	15	Water Level Only Well	1000.49	1002.99
MW-12	4/11/2001	15	Water Level Only Well	1001.35	1003.78
MW-19S	10/21/2019	46	Water Level Only Well	1036.71	1036.21
MW-20	11/9/2015	35	Water Level Only Well	991.20	993.47
MW-22	2/25/2019	22	Water Level Only Well	1005.80	1009.31
MW-23	2/26/2019	24	Water Level Only Well	997.70	1000.81
MW-25S	10/18/2019	28	Water Level Only Well	999.24	1002.51
MW-26S	10/18/2020	28	Water Level Only Well	1008.24	1011.54
MW-27	2/6/2020	32	Water Level Only Well	1017.69	1021.09
MW-28	2/6/2020	50	Water Level Only Well	1040.42	1043.74
MW-29	2/4/2020	42	Water Level Only Well	1028.41	1031.59
MW-30	2/5/2020	40	Water Level Only Well	1026.12	1029.75

Notes:
[1] bgs - below ground surface
[2] AMSL - above mean sea level

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Table 2 - Groundwater Sampling Event Summary
Omaha Public Power District - NOS Ash Landfill

Monitoring Well ID	# of Initial Background Samples	Initial Background Sample Dates	# of Detection Monitoring Samples	Detection Monitoring Sample Dates [1]	# of Assessment Monitoring Samples	Assessment Monitoring Sample Dates[2] [3]
Current Background Monitoring Wells						
MW-9	8	3/22/2016, 6/14/2016, 9/2/2016, 11/28/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/20/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/13/2020, 10/7/2020, 4/5/2021, 10/11/2021, 4/11/2022, 10/5/2022
MW-18	8	3/22/2016, 6/14/2016, 9/2/2016, 11/28/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/13/2020, 10/7/2020, 4/5/2021, 10/11/2021, 4/11/2022, 10/5/2022
MW-19	8	3/22/2016, 6/14/2016, 9/2/2016, 11/28/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/13/2020, 10/7/2020, 4/5/2021, 10/11/2021, 4/11/2022, 10/5/2022
Downgradient Monitoring Wells						
MW-2	8	3/22/2016, 6/14/2016, 11/29/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017, 11/7/2017	1	3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/14/2020, 10/7/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022
MW-5	8	3/23/2016, 6/14/2016, 11/29/2016, 5/2/2017, 6/5/2018, 10/10/2018, 4/16/2019, 10/1/2019	0	N/A[4]	7	10/1/2019, 4/14/2020, 10/8/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022
MW-6	8	3/22/2016, 6/14/2016, 11/28/2016, 5/2/2017, 3/9/2018, 6/5/2018, 10/9/2018, 4/15/2019	0	N/A[4]	7	10/1/2019, 4/14/2020, 10/7/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022
MW-8	8	3/23/2016, 6/14/2016, 11/29/2016, 5/2/2017, 6/5/2018, 10/10/2018, 4/15/2019, 10/1/2019	0	N/A[4]	7	10/1/2019, 4/14/2020, 10/8/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022
MW-13	8	3/22/2016, 6/14/2016, 9/2/2016, 11/28/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/14/2020, 10/7/2020, 4/5/2021, 10/11/2021, 4/11/2022, 10/5/2022
MW-15	8	3/22/2016, 6/14/2016, 9/2/2016, 11/28/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/14/2020, 10/7/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022
MW-17	8	3/22/2016, 6/14/2016, 9/2/2016, 11/29/2016, 2/17/2017, 5/2/2017, 6/19/2017, 7/31/2017	2	11/7/2017, 3/9/2018	10	6/5/2018, 10/9/2018, 4/15/2019, 10/1/2019, 4/14/2020, 10/8/2020, 4/5/2021, 10/12/2021, 4/11/2022, 10/5/2022

Notes:
[1] The March 2018 Detection Monitoring event was completed as an Alternate Source Evaluation (ASD) due to detected SSIs in November 2017.
[2] The June 2018 sampling event was completed for initiation of the Assessment Monitoring Program.
[3] The April 2019 sampling event was completed as part of the initiation of Assessment of Corrective Measures in accordance with 40 CFR 257.96(b).
[4] Monitoring wells MW-5, MW-6, and MW-8 were added to the network after the April 2019 sampling event to coordinate with the NDEE Title 132 Permit.

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Table 3 - Groundwater Elevations

Omaha Public Power District - NOS Ash Landfill

	CCR Monitoring Network Wells																	
	MW-2		MW-5		MW-6		MW-8		MW-9		MW-13		MW-15		MW-17		MW-18		MW-19	
	TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation [1]		TOC Elevation [2]	
	1001.41		1000.96		1002.65		1003.59		1026.47		1001.91		1005.39		1002.54		1036.70		1036.91	
Date	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation	Measured Depth to Water (ft)	GW Elevation	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)
3/22/2016	21.20	980.21	20.30	980.66	12.75	989.90	17.55	986.04	22.41	1004.06	17.41	984.50	10.90	994.49	17.18	985.36	34.75	1002.25	33.85	1003.25
6/14/2016	21.65	979.76	19.15	981.81	12.05	990.60	16.00	987.59	22.10	1004.37	17.40	984.51	10.40	994.99	16.10	986.44	33.92	1003.08	33.40	1003.70
9/2/2016	22.90	978.51	20.50	980.46	13.30	989.35	17.48	986.11	24.70	1001.77	22.50	979.41	10.90	994.49	17.50	985.04	35.50	1001.50	34.95	1002.15
11/28/2016	22.06	979.35	20.55	980.41	13.48	989.17	18.18	985.41	24.65	1001.82	18.20	983.71	11.30	994.09	17.51	985.03	35.35	1001.35	34.91	1002.00
2/17/2017	22.45	978.96	20.73	980.23	13.89	988.76	18.67	984.92	24.70	1001.77	18.80	983.11	11.65	993.74	18.25	984.29	35.95	1000.75	35.30	1001.61
5/2/2017	22.00	979.41	20.25	980.71	13.40	989.25	11.32	992.27	23.71	1002.76	18.41	983.50	10.45	994.94	17.12	985.42	34.80	1001.90	34.22	1002.69
6/19/2017	22.00	979.41	19.60	981.36	12.50	990.15	16.45	987.14	23.90	1002.57	18.30	983.61	10.60	994.79	16.55	985.99	34.70	1002.00	34.20	1002.71
7/31/2017	23.10	978.31	20.21	980.75	13.37	989.28	11.38	992.21	26.65	999.82	19.25	982.66	12.15	993.24	17.10	985.44	36.40	1000.30	35.85	1001.06
11/7/2017	22.95	978.46	23.45	977.51	12.20	990.45	15.80	987.79	21.30	1005.17	19.40	982.51	12.75	992.64	17.50	985.04	36.39	1000.31	35.86	1001.05
3/9/2018	23.33	978.08	21.25	979.71	13.10	989.55	17.17	986.42	26.35	1000.12	20.21	981.70	13.75	991.64	19.21	983.33	36.31	1000.39	37.06	999.85
4/23/2018	23.50	977.91	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	29.27	997.20	20.35	981.56	12.70	992.69	19.00	983.54	35.63	1001.07	35.15	1001.76
6/5/2018	22.43	978.98	19.47	981.49	14.17	988.48	18.27	985.32	26.52	999.95	18.90	983.01	12.12	993.27	17.10	985.44	35.52	1001.18	35.81	1001.10
10/9/2018	19.49	981.92	17.08	983.88	13.49	989.16	17.05	986.54	25.47	1001.00	15.93	985.98	10.71	994.68	14.71	987.83	33.94	1002.76	33.78	1003.13
4/15/2019	17.74	983.67	16.51	984.45	12.78	989.87	17.17	986.42	23.36	1003.11	14.16	987.75	10.67	994.72	14.73	987.81	32.68	1004.02	32.70	1004.21
10/1/2019	16.02	985.39	14.76	986.20	13.17	989.48	16.96	986.63	26.01	1000.46	12.94	988.97	10.76	994.63	13.74	988.80	33.52	1003.18	33.53	1003.38
4/14/2020	21.32	980.09	19.01	981.95	13.15	989.50	17.51	986.08	23.89	1002.58	17.38	984.53	11.29	994.10	16.50	986.04	33.74	1002.96	33.47	1003.44
10/1/2020	23.82	977.59	21.05	979.91	14.98	987.67	19.13	984.46	30.10	996.37	20.39	981.52	14.22	991.17	18.51	984.03	38.03	998.67	37.86	999.05
4/1/2021	23.21	978.20	21.09	979.87	14.07	988.58	17.23	986.36	26.65	999.82	20.58	981.33	10.83	994.56	18.58	983.96	36.00	1000.70	35.29	1001.62
10/11/2021	23.87	977.54	20.41	980.55	14.70	987.95	18.57	985.02	29.34	997.13	20.41	981.50	11.36	994.03	17.78	984.76	36.88	999.82	36.45	1000.46
4/7/2022	23.61	977.80	22.96	978.00	14.42	988.23	19.10	984.49	26.18	1000.29	21.69	980.22	12.18	993.21	19.72	982.82	36.63	1000.07	35.77	1001.14
10/1/2022	24.86	976.55	21.97	978.99	15.60	987.05	19.45	984.14	30.80	995.67	22.04	979.87	15.48	989.91	19.22	983.32	38.70	998.00	38.25	998.66

Notes:

TOC: Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

[1] The casing of MW-18 was cut on November 28, 2016. Prior to this date, the top of casing was 1037.00.

[2] The casing of MW-19 was cut on November 28, 2016. Prior to this date, the top of casing was 1037.10.

Table 3 - Groundwater Elevations

Omaha Public Power District - NOS Ash Landfill

	Water Level Only Wells																			
	MW-4		MW-7		MW-10		MW-11		MW-12		MW-19S		MW-20		MW-22		MW-23		MW-25S	
	TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation	
	1004.59		1001.85		1002.48		1002.99		1002.99		1036.21		993.47		1009.31		1000.81		1002.51	
Date	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)
3/22/2016	11.84	992.75	16.57	985.28	15.50	986.98	10.83	992.16	16.34	986.65			8.17	985.30	N.M.	N.M.	N.M.	N.M.		
6/14/2016	11.19	993.40	15.70	986.15	14.50	987.98	10.05	992.94	14.55	988.44			7.60	985.87	N.M.	N.M.	N.M.	N.M.		
9/2/2016	12.20	992.39	17.21	984.64	16.04	986.44	11.30	991.69	15.60	987.39			8.35	985.12	N.M.	N.M.	N.M.	N.M.		
11/28/2016	12.30	992.29	17.80	984.05	16.80	985.68	12.20	990.79	17.25	985.74			9.00	984.47	N.M.	N.M.	N.M.	N.M.		
2/17/2017	12.90	991.69	18.30	983.55	16.99	985.49	12.54	990.45	17.71	985.28			9.41	984.06	N.M.	N.M.	N.M.	N.M.		
5/2/2017	12.35	992.24	16.69	985.16	15.55	986.93	12.45	990.54	9.39	993.60			8.20	985.27	N.M.	N.M.	N.M.	N.M.		
6/19/2017	11.85	992.74	16.15	985.70	14.95	987.53	10.50	992.49	15.00	987.99			8.05	985.42	N.M.	N.M.	N.M.	N.M.		
7/31/2017	12.45	992.14	16.72	985.13	16.00	986.48	13.02	989.97	10.20	992.79	*Installed 10/21/2019*		8.70	984.77	N.M.	N.M.	N.M.	N.M.	*Installed 10/18/2019*	
11/7/2017	12.80	991.79	15.65	986.20	14.25	988.23	12.00	990.99	14.42	988.57			9.03	984.44	N.M.	N.M.	N.M.	N.M.		
3/9/2018	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	12.81	990.18	N.M.	N.M.				N.M.	N.M.	N.M.	N.M.	N.M.		
4/23/2018	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.	N.M.			N.M.	N.M.	N.M.	N.M.	N.M.	N.M.		
6/5/2018	13.66	990.93	17.51	984.34	16.27	986.21	12.98	990.01	16.11	986.88			6.08	987.39	N.M.	N.M.	N.M.	N.M.		
10/9/2018	11.94	992.65	16.71	985.14	15.51	986.97	12.81	990.18	13.05	989.94			7.00	986.47	N.M.	N.M.	N.M.	N.M.		
4/15/2019	11.44	993.15	16.21	985.64	15.03	987.45	11.64	991.35	16.23	986.76			7.49	985.98	12.16	997.15	10.77	990.04		
10/1/2019	11.79	992.80	16.90	984.95	15.75	986.73	11.94	991.05	15.73	987.26			N.M.	N.M.	N.M.	N.M.	9.37	991.44		
4/14/2020	12.40	992.19	16.72	985.13	15.74	986.74	12.04	990.95	16.40	986.59	25.39	1010.82	8.20	985.27	12.92	996.39	11.87	988.94	24.29	978.22
10/1/2020	14.41	990.18	19.27	982.58	18.10	984.38	13.94	989.05	17.59	985.40	34.93	1001.28	10.26	983.21	15.53	993.78	14.93	985.88	25.28	977.23
4/1/2021	13.02	991.57	17.12	984.73	15.06	987.42	12.93	990.06	14.57	988.42	31.86	1004.35	8.28	985.19	14.73	994.58	14.32	986.49	24.91	977.60
10/11/2021	13.27	991.32	18.55	983.30	17.50	984.98	14.06	988.93	17.46	985.53	32.48	1003.73	9.40	984.07	15.48	993.83	13.90	986.91	25.27	977.24
4/7/2022	14.05	990.54	18.38	983.47	17.30	985.18	13.97	989.02	17.56	985.43	29.56	1006.65	9.83	983.64	16.27	993.04	14.91	985.90	25.50	977.01
10/1/2022	15.66	988.93	19.46	982.39	18.20	984.28	14.21	988.78	17.73	985.26	36.88	999.33	10.38	983.09	17.46	991.85	15.78	985.03	26.12	976.39

Notes:

TOC: Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

Table 3 - Groundwater Elevations

Omaha Public Power District - NOS Ash Landfill

	Water Level Only Wells									
	MW-26S		MW-27		MW-28		MW-29		MW-30	
	TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation	
	1011.54		1021.09		1043.74		1031.59		1029.75	
Date	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)	Measured Depth to Water (ft)	GW Elevation (AMSL)
3/22/2016										
6/14/2016										
9/2/2016										
11/28/2016										
2/17/2017										
5/2/2017										
6/19/2017										
7/31/2017	*Installed 10/18/2019*		*Installed 2/6//2020*		*Installed 2/6/2020*		*Installed 2/4/2020*		*Installed 2/5/2020*	
11/7/2017										
3/9/2018										
4/23/2018										
6/5/2018										
10/9/2018										
4/15/2019										
10/1/2019										
4/14/2020	18.35	993.19	28.72	992.37	43.95	999.79	35.58	996.01	33.65	996.10
10/1/2020	19.26	992.28	31.37	989.72	47.18	996.56	38.15	993.44	36.24	993.51
4/1/2021	18.04	993.50	31.03	990.06	46.72	997.02	39.42	992.17	37.08	992.67
10/11/2021	17.68	993.86	32.07	989.02	46.42	997.32	38.41	993.18	36.60	993.15
4/7/2022	19.17	992.37	31.96	989.13	47.69	996.05	39.72	991.87	37.48	992.27
10/1/2022	20.94	990.60	32.80	988.29	48.95	994.79	40.30	991.29	38.35	991.40

Notes:

TOC: Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

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Table 4 - Appendix III Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent:	Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
	Reporting Unit:	mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
MW-2	3/22/2016	1.6	267	23.1	<0.5	6.85	1320	1920
	6/14/2016	1.52	278	25.7	<0.5	6.80	774	1560
	9/2/2016	1.22	197	24.9	<0.5	7.04	503	2890
	11/28/2016	1.31	262	24.4	0.318	7.49	650	1420
	2/17/2017	1.92	292	19.3	0.563	7.79	915	2120
	5/2/2017	1.79	300	22.9	1.94	7.27	889	1840
	6/19/2017	1.48	277	24.1	<0.5	7.09	631	2020
	7/31/2017	1.81	299	24.8	0.583	7.37	799	1850
	11/7/2017	1.59	263	21.2	0.529	7.29	907	2210
	3/9/2018	1.88	292	27.4	<0.5	6.73	745	1570
	6/5/2018	1.15	239	28.5	<0.5	7.02	618	1460
	10/9/2018	1.38	302	22.2	<0.5	6.96	808	1720
	4/15/2019	2.26	339	22.5	<0.5	7.07	753	1850
	10/1/2019	2.17	306	18.2	<0.5	6.89	841	1930
	4/14/2020	1.90	319	22.0	0.427J	6.59	816	1670
	10/7/2020	2.16	265	21.4	0.352J	6.81	807	1840
	4/5/2021	1.30	243	36.9	<0.275	6.73	553	1340
	10/12/2021	1.03	222	33.6	<0.275	6.44	467	940
	4/11/2022	1.44	284	28.7	0.232J	6.87	707	1490
	10/5/2022	0.863	226	32.9	<0.220	6.89	354	1230
MW-5	3/23/2016	0.545	458	47.7	<0.5	NA	1230	3150
	6/14/2016	0.533	434	52.1	<0.5	NA	1160	2530
	11/29/2016	0.565	443	44.3	<0.5	NA	1340	3150
	5/2/2017	0.564	435	46.9	1.82	NA	1330	2910
	6/5/2018	0.580	413	44.2	<0.5	7.44	1230	2610
	10/10/2018	0.528	412	41.6	<0.5	7.03	1240	2410
	4/16/2019[1]	NA	NA	NA	NA	7.34	1150	NA
	10/1/2019	0.614	428	40.9	<0.5	6.88	1160	2620
	4/14/2020	0.573	439	40.7	0.460J	6.70	1080	2120
	10/8/2020	0.664	424	39.7	<0.23	6.81	1200	2380
	4/5/2021	0.592	380	40.5	0.642	7.22	1100	2020
	10/12/2021	0.530	330	45.7	<0.275	6.61	993	1530
	4/11/2022	0.729	415	39.6	<0.220	7.00	1040	1790
	10/5/2022	0.580	391	34.2	0.516	7.07	1010	2160
MW-6	3/23/2016	0.376	263	217	<0.5	NA	219	1200
	6/14/2016	0.383	261	230	<0.5	NA	226	1100
	11/28/2016	0.468	314	272	<0.5	NA	366	1730
	5/2/2017	0.461	279	224	1.32	NA	314	1340
	3/9/2018	<0.8	316	315	0.525	6.44	349	1240
	6/5/2018	0.589	339	287	<0.5	7.03	293	1690
	10/9/2018	0.415	250	181	0.52	7.03	179	988
	4/15/2019[1]	NA	NA	NA	NA	6.83	213	NA
	10/1/2019	0.543	348	326	0.511	6.67	309	1400
	4/14/2020	0.517	347	349	0.487J	6.55	297	1380
	10/7/2020	0.557	319	409	0.373J	6.47	346	320
	4/5/2020	0.502	283	313	0.310J	6.65	275	1280
	10/12/2021	0.502	289	324	<0.275	6.32	277	1100
	4/11/2022	0.592	285	308	0.244J	6.65	241	1230
	10/5/2022	0.620	300	330	0.637	6.64	235	1360

Table 4 - Appendix III Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent:	Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
	Reporting Unit:	mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
MW-8	3/23/2016	1.01	133	10.6	<0.5	NA	618	964
	6/14/2016	0.974	142	15.1	0.518	NA	608	934
	11/29/2016	1.04	143	9.38	<0.5	NA	589	956
	5/2/2017	1.04	121	10.5	1.7	NA	519	814
	6/5/2018	1.54	149	12.9	<0.5	8.24	519	908
	10/10/2018	1.52	132	10.8	<0.5	7.96	548	900
	4/15/2019[1]	NA	NA	NA	NA	7.88	611	NA
	10/1/2019	2.18	159	9.03	<0.5	7.21	604	1010
	4/14/2020	2.22	162	10.9	0.577	7.60	565	948
	10/8/2020	2.24	139	10.8	<0.23	7.65	560	986
	4/5/2021	2.04	127	10.6	<0.275	7.77	528	814
	10/12/2021	2.20	137	10.8	<0.275	7.51	526	826
	4/11/2022	2.70	141	10.4	<0.220	7.54	561	918
	10/5/2022	2.30	140	10.8	0.266J	7.97	496	916
MW-9	3/22/2016	<0.2	147	121	1.35	6.83	23	708
	6/14/2016	<0.2	159	165	0.864	6.78	31.7	770
	9/2/2016	<0.2	122	146	<0.5	7.27	19.9	766
	11/28/2016	<0.2	166	177	<0.5	7.02	35.4	790
	2/17/2017	<0.2	116	120	0.585	7.47	26.2	640
	5/2/2017	<0.2	148	127	1.84	7.35	25.5	760
	19/6/2017	<0.2	150	149	0.52	6.99	22.0	888
	7/31/2017	<0.2	190	275	0.617	7.87	57.1	1180
	11/7/2017	<0.2	153	220	0.55	7.46	37.7	1090
	3/20/2018	<0.2	146	210	<0.5	6.68	46.1	844
	6/5/2018	<0.2	185	231	<0.5	7.00	57.5	1190
	10/9/2018	<0.2	159	194	0.592	6.74	45.5	872
	4/15/2019	<0.2	157	127	0.947	7.00	32.7	610
	10/1/2019	<0.2	140	164	<0.5	6.56	40.1	728
	4/13/2020	<0.1	165	160	0.562	6.58	36.4	732
	10/7/2020	0.101	145	217	0.410J	6.74	48.0	820
	4/5/2021	0.125	158	164	0.422J	6.46	30.6	724
	10/11/2021	<0.0580	137	135	<0.275	6.38	17.9	664
	4/11/2022	0.0960J	180	176	0.380J	6.84	47.5	820
	10/5/2022	0.160	158	157	0.274J	6.85	30.4	774
MW-13	3/22/2016	2.05	127	7.97	0.796	6.89	486	1050
	6/14/2016	1.97	138	6.7	<0.5	6.70	500	1030
	9/2/2016	2.02	116	8.06	0.652	7.03	458	1170
	11/28/2016	2.21	155	11.3	2.55	7.25	583	1140
	2/17/2017	2.02	153	6.35	<0.5	7.44	603	1320
	5/2/2017	1.8	156	7.52	1.05	7.30	650	1450
	6/19/2017	2.09	179	7.83	<0.5	7.07	590	1400
	7/31/2017	2.26	133	6.3	0.587	7.20	512	1150
	11/7/2017	1.71	129	6.81	0.67	6.79	581	1080
	3/9/2018	1.98	152	7.35	0.53	7.03	663	1340
	6/5/2018	1.78	151	7.93	<0.5	8.31	654	1490
	10/9/2018	1.77	161	7.05	<0.5	6.96	644	1190
	4/15/2019	2.73	215	10.5	1.05	7.13	808	1420
	10/1/2019	2.46	206	8.24	0.544	6.92	673	1440

Table 4 - Appendix III Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent:	Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
	Reporting Unit:	mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
MW-13 (cont'd)	4/14/2020	2.22	213	9.24	0.817	6.58	794	1410
	10/7/2020	2.19	188	8.82	0.391J	6.89	821	1640
	4/5/2021	1.70	144	7.98	0.496J	6.69	790	1330
	10/11/2021	1.62	169	8.47	<0.275	6.26	888	980
	4/11/2022	1.89	171	7.52	0.340J	6.76	893	1460
	10/5/2022	1.50	157	8.09	<0.220	6.69	840	1460
MW-15	3/22/2016	3.11	311	24.3	<0.5	7.09	262	1510
	6/14/2016	5.39	340	13	<0.5	6.80	934	1640
	9/2/2016	3.36	220	3.52	0.278	6.97	625	1460
	11/28/2016	2.87	285	28.2	3.48	7.32	886	1500
	2/17/2017	2.81	266	16.8	<0.5	7.65	863	1370
	2/5/2017	2.80	263	11.2	0.878	7.02	861	1280
	6/19/2017	2.57	248	10.0	<0.5	7.05	643	1320
	7/31/2017	3.01	247	11.4	<0.5	7.02	641	1140
	7/11/2017	4.13	293	11.6	<0.5	7.10	900	1520
	3/9/2018	4.10	283	13.4	<0.5	7.24	819	1330
	6/5/2018	3.26	265	16.6	<0.5	7.42	745	1640
	10/9/2018	2.48	230	11.5	<0.5	7.10	656	1130
	4/15/2019	4.65	256	8.07	<0.5	7.09	634	1070
	10/1/2019	5.13	306	6.6	<0.5	6.61	633	1220
	4/14/2020	3.60	239	7.81	<0.23	7.68	514	928
	10/7/2020	3.44	199	9.51	<0.23	7.14	495	978
	4/5/2021	3.36	224	6.19	<0.275	7.09	586	974
	10/12/2021	1.94	190	7.32	<0.275	6.54	500	876
	4/11/2022	3.09	226	7.91	<0.220	7.07	589	962
	10/5/2022	2.82	229	7.17	<0.220	7.08	468	1010
MW-16	3/22/2016	0.367	180	64.7	1.84	6.86	345	948
	6/14/2016	0.409	180	65.5	<0.5	6.67	340	968
	9/2/2016	0.333	143	57.3	<0.5	7.18	277	1160
	11/28/2016	0.312	184	60.7	<0.5	7.11	357	1040
	2/17/2017	0.433	181	59.2	1.37	7.51	374	1410
	5/2/2017	0.320	184	60.7	1.85	7.26	381	1030
	6/19/2017	0.371	194	59.3	<0.5	6.97	326	1460
	7/31/2017	0.423	200	57.9	0.53	7.12	352	1200
	Abandoned on August 4, 2017							
MW-17	3/23/2016	0.668	392	51.3	1.36	6.60	1010	3150
	6/14/2016	0.706	376	50	<0.5	6.59	990	2360
	2/09/2016	0.637	320	43.0	<0.5	6.98	807	2660
	11/29/2016	0.644	390	49.7	<0.5	6.76	1080	2640
	2/17/2017	0.700	380	62.6	2.91	7.31	1010	2250
	5/2/2017	0.649	364	45.3	1.66	7.47	1090	3040
	6/19/2017	0.679	373	42.3	<0.5	6.93	944	2640
	7/31/2017	0.753	365	44.4	<0.5	7.05	913	2300
	11/7/2017	0.660	323	46.2	<0.5	7.14	952	2590
	3/9/2018	0.745	357	46.8	1.29	6.31	907	2010
	6/5/2018	0.745	363	43.6	<0.5	6.95	918	1990
	10/10/2018	0.615	328	41.9	<0.5	6.39	872	1980
	4/15/2019	0.762	297	38.7	0.573	6.53	834	1900

Table 4 - Appendix III Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent:	Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
	Reporting Unit:	mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
MW-17 (cont'd)	10/1/2019	0.783	342	32.7	<0.5	6.06	724	1890
	4/14/2020	0.757	323	30.2	0.274J	6.31	671	1650
	10/8/2020	0.709	269	31.1	<0.23	6.39	684	1600
	4/5/2021	0.695	274	30.1	<0.275	6.70	677	1500
	10/12/2021	0.580	287	33.0	<0.275	6.21	708	1210
	4/11/2022	0.715	321	37.7	<0.220	6.67	807	1630
	10/5/2022	0.629	333	36.2	0.640	6.49	787	1870
MW-18	3/22/2016	<0.2	115	<5	<0.5	6.86	24.8	504
	6/14/2016	<0.2	96.1	<5	<0.5	7.18	5	468
	9/2/2016	<0.2	73.4	<5	<0.5	7.20	<5	460
	11/28/2016	<0.2	97.6	<5	<0.5	7.47	<5	628
	2/17/2017	<0.2	94.8	<5	0.508	7.70	<5	474
	5/2/2017	<0.2	98.9	<5	1.32	7.27	<5	542
	6/19/2017	<0.2	98.4	<5	<0.5	7.20	<5	514
	7/31/2017	<0.2	98.8	<5	0.632	7.63	<5	468
	7/11/2017	<0.2	87.5	<5	0.704	7.22	<5	518
	3/9/2018	<0.2	97.3	<5	0.530	6.46	<5	438
	6/5/2018	<0.2	106	<5	0.528	6.91	<5	438
	10/9/2018	<0.2	94.2	<5	0.817	6.64	<5	398
	4/15/2019	<0.2	74.6	<5	0.518	6.51	<5	416
	10/1/2019	<0.2	97.00	<5	<0.5	6.11	<5	384
	4/13/2020	<0.1	111	3.55J	0.559	6.43	<3.55	414
	10/7/2020	0.0811J	72.6	6.48	0.320J	6.75	<3.55	316
	4/5/2021	0.123	98.3	3.63J	0.540	6.24	<2.45	384
	10/11/2021	<0.0580	96.2	3.76J	<0.275	6.52	<2.45	348
	4/11/2022	0.0833J	102	2.74J	0.412J	6.89	<2.00	448
	10/5/2022	0.0884J	87.4	4.86J	<0.220	6.88	<2.00	378
MW-19	3/22/2016	<0.2	103	6.5	<0.5	6.85	29.5	494
	6/14/2016	<0.2	110	7.2	<0.5	6.80	29.9	508
	9/2/2016	<0.2	82.8	<5	<0.5	7.12	21.5	492
	11/28/2016	<0.2	110	6.02	<0.5	7.29	20.7	484
	2/17/2017	<0.2	90.5	3.55	0.418	7.49	15.7	484
	5/2/2017	<0.2	107	3.7	0.804	7.39	10.6	566
	6/19/2017	<0.2	103	<5	<0.5	7.05	10.2	518
	7/31/2017	<0.2	105	<5	0.693	7.53	8.35	480
	11/7/2017	<0.2	93.0	<5	<0.5	6.98	6.91	410
	3/9/2018	<0.2	113	<5	<0.5	6.53	8.89	426
	6/5/2018	<0.2	100	<5	0.524	6.91	5.53	440
	10/9/2018	<0.2	106	11.9	<0.5	6.49	16.5	460
	4/15/2019	<0.2	101	<5	0.905	6.73	<5	444
	10/1/2019	<0.2	113	<5	0.511	6.05	<5	438
	4/13/2020	0.113J	123	3.83J	0.701	6.49	<3.55	432
	10/7/2020	0.107	109	23.3	0.469J	6.79	33.5	482
	4/5/2021	0.119	101	3.44J	0.517	6.30	<2.45	402
	10/11/2021	0.0629J	104	3.68J	<0.275	6.46	<2.45	356
	4/11/2022	0.0935J	113	<2.25	0.390J	6.83	<2.00	376
	10/5/2022	0.110	115	22.7	<0.220	6.91	35.6	494

Notes:

mg/L = milligrams per liter

NA = Analyte Not Analyzed/Measured

< = for the period of March 2016 through October 2019, the symbol indicates analyte not detected above the Reporting Limit, which is the value shown following the "<" symbol. Starting in January 2020, the symbol indicates analyte not detected above the Method Detection Limit, which is the value shown following the "<" symbol.

* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CFR Part 257).

J = Value is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

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Table 5 - Appendix IV Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
	Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-2	3/22/2016	<0.001	0.245	0.115	<0.001	<0.0005	<0.005	0.000514	0.664	<0.5	0.000601	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	0.234	0.113	<0.001	<0.0005	<0.005	0.000566	0.488	<0.5	0.00211	<0.05	<0.0002	<0.002	<0.005	<0.001
	9/2/2016	<0.001	0.22	0.104	<0.001	<0.0005	<0.005	0.000619	0.300	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	11/28/2016	<0.001	0.204	0.0952	<0.001	<0.0005	<0.005	0.000559	0.914	0.318	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	2/17/2017	<0.001	0.234	0.126	<0.001	<0.0005	<0.005	0.000656	0.679	0.563	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	5/2/2017	<0.001	0.231	0.118	<0.001	<0.0005	<0.005	0.000833	0.123	1.94	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/19/2017	<0.001	0.212	0.101	<0.001	<0.0005	<0.005	0.000725	0.469	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	7/31/2017	<0.001	0.217	0.117	<0.001	<0.0005	<0.005	0.000953	0.549	0.583	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	07/11/2017	NA	0.137	0.0923	NA	<0.0005	<0.005	NA	NA	0.529	<0.0005	NA	<0.0002	NA	<0.005	NA
	3/9/2018	<0.001	0.219	0.113	<0.001	<0.0005	<0.005	0.000620	1.050	<0.5	<0.0005	0.0415	<0.0002	<0.002	<0.005	<0.001
	6/5/2018	<0.001	0.225	0.0896	<0.001	<0.0005	<0.005	0.000997	0.422	<0.5	0.000586	0.0330	<0.0002	<0.002	<0.005	<0.001
	10/9/2018	<0.001	0.247	0.112	NA	<0.0005	<0.005	0.00135	0.901	<0.5	<0.0005	0.0423	<0.0002	<0.002	<0.005	NA
	4/15/2019	<0.001	0.234	0.140	<0.001	<0.0005	<0.005	0.00156	1.010	<0.5	<0.0005	0.0444	<0.0002	<0.002	<0.005	<0.001
	10/1/2019	<0.001	0.141	0.141	<0.001	<0.0001	<0.005	0.000828	0.620	<0.5	<0.0005	0.0424	<0.0002	<0.002	<0.005	<0.001
	4/14/2020	<0.00058	0.241	0.0997	<0.00027	<0.000039	<0.0011	0.00113	0.455	0.427J	0.000437J	0.0398	<0.0001	<0.0011	<0.001	<0.00026
	10/7/2020	<0.00051	0.224	0.100	<0.00027	<0.000049	<0.00110	0.000535	0.846	0.352J	0.000455J	0.0392	<0.0001	0.00112J	<0.001	<0.00026
	4/5/2021	<0.00110	0.213	0.100	<0.00027	<0.000051	<0.00110	0.000472J	0.493	<0.275	0.000515	0.0435	<0.000150	<0.00130	<0.00096	<0.00026
	10/12/2021	<0.00110	0.191	0.0880	<0.00027	<0.000051	<0.00110	0.000437J	0.856	<0.275	<0.000210	0.0404	<0.000150	<0.00130	<0.00096	<0.00026
	4/11/2022	<0.000690	0.237	0.116	<0.000270	<0.0000550	<0.00110	0.000635	0.167U	0.232J	0.000304J	0.0513	<0.000110	0.00128J	<0.000960	<0.000260
	10/5/2022	<0.000690	0.163	0.105	<0.000270	<0.0000550	<0.00110	0.000379J	1.67	<0.220	<0.000240	0.0433	<0.000110	0.00123J	<0.000960	<0.000260
MW-5	3/23/2016	<0.001	0.0432	0.0437	<0.001	<0.0005	<0.005	<0.0005	0.391U	<0.5	<0.0005	0.0799	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	0.0389	0.0701	<0.001	<0.0005	<0.005	0.000509	0.653	<0.5	<0.0005	0.0866	<0.0002	<0.002	<0.005	<0.001
	11/29/2016	<0.001	0.0564	0.0491	<0.001	<0.0005	<0.005	<0.0005	0.637	<0.5	<0.0005	0.0894	<0.0002	<0.002	<0.005	<0.001
	5/2/2017	<0.001	0.0544	0.0488	<0.001	<0.0005	<0.005	<0.0005	0.0966U	1.82	<0.0005	0.0819	<0.0002	<0.002	<0.005	<0.001
	6/5/2018	<0.001	0.0486	0.0447	<0.001	<0.0005	<0.005	<0.0005	NA	<0.5	0.00262	0.07	<0.0002	<0.002	<0.005	<0.001
	10/10/2018	<0.001	0.0549	0.0402	NA	<0.0005	<0.005	<0.0005	0.305	<0.5	0.000627	0.0797	<0.0002	<0.002	<0.005	NA
	4/16/2019	NA	0.0545	0.0625	NA	<0.0005	<0.005	NA	NA	NA	<0.0005	NA	NA	NA	<0.005	NA
	10/1/2019	<0.001	0.0557	0.0467	<0.001	<0.0001	<0.005	<0.0005	0.373U	<0.5	<0.0005	0.0869	<0.0002	<0.002	<0.005	<0.001
	4/14/2020	<0.00058	0.0568	0.0669	<0.00027	<0.000039	<0.0011	0.000388J	0.0513U	0.460J	0.000542	0.0718	<0.0001	<0.0011	<0.001	<0.00026
	10/8/2020	<0.00051	0.0681	0.0477	<0.00027	<0.000049	<0.0011	0.000350J	0.722	<0.23	<0.00011	0.0848	<0.0001	0.00110J	<0.001	<0.00026
	4/5/2021	<0.0011	0.0614	0.0458	<0.00027	0.000054J	<0.00110	0.000350J	0.387U	0.642	<0.00021	0.0818	<0.000150	0.00157J	<0.00096	<0.00026
	10/12/2021	0.00174J	0.0625	0.0430	0.000737J	0.000861	<0.00110	0.00125	0.187U	<0.275	0.00187	0.0690	<0.000150	0.00367	0.00419J	0.00313
	4/11/2022	<0.00276	0.0701	0.0479	<0.00108	<0.000220	<0.00440	<0.000760	0.130U	<0.220	0.00109J	0.0967	<0.000110	0.00532J	<0.00384	<0.00114J
	10/5/2022	<0.000690	0.0637	0.0483	<0.000270	<0.0000550	<0.00110	0.000450J	0.573	0.516	<0.000240	0.0794	<0.000110	0.00189J	<0.000960	<0.000260
MW-6	3/22/2016	<0.001	0.0365	0.183	<0.001	0.00213	<0.005	0.00592	1.16	<0.5	0.00596	<0.05	<0.0002	0.0435	<0.005	<0.001
	6/14/2016	<0.001	0.0324	0.225	<0.001	<0.0005	<0.005	0.00527	0.825	<0.5	0.00269	<0.05	<0.0002	0.0507	<0.005	<0.001
	11/28/2016	<0.001	0.0133	0.166	<0.001	<0.0005	<0.005	0.0064	0.653	<0.5	0.00139	<0.05	<0.0002	0.0696	<0.005	<0.001
	5/2/2017	<0.001	0.0243	0.195	<0.001	<0.0005	<0.005	0.00562	0.819	1.32	0.00169	<0.05	<0.0002	0.061	<0.005	<0.001
	3/9/2018	<0.004	0.0194	0.165	<0.004	<0.002	<0.02	0.00654	0.673	0.525	<0.002	0.0407	<0.0002	0.0683	<0.02	<0.004
	6/5/2018	<0.001	0.0136	0.196	<0.001	0.000564	<0.005	0.007	NA	<0.5	0.00319	0.048	<0.0002	0.0702	<0.005	<0.001
	10/9/2018	<0.001	0.0393	0.295	NA	0.000834	<0.005	0.00661	1.05	0.52	0.0066	0.0407	<0.0002	0.0537	<0.005	NA
	4/15/2019	NA	0.02	0.212	NA	<0.0005	<0.005	NA	NA	NA	0.00286	NA	NA	NA	<0.005	NA
	10/1/2019	<0.001	0.017	0.192	<0.001	0.000317	<0.005	0.00761	0.985	0.511	0.00287	0.051	<0.0002	0.0654	<0.005	<0.001
	4/14/2020	<0.00058	0.0198	0.197	<0.00027	0.000209	<0.0011	0.00673	0.462U	0.487J	0.00132	0.0432	<0.0001	0.0605	<0.001	<0.00026
	10/7/2020	<0.00051	0.0123	0.143	<0.00027	0.00025	<0.0011	0.0077	0.827	0.373J	0.00159	0.0461	<0.0001	0.0642	<0.001	<0.00026
	4/5/2021	<0.00110	0.0119	0.192	<0.00027	0.000198	<0.0011	0.00613	0.456U	0.310J	0.000707	0.0454	<0.000150	0.0550	<0.00096	<0.00026
	10/12/2021	<0.00110	0.0324	0.174	<0.00027	0.000181	<0.0011	0.00610	0.910	<0.275	0.000739	0.0424	<0.000150	0.0563	<0.00096	<0.00026
	4/11/2022	0.000693J	0.0211	0.167	<0.000270	0.000146	<0.00110	0.00581	1.73	0.244J	0.000836	0.0503	<0.000110	0.0598	<0.000960	<0.000260
	10/5/2022	<0.000690	0.0128	0.147	<0.000270	0.000152	<0.00110	0.00594	0.954	0.637	0.000533	0.0465	<0.000110	0.0633	<0.000960	<0.000260

Table 5 - Appendix IV Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
	Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-8	3/23/2016	<0.001	0.0163	0.088	<0.001	<0.0005	<0.005	<0.0005	0.353U	<0.5	0.00168	<0.05	<0.0002	0.107	<0.005	<0.001
	6/14/2016	<0.001	0.0162	0.1	<0.001	<0.0005	<0.005	<0.0005	0.380U	0.518	0.00169	<0.05	<0.0002	0.102	<0.005	<0.001
	11/29/2016	<0.001	0.021	0.0954	<0.001	<0.0005	<0.005	0.000516	0.565	<0.5	0.0019	<0.05	<0.0002	0.0994	<0.005	<0.001
	5/2/2017	<0.001	0.0256	0.0813	<0.001	<0.0005	<0.005	<0.0005	0.647	1.7	0.00155	<0.05	<0.0002	0.101	<0.005	<0.001
	6/5/2018	<0.001	0.0189	0.0954	<0.001	<0.0005	<0.005	0.00281	NA	<0.5	0.00956	0.0115	<0.0002	0.0753	<0.005	<0.001
	10/10/2018	<0.001	0.0121	0.0892	NA	<0.0005	<0.005	0.000864	0.31	<0.5	0.002	0.0108	<0.0002	0.095	<0.005	NA
	4/16/2019	NA	0.0122	0.101	NA	<0.0005	<0.005	NA	NA	NA	0.000657	NA	NA	NA	<0.005	NA
	10/1/2019	<0.001	0.0106	0.101	<0.001	<0.0001	<0.005	0.000623	0.535U	<0.5	<0.0005	0.0149	<0.0002	0.111	<0.005	<0.001
	10/1/2019	<0.001	0.0106	0.101	<0.001	<0.0001	<0.005	0.000623	0.535U	<0.5	<0.0005	0.0149	<0.0002	0.111	<0.005	<0.001
	4/14/2020	<0.00058	0.012	0.0955	<0.00027	<0.000039	<0.0011	0.000503	0.215U	0.577	0.000349J	0.0131	<0.0001	0.102	<0.001	<0.00026
	10/8/2020	<0.00051	0.00998	0.0851	<0.00027	0.0000660J	<0.0011	0.000543	0.216U	<0.23	0.000146J	0.0133	<0.0001	0.101	<0.001	<0.00026
	4/5/2021	<0.00110	0.011	0.0846	<0.00027	0.0000780J	<0.0011	0.000487J	0.488	<0.275	0.000488J	0.0118	<0.00015	0.100	<0.00096	<0.00026
	10/12/2021	<0.00110	0.0104	0.0806	<0.00027	0.0000790J	<0.0011	0.000611	0.355	<0.275	0.000263J	0.0124	<0.00015	0.0944	<0.00096	<0.00026
	4/11/2022	<0.000690	0.0112	0.0819	<0.000270	<0.0000550	<0.00110	0.000549	0.506U	<0.220	0.000268J	0.0138	<0.000110	0.100	<0.000960	<0.000260
	10/5/2022	<0.000690	0.0111	0.0802	<0.000270	<0.0000550	<0.00110	0.000497J	0.516U	0.266J	<0.000240	0.0126	<0.000110	0.0982	<0.000960	<0.000260
MW-9	3/22/2016	<0.001	0.00454	0.442	<0.001	<0.0005	<0.005	0.00146	1.240	1.35	0.00366	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	0.00542	0.542	<0.001	<0.0005	<0.005	0.00148	0.822	0.864	0.00339	<0.05	<0.0002	<0.002	<0.005	<0.001
	9/2/2016	<0.001	0.00397	0.538	<0.001	<0.0005	<0.005	0.00103	2.010	<0.5	0.00289	<0.05	<0.0002	<0.002	<0.005	<0.001
	11/28/2016	<0.001	0.00572	0.536	<0.001	<0.0005	<0.005	0.00159	1.910	<0.5	0.00499	0.0533	<0.0002	<0.002	<0.005	<0.001
	2/17/2017	<0.001	0.0118	0.383	<0.001	<0.0005	0.00555	0.00265	0.623	0.585	0.00419	<0.05	<0.0002	<0.002	<0.005	<0.001
	5/2/2017	<0.001	0.00423	0.487	<0.001	<0.0005	<0.005	0.000974	1.160	1.84	0.00246	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/19/2017	<0.001	0.00345	0.481	<0.001	<0.0005	<0.005	0.00123	2.620	0.517	0.00322	<0.05	<0.0002	<0.002	<0.005	<0.001
	7/31/2017	<0.001	0.00662	0.624	<0.001	<0.0005	<0.005	0.00195	3.280	0.617	0.00474	0.0505	0.00022	<0.002	<0.005	<0.001
	07/11/2017	NA	0.00772	0.500	NA	<0.0005	<0.005	NA	NA	0.55	0.00461	NA	<0.0002	NA	<0.005	NA
	3/20/2018	<0.001	0.00777	0.526	<0.001	<0.0005	<0.005	0.000895	1.250	<0.5	0.00284	0.0428	<0.0002	<0.002	<0.005	<0.001
	6/5/2018	<0.001	0.00768	0.625	<0.001	<0.0005	<0.005	0.00293	2.450	<0.5	0.00885	0.0541	<0.0002	<0.002	<0.005	<0.001
	10/9/2018	<0.001	0.00571	0.469	NA	<0.0005	<0.005	0.00150	2.410	0.592	0.00407	0.0482	<0.0002	<0.002	<0.005	NA
	4/15/2019	<0.001	0.00677	0.576	<0.001	<0.0005	<0.005	0.00234	1.030	0.947	0.00559	0.0426	<0.0002	<0.002	<0.005	<0.001
	10/1/2019	<0.001	0.0054	0.468	<0.001	<0.001	<0.005	<0.0005	0.939	<0.5	0.000655	0.0473	<0.0002	<0.002	<0.005	<0.001
	4/13/2020	<0.00058	0.00626	0.605	<0.00027	0.000161	0.00154J	0.00166	1.16	0.562	0.00392	0.048	<0.0001	<0.0011	<0.001	<0.00026
	10/7/2020	<0.00051	0.00544	0.523	<0.00027	<0.000049	<0.0011	0.000199J	1.38	0.410J	0.000464J	0.0478	<0.0001	<0.0011	<0.001	<0.00026
	4/5/2021	<0.00110	0.0042	0.562	<0.00027	0.000168	0.00137J	0.00119	1.83	0.422J	0.00289	0.0504	<0.00015	<0.00130	<0.00096	<0.00026
	10/11/2021	<0.00110	0.00188J	0.477	<0.00027	0.0000740J	<0.00110	0.000556	1.37	<0.275	0.00122	0.0446	<0.00015	<0.00130	<0.00096	<0.00026
	4/11/2022	<0.000690	0.00782	0.642	<0.000270	0.000264	0.00345J	0.00346	1.80	0.380J	0.00665	0.0572	<0.000110	<0.00120	<0.000960	<0.000260
	10/5/2022	<0.000690	0.00307	0.556	<0.000270	<0.0000550	<0.00110	0.000579	1.26	0.274J	0.00136	0.0515	<0.000110	<0.00120	<0.000960	<0.000260
MW-13	3/22/2016	<0.001	0.0923	0.0652	<0.001	<0.0005	<0.005	<0.0005	0.575	0.796	<0.0005	<0.05	<0.0002	0.704	0.0205	<0.001
	6/14/2016	<0.001	0.217	0.0906	<0.001	<0.0005	<0.005	<0.0005	0.389	<0.5	<0.0005	<0.05	<0.0002	0.592	0.0141	<0.001
	9/2/2016	<0.001	0.142	0.0825	<0.001	<0.0005	<0.005	<0.0005	0.362	0.652	<0.0005	<0.05	<0.0002	0.945	0.0313	<0.001
	11/28/2016	<0.001	0.154	0.0959	<0.001	<0.0005	<0.005	<0.0005	0.27	2.55	<0.0005	<0.05	<0.0002	0.837	0.0248	<0.001
	2/17/2017	<0.001	0.112	0.0946	<0.001	<0.0005	<0.005	<0.0005	0.455	<0.5	<0.0005	<0.05	<0.0002	0.817	0.0345	<0.001
	5/2/2017	<0.001	0.133	0.0882	<0.001	<0.0005	<0.005	<0.0005	0.301	1.05	<0.0005	<0.05	<0.0002	0.951	0.0403	<0.001
	6/19/2017	<0.001	0.26	0.118	<0.001	<0.0005	<0.005	<0.0005	0.3	<0.5	<0.0005	<0.05	<0.0002	0.881	0.0372	<0.001
	7/31/2017	<0.001	0.274	0.112	<0.001	<0.0005	<0.005	<0.0005	0.298	0.587	<0.0005	<0.05	<0.0002	0.839	0.0233	<0.001
	07/11/2017	NA	0.0925	0.0682	NA	<0.0005	<0.005	NA	NA	0.67	<0.0005	NA	<0.0002	NA	0.00837	NA
	3/9/2018	<0.001	0.205	0.0982	<0.001	<0.0005	<0.005	0.000613	0.546	0.53	<0.0005	0.0212	<0.0002	1.22	0.0609	<0.001
	6/5/2018	<0.001	0.0544	0.0605	<0.001	<0.0005	<0.005	0.000718	0.374	<0.5	<0.0005	0.0205	<0.0002	1.28	0.0483	<0.001
	10/9/2018	<0.001	0.0782	0.0775	NA	<0.0005	<0.005	<0.0005	0.435	<0.5	<0.0005	0.0213	<0.0002	0.980	0.0298	NA
	4/15/2019	<0.001	0.108	0.119	<0.001	<0.0005	<0.005	<0.0005	0.223U	1.05	<0.0005	0.0274	<0.0002	0.916	0.0150	<0.001
	10/1/2019	<0.001	0.104	0.113	<0.001	0.000294	<0.005	<0.0005	0.770	0.544	<0.0005	0.0283	<0.0002	0.915	0.0204	<0.001

Table 5 - Appendix IV Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
	Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-13 (cont'd)	4/14/2020	<0.00058	0.0901	0.0979	<0.00027	0.000226	<0.0011	0.000527	0.231U	0.817	<0.00027	0.0232	<0.0001	1.22	0.0357	<0.00026
	10/7/2020	<0.00051	0.167	0.111	<0.00027	0.000464	<0.0011	0.000661	0.672	0.391J	<0.00011	0.0256	<0.0001	1.41	0.0408	<0.00026
	4/5/2021	<0.00110	0.0892	0.0848	<0.00027	0.000409	<0.0011	0.000567	0.506	0.496J	0.00137	0.024	<0.0015	1.52	0.0377	<0.00026
	10/11/2021	<0.00110	0.183	0.116	<0.00027	0.000542	<0.0011	0.000790	1.67	<0.275	<0.000210	0.0234	<0.00015	1.29	0.0288	<0.00026
	4/11/2022	<0.000690	0.0813	0.0837	<0.000270	0.000254	<0.00110	0.000563	0.770	0.340J	<0.000240	0.0303	<0.000110	1.15	0.0133	<0.000260
	10/5/2022	<0.000690	0.0558	0.0768	<0.000270	0.000278	<0.00110	0.000755	0.588U	<0.220	<0.000240	0.0299	<0.000110	1.30	0.022	<0.000260
MW-15	3/22/2016	0.00145	<0.002	0.0314	<0.001	<0.0005	0.0194	<0.0005	0.245	<0.5	<0.0005	<0.05	<0.0002	0.389	0.104	<0.001
	6/14/2016	0.00195	<0.002	0.0552	<0.001	<0.0005	0.0199	<0.0005	0.378	<0.5	0.000668	<0.05	<0.0002	0.254	0.115	<0.001
	9/2/2016	0.0015	<0.002	0.066	<0.001	<0.0005	0.00548	<0.0005	0.0439	0.278	<0.0005	<0.05	<0.0002	0.319	0.0867	<0.001
	11/28/2016	0.00166	<0.002	0.0523	<0.001	<0.0005	<0.005	<0.0005	0.871	3.48	<0.0005	<0.05	<0.0002	0.402	0.0896	<0.001
	2/17/2017	0.00204	0.00241	0.0448	<0.001	<0.0005	<0.005	<0.0005	0.143	<0.5	<0.0005	<0.05	<0.0002	0.408	0.105	<0.001
	5/2/2017	0.0013	<0.002	0.0382	<0.001	<0.0005	0.0153	<0.0005	0.158	0.878	<0.0005	<0.05	<0.0002	0.316	0.0785	<0.001
	6/19/2017	0.00119	<0.002	0.0447	<0.001	<0.0005	0.00678	<0.0005	0.229	<0.5	<0.0005	<0.05	<0.0002	0.242	0.0638	<0.001
	7/31/2017	0.00131	<0.002	0.0467	<0.001	<0.0005	<0.005	<0.0005	0.455	<0.5	<0.0005	<0.05	<0.0002	0.264	0.0699	<0.001
	07/11/2017	NA	0.00240	0.0428	NA	<0.0005	0.0253	NA	NA	<0.5	<0.0005	NA	<0.0002	NA	0.0850	NA
	3/9/2018	0.00172	0.00337	0.0405	<0.001	<0.0005	<0.005	<0.0005	0.232	<0.5	<0.0005	0.0126	<0.0002	0.353	0.0653	<0.001
	6/5/2018	0.00157	<0.002	0.0424	<0.001	<0.0005	0.0267	<0.0005	0.282U	<0.5	<0.0005	<0.0100	<0.0002	0.353	0.0934	<0.001
	10/9/2018	0.00168	<0.002	0.0394	NA	<0.0005	0.0182	<0.0005	0.303U	<0.5	<0.0005	0.0139	<0.0002	0.290	0.0631	NA
	4/15/2019	0.00207	<0.002	0.0752	<0.001	<0.0005	0.0204	<0.0005	-0.0756U	<0.5	<0.0005	0.0111	<0.0002	0.208	0.0553	<0.001
	10/1/2019	0.00218	<0.002	0.0666	<0.001	0.000109	0.0284	<0.0005	0.419U	<0.5	<0.0005	0.0156	<0.0002	0.245	0.068	<0.001
	4/14/2020	0.00122	0.00159J	0.0701	<0.00027	0.0000540J	0.00495J	<0.000091	0.175U	<0.23	<0.00027	0.00782J	<0.0001	0.211	0.056	<0.00026
	10/7/2020	0.00155	0.0023	0.0612	<0.00027	0.0000710J	0.00178J	<0.000091	0.162U	<0.23	0.000224J	0.00986J	<0.0001	0.216	0.054	<0.00026
	4/5/2021	0.00126J	0.00149J	0.0644	<0.00027	0.0000860J	0.0363	<0.000091	-0.0719U	<0.275	<0.000260	0.0145	<0.00015	0.219	0.0568	<0.00026
	10/12/2021	0.00115J	0.00468	0.0553	<0.00027	0.000118	0.00686	<0.000910	0.383	<0.275	<0.000210	0.0130	<0.00015	0.235	0.0532	<0.00026
	4/11/2022	0.00183J	0.00154J	0.0490	<0.000270	0.0000650J	0.00789	<0.000190	0.189U	<0.220	<0.000240	0.00812J	<0.000110	0.274	0.0699	<0.000260
	10/5/2022	0.00153J	0.00227	0.0584	<0.000270	<0.0000550	0.00386J	<0.000190	0.716	<0.220	<0.000240	0.0118	<0.000110	0.197	0.0830	<0.000260
MW-16	3/22/2016	<0.001	<0.002	0.0665	<0.001	<0.0005	<0.005	0.00083	0.214	1.84	<0.0005	<0.05	<0.0002	0.018	<0.005	<0.001
	6/14/2016	<0.001	<0.002	0.0730	<0.001	<0.0005	<0.005	0.000634	0.392	<0.5	<0.0005	0.0514	<0.0002	0.0125	<0.005	<0.001
	9/2/2016	<0.001	0.00233	0.0837	<0.001	<0.0005	<0.005	0.00126	0.22	<0.5	<0.0005	<0.05	<0.0002	0.0262	<0.005	<0.001
	11/28/2016	<0.001	<0.002	0.0794	<0.001	<0.0005	<0.005	0.000925	0.436	<0.5	<0.0005	0.0501	<0.0002	0.0193	<0.005	<0.001
	2/17/2017	<0.001	<0.002	0.0857	<0.001	<0.0005	<0.005	0.00102	0.362	1.37	<0.0005	0.053	<0.0002	0.0164	<0.005	<0.001
	5/2/2017	<0.001	<0.002	0.0818	<0.001	<0.0005	<0.005	0.000952	0.354	1.85	<0.0005	0.0503	<0.0002	0.00651	<0.005	<0.001
	6/19/2017	<0.001	<0.002	0.0752	<0.001	<0.0005	<0.005	0.000769	0.463	<0.5	<0.0005	<0.05	<0.0002	0.0105	<0.005	<0.001
	7/31/2017	<0.001	<0.002	0.0722	<0.001	<0.0005	<0.005	0.000519	0.353	0.528	<0.0005	<0.05	<0.0002	0.0185	<0.005	<0.001
	Abandoned on August 4, 2017															
MW-17	3/23/2016	<0.001	0.00735	0.0276	<0.001	<0.0005	<0.005	0.00813	0.366	1.36	<0.0005	0.114	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	0.0360	0.0396	<0.001	<0.0005	<0.005	0.0127	0.469	<0.5	<0.0005	0.129	<0.0002	<0.002	<0.005	<0.001
	9/2/2016	<0.001	0.0152	0.0424	<0.001	<0.0005	<0.005	0.0134	0.651	<0.5	<0.0005	0.116	<0.0002	<0.002	<0.005	<0.001
	11/29/2016	<0.001	0.00691	0.0356	<0.001	<0.0005	<0.005	0.00829	0.479	<0.5	<0.0005	0.116	<0.0002	0.00219	<0.005	<0.001
	2/17/2017	<0.001	0.0219	0.0406	<0.001	<0.0005	<0.005	0.0112	NA	2.91	0.0071	0.115	<0.0002	0.00214	<0.005	<0.001
	5/2/2017	<0.001	0.0300	0.0411	<0.001	<0.0005	<0.005	0.0113	0.059	1.66	<0.0005	0.116	<0.0002	<0.002	<0.005	<0.001
	6/19/2017	<0.001	0.0163	0.0361	<0.001	<0.0005	<0.005	0.012	0.777	<0.5	<0.0005	0.114	<0.0002	<0.002	<0.005	<0.001
	7/31/2017	<0.001	0.0159	0.0373	<0.001	<0.0005	<0.005	0.0123	0.284	<0.5	<0.0005	0.109	<0.0002	<0.002	<0.005	<0.001
	07/11/2017	NA	0.00794	0.0305	NA	<0.0005	<0.005	NA	NA	<0.5	<0.0005	NA	<0.0002	NA	<0.005	NA
	3/9/2018	<0.001	0.0257	0.0351	<0.001	<0.0005	<0.005	0.0107	0.738	1.29	<0.0005	0.112	<0.0002	0.0032	<0.005	<0.001
	6/5/2018	<0.001	0.0224	0.0505	<0.001	<0.0005	<0.005	0.0134	0.960	<0.5	<0.0005	0.0990	<0.0002	0.00356	<0.005	<0.001
	10/10/2018	<0.001	0.0173	0.0346	NA	<0.0005	<0.005	0.0114	1.02	<0.5	<0.0005	0.104	<0.0002	<0.002	<0.005	NA
	4/15/2019	<0.001	0.0102	0.0369	<0.001	<0.0005	<0.005	0.0103	0.328U	0.573	<0.0005	0.0948	<0.0002	<0.002	<0.005	<0.001
	10/1/2019	<0.001	0.0117	0.0407	<0.001	<0.0001	<0.005	0.0123	1.12	<0.5	<0.0005	0.12	<0.0002	0.00212	<0.005	<0.001

Table 5 - Appendix IV Constituents in Groundwater
Omaha Public Power District - NOS Ash Landfill

	Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
	Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-17 (cont'd)	4/14/2020	<0.00058	0.0111	0.033	<0.00027	<0.000039	<0.0011	0.0101	0.467	0.274J	<0.00027	0.0969	<0.0001	0.00264	<0.001	<0.00026
	10/8/2020	<0.00051	0.0206	0.0323	<0.00027	<0.000049	<0.0011	0.00898	0.702	<0.23	<0.00011	0.0948	<0.0001	<0.00440	<0.001	<0.00026
	4/5/2021	<0.00110	0.00927	0.0341	<0.00027	<0.000051	<0.0011	0.00915	0.654	<0.275	<0.00021	0.0974	<0.00015	0.00398	<0.00096	<0.00026
	10/12/2021	<0.00110	0.0166	0.0364	<0.00027	<0.000051	<0.0011	0.00983	0.605	<0.275	<0.00021	0.0902	<0.00015	0.00184J	<0.00096	<0.00026
	4/11/2022	<0.000690	0.0203	0.0377	<0.000270	<0.0000550	<0.00110	0.00975	0.554	<0.220	<0.000240	0.107	<0.000110	0.00355	<0.000960	<0.000260
	10/5/2022	<0.000690	0.0405	0.0413	<0.000270	<0.0000550	<0.00110	0.0108	0.884	0.640	<0.000240	0.103	<0.000110	0.00214	<0.000960	<0.000260
MW-18	3/22/2016	<0.001	0.00345	0.343	<0.001	<0.0005	<0.005	0.00152	2.7	<0.5	0.00479	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	<0.002	0.319	<0.001	<0.0005	<0.005	<0.0005	0.72	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	9/2/2016	<0.001	<0.002	0.307	<0.001	<0.0005	<0.005	<0.0005	0.814	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	11/28/2016	<0.001	<0.002	0.306	<0.001	<0.0005	<0.005	<0.0005	1.56	<0.5	0.000577	<0.05	<0.0002	<0.002	<0.005	<0.001
	2/17/2017	<0.001	<0.002	0.314	<0.001	<0.0005	<0.005	<0.0005	0.907	0.508	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	5/2/2017	<0.001	<0.002	0.329	<0.001	<0.0005	<0.005	<0.0005	NA	1.32	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/19/2017	<0.001	<0.002	0.304	<0.001	<0.0005	<0.005	<0.0005	0.465	<0.5	<0.0005	<0.05	0.000204	<0.002	<0.005	<0.001
	7/31/2017	<0.001	<0.002	0.309	<0.001	<0.0005	<0.005	<0.0005	0.899	0.632	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	07/11/2017	NA	NA	NA	NA	NA	NA	NA	NA	0.704	NA	NA	NA	NA	NA	NA
	3/9/2018	<0.001	<0.002	0.303	<0.001	<0.0005	<0.005	<0.0005	1.090	0.530	0.00137	0.0282	<0.0002	<0.002	<0.005	<0.001
	6/5/2018	<0.001	0.00327	0.449	<0.001	0.000537	<0.005	0.00271	2.20	0.528	0.0114	0.0243	<0.0002	<0.002	<0.005	<0.001
	10/9/2018	<0.001	<0.002	0.293	NA	<0.0005	<0.005	<0.0005	1.21	0.817	0.000938	0.0254	NA	<0.002	<0.005	NA
	4/15/2019	<0.001	<0.002	0.272	<0.001	<0.0005	<0.005	<0.0005	0.765	0.518	<0.0005	0.0203	<0.0002	<0.002	<0.005	<0.001
	10/1/2019	<0.001	<0.002	0.321	<0.001	<0.0001	<0.005	<0.0005	0.666	<0.5	<0.0005	0.0263	<0.0002	<0.002	<0.005	<0.001
	4/13/2020	<0.00058	0.00165J	0.328	<0.00027	<0.000039	<0.0011	<0.000091	0.246U	0.559	0.000813	0.0262	<0.0001	<0.0011	<0.001	<0.00026
	10/7/2020	<0.00051	0.000972J	0.215	<0.00027	<0.000049	<0.0011	0.000092J	0.396U	0.320J	0.000219J	0.0203	<0.0001	<0.0011	<0.001	<0.00026
	4/5/2021	<0.00110	0.00126J	0.329	<0.00027	0.000241	<0.0011	0.000099J	0.776	0.540	0.000349J	0.0268	<0.00015	<0.0013	<0.00096	<0.00026
	10/11/2021	<0.00110	0.00175J	0.311	0.000603J	0.000550	0.00117J	0.000654	1.58	<0.275	0.00106	0.0269	<0.00015	<0.0013	<0.00096	<0.00026
	4/11/2022	<0.000690	0.00124J	0.317	<0.000270	<0.0000550	<0.00110	<0.000190	0.776	0.412J	0.000276J	0.0279	<0.000110	<0.00120	<0.000960	<0.000110
	10/5/2022	<0.000690	0.00125J	0.266	<0.000270	<0.0000550	<0.00110	<0.000190	1.47	<0.220	0.000323J	0.0231	<0.000110	<0.00120	<0.000960	<0.000260
MW-19	3/22/2016	<0.001	<0.002	0.33	<0.001	<0.0005	<0.005	<0.0005	1.93	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	6/14/2016	<0.001	<0.002	0.324	<0.001	<0.0005	<0.005	<0.0005	0.386	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	9/2/2016	<0.001	<0.002	0.325	<0.001	<0.0005	<0.005	<0.0005	1.55	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	11/28/2016	<0.001	<0.002	0.317	<0.001	<0.0005	<0.005	<0.0005	1.14	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	2/17/2017	<0.001	<0.002	0.281	<0.001	<0.0005	<0.005	<0.0005	0.82	0.418	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	5/2/2017	<0.001	<0.002	0.328	<0.001	<0.0005	<0.005	<0.0005	NA	0.804	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	19/6/2017	<0.001	<0.002	0.297	<0.001	<0.0005	<0.005	<0.0005	0.744	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	31/7/2017	<0.001	<0.002	0.296	<0.001	<0.0005	<0.005	<0.0005	1	0.693	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	07/11/2017	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA
	3/9/2018	<0.001	<0.002	0.323	<0.001	<0.0005	<0.005	<0.0005	0.691	<0.5	<0.0005	0.0334	<0.0002	<0.002	<0.005	<0.001
	6/5/2018	<0.001	<0.002	0.355	<0.001	<0.0005	<0.005	<0.0005	1.40	0.524	0.00121	0.0306	<0.0002	<0.002	<0.005	<0.001
	10/9/2018	<0.001	<0.002	0.334	NA	<0.0005	<0.005	<0.0005	0.364U	<0.5	<0.0005	0.0336	NA	<0.002	<0.005	NA
	4/15/2019	<0.001	<0.002	0.322	<0.001	<0.0005	<0.005	<0.0005	0.614	0.905	<0.0005	0.0333	<0.0002	<0.002	<0.005	<0.001
	10/1/2019	<0.001	<0.002	0.331	<0.001	<0.0001	<0.005	<0.0005	0.932	0.511	<0.0005	0.0386	<0.0002	<0.002	<0.005	<0.001
	4/13/2020	<0.00058	<0.00088	0.328	<0.00027	<0.000039	<0.0011	<0.000091	0.623	0.701	<0.00027	0.0359	<0.0001	<0.0011	<0.001	<0.00026
	10/7/2020	<0.00051	<0.00088	0.363	<0.00027	<0.000049	<0.0011	<0.000091	0.698U	0.469J	<0.00011	0.0363	<0.0001	<0.0011	<0.001	<0.00026
	4/5/2021	<0.00110	<0.00075	0.297	<0.00027	<0.000051	<0.0011	<0.000091	0.977	0.517	<0.00021	0.0343	<0.00015	<0.0013	<0.00096	<0.00026
	10/11/2021	<0.00110	<0.00075	0.292	<0.00027	<0.000051	<0.0011	<0.00019	1.58	<0.275	<0.00021	0.0355	<0.00015	<0.0013	<0.00096	<0.00026
	4/11/2022	<0.000690	<0.000750	0.305	<0.000270	<0.0000550	<0.00110	<0.000190	1.23	0.390J	<0.000240	0.0373	<0.000110	<0.00120	<0.000960	<0.000260
	10/5/2022	<0.000690	<0.000750	0.392	<0.000270	<0.0000550	<0.00110	<0.000190	1.64	<0.220	<0.000240	0.0355	<0.000110	<0.00120	<0.000960	<0.000260

Notes:
mg/L = milligrams per liter
pCi/L = picoCuries per liter
NA = Analyte Not Analyzed/Measured
< = for the period of March 2016 through October 2019, the symbol indicates analyte not detected above the Reporting Limit, which is the value shown following the "<" symbol. Starting in January 2020, the symbol indicates analyte not detected above the Method Detection Limit, which is the value shown following the "<" symbol.

* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CFR Part 257).
U = Result is less than the sample detection limit.
J = Value is less than the Reporting Limit but greater than or equal to the Method Detection Limit. The concentration is an approximate value.

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Table 6 - Background Threshold Values for Assessment Monitoring
Omaha Public Power District - NOS Ash Landfill

Constituents	Units	Background Threshold Values (BTVs)
Appendix III		
Boron	mg/l	0.200
Calcium	mg/l	201
Chloride	mg/l	275
Fluoride [1]	mg/l	1.31
pH (LPL) [2]	SU	5.94
pH (UPL) [3]	SU	7.90
Sulfate	mg/l	57.5
TDS	mg/l	1,190
Appendix IV		
Antimony	mg/l	0.002
Arsenic	mg/l	0.0118
Barium	mg/l	0.625
Beryllium	mg/l	0.001
Cadmium	mg/l	0.000654
Chromium	mg/l	0.00555
Cobalt	mg/l	0.00293
Fluoride [1]	mg/l	1.31
Lead	mg/l	0.0114
Lithium	mg/l	0.0628
Mercury	mg/l	0.00022
Molybdenum	mg/l	0.002
Radium 226 + 228	pCi/l	4.95
Selenium	mg/l	0.005
Thallium	mg/l	0.001

Notes:

[1] Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CFR Part 257).

[2] Indicates the lower bound of the range is the lower prediction limit (LPL).

[3] Indicates the upper bound is the upper prediction limit (UPL).

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Table 7 - Established Groundwater Protection Standards
Omaha Public Power District - NOS Ash Landfill

Constituents	Units	Established Groundwater Protection Standard (GWPS)[1]
Appendix IV		
Antimony	mg/l	0.006
Arsenic	mg/l	0.0118[2]
Barium	mg/l	2
Beryllium	mg/l	0.004
Cadmium	mg/l	0.005
Chromium	mg/l	0.1
Cobalt	mg/l	0.006
Flouride	mg/l	4
Lead	mg/l	0.015
Lithium	mg/l	0.0628[2]
Mercury	mg/l	0.002
Molybdenum	mg/l	0.1
Radium 226 + 228	pCi/l	5
Selenium	mg/l	0.05
Thallium	mg/l	0.002

Notes:

[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in §257.95(h)(2); unless otherwise specified.

[2] GWPS is established as the upper tolerance limit (UTL) when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2).

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Appendix A

Field Sampling Forms

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NORTH OMAHA STATION

Water Levels Prior to Purging (Feet Below TOC)

MW2	Date of Sampling	4/7/2022	Time of Sampling	12:03	Static Water Level	23.61
MW4	Date of Sampling	4/7/2022	Time of Sampling	12:22	Static Water Level	14.05
MW5	Date of Sampling	4/7/2022	Time of Sampling	12:59	Static Water Level	22.96
MW6	Date of Sampling	4/7/2022	Time of Sampling	12:33	Static Water Level	14.42
MW7	Date of Sampling	4/7/2022	Time of Sampling	12:42	Static Water Level	18.38
MW8	Date of Sampling	4/7/2022	Time of Sampling	12:45	Static Water Level	19.10
MW9	Date of Sampling	4/7/2022	Time of Sampling	11:43	Static Water Level	26.18
MW10	Date of Sampling	4/7/2022	Time of Sampling	12:41	Static Water Level	17.30
MW11	Date of Sampling	4/7/2022	Time of Sampling	12:34	Static Water Level	13.97
MW12	Date of Sampling	4/7/2022	Time of Sampling	12:46	Static Water Level	17.56
MW13	Date of Sampling	4/7/2022	Time of Sampling	11:58	Static Water Level	21.69
MW15	Date of Sampling	4/7/2022	Time of Sampling	12:21	Static Water Level	12.18
MW17	Date of Sampling	4/7/2022	Time of Sampling	12:55	Static Water Level	19.72
MW18	Date of Sampling	4/7/2022	Time of Sampling	11:30	Static Water Level	36.63
MW19	Date of Sampling	4/7/2022	Time of Sampling	11:36	Static Water Level	35.77
MW20	Date of Sampling	4/7/2022	Time of Sampling	13:16	Static Water Level	9.83
MW22	Date of Sampling	4/7/2022	Time of Sampling	12:27	Static Water Level	16.27
MW23	Date of Sampling	4/7/2022	Time of Sampling	11:54	Static Water Level	14.91

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW2 - 5**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, 61^{o}F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	12:16	Pump Start Time	12:20
Static Water Level (+/- 0.01 feet)*	23.62	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	28.35	Time to Purge Well (hours:minutes)	0:23
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	2.92		
Actual Volume of Water Purged (mL)	4,600		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:25	1,000	14.35	6.70	32.7	7.16	1.88	23.85
12:27	1,400	14.12	4.97	33.2	7.15	1.88	23.90
12:29	1,800	13.89	2.88	29.9	7.00	2.03	23.95
12:31	2,200	13.92	1.07	22.2	6.94	2.21	23.95
12:33	2,600	13.98	0.87	16.6	6.89	2.22	23.95
12:35	3,000	13.98	0.58	14.7	6.88	2.24	23.95
12:37	3,400	14.01	0.54	14.9	6.88	2.25	23.95
12:39	3,800	14.06	0.45	16.9	6.88	2.27	23.95
12:41	4,200	14.06	0.43	17.7	6.88	2.27	23.95
12:43	4,600	14.10	0.40	17.7	6.87	2.27	23.95

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:43	4,600	14.10	0.40	17.7	6.87	2.27	23.95
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Light Yellow	QED Pump Control Information	CPM-2, 27/3, ~30 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW5 - 10**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, Breezy, 66°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	17:04	Pump Start Time	17:07
Static Water Level (+/- 0.01 feet)*	22.70	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	33.20	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	6.48		
Actual Volume of Water Purged (mL)	2,200		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
17:12	1,000	15.89	1.99	29.1	6.99	2.54	22.86
17:14	1,400	15.96	1.72	17.7	7.01	2.67	22.90
17:16	1,800	16.00	1.71	13.9	7.00	2.68	22.90
17:18	2,200	16.03	1.75	4.3	7.00	2.69	22.90

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
17:18	2,200	16.03	1.75	4.3	7.00	2.69	22.90
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW6 - 7**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, 63°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	13:58	Pump Start Time	14:00
Static Water Level (+/- 0.01 feet)*	14.63	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	33.18	Time to Purge Well (hours:minutes)	0:21
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	11.45		
Actual Volume of Water Purged (mL)	3,150		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:05	750	16.24	2.33	16.6	6.78	1.99	15.00
14:07	1,050	15.69	2.13	15.5	6.73	2.13	15.05
14:09	1,350	15.56	0.56	15.1	6.70	2.17	15.07
14:11	1,650	15.51	0.43	14.9	6.68	2.18	15.08
14:13	1,950	15.49	0.39	16.4	6.68	2.20	15.10
14:15	2,250	15.47	0.35	17.9	6.67	2.20	15.11
14:17	2,550	15.48	0.34	18.8	6.66	2.21	15.12
14:19	2,850	15.38	0.29	17.8	6.66	2.21	15.13
14:21	3,150	15.38	0.29	18.2	6.65	2.21	15.14

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:21	3,150	15.38	0.29	18.2	6.65	2.21	15.14
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW8 - 8**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, 64°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	14:57	Pump Start Time	15:00
Static Water Level (+/- 0.01 feet)*	18.96	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	25.45	Time to Purge Well (hours:minutes)	0:15
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	4.01		
Actual Volume of Water Purged (mL)	3,000		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:05	1,000	15.34	3.87	6.1	7.08	1.41	20.34
15:07	1,400	15.16	3.43	3.0	7.33	1.24	20.40
15:09	1,800	15.50	3.52	3.3	7.43	1.23	20.27
15:11	2,200	15.83	3.62	3.2	7.45	1.22	20.24
15:13	2,600	16.09	3.61	3.2	7.49	1.21	20.17
15:15	3,000	16.06	3.54	3.0	7.54	1.20	20.07

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:15	3,000	16.06	3.54	3.0	7.54	1.20	20.07
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW9 - 3**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Cloudy, 48°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	10:09	Pump Start Time	10:11
Static Water Level (+/- 0.01 feet)*	26.15	Purge Rate (mL/minute)	125-250
Bottom of Well Casing (+/- 0.01 feet)*	56.65	Time to Purge Well (hours:minutes)	0:17
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	18.83		
Actual Volume of Water Purged (mL)	3,000		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:16	1,250	11.61	2.07	95.0	6.89	1.36	28.11
10:18	1,750	11.73	1.42	71.9	6.86	1.44	28.19
10:20	2,000	11.78	1.01	122	6.84	1.49	28.22
10:22	2,250	11.78	0.79	148	6.84	1.50	28.18
10:24	2,500	11.75	0.70	177	6.84	1.51	28.09
10:26	2,750	11.59	0.68	234	6.84	1.52	28.09
10:28	3,000	11.53	0.67	318	6.84	1.53	28.09

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:28	3,000	11.53	0.67	318	6.84	1.53	28.09
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		125

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Turbid	QED Pump Control Information	CPM-2, 28/2, ~35 psi
Sample Color	Light Brown	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: Increasing Turbidity - Sampled Early

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW13 - 4**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Sunny, 54°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	11:16	Pump Start Time	11:19
Static Water Level (+/- 0.01 feet)*	21.51	Purge Rate (mL/minute)	125-200
Bottom of Well Casing (+/- 0.01 feet)*	23.98	Time to Purge Well (hours:minutes)	0:19
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	1.53		
Actual Volume of Water Purged (mL)	2,750		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:24	1,000	12.87	3.00	138	6.71	2.09	23.68
11:26	1,250	13.01	1.88	86.3	6.72	2.12	Top of Pump
11:28	1,500	13.10	1.44	70.9	6.73	2.14	Top of Pump
11:30	1,750	13.13	1.10	57.5	6.74	2.15	Top of Pump
11:32	2,000	13.16	1.16	51.9	6.75	2.15	Top of Pump
11:34	2,250	13.20	0.80	45.3	6.75	2.14	Top of Pump
11:36	2,500	13.23	0.81	44.1	6.76	2.14	Top of Pump
11:38	2,750	13.25	0.81	45.2	6.76	2.14	Top of Pump

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:38	2,750	13.25	0.81	45.2	6.76	2.14	Top of Pump
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		125

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Mostly Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Light Brown	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: Water Level Dropped Quickly - Sampled Early

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW15 - 6**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, 63°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	13:13	Pump Start Time	13:16
Static Water Level (+/- 0.01 feet)*	12.35	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	15.60	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	2.01		
Actual Volume of Water Purged (mL)	2,200		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:21	1,000	13.99	5.41	10.0	7.08	1.41	12.83
13:23	1,400	14.07	5.45	7.0	7.08	1.40	12.90
13:25	1,800	14.05	5.49	3.5	7.08	1.39	13.00
13:27	2,200	14.00	5.52	4.3	7.07	1.38	13.06

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:27	2,200	14.00	5.52	4.3	7.07	1.38	13.06
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 28/2, ~15 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW17 - 9**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, 64°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	15:42	Pump Start Time	15:44
Static Water Level (+/- 0.01 feet)*	19.72	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	25.45	Time to Purge Well (hours:minutes)	0:21
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	3.54		
Actual Volume of Water Purged (mL)	3,150		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:49	750	16.78	2.51	56.4	6.80	2.22	20.95
15:51	1,050	16.71	1.16	66.3	6.78	2.32	21.04
15:53	1,350	16.66	1.16	65.6	6.74	2.32	21.14
15:55	1,650	16.61	1.14	65.0	6.73	2.34	21.24
15:57	1,950	16.03	1.17	50.8	6.72	2.34	21.33
15:59	2,250	16.04	1.19	48.2	6.70	2.35	21.43
16:01	2,550	16.10	1.20	40.8	6.68	2.34	21.50
16:03	2,850	16.07	1.21	33.2	6.67	2.34	21.60
16:05	3,150	16.03	1.19	20.4	6.67	2.35	21.67

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:05	3,150	16.03	1.19	20.4	6.67	2.35	21.67
Duplicate?	Yes, DUP1	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW18 - 1**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Cloudy, 43°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:27	Pump Start Time	8:30
Static Water Level (+/- 0.01 feet)*	36.60	Purge Rate (mL/minute)	150-250
Bottom of Well Casing (+/- 0.01 feet)*	70.90	Time to Purge Well (hours:minutes)	0:23
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	21.18		
Actual Volume of Water Purged (mL)	4,950		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
8:35	1,250	13.10	1.38	57.3	7.03	0.763	38.82
8:37	1,750	12.80	0.81	37.7	7.00	0.806	39.15
8:39	2,250	12.60	0.74	23.5	6.99	0.811	39.51
8:41	2,750	12.50	0.67	19.9	6.97	0.819	39.60
8:43	3,250	12.08	0.62	19.5	6.95	0.819	40.00
8:45	3,650	12.11	0.61	18.2	6.93	0.820	40.36
8:47	4,050	12.16	0.59	16.1	6.91	0.819	40.58
8:49	4,350	12.22	0.57	15.6	6.90	0.818	40.42
8:51	4,650	12.27	0.57	16.3	6.90	0.817	40.37
8:53	4,950	12.23	0.56	15.3	6.89	0.816	40.35

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
8:53	4,950	12.23	0.56	15.3	6.89	0.816	40.35
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 28/2, ~65 psi
Sample Color	Light Yellow	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Light Sulfur	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481), Cathy King
Monitoring Well Identification - Sample Number: **MW19 - 2**	Date: 4/11/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 45°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	9:20	Pump Start Time	9:21
Static Water Level (+/- 0.01 feet)*	35.76	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	76.70	Time to Purge Well (hours:minutes)	0:15
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	25.28		
Actual Volume of Water Purged (mL)	3,000		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:26	1,000	11.70	1.17	9.2	6.91	0.792	35.90
9:28	1,400	11.70	0.81	5.1	6.85	0.793	35.90
9:30	1,800	11.67	0.63	5.2	6.84	0.794	35.90
9:32	2,200	11.64	0.55	2.7	6.84	0.795	35.90
9:34	2,600	11.62	0.54	2.1	6.83	0.796	35.90
9:36	3,000	11.62	0.52	1.9	6.83	0.798	35.90

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:36	3,000	11.62	0.52	1.9	6.83	0.798	35.90
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~65 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/11/2022, 7:38

Notes / Unusual Occurrences: None

Equipment Calibration Sheet

Date: 4/11/2022
Time: 7:38

Person Calibrating Instrument: Kyle K. Uhing

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	Horiba	U-5000/U-52	KE3AGWPR/NTKDC76Y

Parameter:	Reading	Units
pH 4	4.00	SU
Conductivity	4.63	µS/cm
Turbidity	0.0	NTU
DO	10.60	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

SU = Standard Units

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NORTH OMAHA STATION

Water Levels Prior to Purging (Feet Below TOC)

MW2	Date of Sampling	10/1/2022	Time of Sampling	9:11	Static Water Level	24.86
MW4	Date of Sampling	10/1/2022	Time of Sampling	9:54	Static Water Level	15.66
MW5	Date of Sampling	10/1/2022	Time of Sampling	10:27	Static Water Level	21.97
MW6	Date of Sampling	10/1/2022	Time of Sampling	9:57	Static Water Level	15.60
MW7	Date of Sampling	10/1/2022	Time of Sampling	10:07	Static Water Level	19.46
MW8	Date of Sampling	10/1/2022	Time of Sampling	10:12	Static Water Level	19.45
MW9	Date of Sampling	10/1/2022	Time of Sampling	8:45	Static Water Level	30.80
MW10	Date of Sampling	10/1/2022	Time of Sampling	10:09	Static Water Level	18.20
MW11	Date of Sampling	10/1/2022	Time of Sampling	9:59	Static Water Level	14.21
MW12	Date of Sampling	10/1/2022	Time of Sampling	10:15	Static Water Level	17.73
MW13	Date of Sampling	10/1/2022	Time of Sampling	9:02	Static Water Level	22.04
MW15	Date of Sampling	10/1/2022	Time of Sampling	9:49	Static Water Level	15.48
MW17	Date of Sampling	10/1/2022	Time of Sampling	10:21	Static Water Level	19.22
MW18	Date of Sampling	10/1/2022	Time of Sampling	8:31	Static Water Level	38.70
MW19	Date of Sampling	10/1/2022	Time of Sampling	8:36	Static Water Level	38.25
MW20	Date of Sampling	10/1/2022	Time of Sampling	10:48	Static Water Level	10.38
MW22	Date of Sampling	10/1/2022	Time of Sampling	9:28	Static Water Level	17.46
MW23	Date of Sampling	10/1/2022	Time of Sampling	8:56	Static Water Level	15.78

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW2 - 5**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Cloudy, Sunny, 70^{o}F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	12:25	Pump Start Time	12:27
Static Water Level (+/- 0.01 feet)*	24.86	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	28.35	Time to Purge Well (hours:minutes)	0:20
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	2.15		
Actual Volume of Water Purged (mL)	4,000		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:32	1,000	19.96	3.22	119	6.95	1.88	25.06
12:35	1,600	18.87	2.88	44.0	6.90	1.82	25.20
12:38	2,200	18.00	2.00	36.8	6.90	1.77	25.31
12:41	2,800	17.12	0.86	34.4	6.88	1.82	25.36
12:44	3,400	17.01	0.92	31.3	6.87	1.68	25.40
12:47	4,000	16.82	0.84	22.7	6.89	1.67	25.43

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:47	4,000	16.82	0.84	22.7	6.89	1.67	25.43
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~30 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW5 - 10**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Cloudy, 73°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	18:01	Pump Start Time	18:04
Static Water Level (+/- 0.01 feet)*	21.93	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	33.20	Time to Purge Well (hours:minutes)	0:20
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	6.96		
Actual Volume of Water Purged (mL)	3,000		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
18:09	750	18.27	3.33	149	7.02	2.37	22.07
18:12	1,200	17.12	1.46	70.1	7.06	2.43	22.09
18:15	1,650	16.94	1.29	46.5	7.07	2.46	22.11
18:18	2,100	16.78	1.10	30.3	7.07	2.48	22.14
18:21	2,550	16.62	1.16	22.9	7.07	2.50	22.13
18:24	3,000	16.57	1.14	15.2	7.07	2.51	22.14

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
18:24	3,000	16.57	1.14	15.2	7.07	2.51	22.14
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW6 - 7**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Overcast, Sunny, 73°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	14:41	Pump Start Time	14:42
Static Water Level (+/- 0.01 feet)*	15.63	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	33.18	Time to Purge Well (hours:minutes)	0:17
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	10.84		
Actual Volume of Water Purged (mL)	2,550		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:47	750	18.67	3.47	13.4	6.80	1.74	16.05
14:50	1,200	18.12	2.10	12.0	6.69	2.05	16.15
14:53	1,650	17.02	2.16	8.3	6.68	2.09	16.23
14:56	2,100	16.78	2.20	8.9	6.67	2.13	16.24
14:59	2,550	16.67	2.14	9.4	6.64	2.14	16.24

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:59	2,550	16.67	2.14	9.4	6.64	2.14	16.24
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150-200

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW8 - 8**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 73°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	15:43	Pump Start Time	15:45
Static Water Level (+/- 0.01 feet)*	19.65	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	25.45	Time to Purge Well (hours:minutes)	0:17
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	3.58		
Actual Volume of Water Purged (mL)	3,400		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:50	1,000	16.85	2.98	20.1	7.60	1.23	21.15
15:53	1,600	16.62	2.92	5.9	7.93	1.09	21.13
15:56	2,200	16.77	2.80	6.0	7.99	1.10	21.13
15:59	2,800	16.62	2.91	4.4	7.98	1.11	21.19
16:02	3,400	16.58	2.92	3.4	7.97	1.12	21.22

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:02	3,400	16.58	2.92	3.4	7.97	1.12	21.22
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW9 - 3**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Sunny, 60°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	10:02	Pump Start Time	10:05
Static Water Level (+/- 0.01 feet)*	30.89	Purge Rate (mL/minute)	200-250
Bottom of Well Casing (+/- 0.01 feet)*	56.65	Time to Purge Well (hours:minutes)	0:44
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	15.91		
Actual Volume of Water Purged (mL)	7,800		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:10	1,250	13.95	0.87	<1,000	6.84	1.32	33.43
10:13	1,750	13.80	0.01	834	6.83	1.48	33.96
10:16	2,000	13.61	0.00	780	6.82	1.55	34.52
10:19	2,250	13.64	0.00	744	6.85	1.57	35.27
10:22	2,500	13.92	0.00	531	6.89	1.52	35.86
10:25	3,100	14.08	0.00	422	6.88	1.39	36.17
10:28	3,700	14.14	0.00	327	6.87	1.32	36.40
10:31	4,300	14.17	0.00	349	6.85	1.30	36.52
10:34	4,900	14.20	0.00	281	6.85	1.27	36.64
10:37	5,400	14.28	0.00	233	6.85	1.26	36.74
10:40	6,000	14.32	0.00	203	6.85	1.27	36.89
10:43	6,600	14.36	0.00	156	6.85	1.28	37.04
10:46	7,200	14.28	0.00	164	6.85	1.29	37.15
10:49	7,800	14.27	0.00	165	6.85	1.30	37.22

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:49	7,800	14.27	0.00	165	6.85	1.30	37.22
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 28/2, ~35 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW13 - 4**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Cloudy, 66°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	11:29	Pump Start Time	11:31
Static Water Level (+/- 0.01 feet)*	22.07	Purge Rate (mL/minute)	100
Bottom of Well Casing (+/- 0.01 feet)*	23.98	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	1.18		
Actual Volume of Water Purged (mL)	1,100		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:36	500	17.62	8.77	48.1	6.69	1.82	Top of Pump
11:39	800	16.52	8.71	29.0	6.70	1.83	Top of Pump
11:42	1,100	16.48	8.82	23.6	6.69	1.87	Top of Pump

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:42	1,100	16.48	8.82	23.6	6.69	1.87	Top of Pump
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		100-175

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW15 - 6**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Overcast, 72°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	13:30	Pump Start Time	13:31
Static Water Level (+/- 0.01 feet)*	Top of Pump	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	15.60	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	Not Measured		
Actual Volume of Water Purged (mL)	1,650		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:36	750	16.94	2.02	12.6	7.03	1.32	Top of Pump
13:39	1,200	16.88	2.00	10.9	7.06	1.27	Top of Pump
13:42	1,650	16.75	1.82	8.8	7.08	1.25	Top of Pump

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:42	1,650	16.75	1.82	8.8	7.08	1.25	Top of Pump
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 28/2, ~15 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW17 - 9**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Overcast, 73°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	16:32	Pump Start Time	16:35
Static Water Level (+/- 0.01 feet)*	19.23	Purge Rate (mL/minute)	150
Bottom of Well Casing (+/- 0.01 feet)*	25.45	Time to Purge Well (hours:minutes)	0:35
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	3.84		
Actual Volume of Water Purged (mL)	5,250		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:40	750	18.88	0.65	239	6.56	2.11	20.48
16:43	1,200	17.90	0.59	312	6.54	2.21	20.68
16:46	1,650	17.64	0.59	201	6.52	2.25	21.01
16:49	2,100	17.52	0.60	151	6.52	2.27	21.19
16:52	2,550	17.61	0.59	113	6.50	2.26	21.38
16:55	3,000	17.44	0.59	77.3	6.50	2.26	21.58
16:58	3,450	17.39	0.60	63.6	6.51	2.26	21.77
17:01	3,900	17.27	0.61	53.7	6.50	2.25	21.90
17:04	4,350	17.22	0.61	38.2	6.49	2.26	21.99
17:07	4,800	17.23	0.62	31.8	6.50	2.27	22.12
17:10	5,250	17.31	0.61	23.2	6.49	2.27	22.20

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
17:10	5,250	17.31	0.61	23.2	6.49	2.27	22.20
Duplicate?	Yes, DUP1	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		150

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Light Yellow	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW18 - 1**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Cloudy, 57°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:32	Pump Start Time	8:35
Static Water Level (+/- 0.01 feet)*	38.88	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	70.90	Time to Purge Well (hours:minutes)	0:17
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	19.77		
Actual Volume of Water Purged (mL)	3,400		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
8:40	1,000	13.85	1.04	24.9	6.90	0.740	41.51
8:43	1,600	13.51	0.66	12.0	7.08	0.741	42.11
8:46	2,200	13.71	0.40	10.1	6.87	0.742	43.02
8:49	2,800	13.63	0.37	6.8	6.86	0.739	43.90
8:52	3,400	13.58	0.36	6.7	6.88	0.736	44.33

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
8:52	3,400	13.58	0.36	6.7	6.88	0.736	44.33
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics		**Equipment Information**	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 28/2, ~65 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD North Omaha Station	Sampler Name(s): Kyle K. Uhing (29481)
Monitoring Well Identification - Sample Number: **MW19 - 2**	Date: 10/5/2022
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Sunny, 58°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	9:14	Pump Start Time	9:16
Static Water Level (+/- 0.01 feet)*	38.35	Purge Rate (mL/minute)	200
Bottom of Well Casing (+/- 0.01 feet)*	76.70	Time to Purge Well (hours:minutes)	0:23
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	23.68		
Actual Volume of Water Purged (mL)	4,600		

*Measurement collected from a defined point on the edge of the surveyed top of monitoring well casing using an electronic water level indicator.

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:21	1,000	13.33	7.00	7.6	6.67	0.700	38.52
9:24	1,600	13.22	6.41	3.1	6.67	0.705	38.54
9:27	2,200	13.38	6.11	4.2	6.68	0.707	38.51
9:30	2,800	13.27	5.12	1.3	6.79	0.758	38.52
9:33	3,400	13.36	4.73	0.6	6.85	0.796	38.53
9:36	4,000	13.27	4.67	0.0	6.89	0.799	38.53
9:39	4,600	13.22	4.52	0.4	6.91	0.802	38.54

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:39	4,600	13.22	4.52	0.4	6.91	0.802	38.54
Duplicate?	No	Preservation?	Cool on Ice, HNO_3 for Metals		Pump Rate (mL/minute)		200

Sample Physical Characteristics / **Equipment Information**

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~65 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	None	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	10/5/2022, 6:15

Notes / Unusual Occurrences: None

Equipment Calibration Sheet

Date: 10/5/2022
Time: 6:15

Person Calibrating Instrument: Kyle K. Uhing

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	Horiba	U-5000/U-52	KE3AGWPR/NTKDC76Y

Parameter:	Reading	Units
pH 4	4.00	SU
Conductivity	4.48	µS/cm
Turbidity	0.0	NTU
DO	9.82	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

SU = Standard Units

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Appendix B

Laboratory Analytical Reports

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eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-228858-1
Client Project/Site: North Omaha Station CCR/Landfill

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Kyle Uhing

Authorized for release by:
4/28/2022 1:39:37 PM

Shawn Hayes, Senior Project Manager
(319)229-8211
Shawn.Hayes@et.eurofinsus.com

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Table of Contents

Case Narrative

Job ID: 310-228858-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-228858-1

Comments
No additional comments.

Receipt
The samples were received on 4/12/2022 4:48 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.1° C, 2.6° C and 3.2° C.

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

Metals
Method 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: MW5 (310-228858-2).

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

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

Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228858-1	MW2	Water	04/11/22 12:43	04/12/22 16:48
310-228858-2	MW5	Water	04/11/22 17:18	04/12/22 16:48
310-228858-3	MW6	Water	04/11/22 14:21	04/12/22 16:48
310-228858-4	MW8	Water	04/11/22 15:15	04/12/22 16:48
310-228858-5	MW9	Water	04/11/22 10:28	04/12/22 16:48
310-228858-6	MW13	Water	04/11/22 11:38	04/12/22 16:48
310-228858-7	MW15	Water	04/11/22 13:27	04/12/22 16:48
310-228858-8	MW17	Water	04/11/22 16:05	04/12/22 16:48
310-228858-9	MW18	Water	04/11/22 08:53	04/12/22 16:48
310-228858-10	MW19	Water	04/11/22 09:36	04/12/22 16:48
310-228858-11	DUP1	Water	04/11/22 00:00	04/12/22 16:48

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW2 — Lab Sample ID: 310-228858-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28.7		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.232	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	707		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.237		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.116		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	1.44		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	284		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000635		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	39.0		0.100	0.0360	mg/L	1		6020A	Total/NA
Lead	0.000304	J	0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0513		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00128	J	0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1490		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-228858-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	39.6		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	1040		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0701		0.00800	0.00300	mg/L	4		6020A	Total/NA
Barium	0.0479		0.00800	0.00352	mg/L	4		6020A	Total/NA
Boron	0.729		0.400	0.232	mg/L	4		6020A	Total/NA
Calcium	415		2.00	0.760	mg/L	4		6020A	Total/NA
Iron	52.0		0.400	0.144	mg/L	4		6020A	Total/NA
Lead	0.00109	J	0.00200	0.000960	mg/L	4		6020A	Total/NA
Lithium	0.0967		0.0400	0.0100	mg/L	4		6020A	Total/NA
Molybdenum	0.00532	J	0.00800	0.00480	mg/L	4		6020A	Total/NA
Thallium	0.00114	J B	0.00400	0.00104	mg/L	4		6020A	Total/NA
Total Dissolved Solids	1790		250	130	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-228858-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	308		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.244	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	241		5.00	2.00	mg/L	5		9056A	Total/NA
Antimony	0.000693	J	0.00200	0.000690	mg/L	1		6020A	Total/NA
Arsenic	0.0211		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.167		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.592		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000146		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	285		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00581		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	5.68		0.100	0.0360	mg/L	1		6020A	Total/NA
Lead	0.000836		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0503		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0598		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1230		50.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW8 — Lab Sample ID: 310-228858-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.4		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	561		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0112		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0819		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	2.70		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	141		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000549		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	0.180		0.100	0.0360	mg/L	1		6020A	Total/NA
Lead	0.000268	J	0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0138		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.100		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	918		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-228858-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	176		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.380	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	47.5		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.00782		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.642		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.0960	J	0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000264		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	180		0.500	0.190	mg/L	1		6020A	Total/NA
Chromium	0.00345	J	0.00500	0.00110	mg/L	1		6020A	Total/NA
Cobalt	0.00346		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	17.5		0.100	0.0360	mg/L	1		6020A	Total/NA
Lead	0.00665		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0572		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	820		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-228858-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.52		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.340	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	893		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0813		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0837		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	1.89		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000254		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	171		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000563		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	14.1		0.100	0.0360	mg/L	1		6020A	Total/NA
Lithium	0.0303		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	1.15		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0133		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1460		50.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW15 — Lab Sample ID: 310-228858-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.91		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	589		20.0	8.00	mg/L	20		9056A	Total/NA
Antimony	0.00183	J	0.00200	0.000690	mg/L	1		6020A	Total/NA
Arsenic	0.00154	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0490		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	3.09		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.0000650	J	0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	226		0.500	0.190	mg/L	1		6020A	Total/NA
Chromium	0.00789		0.00500	0.00110	mg/L	1		6020A	Total/NA
Lithium	0.00812	J	0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.274		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0699		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	962		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW17 — Lab Sample ID: 310-228858-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	37.7		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	807		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0203		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0377		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.715		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	321		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00975		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	5.84		0.100	0.0360	mg/L	1		6020A	Total/NA
Lithium	0.107		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00355		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1630		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW18 — Lab Sample ID: 310-228858-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.74	J	5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.412	J	0.500	0.220	mg/L	5		9056A	Total/NA
Arsenic	0.00124	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.317		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.0833	J	0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	102		0.500	0.190	mg/L	1		6020A	Total/NA
Iron	4.59		0.100	0.0360	mg/L	1		6020A	Total/NA
Lead	0.000276	J	0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0279		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	448		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW19 — Lab Sample ID: 310-228858-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.390	J	0.500	0.220	mg/L	5		9056A	Total/NA
Barium	0.305		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.0935	J	0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	113		0.500	0.190	mg/L	1		6020A	Total/NA
Iron	1.77		0.100	0.0360	mg/L	1		6020A	Total/NA
Lithium	0.0373		0.0100	0.00250	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW19 (Continued) — Lab Sample ID: 310-228858-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	376		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP1 — Lab Sample ID: 310-228858-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36.0		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	811		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0199		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0377		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.682		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	322		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00979		0.000500	0.000190	mg/L	1		6020A	Total/NA
Iron	5.67		0.100	0.0360	mg/L	1		6020A	Total/NA
Lithium	0.107		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00202		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1700		50.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW2 — **Lab Sample ID: 310-228858-1**
Date Collected: 04/11/22 12:43 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.7		5.00	2.25	mg/L			04/15/22 13:38	5
Fluoride	0.232	J	0.500	0.220	mg/L			04/15/22 13:38	5
Sulfate	707		20.0	8.00	mg/L			04/15/22 22:13	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 17:29	1
Arsenic	0.237		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 17:29	1
Barium	0.116		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 17:29	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 17:29	1
Boron	1.44		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 17:29	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 17:29	1
Calcium	284		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 17:29	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 17:29	1
Cobalt	0.000635		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 17:29	1
Iron	39.0		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 17:29	1
Lead	0.000304	J	0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 17:29	1
Lithium	0.0513		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 17:29	1
Molybdenum	0.00128	J	0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 17:29	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 17:29	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 17:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1490		50.0	26.0	mg/L			04/14/22 15:41	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW5 — **Lab Sample ID: 310-228858-2**
Date Collected: 04/11/22 17:18 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.6		5.00	2.25	mg/L			04/15/22 14:25	5
Fluoride	<0.220		0.500	0.220	mg/L			04/15/22 14:25	5
Sulfate	1040		20.0	8.00	mg/L			04/15/22 14:40	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00276		0.00800	0.00276	mg/L		04/19/22 09:00	04/27/22 17:41	4
Arsenic	0.0701		0.00800	0.00300	mg/L		04/19/22 09:00	04/27/22 17:41	4
Barium	0.0479		0.00800	0.00352	mg/L		04/19/22 09:00	04/27/22 17:41	4
Beryllium	<0.00108		0.00400	0.00108	mg/L		04/19/22 09:00	04/27/22 17:41	4
Boron	0.729		0.400	0.232	mg/L		04/19/22 09:00	04/27/22 17:41	4
Cadmium	<0.000220		0.000400	0.000220	mg/L		04/19/22 09:00	04/27/22 17:41	4
Calcium	415		2.00	0.760	mg/L		04/19/22 09:00	04/27/22 17:41	4
Chromium	<0.00440		0.0200	0.00440	mg/L		04/19/22 09:00	04/27/22 17:41	4
Cobalt	<0.000760		0.00200	0.000760	mg/L		04/19/22 09:00	04/27/22 17:41	4
Iron	52.0		0.400	0.144	mg/L		04/19/22 09:00	04/27/22 17:41	4
Lead	0.00109	J	0.00200	0.000960	mg/L		04/19/22 09:00	04/27/22 17:41	4
Lithium	0.0967		0.0400	0.0100	mg/L		04/19/22 09:00	04/27/22 17:41	4
Molybdenum	0.00532	J	0.00800	0.00480	mg/L		04/19/22 09:00	04/27/22 17:41	4
Selenium	<0.00384		0.0200	0.00384	mg/L		04/19/22 09:00	04/27/22 17:41	4
Thallium	0.00114	J B	0.00400	0.00104	mg/L		04/19/22 09:00	04/27/22 17:41	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1790		250	130	mg/L			04/14/22 15:41	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW6 — **Lab Sample ID: 310-228858-3**
Date Collected: 04/11/22 14:21 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	308		5.00	2.25	mg/L			04/15/22 14:56	5
Fluoride	0.244	J	0.500	0.220	mg/L			04/15/22 14:56	5
Sulfate	241		5.00	2.00	mg/L			04/15/22 14:56	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.000693	J	0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:00	1
Arsenic	0.0211		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:00	1
Barium	0.167		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:00	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:00	1
Boron	0.592		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:00	1
Cadmium	0.000146		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:00	1
Calcium	285		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:00	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:00	1
Cobalt	0.00581		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:00	1
Iron	5.68		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:00	1
Lead	0.000836		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:00	1
Lithium	0.0503		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:00	1
Molybdenum	0.0598		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:00	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:00	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1230		50.0	26.0	mg/L			04/14/22 15:41	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

Client Sample ID: MW8 — **Lab Sample ID: 310-228858-4**
Date Collected: 04/11/22 15:15 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.4		5.00	2.25	mg/L			04/15/22 15:12	5
Fluoride	<0.220		0.500	0.220	mg/L			04/15/22 15:12	5
Sulfate	561		20.0	8.00	mg/L			04/15/22 15:58	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:04	1
Arsenic	0.0112		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:04	1
Barium	0.0819		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:04	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:04	1
Boron	2.70		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:04	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:04	1
Calcium	141		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:04	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:04	1
Cobalt	0.000549		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:04	1
Iron	0.180		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:04	1
Lead	0.000268	J	0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:04	1
Lithium	0.0138		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:04	1
Molybdenum	0.100		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:04	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:04	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	918		50.0	26.0	mg/L			04/14/22 15:41	1

Client: Omaha Public Power District
Job ID: 310-228858-1
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW9
Lab Sample ID: 310-228858-5
Date Collected: 04/11/22 10:28
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	176		5.00	2.25	mg/L			04/15/22 16:14	5
Fluoride	0.380	J	0.500	0.220	mg/L			04/15/22 16:14	5
Sulfate	47.5		5.00	2.00	mg/L			04/15/22 16:14	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:08	1
Arsenic	0.00782		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:08	1
Barium	0.642		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:08	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:08	1
Boron	0.0960	J	0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:08	1
Cadmium	0.000264		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:08	1
Calcium	180		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:08	1
Chromium	0.00345	J	0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:08	1
Cobalt	0.00346		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:08	1
Iron	17.5		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:08	1
Lead	0.00665		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:08	1
Lithium	0.0572		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:08	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:08	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:08	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	820		50.0	26.0	mg/L			04/14/22 15:41	1

Client: Omaha Public Power District
Job ID: 310-228858-1
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW13
Lab Sample ID: 310-228858-6
Date Collected: 04/11/22 11:38
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.52		5.00	2.25	mg/L			04/15/22 16:29	5
Fluoride	0.340	J	0.500	0.220	mg/L			04/15/22 16:29	5
Sulfate	893		20.0	8.00	mg/L			04/15/22 16:45	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:12	1
Arsenic	0.0813		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:12	1
Barium	0.0837		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:12	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:12	1
Boron	1.89		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:12	1
Cadmium	0.000254		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:12	1
Calcium	171		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:12	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:12	1
Cobalt	0.000563		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:12	1
Iron	14.1		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:12	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:12	1
Lithium	0.0303		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:12	1
Molybdenum	1.15		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:12	1
Selenium	0.0133		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:12	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1460		50.0	26.0	mg/L			04/14/22 15:41	1

Client: Omaha Public Power District
Job ID: 310-228858-1
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW15
Lab Sample ID: 310-228858-7
Date Collected: 04/11/22 13:27
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.91		5.00	2.25	mg/L			04/15/22 17:01	5
Fluoride	<0.220		0.500	0.220	mg/L			04/15/22 17:01	5
Sulfate	589		20.0	8.00	mg/L			04/15/22 17:16	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00183	J	0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:15	1
Arsenic	0.00154	J	0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:15	1
Barium	0.0490		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:15	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:15	1
Boron	3.09		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:15	1
Cadmium	0.0000650	J	0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:15	1
Calcium	226		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:15	1
Chromium	0.00789		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:15	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:15	1
Iron	<0.0360		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:15	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:15	1
Lithium	0.00812	J	0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:15	1
Molybdenum	0.274		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:15	1
Selenium	0.0699		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:15	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	962		50.0	26.0	mg/L			04/14/22 15:41	1

Client: Omaha Public Power District
Job ID: 310-228858-1
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW17
Lab Sample ID: 310-228858-8
Date Collected: 04/11/22 16:05
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.7		20.0	9.00	mg/L			04/15/22 17:47	20
Fluoride	<0.220		0.500	0.220	mg/L			04/15/22 17:32	5
Sulfate	807		20.0	8.00	mg/L			04/15/22 17:47	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:19	1
Arsenic	0.0203		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:19	1
Barium	0.0377		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:19	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:19	1
Boron	0.715		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:19	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:19	1
Calcium	321		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:19	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:19	1
Cobalt	0.00975		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:19	1
Iron	5.84		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:19	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:19	1
Lithium	0.107		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:19	1
Molybdenum	0.00355		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:19	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:19	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1630		50.0	26.0	mg/L			04/14/22 15:41	1

Client Sample ID: MW18
Lab Sample ID: 310-228858-9
Date Collected: 04/11/22 08:53
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.74	J	5.00	2.25	mg/L			04/15/22 18:03	5
Fluoride	0.412	J	0.500	0.220	mg/L			04/15/22 18:03	5
Sulfate	<2.00		5.00	2.00	mg/L			04/15/22 18:03	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:23	1
Arsenic	0.00124	J	0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:23	1
Barium	0.317		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:23	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:23	1
Boron	0.0833	J	0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:23	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:23	1
Calcium	102		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:23	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:23	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:23	1
Iron	4.59		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:23	1
Lead	0.000276	J	0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:23	1
Lithium	0.0279		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:23	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:23	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:23	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	448		50.0	26.0	mg/L			04/14/22 15:41	1

Client Sample ID: MW19
Lab Sample ID: 310-228858-10
Date Collected: 04/11/22 09:36
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.25		5.00	2.25	mg/L			04/15/22 18:19	5
Fluoride	0.390	J	0.500	0.220	mg/L			04/15/22 18:19	5
Sulfate	<2.00		5.00	2.00	mg/L			04/15/22 18:19	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:27	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:27	1
Barium	0.305		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:27	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:27	1
Boron	0.0935	J	0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:27	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:27	1
Calcium	113		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:27	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:27	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:27	1
Iron	1.77		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:27	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:27	1
Lithium	0.0373		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:27	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:27	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:27	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	376		50.0	26.0	mg/L			04/14/22 15:41	1

Client Sample ID: DUP1
Lab Sample ID: 310-228858-11
Date Collected: 04/11/22 00:00
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.0		5.00	2.25	mg/L			04/15/22 19:05	5
Fluoride	<0.220		0.500	0.220	mg/L			04/15/22 19:05	5
Sulfate	811		20.0	8.00	mg/L			04/18/22 08:48	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/27/22 18:31	1
Arsenic	0.0199		0.00200	0.000750	mg/L		04/19/22 09:00	04/27/22 18:31	1
Barium	0.0377		0.00200	0.000880	mg/L		04/19/22 09:00	04/27/22 18:31	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/27/22 18:31	1
Boron	0.682		0.100	0.0580	mg/L		04/19/22 09:00	04/27/22 18:31	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/27/22 18:31	1
Calcium	322		0.500	0.190	mg/L		04/19/22 09:00	04/27/22 18:31	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/27/22 18:31	1
Cobalt	0.00979		0.000500	0.000190	mg/L		04/19/22 09:00	04/27/22 18:31	1
Iron	5.67		0.100	0.0360	mg/L		04/19/22 09:00	04/27/22 18:31	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/27/22 18:31	1
Lithium	0.107		0.0100	0.00250	mg/L		04/19/22 09:00	04/27/22 18:31	1
Molybdenum	0.00202		0.00200	0.00120	mg/L		04/19/22 09:00	04/27/22 18:31	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/27/22 18:31	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/19/22 09:00	04/27/22 18:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1700		50.0	26.0	mg/L			04/14/22 15:41	1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-350247/3
Matrix: Water
Analysis Batch: 350247

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.450		1.00	0.450	mg/L			04/15/22 13:07	1
Fluoride	<0.0440		0.100	0.0440	mg/L			04/15/22 13:07	1
Sulfate	<0.400		1.00	0.400	mg/L			04/15/22 13:07	1

Lab Sample ID: LCS 310-350247/4
Matrix: Water
Analysis Batch: 350247

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.306		mg/L		93	90 - 110
Fluoride	2.00	1.839		mg/L		92	90 - 110
Sulfate	10.0	9.725		mg/L		97	90 - 110

Lab Sample ID: 310-228858-1 MS
Matrix: Water
Analysis Batch: 350247

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	28.7		25.0	51.20		mg/L		90	80 - 120
Fluoride	0.232	J	5.00	4.945		mg/L		94	80 - 120

Lab Sample ID: 310-228858-1 MS
Matrix: Water
Analysis Batch: 350247

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	707		100	790.9	4	mg/L		84	80 - 120

Lab Sample ID: 310-228858-1 MSD
Matrix: Water
Analysis Batch: 350247

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	28.7		25.0	51.12		mg/L		90	80 - 120	0	15
Fluoride	0.232	J	5.00	4.994		mg/L		95	80 - 120	1	15

Lab Sample ID: 310-228858-1 MSD
Matrix: Water
Analysis Batch: 350247

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	707		100	790.2	4	mg/L		83	80 - 120	0	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-350107/1-A
Matrix: Water
Analysis Batch: 351119

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		04/19/22 09:00	04/26/22 15:43	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		04/19/22 09:00	04/26/22 15:43	1
Barium	<0.000880		0.00200	0.000880	mg/L		04/19/22 09:00	04/26/22 15:43	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/19/22 09:00	04/26/22 15:43	1
Boron	<0.0580		0.100	0.0580	mg/L		04/19/22 09:00	04/26/22 15:43	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/19/22 09:00	04/26/22 15:43	1
Calcium	<0.190		0.500	0.190	mg/L		04/19/22 09:00	04/26/22 15:43	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/19/22 09:00	04/26/22 15:43	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/19/22 09:00	04/26/22 15:43	1
Iron	<0.0360		0.100	0.0360	mg/L		04/19/22 09:00	04/26/22 15:43	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/19/22 09:00	04/26/22 15:43	1
Lithium	<0.00250		0.0100	0.00250	mg/L		04/19/22 09:00	04/26/22 15:43	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/19/22 09:00	04/26/22 15:43	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/19/22 09:00	04/26/22 15:43	1
Thallium	0.0003650	J	0.00100	0.000260	mg/L		04/19/22 09:00	04/26/22 15:43	1

Lab Sample ID: LCS 310-350107/2-A
Matrix: Water
Analysis Batch: 351119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2110		mg/L		106	80 - 120
Arsenic	0.200	0.2065		mg/L		103	80 - 120
Barium	0.100	0.1037		mg/L		104	80 - 120
Beryllium	0.100	0.1036		mg/L		104	80 - 120
Boron	0.200	0.2029		mg/L		101	80 - 120
Cadmium	0.100	0.09825		mg/L		98	80 - 120
Calcium	2.00	2.001		mg/L		100	80 - 120
Chromium	0.100	0.1013		mg/L		101	80 - 120
Cobalt	0.100	0.1055		mg/L		106	80 - 120
Iron	0.200	0.2039		mg/L		102	80 - 120
Lead	0.200	0.2106		mg/L		105	80 - 120
Lithium	0.200	0.2099		mg/L		105	80 - 120
Molybdenum	0.200	0.2069		mg/L		103	80 - 120
Selenium	0.400	0.3982		mg/L		100	80 - 120
Thallium	0.200	0.2073		mg/L		104	80 - 120

Lab Sample ID: 310-228858-1 MS
Matrix: Water
Analysis Batch: 351351

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 350107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.000690		0.200	0.2206		mg/L		110	75 - 125
Arsenic	0.237		0.200	0.4669	E	mg/L		115	75 - 125
Barium	0.116		0.100	0.2201		mg/L		104	75 - 125
Beryllium	<0.000270		0.100	0.1139		mg/L		114	75 - 125
Boron	1.44		0.200	1.683	4	mg/L		119	75 - 125
Cadmium	<0.0000550		0.100	0.09916		mg/L		99	75 - 125
Calcium	284		2.00	283.0	4	mg/L		-37	75 - 125

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

Lab Sample ID: 310-228858-1 MS
Matrix: Water
Analysis Batch: 351351

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 350107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	<0.00110		0.100	0.1045		mg/L		104	75 - 125
Cobalt	0.000635		0.100	0.09674		mg/L		96	75 - 125
Iron	39.0		0.200	38.91	4	mg/L		-41	75 - 125
Lead	0.000304	J	0.200	0.1969		mg/L		98	75 - 125
Lithium	0.0513		0.200	0.2621		mg/L		105	75 - 125
Molybdenum	0.00128	J	0.200	0.2101		mg/L		104	75 - 125
Selenium	<0.000960		0.400	0.3955		mg/L		99	75 - 125
Thallium	<0.000260		0.200	0.1920		mg/L		96	75 - 125

Lab Sample ID: 310-228858-1 MSD
Matrix: Water
Analysis Batch: 351351

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 350107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.000690		0.200	0.2209		mg/L		110	75 - 125	0	20
Arsenic	0.237		0.200	0.4606	E	mg/L		112	75 - 125	1	20
Barium	0.116		0.100	0.2210		mg/L		105	75 - 125	0	20
Beryllium	<0.000270		0.100	0.1092		mg/L		109	75 - 125	4	20
Boron	1.44		0.200	1.658	4	mg/L		107	75 - 125	1	20
Cadmium	<0.0000550		0.100	0.1002		mg/L		100	75 - 125	1	20
Calcium	284		2.00	278.4	4	mg/L		-268	75 - 125	2	20
Chromium	<0.00110		0.100	0.1044		mg/L		104	75 - 125	0	20
Cobalt	0.000635		0.100	0.09677		mg/L		96	75 - 125	0	20
Iron	39.0		0.200	38.42	4	mg/L		-286	75 - 125	1	20
Lead	0.000304	J	0.200	0.1979		mg/L		99	75 - 125	1	20
Lithium	0.0513		0.200	0.2543		mg/L		101	75 - 125	3	20
Molybdenum	0.00128	J	0.200	0.2119		mg/L		105	75 - 125	1	20
Selenium	<0.000960		0.400	0.3986		mg/L		100	75 - 125	1	20
Thallium	<0.000260		0.200	0.1898		mg/L		95	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-350501/1-A
Matrix: Water
Analysis Batch: 350701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350501

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		04/20/22 13:43	04/21/22 14:13	1

Lab Sample ID: LCS 310-350501/2-A
Matrix: Water
Analysis Batch: 350701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350501

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001741		mg/L		104	80 - 120

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

Lab Sample ID: MB 310-349905/1
Matrix: Water
Analysis Batch: 349905

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	<26.0		50.0	26.0	mg/L			04/14/22 15:41	1

Lab Sample ID: LCS 310-349905/2
Matrix: Water
Analysis Batch: 349905

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	938.0		mg/L		94	90 - 110

Lab Sample ID: 310-228858-1 DU
Matrix: Water
Analysis Batch: 349905

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1490		1496		mg/L		0.3	20

Lab Sample ID: 310-228858-11 DU
Matrix: Water
Analysis Batch: 349905

Client Sample ID: DUP1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1700		1680		mg/L		1	20

HPLC/IC

Analysis Batch: 350247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	9056A	
310-228858-1	MW2	Total/NA	Water	9056A	
310-228858-2	MW5	Total/NA	Water	9056A	
310-228858-2	MW5	Total/NA	Water	9056A	
310-228858-3	MW6	Total/NA	Water	9056A	
310-228858-4	MW8	Total/NA	Water	9056A	
310-228858-4	MW8	Total/NA	Water	9056A	
310-228858-5	MW9	Total/NA	Water	9056A	
310-228858-6	MW13	Total/NA	Water	9056A	
310-228858-6	MW13	Total/NA	Water	9056A	
310-228858-7	MW15	Total/NA	Water	9056A	
310-228858-7	MW15	Total/NA	Water	9056A	
310-228858-8	MW17	Total/NA	Water	9056A	
310-228858-8	MW17	Total/NA	Water	9056A	
310-228858-9	MW18	Total/NA	Water	9056A	
310-228858-10	MW19	Total/NA	Water	9056A	
310-228858-11	DUP1	Total/NA	Water	9056A	
310-228858-11	DUP1	Total/NA	Water	9056A	
MB 310-350247/3	Method Blank	Total/NA	Water	9056A	
LCS 310-350247/4	Lab Control Sample	Total/NA	Water	9056A	
310-228858-1 MS	MW2	Total/NA	Water	9056A	
310-228858-1 MS	MW2	Total/NA	Water	9056A	
310-228858-1 MSD	MW2	Total/NA	Water	9056A	
310-228858-1 MSD	MW2	Total/NA	Water	9056A	

Metals

Prep Batch: 350107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	3005A	
310-228858-2	MW5	Total/NA	Water	3005A	
310-228858-3	MW6	Total/NA	Water	3005A	
310-228858-4	MW8	Total/NA	Water	3005A	
310-228858-5	MW9	Total/NA	Water	3005A	
310-228858-6	MW13	Total/NA	Water	3005A	
310-228858-7	MW15	Total/NA	Water	3005A	
310-228858-8	MW17	Total/NA	Water	3005A	
310-228858-9	MW18	Total/NA	Water	3005A	
310-228858-10	MW19	Total/NA	Water	3005A	
310-228858-11	DUP1	Total/NA	Water	3005A	
MB 310-350107/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-350107/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-228858-1 MS	MW2	Total/NA	Water	3005A	
310-228858-1 MSD	MW2	Total/NA	Water	3005A	

Prep Batch: 350501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	7470A	
310-228858-2	MW5	Total/NA	Water	7470A	
310-228858-3	MW6	Total/NA	Water	7470A	
310-228858-4	MW8	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 350501 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-5	MW9	Total/NA	Water	7470A	
310-228858-6	MW13	Total/NA	Water	7470A	
310-228858-7	MW15	Total/NA	Water	7470A	
310-228858-8	MW17	Total/NA	Water	7470A	
310-228858-9	MW18	Total/NA	Water	7470A	
310-228858-10	MW19	Total/NA	Water	7470A	
310-228858-11	DUP1	Total/NA	Water	7470A	
MB 310-350501/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-350501/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 350701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	7470A	350501
310-228858-2	MW5	Total/NA	Water	7470A	350501
310-228858-3	MW6	Total/NA	Water	7470A	350501
310-228858-4	MW8	Total/NA	Water	7470A	350501
310-228858-5	MW9	Total/NA	Water	7470A	350501
310-228858-6	MW13	Total/NA	Water	7470A	350501
310-228858-7	MW15	Total/NA	Water	7470A	350501
310-228858-8	MW17	Total/NA	Water	7470A	350501
310-228858-9	MW18	Total/NA	Water	7470A	350501
310-228858-10	MW19	Total/NA	Water	7470A	350501
310-228858-11	DUP1	Total/NA	Water	7470A	350501
MB 310-350501/1-A	Method Blank	Total/NA	Water	7470A	350501
LCS 310-350501/2-A	Lab Control Sample	Total/NA	Water	7470A	350501

Analysis Batch: 351119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-350107/1-A	Method Blank	Total/NA	Water	6020A	350107
LCS 310-350107/2-A	Lab Control Sample	Total/NA	Water	6020A	350107

Analysis Batch: 351351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	6020A	350107
310-228858-2	MW5	Total/NA	Water	6020A	350107
310-228858-3	MW6	Total/NA	Water	6020A	350107
310-228858-4	MW8	Total/NA	Water	6020A	350107
310-228858-5	MW9	Total/NA	Water	6020A	350107
310-228858-6	MW13	Total/NA	Water	6020A	350107
310-228858-7	MW15	Total/NA	Water	6020A	350107
310-228858-8	MW17	Total/NA	Water	6020A	350107
310-228858-9	MW18	Total/NA	Water	6020A	350107
310-228858-10	MW19	Total/NA	Water	6020A	350107
310-228858-11	DUP1	Total/NA	Water	6020A	350107
310-228858-1 MS	MW2	Total/NA	Water	6020A	350107
310-228858-1 MSD	MW2	Total/NA	Water	6020A	350107

General Chemistry

Analysis Batch: 349905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	SM 2540C	
310-228858-2	MW5	Total/NA	Water	SM 2540C	
310-228858-3	MW6	Total/NA	Water	SM 2540C	
310-228858-4	MW8	Total/NA	Water	SM 2540C	
310-228858-5	MW9	Total/NA	Water	SM 2540C	
310-228858-6	MW13	Total/NA	Water	SM 2540C	
310-228858-7	MW15	Total/NA	Water	SM 2540C	
310-228858-8	MW17	Total/NA	Water	SM 2540C	
310-228858-9	MW18	Total/NA	Water	SM 2540C	
310-228858-10	MW19	Total/NA	Water	SM 2540C	
310-228858-11	DUP1	Total/NA	Water	SM 2540C	
MB 310-349905/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-349905/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-228858-1 DU	MW2	Total/NA	Water	SM 2540C	
310-228858-11 DU	DUP1	Total/NA	Water	SM 2540C	

Client Sample ID: MW2
Lab Sample ID: 310-228858-1
Date Collected: 04/11/22 12:43
Matrix: Water
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 13:38	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 22:13	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 17:29	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:32	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW5
Lab Sample ID: 310-228858-2
Date Collected: 04/11/22 17:18
Matrix: Water
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 14:25	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 14:40	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		4	351351	04/27/22 17:41	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:39	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW6
Lab Sample ID: 310-228858-3
Date Collected: 04/11/22 14:21
Matrix: Water
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 14:56	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:00	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:41	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW8
Lab Sample ID: 310-228858-4
Date Collected: 04/11/22 15:15
Matrix: Water
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 15:12	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 15:58	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:04	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:43	EAM	TAL CF

Client Sample ID: MW8 — **Lab Sample ID: 310-228858-4**
Date Collected: 04/11/22 15:15 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW9 — **Lab Sample ID: 310-228858-5**
Date Collected: 04/11/22 10:28 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 16:14	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:08	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:45	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW13 — **Lab Sample ID: 310-228858-6**
Date Collected: 04/11/22 11:38 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 16:29	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 16:45	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:12	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:47	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW15 — **Lab Sample ID: 310-228858-7**
Date Collected: 04/11/22 13:27 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 17:01	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 17:16	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:15	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:49	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW17 — **Lab Sample ID: 310-228858-8**
Date Collected: 04/11/22 16:05 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 17:32	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/15/22 17:47	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:19	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:52	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW18 — **Lab Sample ID: 310-228858-9**
Date Collected: 04/11/22 08:53 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 18:03	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:23	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:54	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: MW19 — **Lab Sample ID: 310-228858-10**
Date Collected: 04/11/22 09:36 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 18:19	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:27	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:56	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Client Sample ID: DUP1 — **Lab Sample ID: 310-228858-11**
Date Collected: 04/11/22 00:00 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	350247	04/15/22 19:05	JNR	TAL CF
Total/NA	Analysis	9056A		20	350247	04/18/22 08:48	JNR	TAL CF
Total/NA	Prep	3005A			350107	04/19/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	351351	04/27/22 18:31	SAP	TAL CF
Total/NA	Prep	7470A			350501	04/20/22 13:43	EAM	TAL CF
Total/NA	Analysis	7470A		1	350701	04/21/22 14:58	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349905	04/14/22 15:41	TGF	TAL CF

Laboratory References:
TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Laboratory: Eurofins Cedar Falls
All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-22
Georgia	State	IA100001 (OR)	09-29-22
Illinois	NELAP	200024	11-29-22
Iowa	State	007	12-01-21 *
Kansas	NELAP	E-10341	01-31-23
Minnesota	NELAP	019-999-319	12-31-22
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-22
Oregon	NELAP	IA100001	09-29-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-1

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

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 CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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Cooler/Sample Receipt and Temperature Log Form

310-228858 Chain of Custody

Client Information

Client: Omaha Public Power District | City/State: Omaha, NE | Project:

Receipt Information

Date/Time Received: Date 4-12-22 Time 1048 | Received By: HED

Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No — If yes: Cooler ID:

Multiple Coolers? ☒ Yes ☐ No — If yes: Cooler # 1 of 3

Cooler Custody Seals Present? ☐ Yes ☒ No — If yes: Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No — If yes: Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No — If yes: Which VOA samples are in cooler? 1

Temperature Record

Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other_____ ☐ NONE

Thermometer ID: N — Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.1 — Corrected Temp (°C): 2.1

• Sample Container Temperature

Container(s) used: CONTAINER 1 — CONTAINER 2

Uncorrected Temp (°C):

Corrected Temp (°C):

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No

a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperatures is >0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

Notify PM if yes is noticed PM before proceeding. If no, proceed with login

Additional Comments

MW-2, MW-3, MW-15, MW-16, MW-17

Document: CEDI-F-SAM-FRM-SS21
Revision: 26
Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

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Cooler/Sample Receipt and Temperature Log Form

Place COC scanning label here

Client Information

Client: [illegible] | City/State: [illegible] | Project:

Receipt Information

Date/Time Received: Date 4-12-22 Time 1048 | Received By: HED

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No — If yes: Cooler ID:

Multiple Coolers? ☐ Yes ☐ No — If yes: Cooler # 2 of 3

Cooler Custody Seals Present? ☐ Yes ☐ No — If yes: Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☐ No — If yes: Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No — If yes: Which VOA samples are in cooler? 1

Temperature Record

Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other_____ ☐ NONE

Thermometer ID: N — Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.2 — Corrected Temp (°C): 3.2

• Sample Container Temperature

Container(s) used: CONTAINER 1 — CONTAINER 2

Uncorrected Temp (°C):

Corrected Temp (°C):

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No

a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperatures is >0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

Notify PM if yes is noticed PM before proceeding. If no, proceed with login

Additional Comments

DUP-1

Document: CEDI-F-SAM-FRM-SS21
Revision: 26
Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

eurofins | Environment Testing America

Cooler/Sample Receipt and Temperature Log Form

Place COC scanning label here

Client Information

Client: [illegible] | City/State: [illegible] | Project:

Receipt Information

Date/Time Received: Date 4-12-22 Time 1048 | Received By: HED

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No — If yes: Cooler ID:

Multiple Coolers? ☐ Yes ☐ No — If yes: Cooler # 3 of 3

Cooler Custody Seals Present? ☐ Yes ☐ No — If yes: Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☐ No — If yes: Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No — If yes: Which VOA samples are in cooler? 1

Temperature Record

Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other_____ ☐ NONE

Thermometer ID: N — Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.2 — Corrected Temp (°C): 3.2

• Sample Container Temperature

Container(s) used: CONTAINER 1 — CONTAINER 2

Uncorrected Temp (°C):

Corrected Temp (°C):

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No

a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperatures is >0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

Notify PM if yes is noticed PM before proceeding. If no, proceed with login

Additional Comments

Document: CEDI-F-SAM-FRM-SS21
Revision: 26
Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

eurofins | Environment Testing America

Cooler/Sample Receipt and Temperature Log Form

Place COC scanning label here

Client Information

Client: [illegible] | City/State: [illegible] | Project:

Receipt Information

Date/Time Received: Date 4-12-22 Time 1048 | Received By: HED

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No — If yes: Cooler ID:

Multiple Coolers? ☒ Yes ☐ No — If yes: Cooler # 2 of 3

Cooler Custody Seals Present? ☐ Yes ☒ No — If yes: Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No — If yes: Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No — If yes: Which VOA samples are in cooler? 1

Temperature Record

Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other_____ ☐ NONE

Thermometer ID: N — Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.1 — Corrected Temp (°C): 1.1

• Sample Container Temperature

Container(s) used: CONTAINER 1 — CONTAINER 2

Uncorrected Temp (°C):

Corrected Temp (°C):

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No

a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperatures is >0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

Notify PM if yes is noticed PM before proceeding. If no, proceed with login

Additional Comments

MW-2, MW-3, MW-15, MW-16, MW-17

Document: CEDI-F-SAM-FRM-SS21
Revision: 26
Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica Omaha SC 268 TestAmerica

Client Information	Sampler: Kyle K. Uhing	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Kyle Uhing	Phone: (531) 226-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District		Analysis Requested		Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			Preservation Codes: A HCL M Hexane; B NaOH N None; C Zn Acetate O AsNaO2; D Nitric Acid P Na2O4S; E NaHSO4 Q Na2SO3; F MeOH R Na2S2O3; G Amchlor S H2SO4; H Ascorbic Acid T TSP Dodecahydrate; I Ice U Acetone; J DI Water V MCAA; K EDTA W pH 4-5; L EDA Z other (specify); Other:
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247	PO #:			
Phone: (531) 226-2515	WO #:			
Email: kluhing@oppd.com				
Project Name: North Omaha Station Landfill	TestAmerica Project #: 310O7560			
Site: North Omaha Station	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	X	
MW2	4/11/22	1243	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW5	4/11/22	1318	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW6	4/11/22	1420	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW8	4/11/22	1515	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW9	4/11/22	1128	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW13	4/11/22	1133	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW15	4/11/22	1327	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW17	4/11/22	1205	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW18	4/11/22	0953	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
MW19	4/11/22	0926	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron
DUP1	4/11/22	–	G	W	N	X X X	4	CCR Appendix III and IV Constituents, Iron

Possible Hazard Identification: Non-Hazard, Flammable, Skin Irritant, Poison B, Unknown, Radiological

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 4/12/22 0800	Company: OPPD	Received by:	Date/Time: 4/12/22 0730	Company: Eurofins
Relinquished by:	Date/Time: 4-12-22 0800	Company: OPPD	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4-12-22 1648	Company

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

Login Sample Receipt Checklist

Client: Omaha Public Power District — Job Number: 310-228858-1

Login Number: 228858 — **List Source: Eurofins Cedar Falls**
List Number: 1
Creator: Hayes, Shawn M

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

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ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-228858-2
Client Project/Site: North Omaha Station CCR/Landfill

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Kyle Uhing

Authorized for release by:
5/19/2022 10:09:00 AM

Shawn Hayes, Senior Project Manager
(319)229-8211
Shawn.Hayes@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Laboratory Job ID: 310-228858-2

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-2

Job ID: 310-228858-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-228858-2

Comments
No additional comments.

Receipt
The samples were received on 4/12/2022 4:48 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.1° C, 2.6° C and 3.2° C.

RAD
Method 9320: Radium-228 Batch 560490
The detection goal was not met for the following sample. Sample was prepped at a reduced volume due to the presence of matrix interferences: MW9 (310-228858-5). Analytical results are reported with the detection limit achieved.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228858-1	MW2	Water	04/11/22 12:43	04/12/22 16:48
310-228858-2	MW5	Water	04/11/22 17:18	04/12/22 16:48
310-228858-3	MW6	Water	04/11/22 14:21	04/12/22 16:48
310-228858-4	MW8	Water	04/11/22 15:15	04/12/22 16:48
310-228858-5	MW9	Water	04/11/22 10:28	04/12/22 16:48
310-228858-6	MW13	Water	04/11/22 11:38	04/12/22 16:48
310-228858-7	MW15	Water	04/11/22 13:27	04/12/22 16:48
310-228858-8	MW17	Water	04/11/22 16:05	04/12/22 16:48
310-228858-9	MW18	Water	04/11/22 08:53	04/12/22 16:48
310-228858-10	MW19	Water	04/11/22 09:36	04/12/22 16:48
310-228858-11	DUP1	Water	04/11/22 00:00	04/12/22 16:48

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-2

Client Sample ID: MW2 — **Lab Sample ID: 310-228858-1**
Date Collected: 04/11/22 12:43 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.182		0.115	0.116	1.00	0.158	pCi/L	04/15/22 10:11	05/17/22 21:11	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.4		40 - 110	04/15/22 10:11	05/17/22 21:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0155	U	0.239	0.239	1.00	0.442	pCi/L	04/15/22 10:55	05/06/22 12:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.4		40 - 110	04/15/22 10:55	05/06/22 12:43	1
Y Carrier	87.1		40 - 110	04/15/22 10:55	05/06/22 12:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.167	U	0.265	0.266	5.00	0.442	pCi/L		05/18/22 21:51	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-2

Client Sample ID: MW5 — **Lab Sample ID: 310-228858-2**
Date Collected: 04/11/22 17:18 — **Matrix: Water**
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0512	U	0.109	0.109	1.00	0.193	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0788	U	0.273	0.273	1.00	0.485	pCi/L	04/15/22 10:55	05/06/22 12:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110	04/15/22 10:55	05/06/22 12:43	1
Y Carrier	83.7		40 - 110	04/15/22 10:55	05/06/22 12:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.130	U	0.294	0.294	5.00	0.485	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW6
Lab Sample ID: 310-228858-3
Date Collected: 04/11/22 14:21
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.386		0.158	0.162	1.00	0.177	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	75.4		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.35		0.470	0.486	1.00	0.629	pCi/L	04/15/22 10:55	05/06/22 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	75.4		40 - 110	04/15/22 10:55	05/06/22 12:45	1
Y Carrier	86.0		40 - 110	04/15/22 10:55	05/06/22 12:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.73		0.496	0.512	5.00	0.629	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW8
Lab Sample ID: 310-228858-4
Date Collected: 04/11/22 15:15
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.166	U	0.140	0.141	1.00	0.212	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	73.4		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.340	U	0.392	0.393	1.00	0.645	pCi/L	04/15/22 10:55	05/06/22 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	73.4		40 - 110	04/15/22 10:55	05/06/22 12:45	1
Y Carrier	83.7		40 - 110	04/15/22 10:55	05/06/22 12:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.506	U	0.416	0.418	5.00	0.645	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW9
Lab Sample ID: 310-228858-5
Date Collected: 04/11/22 10:28
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.897		0.401	0.409	1.00	0.473	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.903	U G	1.01	1.01	1.00	1.66	pCi/L	04/15/22 10:55	05/06/22 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110	04/15/22 10:55	05/06/22 12:45	1
Y Carrier	84.1		40 - 110	04/15/22 10:55	05/06/22 12:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.80		1.09	1.09	5.00	1.66	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW13
Lab Sample ID: 310-228858-6
Date Collected: 04/11/22 11:38
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.120	U	0.116	0.116	1.00	0.182	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.651		0.394	0.399	1.00	0.598	pCi/L	04/15/22 10:55	05/06/22 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110	04/15/22 10:55	05/06/22 12:45	1
Y Carrier	84.9		40 - 110	04/15/22 10:55	05/06/22 12:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.770		0.411	0.416	5.00	0.598	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW15
Lab Sample ID: 310-228858-7
Date Collected: 04/11/22 13:27
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105	U	0.0957	0.0961	1.00	0.150	pCi/L	04/15/22 10:11	05/17/22 21:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110	04/15/22 10:11	05/17/22 21:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0834	U	0.212	0.212	1.00	0.368	pCi/L	04/15/22 10:55	05/06/22 12:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110	04/15/22 10:55	05/06/22 12:46	1
Y Carrier	86.7		40 - 110	04/15/22 10:55	05/06/22 12:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.189	U	0.233	0.233	5.00	0.368	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW17
Lab Sample ID: 310-228858-8
Date Collected: 04/11/22 16:05
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.133		0.0893	0.0901	1.00	0.128	pCi/L	04/15/22 10:11	05/17/22 22:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110	04/15/22 10:11	05/17/22 22:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.421		0.255	0.258	1.00	0.387	pCi/L	04/15/22 10:55	05/06/22 12:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110	04/15/22 10:55	05/06/22 12:46	1
Y Carrier	86.7		40 - 110	04/15/22 10:55	05/06/22 12:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.554		0.270	0.273	5.00	0.387	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW18
Lab Sample ID: 310-228858-9
Date Collected: 04/11/22 08:53
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.604		0.167	0.176	1.00	0.148	pCi/L	04/15/22 10:11	05/17/22 22:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.1		40 - 110	04/15/22 10:11	05/17/22 22:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.172	U	0.303	0.304	1.00	0.515	pCi/L	04/15/22 10:55	05/06/22 12:47	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.1		40 - 110	04/15/22 10:55	05/06/22 12:47	1
Y Carrier	83.4		40 - 110	04/15/22 10:55	05/06/22 12:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.776		0.346	0.351	5.00	0.515	pCi/L		05/18/22 21:51	1

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: MW19
Lab Sample ID: 310-228858-10
Date Collected: 04/11/22 09:36
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.509		0.172	0.178	1.00	0.182	pCi/L	04/15/22 10:11	05/17/22 22:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110	04/15/22 10:11	05/17/22 22:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.720		0.375	0.380	1.00	0.558	pCi/L	04/15/22 10:55	05/06/22 12:47	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110	04/15/22 10:55	05/06/22 12:47	1
Y Carrier	89.7		40 - 110	04/15/22 10:55	05/06/22 12:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.23		0.413	0.420	5.00	0.558	pCi/L		05/18/22 21:51	1

Client Sample Results

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Client Sample ID: DUP1
Lab Sample ID: 310-228858-11
Date Collected: 04/11/22 00:00
Matrix: Water
Date Received: 04/12/22 16:48

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0600	U	0.0717	0.0719	1.00	0.118	pCi/L	04/15/22 10:11	05/17/22 22:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110	04/15/22 10:11	05/17/22 22:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.417	U	0.308	0.310	1.00	0.485	pCi/L	04/15/22 10:55	05/06/22 12:47	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110	04/15/22 10:55	05/06/22 12:47	1
Y Carrier	89.0		40 - 110	04/15/22 10:55	05/06/22 12:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.477	U	0.316	0.318	5.00	0.485	pCi/L		05/18/22 21:51	1

Definitions/Glossary

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

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

QC Sample Results

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-560487/22-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 566379
Prep Batch: 560487

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.007508	U	0.0506	0.0506	1.00	0.0990	pCi/L	04/15/22 10:11	05/18/22 07:03	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	04/15/22 10:11	05/18/22 07:03	1

Lab Sample ID: LCS 160-560487/1-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 566012
Prep Batch: 560487

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.352		0.976	1.00	0.103	pCi/L	82	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.0		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-560490/22-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 564107
Prep Batch: 560490

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1540	U	0.215	0.216	1.00	0.360	pCi/L	04/15/22 10:55	05/06/22 12:47	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	04/15/22 10:55	05/06/22 12:47	1
Y Carrier	87.5		40 - 110	04/15/22 10:55	05/06/22 12:47	1

Lab Sample ID: LCS 160-560490/1-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 564085
Prep Batch: 560490

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.65	9.752		1.13	1.00	0.364	pCi/L	113	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.0		40 - 110
Y Carrier	81.9		40 - 110

QC Association Summary

Client: Omaha Public Power District
Job ID: 310-228858-2
Project/Site: North Omaha Station CCR/Landfill

Rad

Prep Batch: 560487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	PrecSep-21	
310-228858-2	MW5	Total/NA	Water	PrecSep-21	
310-228858-3	MW6	Total/NA	Water	PrecSep-21	
310-228858-4	MW8	Total/NA	Water	PrecSep-21	
310-228858-5	MW9	Total/NA	Water	PrecSep-21	
310-228858-6	MW13	Total/NA	Water	PrecSep-21	
310-228858-7	MW15	Total/NA	Water	PrecSep-21	
310-228858-8	MW17	Total/NA	Water	PrecSep-21	
310-228858-9	MW18	Total/NA	Water	PrecSep-21	
310-228858-10	MW19	Total/NA	Water	PrecSep-21	
310-228858-11	DUP1	Total/NA	Water	PrecSep-21	
MB 160-560487/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-560487/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 560490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228858-1	MW2	Total/NA	Water	PrecSep_0	
310-228858-2	MW5	Total/NA	Water	PrecSep_0	
310-228858-3	MW6	Total/NA	Water	PrecSep_0	
310-228858-4	MW8	Total/NA	Water	PrecSep_0	
310-228858-5	MW9	Total/NA	Water	PrecSep_0	
310-228858-6	MW13	Total/NA	Water	PrecSep_0	
310-228858-7	MW15	Total/NA	Water	PrecSep_0	
310-228858-8	MW17	Total/NA	Water	PrecSep_0	
310-228858-9	MW18	Total/NA	Water	PrecSep_0	
310-228858-10	MW19	Total/NA	Water	PrecSep_0	
310-228858-11	DUP1	Total/NA	Water	PrecSep_0	
MB 160-560490/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-560490/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Sample ID: MW2 — **Lab Sample ID: 310-228858-1**
Date Collected: 04/11/22 12:43 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566011	05/17/22 21:11	CLP	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564085	05/06/22 12:43	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW5 — **Lab Sample ID: 310-228858-2**
Date Collected: 04/11/22 17:18 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564085	05/06/22 12:43	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW6 — **Lab Sample ID: 310-228858-3**
Date Collected: 04/11/22 14:21 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW8 — **Lab Sample ID: 310-228858-4**
Date Collected: 04/11/22 15:15 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW9 — **Lab Sample ID: 310-228858-5**
Date Collected: 04/11/22 10:28 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW13 — **Lab Sample ID: 310-228858-6**
Date Collected: 04/11/22 11:38 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW15 — **Lab Sample ID: 310-228858-7**
Date Collected: 04/11/22 13:27 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 21:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:46	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW17 — **Lab Sample ID: 310-228858-8**
Date Collected: 04/11/22 16:05 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 22:56	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:46	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW18 — **Lab Sample ID: 310-228858-9**
Date Collected: 04/11/22 08:53 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 22:56	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: MW19 — **Lab Sample ID: 310-228858-10**
Date Collected: 04/11/22 09:36 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 22:56	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

Client Sample ID: DUP1 — **Lab Sample ID: 310-228858-11**
Date Collected: 04/11/22 00:00 — **Matrix: Water**
Date Received: 04/12/22 16:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			560487	04/15/22 10:11	LPS	TAL SL
Total/NA	Analysis	9315		1	566012	05/17/22 22:56	FLC	TAL SL
Total/NA	Prep	PrecSep_0			560490	04/15/22 10:55	LPS	TAL SL
Total/NA	Analysis	9320		1	564107	05/06/22 12:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	566397	05/18/22 21:51	SCB	TAL SL

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

Laboratory: Eurofins St. Louis
All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

Method Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR/Landfill

Job ID: 310-228858-2

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

Protocol References:

None = None

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

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

Laboratory References:

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

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica Omaha SC 268

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Kyle K. Uhing	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Kyle Uhing	Phone: (531) 226-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:

Analysis Requested

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:	Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA
City: Omaha	TAT Requested (days):	M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: NE, 68102-2247		
Phone: (531) 226-2615	PO #:	
Email: kkuhing@oppd.com	WO #:	
Project Name: North Omaha Station CCR	TestAmerica Project #: 31007560	
Site: North Omaha Station	SSOW#:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010A/6020, 6020 Ra226, Combined Ra226 and Ra228	Total 6020A (CCR Appendix III and IV) Fluoride, Sulfide	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW2	4/11/22	13:45	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW5	4/11/22	17:18	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW6	4/11/22	15:15	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW8	4/11/22	10:28	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW9	4/11/22	11:38	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW13	4/11/22	13:27	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW15	4/11/22	08:53	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW17	4/11/22	09:40	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW18	4/11/22	12:43	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
MW19	4/11/22	08:35	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents
DUP1	4/11/22	–	G	W	N		X	X	X	4	CCR Appendix III and IV Constituents

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Kyle K. Uhing	Date/Time: 4-12-22 0733	Company: OPPD	Received by: Company: FedEx
Relinquished by:	Date/Time: 4-12-22 0800	Company: FedEx	Received by: Company:
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: 4-12-22 1648 Company:

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

Cooler Temperature(s) °C and Other Remarks:

5/19/2022

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No: 310-46599.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Shawn.Hayes@et.eurofinsus.com	State of Origin: Nebraska	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 310-228858-2

Analysis Requested

Address: 13715 River Trail North, .	Due Date Requested: 5/17/2022	Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: Earth City	TAT Requested (days):	
State, Zip: MO, 63045		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	
Email:	WO #:	
Project Name: North Omaha Station CCR/Landfill	Project #: 31007560	
Site:	SSOW#:	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_RA228Prep/Prep_21 Standard Target List	9320_RA228Prep/Prep_0 Standard Target List	RA228Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW2 (310-228858-1)	4/11/22	12:45 Central	G	Water			X	X	X	2	
MW5 (310-228858-2)	4/11/22	17:18 Central	G	Water			X	X	X	2	
MW6 (310-228858-3)	4/11/22	15:15 Central	G	Water			X	X	X	2	
MW8 (310-228858-4)	4/11/22	10:28 Central	G	Water			X	X	X	2	
MW9 (310-228858-5)	4/11/22	11:38 Central	G	Water			X	X	X	2	
MW13 (310-228858-6)	4/11/22	13:27 Central	G	Water			X	X	X	2	
MW15 (310-228858-7)	4/11/22	08:53 Central	G	Water			X	X	X	2	
MW17 (310-228858-8)	4/11/22	09:40 Central	G	Water			X	X	X	2	
MW18 (310-228858-9)	4/11/22	12:43 Central	G	Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify) | Primary Deliverable Rank: 2 | Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 4/12/22 1740	Company:	Received by: FED EX Company:	Date/time: Company:
Relinquished by: FED EX	Date/Time:	Company:	Received by: Company:	Date/Time: Company:
Relinquished by:	Date/Time:	Company:	Received by: Company:	Date/Time: APR 14 2022 0830 Company: EFIRST

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

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/19/2022

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No: 310-46599.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Shawn.Hayes@et.eurofinsus.com	State of Origin: Nebraska	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 310-228858-2

Analysis Requested

Address: 13715 River Trail North, .	Due Date Requested: 5/17/2022	Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: Earth City	TAT Requested (days):	
State, Zip: MO, 63045		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	
Email:	WO #:	
Project Name: North Omaha Station CCR/Landfill	Project #: 31007560	
Site:	SSOW#:	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_RA228Prep/Prep_21 Standard Target List	9320_RA228Prep/Prep_0 Standard Target List	RA228Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW19 (310-228858-10)	4/11/22	08:35 Central	G	Water			X	X	X	2	
DUP1 (310-228858-11)	4/11/22		G	Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify) | Primary Deliverable Rank: 2 | Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 4/12/22 1740	Company:	Received by: FED EX Company:	Date/time: Company:
Relinquished by: FED EX	Date/Time:	Company:	Received by: Company:	Date/Time: Company:
Relinquished by:	Date/Time:	Company:	Received by: Company:	Date/Time: APR 14 2022 0830 Company: EFIRST

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

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/19/2022

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228858-2

Login Number: 228858
List Number: 1
Creator: Hayes, Shawn M

List Source: Eurofins Cedar Falls

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

Eurofins Cedar Falls

5/19/2022

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228858-2

Login Number: 228858
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 04/14/22 01:05 PM

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

Tracer/Carrier Summary

Client: Omaha Public Power District

Job ID: 310-228858-2

Project/Site: North Omaha Station CCR/Landfill

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**Ba (40-110)**
310-228858-1	MW2	87.4
310-228858-2	MW5	78.8
310-228858-3	MW6	75.4
310-228858-4	MW8	73.4
310-228858-5	MW9	81.5
310-228858-6	MW13	81.5
310-228858-7	MW15	91.6
310-228858-8	MW17	91.6
310-228858-9	MW18	95.1
310-228858-10	MW19	89.7
310-228858-11	DUP1	84.2
LCS 160-560487/1-A	Lab Control Sample	99.0
MB 160-560487/22-A	Method Blank	101

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	**Client Sample ID**	**Ba (40-110)**	**Y (40-110)**
310-228858-1	MW2	87.4	87.1
310-228858-2	MW5	78.8	83.7
310-228858-3	MW6	75.4	86.0
310-228858-4	MW8	73.4	83.7
310-228858-5	MW9	81.5	84.1
310-228858-6	MW13	81.5	84.9
310-228858-7	MW15	91.6	86.7
310-228858-8	MW17	91.6	86.7
310-228858-9	MW18	95.1	83.4
310-228858-10	MW19	89.7	89.7
310-228858-11	DUP1	84.2	89.0
LCS 160-560490/1-A	Lab Control Sample	99.0	81.9
MB 160-560490/22-A	Method Blank	101	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-241864-1
Client Project/Site: North Omaha Station CCR
Revision: 1

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Kyle Uhing

Authorized for release by:
10/27/2022 10:11:14 AM

Shirley Thompson, Client Service Manager
(319)277-2401
Shirley.Thompson@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Table of Contents

Case Narrative

Job ID: 310-241864-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241864-1

Comments
Results reported per the client requested CCR rule compound list.

Receipt
The samples were received on 10/7/2022 5:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2° C, 1.4° C and 1.8° C.

HPLC/IC
Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW2 (310-241864-1), MW8 (310-241864-4), MW9 (310-241864-5), MW13 (310-241864-6), MW15 (310-241864-7), MW18 (310-241864-9) and MW19 (310-241864-10). Elevated reporting limits (RLs) are provided.

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

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

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

Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241864-1	MW2	Water	10/05/22 12:47	10/07/22 17:15
310-241864-2	MW5	Water	10/05/22 18:24	10/07/22 17:15
310-241864-3	MW6	Water	10/05/22 14:59	10/07/22 17:15
310-241864-4	MW8	Water	10/05/22 16:02	10/07/22 17:15
310-241864-5	MW9	Water	10/05/22 10:49	10/07/22 17:15
310-241864-6	MW13	Water	10/05/22 11:42	10/07/22 17:15
310-241864-7	MW15	Water	10/05/22 12:42	10/07/22 17:15
310-241864-8	MW17	Water	10/05/22 17:10	10/07/22 17:15
310-241864-9	MW18	Water	10/05/22 08:52	10/07/22 17:15
310-241864-10	MW19	Water	10/05/22 09:39	10/07/22 17:15
310-241864-11	DUP-1	Water	10/05/22 00:00	10/07/22 17:15

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW2 — Lab Sample ID: 310-241864-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32.9		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	354		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.163		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.105		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.863		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	226		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000379	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0433		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00123	J	0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1230		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-241864-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34.2		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.516		0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	1010		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0637		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0483		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.580		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	391		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000450	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0794		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00189	J	0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	2160		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-241864-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	330		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.637		0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	235		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0128		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.147		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.620		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000152		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	300		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00594		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.000533		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0465		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0633		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1360		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW8 — Lab Sample ID: 310-241864-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.8		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.266	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	496		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0111		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0802		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	2.30		0.100	0.0580	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW8 (Continued) — Lab Sample ID: 310-241864-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	140		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000497	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0126		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0982		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	916		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-241864-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	157		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.274	J	0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	30.4		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.00307		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.556		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.160		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	158		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000579		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.00136		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0515		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	774		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-241864-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.09		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	840		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0558		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0768		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	1.50		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000278		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	157		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000755		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0299		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	1.30		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0220		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1460		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW15 — Lab Sample ID: 310-241864-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.17		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	468		5.00	2.00	mg/L	5		9056A	Total/NA
Antimony	0.00153	J	0.00200	0.000690	mg/L	1		6020A	Total/NA
Arsenic	0.00227		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0584		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	2.82		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	229		0.500	0.190	mg/L	1		6020A	Total/NA
Chromium	0.00386	J	0.00500	0.00110	mg/L	1		6020A	Total/NA
Lithium	0.0118		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.197		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0830		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1010		50.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW17 — Lab Sample ID: 310-241864-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36.2		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.640		0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	787		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0405		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0413		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.629		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	333		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.0108		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.103		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00214		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1870		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW18 — Lab Sample ID: 310-241864-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.86	J	5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.00125	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.266		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.0884	J	0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	87.4		0.500	0.190	mg/L	1		6020A	Total/NA
Lead	0.000323	J	0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0231		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	378		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW19 — Lab Sample ID: 310-241864-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	35.6		5.00	2.00	mg/L	5		9056A	Total/NA
Barium	0.392		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.110		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	115		0.500	0.190	mg/L	1		6020A	Total/NA
Lithium	0.0355		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	494		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1 — Lab Sample ID: 310-241864-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	35.2		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.749		0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	756		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0408		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0433		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.638		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	339		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.0110		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.106		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00210		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1890		50.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW2 — Lab Sample ID: 310-241864-1

Date Collected: 10/05/22 12:47
Date Received: 10/07/22 17:15

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.9		5.00	2.25	mg/L			10/24/22 16:40	5
Fluoride	<0.220		0.500	0.220	mg/L			10/24/22 16:40	5
Sulfate	354		5.00	2.00	mg/L			10/24/22 16:40	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:14	1
Arsenic	0.163		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:14	1
Barium	0.105		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:14	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:14	1
Boron	0.863		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:14	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:14	1
Calcium	226		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:14	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:14	1
Cobalt	0.000379	J	0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:14	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:14	1
Lithium	0.0433		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:14	1
Molybdenum	0.00123	J	0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:14	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:14	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:14	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1230		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW5
Lab Sample ID: 310-241864-2
Date Collected: 10/05/22 18:24
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.2		5.00	2.25	mg/L			10/25/22 10:19	5
Fluoride	0.516		0.500	0.220	mg/L			10/25/22 10:19	5
Sulfate	1010		20.0	8.00	mg/L			10/25/22 10:06	20

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:18	1
Arsenic	0.0637		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:18	1
Barium	0.0483		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:18	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:18	1
Boron	0.580		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:18	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:18	1
Calcium	391		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:18	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:18	1
Cobalt	0.000450	J	0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:18	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:18	1
Lithium	0.0794		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:18	1
Molybdenum	0.00189	J	0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:18	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:18	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2160		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW6
Lab Sample ID: 310-241864-3
Date Collected: 10/05/22 14:59
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		5.00	2.25	mg/L			10/25/22 10:49	5
Fluoride	0.637		0.500	0.220	mg/L			10/25/22 10:49	5
Sulfate	235		5.00	2.00	mg/L			10/25/22 10:49	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:21	1
Arsenic	0.0128		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:21	1
Barium	0.147		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:21	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:21	1
Boron	0.620		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:21	1
Cadmium	0.000152		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:21	1
Calcium	300		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:21	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:21	1
Cobalt	0.00594		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:21	1
Lead	0.000533		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:21	1
Lithium	0.0465		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:21	1
Molybdenum	0.0633		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:21	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:21	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1360		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW8
Lab Sample ID: 310-241864-4
Date Collected: 10/05/22 16:02
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.8		5.00	2.25	mg/L			10/25/22 11:05	5
Fluoride	0.266	J	0.500	0.220	mg/L			10/25/22 11:05	5
Sulfate	496		5.00	2.00	mg/L			10/25/22 11:05	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:25	1
Arsenic	0.0111		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:25	1
Barium	0.0802		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:25	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:25	1
Boron	2.30		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:25	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:25	1
Calcium	140		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:25	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:25	1
Cobalt	0.000497	J	0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:25	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:25	1
Lithium	0.0126		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:25	1
Molybdenum	0.0982		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:25	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:25	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	916		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW9
Lab Sample ID: 310-241864-5
Date Collected: 10/05/22 10:49
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	157		5.00	2.25	mg/L			10/25/22 11:21	5
Fluoride	0.274	J	0.500	0.220	mg/L			10/25/22 11:21	5
Sulfate	30.4		5.00	2.00	mg/L			10/25/22 11:21	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:28	1
Arsenic	0.00307		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:28	1
Barium	0.556		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:28	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:28	1
Boron	0.160		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:28	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:28	1
Calcium	158		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:28	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:28	1
Cobalt	0.000579		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:28	1
Lead	0.00136		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:28	1
Lithium	0.0515		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:28	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:28	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:28	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:28	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	774		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW13
Lab Sample ID: 310-241864-6
Date Collected: 10/05/22 11:42
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.09		5.00	2.25	mg/L			10/25/22 11:36	5
Fluoride	<0.220		0.500	0.220	mg/L			10/25/22 11:36	5
Sulfate	840		20.0	8.00	mg/L			10/25/22 11:52	20

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:35	1
Arsenic	0.0558		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:35	1
Barium	0.0768		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:35	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:35	1
Boron	1.50		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:35	1
Cadmium	0.000278		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:35	1
Calcium	157		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:35	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:35	1
Cobalt	0.000755		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:35	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:35	1
Lithium	0.0299		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:35	1
Molybdenum	1.30		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:35	1
Selenium	0.0220		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:35	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1460		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW15
Lab Sample ID: 310-241864-7
Date Collected: 10/05/22 12:42
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.17		5.00	2.25	mg/L			10/25/22 12:07	5
Fluoride	<0.220		0.500	0.220	mg/L			10/25/22 12:07	5
Sulfate	468		5.00	2.00	mg/L			10/25/22 12:07	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00153	J	0.00200	0.000690	mg/L		10/11/22 09:15	10/19/22 14:39	1
Arsenic	0.00227		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 14:39	1
Barium	0.0584		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 14:39	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 14:39	1
Boron	2.82		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 14:39	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 14:39	1
Calcium	229		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 14:39	1
Chromium	0.00386	J	0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 14:39	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 14:39	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 14:39	1
Lithium	0.0118		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 14:39	1
Molybdenum	0.197		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 14:39	1
Selenium	0.0830		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 14:39	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 14:39	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1010		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW17
Lab Sample ID: 310-241864-8
Date Collected: 10/05/22 17:10
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.2		5.00	2.25	mg/L			10/25/22 12:23	5
Fluoride	0.640		0.500	0.220	mg/L			10/25/22 12:23	5
Sulfate	787		20.0	8.00	mg/L			10/25/22 12:38	20

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/20/22 18:46	1
Arsenic	0.0405		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 15:07	1
Barium	0.0413		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 15:07	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 15:07	1
Boron	0.629		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 15:07	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 15:07	1
Calcium	333		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 15:07	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 15:07	1
Cobalt	0.0108		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 15:07	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 15:07	1
Lithium	0.103		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 15:07	1
Molybdenum	0.00214		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 15:07	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 15:07	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 15:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1870		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: MW18
Lab Sample ID: 310-241864-9
Date Collected: 10/05/22 08:52
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.86	J	5.00	2.25	mg/L			10/25/22 13:25	5
Fluoride	<0.220		0.500	0.220	mg/L			10/25/22 13:25	5
Sulfate	<2.00		5.00	2.00	mg/L			10/25/22 13:25	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/20/22 18:50	1
Arsenic	0.00125	J	0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 15:11	1
Barium	0.266		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 15:11	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 15:11	1
Boron	0.0884	J	0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 15:11	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 15:11	1
Calcium	87.4		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 15:11	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 15:11	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 15:11	1
Lead	0.000323	J	0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 15:11	1
Lithium	0.0231		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 15:11	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 15:11	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 15:11	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 15:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	378		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample ID: MW19 — **Lab Sample ID: 310-241864-10**
Date Collected: 10/05/22 09:39 — **Matrix: Water**
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.7		5.00	2.25	mg/L			10/25/22 13:41	5
Fluoride	<0.220		0.500	0.220	mg/L			10/25/22 13:41	5
Sulfate	35.6		5.00	2.00	mg/L			10/25/22 13:41	5

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/20/22 18:53	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 15:15	1
Barium	0.392		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 15:15	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 15:15	1
Boron	0.110		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 15:15	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 15:15	1
Calcium	115		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 15:15	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 15:15	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 15:15	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 15:15	1
Lithium	0.0355		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 15:15	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 15:15	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 15:15	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 15:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	494		50.0	26.0	mg/L			10/10/22 15:18	1

Client Sample ID: DUP-1 — **Lab Sample ID: 310-241864-11**
Date Collected: 10/05/22 00:00 — **Matrix: Water**
Date Received: 10/07/22 17:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.2		5.00	2.25	mg/L			10/25/22 13:56	5
Fluoride	0.749		0.500	0.220	mg/L			10/25/22 13:56	5
Sulfate	756		20.0	8.00	mg/L			10/25/22 14:12	20

Method: SW846 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/20/22 18:56	1
Arsenic	0.0408		0.00200	0.000750	mg/L		10/11/22 09:15	10/19/22 15:18	1
Barium	0.0433		0.00200	0.000880	mg/L		10/11/22 09:15	10/19/22 15:18	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/19/22 15:18	1
Boron	0.638		0.100	0.0580	mg/L		10/11/22 09:15	10/19/22 15:18	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/19/22 15:18	1
Calcium	339		0.500	0.190	mg/L		10/11/22 09:15	10/19/22 15:18	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/19/22 15:18	1
Cobalt	0.0110		0.000500	0.000190	mg/L		10/11/22 09:15	10/19/22 15:18	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/19/22 15:18	1
Lithium	0.106		0.0100	0.00250	mg/L		10/11/22 09:15	10/19/22 15:18	1
Molybdenum	0.00210		0.00200	0.00120	mg/L		10/11/22 09:15	10/19/22 15:18	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/19/22 15:18	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/19/22 15:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 16:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1890		50.0	26.0	mg/L			10/10/22 15:18	1

Qualifiers

HPLC/IC

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.

Metals

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

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-369860/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 369860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.450		1.00	0.450	mg/L			10/24/22 13:43	1
Fluoride	<0.0440		0.100	0.0440	mg/L			10/24/22 13:43	1
Sulfate	<0.400		1.00	0.400	mg/L			10/24/22 13:43	1

Lab Sample ID: LCS 310-369860/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 369860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	11.52		mg/L		92	90 - 110
Fluoride	2.50	2.251		mg/L		90	90 - 110
Sulfate	12.5	11.31		mg/L		90	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-368076/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 368472 — **Prep Batch: 368076**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/11/22 09:15	10/12/22 21:11	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		10/11/22 09:15	10/12/22 21:11	1
Barium	<0.000880		0.00200	0.000880	mg/L		10/11/22 09:15	10/12/22 21:11	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/11/22 09:15	10/12/22 21:11	1
Boron	<0.0580		0.100	0.0580	mg/L		10/11/22 09:15	10/12/22 21:11	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/11/22 09:15	10/12/22 21:11	1
Calcium	<0.190		0.500	0.190	mg/L		10/11/22 09:15	10/12/22 21:11	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/11/22 09:15	10/12/22 21:11	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/11/22 09:15	10/12/22 21:11	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/11/22 09:15	10/12/22 21:11	1
Lithium	<0.00250		0.0100	0.00250	mg/L		10/11/22 09:15	10/12/22 21:11	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/11/22 09:15	10/12/22 21:11	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/11/22 09:15	10/12/22 21:11	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/11/22 09:15	10/12/22 21:11	1

Lab Sample ID: LCS 310-368076/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 368472 — **Prep Batch: 368076**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2228		mg/L		111	80 - 120
Arsenic	0.200	0.2131		mg/L		107	80 - 120
Barium	0.100	0.1070		mg/L		107	80 - 120
Beryllium	0.100	0.1094		mg/L		109	80 - 120
Boron	0.200	0.2258		mg/L		113	80 - 120
Cadmium	0.100	0.1049		mg/L		105	80 - 120
Calcium	2.00	2.123		mg/L		106	80 - 120
Chromium	0.100	0.1013		mg/L		101	80 - 120
Cobalt	0.100	0.1020		mg/L		102	80 - 120

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

Lab Sample ID: LCS 310-368076/2-A
Matrix: Water
Analysis Batch: 368472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368076

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lead			0.200	0.2137		mg/L		107	80 - 120		
Lithium			0.200	0.1987		mg/L		99	80 - 120		
Molybdenum			0.200	0.2094		mg/L		105	80 - 120		
Selenium			0.400	0.3882		mg/L		97	80 - 120		
Thallium			0.200	0.2173		mg/L		109	80 - 120		

Lab Sample ID: 310-241864-5 DU
Matrix: Water
Analysis Batch: 369170

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 368076

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Antimony	<0.000690			<0.000690		mg/L				NC	20
Arsenic	0.00307			0.003143		mg/L				2	20
Barium	0.556			0.5696		mg/L				2	20
Beryllium	<0.000270			<0.000270		mg/L				NC	20
Boron	0.160			0.1236	F5	mg/L				25	20
Cadmium	<0.0000550			0.00006700	J	mg/L				NC	20
Calcium	158			156.7		mg/L				0.5	20
Chromium	<0.00110			<0.00110		mg/L				NC	20
Cobalt	0.000579			0.0005980		mg/L				3	20
Lead	0.00136			0.001426		mg/L				5	20
Lithium	0.0515			0.05190		mg/L				0.7	20
Molybdenum	<0.00120			<0.00120		mg/L				NC	20
Selenium	<0.000960			<0.000960		mg/L				NC	20
Thallium	<0.000260			<0.000260		mg/L				NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-368714/1-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368714

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:49	10/17/22 15:58	1

Lab Sample ID: LCS 310-368714/2-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368714

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00167	0.001593		mg/L		96	80 - 120		

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

Lab Sample ID: MB 310-368112/1
Matrix: Water
Analysis Batch: 368112

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	<26.0		50.0	26.0	mg/L			10/10/22 15:18	1

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

Lab Sample ID: LCS 310-368112/2
Matrix: Water
Analysis Batch: 368112

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			1000	962.0		mg/L		96	90 - 110		

Lab Sample ID: 310-241864-2 DU
Matrix: Water
Analysis Batch: 368112

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	2160			2162		mg/L				0.3	20

HPLC/IC

Analysis Batch: 369860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	9056A	
310-241864-2	MW5	Total/NA	Water	9056A	
310-241864-2	MW5	Total/NA	Water	9056A	
310-241864-3	MW6	Total/NA	Water	9056A	
310-241864-4	MW8	Total/NA	Water	9056A	
310-241864-5	MW9	Total/NA	Water	9056A	
310-241864-6	MW13	Total/NA	Water	9056A	
310-241864-6	MW13	Total/NA	Water	9056A	
310-241864-7	MW15	Total/NA	Water	9056A	
310-241864-8	MW17	Total/NA	Water	9056A	
310-241864-8	MW17	Total/NA	Water	9056A	
310-241864-9	MW18	Total/NA	Water	9056A	
310-241864-10	MW19	Total/NA	Water	9056A	
310-241864-11	DUP-1	Total/NA	Water	9056A	
310-241864-11	DUP-1	Total/NA	Water	9056A	
MB 310-369860/3	Method Blank	Total/NA	Water	9056A	
LCS 310-369860/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 368076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	3005A	
310-241864-2	MW5	Total/NA	Water	3005A	
310-241864-3	MW6	Total/NA	Water	3005A	
310-241864-4	MW8	Total/NA	Water	3005A	
310-241864-5	MW9	Total/NA	Water	3005A	
310-241864-6	MW13	Total/NA	Water	3005A	
310-241864-7	MW15	Total/NA	Water	3005A	
310-241864-8	MW17	Total/NA	Water	3005A	
310-241864-9	MW18	Total/NA	Water	3005A	
310-241864-10	MW19	Total/NA	Water	3005A	
310-241864-11	DUP-1	Total/NA	Water	3005A	
MB 310-368076/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-368076/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-241864-5 DU	MW9	Total/NA	Water	3005A	

Analysis Batch: 368472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-368076/1-A	Method Blank	Total/NA	Water	6020A	368076
LCS 310-368076/2-A	Lab Control Sample	Total/NA	Water	6020A	368076

Prep Batch: 368714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	7470A	
310-241864-2	MW5	Total/NA	Water	7470A	
310-241864-3	MW6	Total/NA	Water	7470A	
310-241864-4	MW8	Total/NA	Water	7470A	
310-241864-5	MW9	Total/NA	Water	7470A	
310-241864-6	MW13	Total/NA	Water	7470A	
310-241864-7	MW15	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 368714 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-8	MW17	Total/NA	Water	7470A	
310-241864-9	MW18	Total/NA	Water	7470A	
310-241864-10	MW19	Total/NA	Water	7470A	
310-241864-11	DUP-1	Total/NA	Water	7470A	
MB 310-368714/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-368714/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 368887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	7470A	368714
310-241864-2	MW5	Total/NA	Water	7470A	368714
310-241864-3	MW6	Total/NA	Water	7470A	368714
310-241864-4	MW8	Total/NA	Water	7470A	368714
310-241864-5	MW9	Total/NA	Water	7470A	368714
310-241864-6	MW13	Total/NA	Water	7470A	368714
310-241864-7	MW15	Total/NA	Water	7470A	368714
310-241864-8	MW17	Total/NA	Water	7470A	368714
310-241864-9	MW18	Total/NA	Water	7470A	368714
310-241864-10	MW19	Total/NA	Water	7470A	368714
310-241864-11	DUP-1	Total/NA	Water	7470A	368714
MB 310-368714/1-A	Method Blank	Total/NA	Water	7470A	368714
LCS 310-368714/2-A	Lab Control Sample	Total/NA	Water	7470A	368714

Analysis Batch: 369170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	6020A	368076
310-241864-2	MW5	Total/NA	Water	6020A	368076
310-241864-3	MW6	Total/NA	Water	6020A	368076
310-241864-4	MW8	Total/NA	Water	6020A	368076
310-241864-5	MW9	Total/NA	Water	6020A	368076
310-241864-6	MW13	Total/NA	Water	6020A	368076
310-241864-7	MW15	Total/NA	Water	6020A	368076
310-241864-8	MW17	Total/NA	Water	6020A	368076
310-241864-9	MW18	Total/NA	Water	6020A	368076
310-241864-10	MW19	Total/NA	Water	6020A	368076
310-241864-11	DUP-1	Total/NA	Water	6020A	368076
310-241864-5 DU	MW9	Total/NA	Water	6020A	368076

Analysis Batch: 369373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-8	MW17	Total/NA	Water	6020A	368076
310-241864-9	MW18	Total/NA	Water	6020A	368076
310-241864-10	MW19	Total/NA	Water	6020A	368076
310-241864-11	DUP-1	Total/NA	Water	6020A	368076

General Chemistry

Analysis Batch: 368112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	SM 2540C	
310-241864-2	MW5	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 368112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-3	MW6	Total/NA	Water	SM 2540C	
310-241864-4	MW8	Total/NA	Water	SM 2540C	
310-241864-5	MW9	Total/NA	Water	SM 2540C	
310-241864-6	MW13	Total/NA	Water	SM 2540C	
310-241864-7	MW15	Total/NA	Water	SM 2540C	
310-241864-8	MW17	Total/NA	Water	SM 2540C	
310-241864-9	MW18	Total/NA	Water	SM 2540C	
310-241864-10	MW19	Total/NA	Water	SM 2540C	
310-241864-11	DUP-1	Total/NA	Water	SM 2540C	
MB 310-368112/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-368112/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-241864-2 DU	MW5	Total/NA	Water	SM 2540C	

Client Sample ID: MW2
Lab Sample ID: 310-241864-1
Date Collected: 10/05/22 12:47
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/24/22 16:40
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:14
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:32
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW5
Lab Sample ID: 310-241864-2
Date Collected: 10/05/22 18:24
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	369860	J7CK	EET CF	10/25/22 10:06
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 10:19
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:18
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:34
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW6
Lab Sample ID: 310-241864-3
Date Collected: 10/05/22 14:59
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 10:49
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:21
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:36
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW8
Lab Sample ID: 310-241864-4
Date Collected: 10/05/22 16:02
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 11:05
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:25
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:38
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW9
Lab Sample ID: 310-241864-5
Date Collected: 10/05/22 10:49
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 11:21
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:28
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:40
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW13
Lab Sample ID: 310-241864-6
Date Collected: 10/05/22 11:42
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 11:36
Total/NA	Analysis	9056A		20	369860	J7CK	EET CF	10/25/22 11:52
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:35
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:42
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW15
Lab Sample ID: 310-241864-7
Date Collected: 10/05/22 12:42
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 12:07
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 14:39
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:45
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW17
Lab Sample ID: 310-241864-8
Date Collected: 10/05/22 17:10
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 12:23
Total/NA	Analysis	9056A		20	369860	J7CK	EET CF	10/25/22 12:38
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 15:07
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369373	A6US	EET CF	10/20/22 18:46

Client Sample ID: MW17
Lab Sample ID: 310-241864-8
Date Collected: 10/05/22 17:10
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:47
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW18
Lab Sample ID: 310-241864-9
Date Collected: 10/05/22 08:52
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 13:25
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 15:11
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369373	A6US	EET CF	10/20/22 18:50
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:49
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: MW19
Lab Sample ID: 310-241864-10
Date Collected: 10/05/22 09:39
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 13:41
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 15:15
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369373	A6US	EET CF	10/20/22 18:53
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:51
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Client Sample ID: DUP-1
Lab Sample ID: 310-241864-11
Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369860	J7CK	EET CF	10/25/22 13:56
Total/NA	Analysis	9056A		20	369860	J7CK	EET CF	10/25/22 14:12
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369170	A6US	EET CF	10/19/22 15:18
Total/NA	Prep	3005A			368076	QTZ5	EET CF	10/11/22 09:15
Total/NA	Analysis	6020A		1	369373	A6US	EET CF	10/20/22 18:56
Total/NA	Prep	7470A			368714	XXW3	EET CF	10/14/22 14:49
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 16:57

Lab Chronicle

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Client Sample ID: DUP-1
Date Collected: 10/05/22 00:00
Date Received: 10/07/22 17:15

Lab Sample ID: 310-241864-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	368112	ENB7	EET CF	10/10/22 15:18

Laboratory References:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-23
Georgia	State	IA100001 (OR)	09-29-23
Illinois	NELAP	200024	11-29-22
Iowa	State	007	12-02-22
Kansas	NELAP	E-10341	01-31-23
Minnesota	NELAP	019-999-319	12-31-22
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-23
Oregon	NELAP	IA100001	09-29-23

Method Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020A	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

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:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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310-241864 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information
Client: Omaha Public Power
City/State: CITY | STATE | Project:

Receipt Information
Date/Time Received: DATE 10/7/22 | TIME 1715 | Received By: AM

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers
Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:
Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 1 of 3
Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE
Thermometer ID: R | Correction Factor (°C): 0
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature
Uncorrected Temp (°C): 1.8 | Corrected Temp (°C): 1.8
• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No
NOTE If yes, contact PM before proceeding If no, proceed with login
Additional Comments

Document CED-P-SAM-FRM45521
Revision 26
Date 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: CITY / STATE Project:

Receipt Information

Date/Time Received: DATE 10/7/22 TIME 1715 Received By: AM

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 2 of 3

Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: R Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.4 Corrected Temp (°C): 1.4

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: CITY / STATE Project:

Receipt Information

Date/Time Received: DATE 10/7/22 TIME 1715 Received By: AM

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 3 of 3

Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: R Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.2 Corrected Temp (°C): 1.2

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

TestAmerica Omaha 288

Chain of Custody Record

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Sampler: Kyle K. Uhing
Phone: (531) 226-2515
Lab PM: Hepler, Shawn M
E-Mail: shawn.hayes@testamericainc.com
Carrier Tracking No(s):
COC No:
Page:
Job #:

Client Information
Client Contact: Kyle Uhing
Company: Omaha Public Power District
Address: 444 South 16th Street Mall 9/EP1
City: Omaha
State, Zip: NE, 68102-2247
Phone: (531) 226-2515
Email: kkuhing@oppd.com
Project Name: North Omaha Station CCR
Site: North Omaha Station

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
TestAmerica Project #: 31007560
SSOW#:

Analysis Requested

Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S2O3; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015 Ra228, 9320 Ra228, Combined Ra226 and Ra228	Total 6020A (CCR Appendix III and IV, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	CCR Appendix III and IV Constituents
MW2	10/5/22	1247	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW5	10/5/22	1434	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW6	10/5/22	1459	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW8	10/5/22	1603	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW9	10/5/22	1049	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW13	10/5/22	1129	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW15	10/5/22	1342	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW17	10/5/22	1110	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW18	10/5/22	0932	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
MW19	10/5/22	0939	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents
DUP1	10/5/22	—	G	W		N	N	N	N	N	4	CCR Appendix III and IV Constituents

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

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

Empty Kit Relinquished by: Date/Time: 10/6/2022 1120 Company: Eurofins
Relinquished by: Date/Time: 10/6/22 1715 Company: Eurofins
Relinquished by: Date/Time: 10/7/22 1715 Company: Eurofins
Relinquished by: Date/Time: Company:

Time:
Received by: Date/Time: Company:
Received by: Date/Time: Company:
Received by: Date/Time: Company:
Cooler Temperature(s) °C and Other Remarks:

Custody Seals Intact: ☐ Yes ☐ No Custody Seal No

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-241864-1

Login Number: 241864
List Number: 1
Creator: Bindert, Zach T

List Source: Eurofins Cedar Falls

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

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ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-241864-2
Client Project/Site: North Omaha Station CCR

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Kyle Uhing

Authorized for release by:
11/10/2022 4:56:56 PM
Brian Graettinger, Lab Director
(319)595-2012
Brian.Graettinger@et.eurofinsus.com

Designee for

Shirley Thompson, Client Service Manager
(319)277-2401
Shirley.Thompson@et.eurofinsus.com

LINKS

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Table of Contents

Case Narrative

Job ID: 310-241864-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241864-2

Comments
No additional comments.

Receipt
The samples were received on 10/7/2022 5:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2° C, 1.4° C and 1.8° C.

RAD
Methods 903.0, 9315: Radium-226 batch 586245
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW13 (310-241864-6), (LCS 160-586245/2-A), (MB 160-586245/1-A), (680-221590-A-1-A) and (680-221590-B-1-A DU)

Method 9315: Radium-226 batch 586424
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW2 (310-241864-1), MW5 (310-241864-2), MW6 (310-241864-3), MW8 (310-241864-4), MW9 (310-241864-5), MW15 (310-241864-7), MW17 (310-241864-8), MW18 (310-241864-9), MW19 (310-241864-10), DUP-1 (310-241864-11), (LCS 160-586424/2-A), (MB 160-586424/1-A) and (310-241864-D-1-A DU)

Methods 904.0, 9320: Radium-228 batch 586251
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW13 (310-241864-6), (LCS 160-586251/2-A), (MB 160-586251/1-A), (680-221590-A-1-B) and (680-221590-B-1-B DU)

Method 9320: Radium-228 batch 586435
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date

MW2 (310-241864-1), MW5 (310-241864-2), MW6 (310-241864-3), MW8 (310-241864-4), MW9 (310-241864-5), MW15 (310-241864-7), MW17 (310-241864-8), MW19 (310-241864-10), DUP-1 (310-241864-11), (LCS 160-586435/2-A), (MB 160-586435/1-A) and (310-241864-D-1-B DU)

Method 9320: Radium-228 batch 587955
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date
MW18 (310-241864-9), (LCS 160-587955/2-A), (LCSD 160-587955/3-A) and (MB 160-587955/1-A)

Method PrecSep_0:

Method PrecSep_0: Radium-228 Prep Batch 160-587955

The following sample was prepared at a reduced aliquot due to Matrix: MW18 (310-241864-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21:

Case Narrative

Job ID: 310-241864-2 (Continued)

Laboratory: Eurofins Cedar Falls (Continued)

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

Sample Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241864-1	MW2	Water	10/05/22 12:47	10/07/22 17:15
310-241864-2	MW5	Water	10/05/22 18:24	10/07/22 17:15
310-241864-3	MW6	Water	10/05/22 14:59	10/07/22 17:15
310-241864-4	MW8	Water	10/05/22 16:02	10/07/22 17:15
310-241864-5	MW9	Water	10/05/22 10:49	10/07/22 17:15
310-241864-6	MW13	Water	10/05/22 11:42	10/07/22 17:15
310-241864-7	MW15	Water	10/05/22 12:42	10/07/22 17:15
310-241864-8	MW17	Water	10/05/22 17:10	10/07/22 17:15
310-241864-9	MW18	Water	10/05/22 08:52	10/07/22 17:15
310-241864-10	MW19	Water	10/05/22 09:39	10/07/22 17:15
310-241864-11	DUP-1	Water	10/05/22 00:00	10/07/22 17:15

Detection Summary

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW2 — **Lab Sample ID: 310-241864-1**
No Detections.

Client Sample ID: MW5 — **Lab Sample ID: 310-241864-2**
No Detections.

Client Sample ID: MW6 — **Lab Sample ID: 310-241864-3**
No Detections.

Client Sample ID: MW8 — **Lab Sample ID: 310-241864-4**
No Detections.

Client Sample ID: MW9 — **Lab Sample ID: 310-241864-5**
No Detections.

Client Sample ID: MW13 — **Lab Sample ID: 310-241864-6**
No Detections.

Client Sample ID: MW15 — **Lab Sample ID: 310-241864-7**
No Detections.

Client Sample ID: MW17 — **Lab Sample ID: 310-241864-8**
No Detections.

Client Sample ID: MW18 — **Lab Sample ID: 310-241864-9**
No Detections.

Client Sample ID: MW19 — **Lab Sample ID: 310-241864-10**
No Detections.

Client Sample ID: DUP-1 — **Lab Sample ID: 310-241864-11**
No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW2 — **Lab Sample ID: 310-241864-1**
Date Collected: 10/05/22 12:47 — **Matrix: Water**
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.330		0.142	0.145	1.00	0.170	pCi/L	10/18/22 13:24	11/09/22 08:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110	10/18/22 13:24	11/09/22 08:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.34		0.528	0.542	1.00	0.670	pCi/L	10/18/22 15:20	10/28/22 11:20	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110	10/18/22 15:20	10/28/22 11:20	1
Y Carrier	87.9		40 - 110	10/18/22 15:20	10/28/22 11:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.67		0.547	0.561	5.00	0.670	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW5 — **Lab Sample ID: 310-241864-2**
Date Collected: 10/05/22 18:24 — **Matrix: Water**
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0689	U	0.0801	0.0803	1.00	0.130	pCi/L	10/18/22 13:24	11/09/22 08:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	10/18/22 13:24	11/09/22 08:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.504	U	0.375	0.377	1.00	0.564	pCi/L	10/18/22 15:20	10/28/22 11:20	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	10/18/22 15:20	10/28/22 11:20	1
Y Carrier	88.2		40 - 110	10/18/22 15:20	10/28/22 11:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.573		0.383	0.385	5.00	0.564	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW6
Lab Sample ID: 310-241864-3
Date Collected: 10/05/22 14:59
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.296		0.119	0.122	1.00	0.121	pCi/L	10/18/22 13:24	11/09/22 08:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110	10/18/22 13:24	11/09/22 08:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.658		0.441	0.445	1.00	0.657	pCi/L	10/18/22 15:20	10/28/22 11:20	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110	10/18/22 15:20	10/28/22 11:20	1
Y Carrier	87.1		40 - 110	10/18/22 15:20	10/28/22 11:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.954		0.457	0.461	5.00	0.657	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW8
Lab Sample ID: 310-241864-4
Date Collected: 10/05/22 16:02
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0645	U	0.0666	0.0668	1.00	0.105	pCi/L	10/18/22 13:24	11/09/22 08:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110	10/18/22 13:24	11/09/22 08:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.452	U	0.342	0.344	1.00	0.526	pCi/L	10/18/22 15:20	10/28/22 11:24	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110	10/18/22 15:20	10/28/22 11:24	1
Y Carrier	88.6		40 - 110	10/18/22 15:20	10/28/22 11:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.516	U	0.348	0.350	5.00	0.526	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW9
Lab Sample ID: 310-241864-5
Date Collected: 10/05/22 10:49
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.627		0.197	0.205	1.00	0.209	pCi/L	10/18/22 13:24	11/09/22 08:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.3		40 - 110	10/18/22 13:24	11/09/22 08:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.635	U	0.482	0.485	1.00	0.743	pCi/L	10/18/22 15:20	10/28/22 11:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.3		40 - 110	10/18/22 15:20	10/28/22 11:25	1
Y Carrier	90.8		40 - 110	10/18/22 15:20	10/28/22 11:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.521	0.527	5.00	0.743	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW13
Lab Sample ID: 310-241864-6
Date Collected: 10/05/22 11:42
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0301	U	0.0618	0.0618	1.00	0.112	pCi/L	10/17/22 13:11	11/08/22 10:24	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	70.8		40 - 110	10/17/22 13:11	11/08/22 10:24	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.558	U	0.447	0.450	1.00	0.693	pCi/L	10/17/22 14:07	10/27/22 11:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	70.8		40 - 110	10/17/22 14:07	10/27/22 11:57	1
Y Carrier	82.6		40 - 110	10/17/22 14:07	10/27/22 11:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.588	U	0.451	0.454	5.00	0.693	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW15
Date Collected: 10/05/22 12:42
Date Received: 10/07/22 17:15

Lab Sample ID: 310-241864-7
Matrix: Water

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0483	U	0.0726	0.0727	1.00	0.124	pCi/L	10/18/22 13:24	11/09/22 08:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110	10/18/22 13:24	11/09/22 08:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.667		0.379	0.383	1.00	0.544	pCi/L	10/18/22 15:20	10/28/22 11:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110	10/18/22 15:20	10/28/22 11:25	1
Y Carrier	88.2		40 - 110	10/18/22 15:20	10/28/22 11:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.716		0.386	0.390	5.00	0.544	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW17
Date Collected: 10/05/22 17:10
Date Received: 10/07/22 17:15

Lab Sample ID: 310-241864-8
Matrix: Water

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121	U	0.0900	0.0907	1.00	0.125	pCi/L	10/18/22 13:24	11/09/22 08:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110	10/18/22 13:24	11/09/22 08:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.762		0.463	0.468	1.00	0.675	pCi/L	10/18/22 15:20	10/28/22 11:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110	10/18/22 15:20	10/28/22 11:25	1
Y Carrier	88.2		40 - 110	10/18/22 15:20	10/28/22 11:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.884		0.472	0.477	5.00	0.675	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW18
Date Collected: 10/05/22 08:52
Date Received: 10/07/22 17:15

Lab Sample ID: 310-241864-9
Matrix: Water

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.518		0.159	0.165	1.00	0.150	pCi/L	10/18/22 13:24	11/09/22 08:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110	10/18/22 13:24	11/09/22 08:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.947		0.548	0.555	1.00	0.787	pCi/L	11/01/22 10:49	11/04/22 13:29	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110	11/01/22 10:49	11/04/22 13:29	1
Y Carrier	82.2		40 - 110	11/01/22 10:49	11/04/22 13:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.47		0.571	0.579	5.00	0.787	pCi/L		11/10/22 13:43	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: North Omaha Station CCR

Job ID: 310-241864-2

Client Sample ID: MW19
Date Collected: 10/05/22 09:39
Date Received: 10/07/22 17:15

Lab Sample ID: 310-241864-10
Matrix: Water

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.497		0.173	0.179	1.00	0.196	pCi/L	10/18/22 13:24	11/09/22 08:43	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110	10/18/22 13:24	11/09/22 08:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.14		0.541	0.552	1.00	0.744	pCi/L	10/18/22 15:20	10/28/22 11:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110	10/18/22 15:20	10/28/22 11:25	1
Y Carrier	86.7		40 - 110	10/18/22 15:20	10/28/22 11:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.64		0.568	0.580	5.00	0.744	pCi/L		11/10/22 13:43	1

Client Sample ID: DUP-1
Lab Sample ID: 310-241864-11
Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/07/22 17:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.107	U	0.0769	0.0775	1.00	0.110	pCi/L	10/18/22 13:24	11/09/22 10:37	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110	10/18/22 13:24	11/09/22 10:37	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.877		0.378	0.386	1.00	0.501	pCi/L	10/18/22 15:20	10/28/22 11:26	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110	10/18/22 15:20	10/28/22 11:26	1
Y Carrier	87.5		40 - 110	10/18/22 15:20	10/28/22 11:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.984		0.386	0.394	5.00	0.501	pCi/L		11/10/22 13:43	1

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-586245/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589214
Prep Batch: 586245

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02468	U	0.0478	0.0478	1.00	0.0863	pCi/L	10/17/22 13:11	11/08/22 10:18	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110	10/17/22 13:11	11/08/22 10:18	1

Lab Sample ID: LCS 160-586245/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589214
Prep Batch: 586245

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.47		1.09	1.00	0.101	pCi/L	92	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	88.0		40 - 110

Lab Sample ID: MB 160-586424/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589434
Prep Batch: 586424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07547	U	0.0762	0.0765	1.00	0.121	pCi/L	10/18/22 13:24	11/09/22 08:41	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.6		40 - 110	10/18/22 13:24	11/09/22 08:41	1

Lab Sample ID: LCS 160-586424/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589434
Prep Batch: 586424

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.18		1.06	1.00	0.114	pCi/L	90	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.5		40 - 110

Lab Sample ID: 310-241864-1 DU
Client Sample ID: MW2
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589434
Prep Batch: 586424

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.330		0.2899		0.144	1.00	0.163	pCi/L	0.14	1

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

Lab Sample ID: 310-241864-1 DU
Client Sample ID: MW2
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589434
Prep Batch: 586424

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	65.7		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586251/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 587475
Prep Batch: 586251

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7348		0.355	0.362	1.00	0.491	pCi/L	10/17/22 14:07	10/27/22 11:56	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110	10/17/22 14:07	10/27/22 11:56	1
Y Carrier	86.0		40 - 110	10/17/22 14:07	10/27/22 11:56	1

Lab Sample ID: LCS 160-586251/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 587475
Prep Batch: 586251

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.50	10.26		1.36	1.00	0.504	pCi/L	121	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	88.0		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: MB 160-586435/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 587626
Prep Batch: 586435

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5753		0.319	0.323	1.00	0.447	pCi/L	10/18/22 15:20	10/28/22 11:20	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.6		40 - 110	10/18/22 15:20	10/28/22 11:20	1
Y Carrier	87.5		40 - 110	10/18/22 15:20	10/28/22 11:20	1

Lab Sample ID: LCS 160-586435/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 587626
Prep Batch: 586435

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.49	9.149		1.21	1.00	0.475	pCi/L	108	75 - 125

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

Lab Sample ID: LCS 160-586435/2-A — Client Sample ID: Lab Control Sample
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 587626 — Prep Batch: 586435

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.5		40 - 110
Y Carrier	87.1		40 - 110

Lab Sample ID: 310-241864-1 DU — Client Sample ID: MW2
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 587626 — Prep Batch: 586435

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	1.34			1.411		0.654	1.00	0.845	pCi/L			0.06	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	65.7		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: MB 160-587955/1-A — Client Sample ID: Method Blank
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 588685 — Prep Batch: 587955

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1291	U	0.308	0.308	1.00	0.543	pCi/L	11/01/22 10:49	11/04/22 13:29	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110	11/01/22 10:49	11/04/22 13:29	1
Y Carrier	85.6		40 - 110	11/01/22 10:49	11/04/22 13:29	1

Lab Sample ID: LCS 160-587955/2-A — Client Sample ID: Lab Control Sample
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 588685 — Prep Batch: 587955

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.47	10.53		1.43	1.00	0.541	pCi/L	124	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	82.4		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: LCSD 160-587955/3-A — Client Sample ID: Lab Control Sample Dup
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 588685 — Prep Batch: 587955

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.47	9.402		1.32	1.00	0.527	pCi/L	111	75 - 125	0.41	1

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

Lab Sample ID: LCSD 160-587955/3-A — Client Sample ID: Lab Control Sample Dup
Matrix: Water — Prep Type: Total/NA
Analysis Batch: 588685 — Prep Batch: 587955

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	81.9		40 - 110
Y Carrier	87.9		40 - 110

Rad

Prep Batch: 586245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-6	MW13	Total/NA	Water	PrecSep-21	
MB 160-586245/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586245/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 586251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-6	MW13	Total/NA	Water	PrecSep_0	
MB 160-586251/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586251/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 586424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	PrecSep-21	
310-241864-2	MW5	Total/NA	Water	PrecSep-21	
310-241864-3	MW6	Total/NA	Water	PrecSep-21	
310-241864-4	MW8	Total/NA	Water	PrecSep-21	
310-241864-5	MW9	Total/NA	Water	PrecSep-21	
310-241864-7	MW15	Total/NA	Water	PrecSep-21	
310-241864-8	MW17	Total/NA	Water	PrecSep-21	
310-241864-9	MW18	Total/NA	Water	PrecSep-21	
310-241864-10	MW19	Total/NA	Water	PrecSep-21	
310-241864-11	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-586424/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586424/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-241864-1 DU	MW2	Total/NA	Water	PrecSep-21	

Prep Batch: 586435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-1	MW2	Total/NA	Water	PrecSep_0	
310-241864-2	MW5	Total/NA	Water	PrecSep_0	
310-241864-3	MW6	Total/NA	Water	PrecSep_0	
310-241864-4	MW8	Total/NA	Water	PrecSep_0	
310-241864-5	MW9	Total/NA	Water	PrecSep_0	
310-241864-7	MW15	Total/NA	Water	PrecSep_0	
310-241864-8	MW17	Total/NA	Water	PrecSep_0	
310-241864-10	MW19	Total/NA	Water	PrecSep_0	
310-241864-11	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-586435/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586435/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-241864-1 DU	MW2	Total/NA	Water	PrecSep_0	

Prep Batch: 587955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241864-9	MW18	Total/NA	Water	PrecSep_0	
MB 160-587955/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-587955/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-587955/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Client Sample ID: MW2 — Lab Sample ID: 310-241864-1
Date Collected: 10/05/22 12:47 — Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:42
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587626	FLC	EET SL	10/28/22 11:20
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW5 — Lab Sample ID: 310-241864-2
Date Collected: 10/05/22 18:24 — Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:42
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587626	FLC	EET SL	10/28/22 11:20
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW6 — Lab Sample ID: 310-241864-3
Date Collected: 10/05/22 14:59 — Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:42
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587626	FLC	EET SL	10/28/22 11:20
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW8 — Lab Sample ID: 310-241864-4
Date Collected: 10/05/22 16:02 — Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:42
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:24
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW9
Lab Sample ID: 310-241864-5
Date Collected: 10/05/22 10:49
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:43
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:25
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW13
Lab Sample ID: 310-241864-6
Date Collected: 10/05/22 11:42
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586245	BMP	EET SL	10/17/22 13:11
Total/NA	Analysis	9315		1	589214	FLC	EET SL	11/08/22 10:24
Total/NA	Prep	PrecSep_0			586251	BMP	EET SL	10/17/22 14:07
Total/NA	Analysis	9320		1	587475	FLC	EET SL	10/27/22 11:57
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW15
Lab Sample ID: 310-241864-7
Date Collected: 10/05/22 12:42
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:43
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:25
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW17
Lab Sample ID: 310-241864-8
Date Collected: 10/05/22 17:10
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:43
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:25
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW18
Lab Sample ID: 310-241864-9
Date Collected: 10/05/22 08:52
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:43
Total/NA	Prep	PrecSep_0			587955	BMP	EET SL	11/01/22 10:49
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:29
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: MW19
Lab Sample ID: 310-241864-10
Date Collected: 10/05/22 09:39
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 08:43
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:25
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Client Sample ID: DUP-1
Lab Sample ID: 310-241864-11
Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/07/22 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 10:37
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:26
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Laboratory References:

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

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-22 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22 *
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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

Protocol References:

None = None

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

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

Laboratory References:

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

eurofins | Environment Testing America

310-241864 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information
Client: Omaha Public Power
City/State: CITY STATE Project:
Receipt Information
Date/Time Received: DATE 10/7/22 TIME 1715 Received By: AM
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:
Condition of Cooler/Containers
Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:
Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 1 of 3
Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓
Temperature Record
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE
Thermometer ID: R Correction Factor (°C): 0
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature
Uncorrected Temp (°C): 1.8 Corrected Temp (°C): 1.8
• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No
NOTE If yes, contact PM before proceeding If no, proceed with login
Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information
Client: Omaha Public Power
City/State: CITY STATE Project:
Receipt Information
Date/Time Received: DATE 10/7/22 TIME 1715 Received By: AM
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:
Condition of Cooler/Containers
Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:
Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 2 of 3
Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓
Temperature Record
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE
Thermometer ID: R Correction Factor (°C): 0
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature
Uncorrected Temp (°C): 1.4 Corrected Temp (°C): 1.4
• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No
NOTE If yes, contact PM before proceeding. If no, proceed with login
Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information
Client: Omaha Public Power
City/State: CITY STATE Project:
Receipt Information
Date/Time Received: DATE 10/7/22 TIME 1715 Received By: AM
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:
Condition of Cooler/Containers
Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:
Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 3 of 3
Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓
Temperature Record
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE
Thermometer ID: R Correction Factor (°C): 0
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature
Uncorrected Temp (°C): 1.2 Corrected Temp (°C): 1.2
• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No
NOTE If yes, contact PM before proceeding If no, proceed with login
Additional Comments

TestAmerica Omaha 288

Chain of Custody Record

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Client Information
Client Contact: Kyle Uhing
Company: Omaha Public Power District
Address: 444 South 16th Street Mall 9E/EP1
City: Omaha
State, Zip: NE, 68102-2247
Phone: (331) 226-2515
Email: kduhing@oppd.com
Project Name: North Omaha Station CCR
Site: North Omaha Station

Sampler: Kyle K. Uhing
Phone: (331) 226-2515
Due Date Requested:
TAT Requested (days):
PO #:
WO #: TestAmerica Project #: 31007560
SSOW#:

Lab PM: Hayes, Shawn M
E-Mail: shawn.hayes@testamericainc.com
Carrier Tracking No(s):
COC No:
Page:
Job #:

Analysis Requested

Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S2O3; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Special Instructions/Note:

Total Number of containers

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015 RA226, 9320 RA226, Combined RA226 and RA228	Total 6020A (CCR Appendix III and IV, Mercury	25dec TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
MW2	10/5/22	1247	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW5	10/5/22	1834	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW6	10/5/22	1459	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW8	10/5/22	1603	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW9	10/5/22	1049	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW13	10/5/22	1119	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW15	10/5/22	1342	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW17	10/5/22	1710	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW18	10/5/22	0852	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
MW19	10/5/22	0939	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents
DUP1	10/5/22	—	G	W	N	N	X	X	X	X	4	CCR Appendix III and IV Constituents

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

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

Empty Kit Relinquished by:
Relinquished by: Date/Time: 10/6/22 1145 Company: OPPD
Relinquished by: Date/Time: 10/7/22 0800 Company: Eurofins
Relinquished by: Date/Time: Company:

Time:
Received by:
Received by:
Received by:

Method of Shipment:
Date/Time: 10/6/22 1145 Company: Eurofins
Date/Time: 10/7/22 1715 Company: Eurofins
Date/Time: Company:
Cooler Temperature(s) °C and Other Remarks:

Custody Seals Intact: Δ Yes Δ No Custody Seal No

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North, ,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: North Omaha Station CCR
Site:

Sampler:
Phone:
Due Date Requested: 11/7/2022
TAT Requested (days):
PO #:
WO #:
Project #: 31007560
SSOW#:

Lab PM: Thompson, Shirley J
E-Mail: Shirley.Thompson@et.eurofinsus.com
Accreditations Required (See note):

Carrier Tracking No(s):
State of Origin: Nebraska

COC No: 310-54620.1
Page: Page 1 of 2
Job #: 310-241864-2

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

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_RA228Prep&Rep_21 Standard Target List	9320_RA228Prep&Rep_0 Standard Target List	RA228/RA228_GFPC	Total Number of containers	Special Instructions/Note:
MW2 (310-241864-1)	10/5/22	12:47 Central		Water				X	X		2	
MW5 (310-241864-2)	10/5/22	18:24 Central		Water				X	X		2	
MW6 (310-241864-3)	10/5/22	14:58 Central		Water				X	X		2	
MW8 (310-241864-4)	10/5/22	16:02 Central		Water				X	X		2	
MW9 (310-241864-5)	10/5/22	09:53 Central		Water				X	X		2	
MW13 (310-241864-6)	10/5/22	11:42 Central		Water				X	X		2	
MW15 (310-241864-7)	10/5/22	12:42 Central		Water				X	X		2	
MW17 (310-241864-8)	10/5/22	17:10 Central		Water				X	X		2	
MW18 (310-241864-9)	10/5/22	08:52 Central		Water				X	X		2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being requested, this shipment may not be accepted by the receiving laboratory. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date:
Relinquished by: FED EX Date/Time: Company
Relinquished by: Date/Time: Company
Relinquished by: Date/Time: Company

Time: Method of Shipment:
Received by: Date/Time: Company
Received by: Date/Time: Company
Received by: Autumn R. Johnson Date/Time: 10/11/22 0850 CST Company
Cooler Temperature(s) °C and Other Remarks:

Custody Seal Intact: △ Yes △ No
Custody Seal No.:

Ver: 06/08/2021

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North, ,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: North Omaha Station CCR
Site:

Sampler:
Phone:
Due Date Requested: 11/7/2022
TAT Requested (days):
PO #:
WO #:
Project #: 31007560
SSOW#:

Lab PM: Thompson, Shirley J
E-Mail: Shirley.Thompson@et.eurofinsus.com
Accreditations Required (See note):

Carrier Tracking No(s):
State of Origin: Nebraska

COC No: 310-54620.2
Page: Page 2 of 2
Job #: 310-241864-2

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

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_RA228Prep&Rep_21 Standard Target List	9320_RA228Prep&Rep_0 Standard Target List	RA228/RA228_GFPC	Total Number of containers	Special Instructions/Note:
MW19 (310-241864-10)	10/5/22	09:35 Central		Water				X	X	X	2	
DUP-1 (310-241864-11)	10/5/22	Central		Water				X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being requested, this shipment may not be accepted by the receiving laboratory. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date:
Relinquished by: FED EX Date/Time: Company
Relinquished by: Date/Time: Company
Relinquished by: Date/Time: Company

Time: Method of Shipment:
Received by: Date/Time: Company
Received by: Date/Time: Company
Received by: Autumn R. Johnson Date/Time: 10/11/22 0850 CST Company
Cooler Temperature(s) °C and Other Remarks:

Custody Seals Intact: △ Yes △ No
Custody Seal No.:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-241864-2

Login Number: 241864
List Number: 1
Creator: Bindert, Zach T

List Source: Eurofins Cedar Falls

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

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-241864-2

Login Number: 241864
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 10/11/22 01:02 PM

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

Tracer/Carrier Summary

Client: Omaha Public District
Job ID: 310-241864-2
Project/Site: North Omaha Station CCR

Method: 9315 - Radium-226 (GFPC)

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

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-241864-1	MW2	88.2
310-241864-1 DU	MW2	65.7
310-241864-2	MW5	92.4
310-241864-3	MW6	91.4
310-241864-4	MW8	89.0
310-241864-5	MW9	83.3
310-241864-6	MW13	70.8
310-241864-7	MW15	85.3
310-241864-8	MW17	88.2
310-241864-9	MW18	89.7
310-241864-10	MW19	86.5
310-241864-11	DUP-1	91.7
LCS 160-586245/2-A	Lab Control Sample	88.0
LCS 160-586424/2-A	Lab Control Sample	97.5
MB 160-586245/1-A	Method Blank	96.8
MB 160-586424/1-A	Method Blank	93.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

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

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-241864-1	MW2	88.2	87.9
310-241864-1 DU	MW2	65.7	87.9
310-241864-2	MW5	92.4	88.2
310-241864-3	MW6	91.4	87.1
310-241864-4	MW8	89.0	88.6
310-241864-5	MW9	83.3	90.8
310-241864-6	MW13	70.8	82.6
310-241864-7	MW15	85.3	88.2
310-241864-8	MW17	88.2	88.2
310-241864-9	MW18	84.6	82.2
310-241864-10	MW19	86.5	86.7
310-241864-11	DUP-1	91.7	87.5
LCS 160-586251/2-A	Lab Control Sample	88.0	86.4
LCS 160-586435/2-A	Lab Control Sample	97.5	87.1
LCS 160-587955/2-A	Lab Control Sample	82.4	86.4
LCSD 160-587955/3-A	Lab Control Sample Dup	81.9	87.9
MB 160-586251/1-A	Method Blank	96.8	86.0
MB 160-586435/1-A	Method Blank	93.6	87.5
MB 160-587955/1-A	Method Blank	87.7	85.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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Appendix C

Semi-Annual Statistical Analysis Memos

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Technical Memorandum

Date:	Friday, July 01, 2022
To:	Omaha Public Power District (OPPD)
From:	HDR Engineering, Inc.
Subject:	Summary of Statistical Analysis and Evaluation for SSLs North Omaha Station Ash Landfill Spring 2022 Title 132 Groundwater Monitoring Report

Omaha Public Power District owns and operates a five-unit fuel-fired generating plant at the North Omaha Station (NOS), herein referenced as “Station” or “Site”, in Omaha, Nebraska. Units 1, 2, and 3 were retired from coal operation (converted to natural gas), while Units 4 and 5 are operating as coal-burning units. This Station has one active coal combustion residual (CCR) landfill, known as the NOS Ash Landfill, which is subject to the United States Environmental Protection Agency’s (EPA’s) final CCR rule promulgated under U.S. Code of Federal Regulations (CFR), Title 40, Part 257 and Nebraska Department of Environment and Energy’s (NDEE) Title 132 regulations for fossil fuel combustion ash disposal areas. This memorandum provides a discussion and evaluation of the statistical analysis conducted for the NOS Ash Landfill which consists of an unlined active CCR landfill of approximately 18 acres and a 1.4-acre undeveloped portion.

Groundwater sampling was completed as part of an assessment monitoring program for the NOS Ash Landfill in April 2022, as specified in 40 CFR §257.95(d) and NDEE Title 132 Chapter 7 Section 005.06. The statistical analysis of groundwater data was performed in accordance with the methods described in the *Groundwater Monitoring Statistical Certification* for the North Omaha Station – NOS Ash Landfill, amended December 13, 2021, and the facility’s Groundwater Sampling and Analysis Plan (dated September 2019; revised December 2019) as permitted under Title 132. Sampling results used to calculate the background threshold values (BTVs) were updated during the fall 2021 statistical evaluation. The background ranges should be evaluated every two years, in accordance with Chapter 21 of the EPA’s Statistical Analysis of Groundwater Monitoring Data – Unified Guidance (EPA, 2009). The current BTVs were updated in October 2021 with monitoring results obtained during monitoring events conducted between March 2016 and October 2021.

Downgradient sampling results from the April 2022 assessment monitoring were used to evaluate for statistically significant increases (SSIs) over background and statistically significant levels (SSLs) over the groundwater protection standard (GWPS). The calculated BTVs and the evaluation for SSIs over background for the Appendix III (detection monitoring) constituents and Appendix IV (assessment monitoring) constituents are provided in **Table D-1**. The calculated lower confidence levels and the evaluation for SSLs above the GWPS for the Appendix IV (assessment monitoring) constituents are provided in **Table D-2**.

Table D-1. Summary of Evaluation for SSIs over Background (April 2022)

		Well ID:	MW-2	MW-5	MW-6	MW-8	MW-13	MW-15	MW-17
	BTV (UPL):	*Unit*	*Assessment Monitoring Results in accordance with Title 132 Chapter 7 Section 005.06*						
Detection Monitoring Constituents***									
Boron	*0.200*	*mg/L*	**1.44**	**0.729**	**0.592**	**2.70**	**1.89**	**3.09**	**0.715**
Calcium	*201*	*mg/L*	**284**	**415**	**285**	141	171	**226**	**321**
Chloride	275	*mg/L*	28.7	39.6	**308**	10.4	7.52	7.91	37.7
TDS	*1,190*	*mg/L*	**1,490**	**1,790**	**1,230**	918	**1,460**	962	**1,630**
Assessment Monitoring Constituents									
Antimony	*0.002*	*mg/L*	<0.000690	<0.00276	0.000693J	<0.000690	<0.000690	0.00183J	<0.000690
Arsenic***	*0.0118*	*mg/L*	**0.237**	**0.0701**	**0.0211**	0.0112	**0.0813**	0.00154J	**0.0203**
Barium	*0.625*	*mg/L*	0.116	0.0479	0.167	0.0819	0.0837	0.0490	0.0377
Beryllium	*0.001*	*mg/L*	<0.000270	<0.00108	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium***	*0.000654*	*mg/L*	<0.0000550	<0.000220	0.000146	<0.0000550	0.000254	0.0000850J	<0.0000550
Chromium***	*0.006*	*mg/L*	<0.00110	<0.00440	<0.00110	<0.00110	<0.00110	**0.00789**	<0.00110
Cobalt	*0.00293*	*mg/L*	0.000635	<0.000760	**0.00581**	0.000549	0.000563	<0.0000910	**0.00975**
Fluoride**	*1.31*	*mg/L*	0.232J	<0.220	0.244J	<0.220	0.340J	<0.220	<0.220
Iron***	*22.2*	*mg/L*	**39.0**	**52.0**	5.68	0.180	14.1	<0.0360	5.84
Lead	*0.0114*	*mg/L*	0.000304J	0.00109J	0.000836	0.000268J	<0.000240	<0.000240	<0.000240
Lithium	*0.0628*	*mg/L*	0.0513	**0.0967**	0.0503	0.0138	0.0303	0.00812J	**0.107**
Mercury	*0.00022*	*mg/L*	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110
Molybdenum	*0.002*	*mg/L*	0.00128J	0.00532J	**0.0598**	**0.100**	**1.15**	**0.274**	**0.00355**
Radium 226+228	*4.95*	*pCi/L*	0.167U	0.130U	1.73	0.506U	0.770	0.189U	0.554
pH***	*5.94-7.90**	*SU*	6.87	7.00	6.65	7.54	6.76	7.07	6.67
Selenium***	*0.005*	*mg/L*	<0.000960	<0.00384	<0.000960	<0.000960	**0.0133**	**0.0699**	<0.000960
Sulfate***	*57.5*	*mg/L*	**707**	**1,040**	**241**	**561**	**893**	**589**	**807**
Thallium	*0.001*	*mg/L*	<0.000260	0.00114J	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260

Bold and underlined concentration indicates an SSI over background.

* Indicates the lower bound of the range is the lower prediction limit (LPL). The upper bound is the upper prediction limit (UPL).

** Fluoride is listed in both Appendix III and Appendix IV of the CCR Rule (40 CFR Part 257).

***Arsenic, cadmium, chromium, iron, pH, selenium, and sulfate are required to be included in both Detection Monitoring and Assessment Monitoring under NDEE Title 132. Iron is only monitored as part of Title 132 and is not required to be monitored under the CCR Rule.

"U" data qualifier (radium) indicates parameter was analyzed for but not detected above limiting criteria (such as, but not limited to minimum detectable concentration, total uncertainty, reporting limit) as defined in the analytical laboratory data package.

“J” data qualifier indicates that value is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

Table D-2. Summary of Evaluation for SSLs over GWPS (April 2022)

		Well ID:	MW-2	MW-5	MW-6	MW-8	MW-13	MW-15	MW-17
	GWPS[1]	*Unit*	*Lower Confidence Levels (LCLs) – Assessment Monitoring Constituents*						
Antimony	*0.006*	*mg/L*	0.000345	0.0005	0.0005	0.000345	0.000345	0.001394	0.000345
Arsenic***	*0.0118[2]*	*mg/L*	**0.212**	**0.04925**	**0.01582**	0.01099	**0.1016**	0.001	**0.01234**
Barium	*2*	*mg/L*	0.1006	0.043	0.1681	0.08497	0.08287	0.04479	0.03402
Beryllium	*0.004*	*mg/L*	0.000135	0.0005	0.000135	0.000135	0.000135	0.000135	0.000135
Cadmium***	*0.005*	*mg/L*	0.00005	0.00005	0.000198	0.00005	0.000226	0.000086	0.00005
Chromium***	*0.1*	*mg/L*	0.00055	0.0022	0.00055	0.00055	0.00055	0.006379	0.00055
Cobalt	*0.006*	*mg/L*	0.0005871	0.00025	0.005879	0.00025	0.00025	0.000095	**0.00985**
Fluoride	*4*	*mg/L*	0.232	0.1375	0.2842	0.1375	0.3916	0.1375	0.1375
Lead	*0.015*	*mg/L*	0.00025	0.000105	0.001128	0.0003262	0.00012	0.000224	0.00012
Lithium	*0.0628[2]*	*mg/L*	0.025	**0.07507**	0.04232	0.0115	0.02263	0.00986	**0.1016**
Mercury	*0.002*	*mg/L*	0.000075	0.000075	0.000075	0.000075	0.000075	0.000075	0.000075
Molybdenum	*0.100*	*mg/L*	0.00065	0.001	0.05398	0.09329	**0.8733**	**0.2476**	0.001
Radium 226+228	*5*	*pCi/L*	0.4573	0.1897	0.684	0.2045	0.455	0.282	0.479
Selenium***	*0.05*	*mg/L*	0.00048	0.00192	0.00048	0.00048	0.02199	**0.06448**	0.00048
Thallium	*0.002*	*mg/L*	0.00013	0.0005	0.00013	0.00013	0.00013	0.00013	0.00013
Iron***	*22.2[2]*	*mg/L*	**27.23**	**44.76**	3.844	0.0979	13.11	0.03047	3.799
Sulfate***	*250[3]*	*mg/L*	**653**	**1096**	238.7	**538.4**	**583.6**	**571.4**	**794.1**
pH***	*5.94[2]**	*SU*	6.832	6.684	6.418	7.432	6.735	6.922	6.504
pH***	*8.50***	*SU*	7.231	7.322	6.91	8.032	7.28	7.28	7.016

Bold and underlined concentration indicates an SSL over the GWPS.

* Indicates the lower bound is the lower GWPS limit.

**Indicates the upper bound is the upper GWPS limit.

***Arsenic, cadmium, chromium, iron, pH, selenium, and sulfate are required to be included in both Detection Monitoring and Assessment Monitoring under NDEE Title 132. Iron is only monitored as part of Title 132 and is not required to be monitored under the CCR Rule.

[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in 40 CFR §257.95(h)(2).

[2] GWPS is established as the UPL when the background level is higher than the U.S. EPA MCL or the GWPS specified in 40 CFR §257.95(h)(2), or as the LPL when the background level is lower than the U.S. EPA MCL (i.e. pH).

[3] Based on NDEE Title 118 Chapter 4 Numerical Standards.

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Technical Memorandum

Date:	Wednesday, December 21, 2022
To:	Omaha Public Power District (OPPD)
From:	HDR Engineering, Inc.
Subject:	Summary of Statistical Analysis and Evaluation for SSLs North Omaha Station Ash Landfill Fall 2022 Title 132 Groundwater Monitoring Report

Omaha Public Power District owns and operates a five-unit fuel-fired generating plant at the North Omaha Station (NOS), herein referenced as “Station” or “Site”, in Omaha, Nebraska. Units 1, 2, and 3 were retired from coal operation (converted to natural gas), while Units 4 and 5 are operating as coal-burning units. This Station has one active coal combustion residual (CCR) landfill, known as the NOS Ash Landfill, which is subject to the United States Environmental Protection Agency’s (EPA’s) final CCR rule promulgated under U.S. Code of Federal Regulations (CFR), Title 40, Part 257 and Nebraska Department of Environment and Energy’s (NDEE) Title 132 regulations for fossil fuel combustion ash disposal areas. This memorandum provides a discussion and evaluation of the statistical analysis conducted for the NOS Ash Landfill which consists of an unlined active CCR landfill of approximately 18 acres and a 1.4-acre undeveloped portion.

Groundwater sampling was completed as part of an assessment monitoring program for the NOS Ash Landfill in October 2022, as specified in 40 CFR §257.95(d) and NDEE Title 132 Chapter 7 Section 005.06. The statistical analysis of groundwater data was performed in accordance with the methods described in the *Groundwater Monitoring Statistical Certification* for the North Omaha Station – NOS Ash Landfill, amended December 13, 2021, and the facility’s Groundwater Sampling and Analysis Plan (dated September 2019; revised December 2019) as permitted under Title 132. Sampling results used to calculate the background threshold values (BTVs) were updated during the fall 2021 statistical evaluation. The background ranges should be evaluated every two years, in accordance with Chapter 21 of the EPA’s Statistical Analysis of Groundwater Monitoring Data – Unified Guidance (EPA, 2009). The current BTVs were updated in October 2021 with monitoring results obtained during monitoring events conducted between March 2016 and October 2021.

Downgradient sampling results from the October 2022 assessment monitoring were used to evaluate for statistically significant increases (SSIs) over background and statistically significant levels (SSLs) over the groundwater protection standard (GWPS). The calculated BTVs and the evaluation for SSIs over background for the Appendix III (detection monitoring) constituents and Appendix IV (assessment monitoring) constituents are provided in **Table D-1**. The calculated lower confidence levels and the evaluation for SSLs above the GWPS for the Appendix IV (assessment monitoring) constituents are provided in **Table D-2**.

Table D-1. Summary of Evaluation for SSIs over Background (October 2022)

	Well ID:		MW-2	MW-5	MW-6	MW-8	MW-13	MW-15	MW-17
	BTV (UPL):	*Unit*	*Assessment Monitoring Results in accordance with Title 132 Chapter 7 Section 005.06*						
Detection Monitoring Constituents***									
Boron	*0.200*	*mg/L*	**0.863**	**0.580**	**0.620**	**2.30**	**1.50**	**2.82**	**0.629**
Calcium	*201*	*mg/L*	**226**	**391**	**300**	140	157	**229**	**333**
Chloride	275	*mg/L*	32.9	34.2	**330**	10.8	8.09	7.17	36.2
TDS	*1,190*	*mg/L*	**1230**	**2160**	**1360**	916	**1460**	1010	**1870**
Assessment Monitoring Constituents									
Antimony	*0.002*	*mg/L*	<0.000690	<0.000690	<0.000690	<0.000690	<0.000690	0.00153J	<0.000690
Arsenic***	*0.0118*	*mg/L*	**0.163**	**0.0637**	**0.0128**	0.0111	**0.0558**	0.00227	**0.0405**
Barium	*0.625*	*mg/L*	0.105	0.0483	0.147	0.0802	0.0768	0.0584	0.0413
Beryllium	*0.001*	*mg/L*	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium***	*0.000654*	*mg/L*	<0.0000550	<0.0000550	0.000152	<0.0000550	0.000278	<0.0000550	<0.0000550
Chromium***	*0.00555*	*mg/L*	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	0.00386J	<0.00110
Cobalt	*0.00293*	*mg/L*	0.000379J	0.000450J	**0.00594**	0.000497J	0.000755	<0.000190	**0.0108**
Fluoride**	*1.31*	*mg/L*	<0.220	0.516	0.637	0.266J	<0.220	<0.220	0.640
Iron***	*22.2*	*mg/L*	**24.9**	**49.3**	3.28	0.175	10.3	<0.0360	12.6
Lead	*0.0114*	*mg/L*	<0.000240	<0.000240	0.000533	<0.000240	<0.000240	<0.000240	<0.000240
Lithium	*0.0628*	*mg/L*	0.0433	**0.0794**	0.0465	0.0126	0.0299	0.0118	**0.103**
Mercury	*0.00022*	*mg/L*	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110
Molybdenum	*0.002*	*mg/L*	0.00123J	0.00189J	**0.0633**	**0.0982**	**1.30**	**0.197**	**0.00214**
Radium 226+228	*4.95*	*pCi/L*	1.67	0.573	0.954	0.516U	0.588U	0.716	0.884
pH***	*5.94-7.90**	*SU*	6.89	7.07	6.64	**7.97**	6.69	7.08	6.49
Selenium***	*0.005*	*mg/L*	<0.000960	<0.000960	<0.000960	<0.000960	**0.0220**	**0.0830**	<0.000960
Sulfate***	*57.5*	*mg/L*	**354**	**1010**	**235**	**496**	**840**	**468**	**787**
Thallium	*0.001*	*mg/L*	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260

Bold and underlined concentration indicates an SSI over background.

* Indicates the lower bound of the range is the lower prediction limit (LPL). The upper bound is the upper prediction limit (UPL).

** Fluoride is listed in both Appendix III and Appendix IV of the CCR Rule (40 CFR Part 257).

***Arsenic, cadmium, chromium, iron, pH, selenium, and sulfate are required to be included in both Detection Monitoring and Assessment Monitoring under NDEE Title 132. Iron is only monitored as part of Title 132 and is not required to be monitored under the CCR Rule.

"U" data qualifier (radium) indicates parameter was analyzed for but not detected above limiting criteria (such as, but not limited to minimum detectable concentration, total uncertainty, reporting limit) as defined in the analytical laboratory data package.

“J” data qualifier indicates that value is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

Table D-2. Summary of Evaluation for SSLs over GWPS (October 2022)

		Well ID:	MW-2	MW-5	MW-6	MW-8	MW-13	MW-15	MW-17
	GWPS[1]	*Unit*	*Lower Confidence Levels (LCLs) – Assessment Monitoring Constituents*						
Antimony	*0.006*	*mg/L*	0.00069	0.001	0.000693	0.00069	0.00069	0.001403	0.00069
Arsenic***	*0.0118[2]*	*mg/L*	**0.2158**	**0.05018**	**0.01535**	0.0106	**0.09799**	0.00159	**0.01285**
Barium	*2*	*mg/L*	0.1009	0.0437	0.1659	0.08434	0.08241	0.04547	0.03435
Beryllium	*0.004*	*mg/L*	0.00027	0.00027	0.00027	0.00027	0.00027	0.00027	0.00027
Cadmium***	*0.005*	*mg/L*	0.0001	0.000055	0.0001675	0.000066	0.000294	0.000086	0.0001
Chromium***	*0.1*	*mg/L*	0.0011	0.0011	0.0011	0.0011	0.0011	0.006274	0.0011
Cobalt	*0.006*	*mg/L*	0.0005672	0.00035	0.005883	0.000497	0.0005	0.00019	**0.009907**
Fluoride	*4*	*mg/L*	0.318	0.275	0.3094	0.266	0.3645	0.278	0.275
Lead	*0.015*	*mg/L*	0.000437	0.00024	0.00112	0.000337	0.00024	0.00024	0.00024
Lithium	*0.0628[2]*	*mg/L*	0.03826	**0.07549**	0.04215	0.01148	0.02207	0.008518	**0.1017**
Mercury	*0.002*	*mg/L*	0.00015	0.00011	0.00015	0.00011	0.00015	0.00015	0.00015
Molybdenum	*0.100*	*mg/L*	0.0013	0.00157	0.05469	0.09733	**0.8921**	**0.2433**	0.002
Radium 226+228	*5*	*pCi/L*	0.469	0.305	0.6914	0.31	0.455	0.369	0.479
Selenium***	*0.05*	*mg/L*	0.00096	0.00384	0.00096	0.00096	0.02197	**0.06544**	0.00096
Thallium	*0.002*	*mg/L*	0.00026	0.00026	0.00026	0.00026	0.00026	0.00026	0.00026
Iron***	*22.2[2]*	*mg/L*	**26.5**	**45.43**	3.678	0.1294	12.24	0.02986	4.225
Sulfate***	*250[3]*	*mg/L*	**626.5**	**1085**	238.1	**532.5**	**593.6**	**595.2**	**793.4**
pH***, v	*5.94[2]**	*SU*	6.835	6.733	6.445	7.48	6.738	6.93	6.503
pH***, ^	*8.50***	*SU*	7.215	7.287	6.879	8.027	7.112	7.27	6.993

Bold and underlined concentration indicates an SSL over the GWPS.

vIndicates the lower bound is the lower GWPS limit.

^Indicates the upper bound is the upper GWPS limit.

***Arsenic, cadmium, chromium, iron, pH, selenium, and sulfate are required to be included in both Detection Monitoring and Assessment Monitoring under NDEE Title 132. Iron is only monitored as part of Title 132 and is not required to be monitored under the CCR Rule.

[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in 40 CFR §257.95(h)(2).

[2] GWPS is established as the UPL when the background level is higher than the U.S. EPA MCL or the GWPS specified in 40 CFR §257.95(h)(2), or as the LPL when the background level is lower than the U.S. EPA MCL (i.e. pH).

[3] Based on NDEE Title 118 Chapter 4 Numerical Standards.