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2022 NC2 CCR Landfill Annual Groundwater Report

Nebraska City Station NC2
Ash Disposal Area

*Nebraska City, 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 two-unit fossil fuel-fired generating station (NC1 and NC2), located 5.5 miles southeast of Nebraska City, Nebraska, along the west shore of the Missouri River. This generating station (Station or Site) has two (2) existing coal combustion residual (CCR) landfills for fossil fuel combustion ash disposal: the NC1 Ash Disposal Area and the NC2 Ash Disposal Area. 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. 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 and corrective action monitoring under 40 CFR §257.96 for the NC2 Ash Disposal Area which is a lined landfill located at the Site.

The NC2 Ash Disposal Area transitioned from detection monitoring to assessment monitoring following the fall 2019 sampling event due to calcium detected as a statistically significant increase (SSI) above the background threshold value in monitoring well NC2MW-2. An alternate source demonstration (ASD) for calcium was unsuccessful, and OPPD published a notification (dated April 24, 2020). An assessment monitoring program was initiated in accordance 40 CFR §257.95 with the first sampling event in April 2020 and subsequent event July 2020. Results of assessment monitoring indicated three statistically significant levels (SSLs) over groundwater protection standards (GWPS); arsenic and lithium in NC2MW-7 and arsenic in NC2MW-8. OPPD published a notification of the exceedances and initiation of assessment of corrective measures (ACM) on November 25, 2020. An ACM report, dated December 22, 2020, was conducted to evaluate potential remedies for constituents with detected SSLs. A public meeting was conducted on August 25, 2021 and then on November 15, 2021, OPPD published a Remedy Selection Report (HDR, 2021a). The selected remedial system includes source control of windblown CCR and long-term performance monitoring. Initiation of the selected remedy began in December 2021 with submittal of draft permit modifications to the Nebraska Department of Energy and Environment (NDEE) under NDEE Title 132 regulations.

Groundwater has continued to be monitored at the Site in 2022, in accordance with 40 CFR §257.96. For the April 2022 sampling event, results of the analysis indicated eleven SSIs above background. Five new SSIs were detected (chloride, selenium, sulfate and TDS in NC2MW-3 and cobalt in NC2MW-8). There was one continued SSL above GWPS (lithium in NC2MW-7) and no newly detected SSLs.

For the October 2022 sampling event, results of the analysis indicated eleven SSIs above background. One new SSI was detected (radium 226+228 in NC2MW-2). There was one continued SSL above GWPS (lithium in NC2MW-7) and no newly detected SSLs.



Arsenic has been shown to be naturally occurring and highly variable at the NC2 Ash Disposal Area and is therefore not treated as an SSL under the ASD granted by the NDEE correspondence dated May 5, 2020. The Site will continue to be monitored semi-annually, as specified in 40 CFR §257.96(b) and will continue implementation of corrective measures in accordance with the schedule specified in the Selection of Remedy Report (HDR, 2021a). The next 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:		NC2 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.	<ul style="list-style-type: none"> • NC2MW-2 – calcium • NC2MW-3 – chloride, sulfate, TDS 	<ul style="list-style-type: none"> • NC2MW-2 – calcium • NC2MW-3 – TDS
§257.90(e)(6)(iii)(B)	Provide the date when the assessment monitoring program was initiated for the CCR unit.	April 24, 2020	
§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.	<ul style="list-style-type: none"> • NC2MW-7 – lithium 	<ul style="list-style-type: none"> • NC2MW-7 – lithium



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:		NC2 Ash Disposal Area
§257.90(e)(6)(iv) (B)	Provide the date when the assessment of corrective measures was initiated for the CCR unit.	December 14, 2020
§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.	August 25, 2021
§257.90(e)(6)(iv)(D)	Provide the date when the assessment of corrective measures was completed for the CCR unit.	November 15, 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.	Remedy selected in 2021
§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 initiated and performance monitoring ongoing

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 residual (CCR) under Subtitle D of the Resource Conservation and Recovery Act. The CCR rule is formally promulgated in the U.S. Code of Federal Regulations (CFR), Title 40, Part 257. The rule – effective on October 19, 2015 – applies to electric utilities and independent power producers that fall within North American Industry Codes System code 221112, and facilities that produce or store CCR materials in surface impoundments or landfills (EPA, 2015). 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), Nebraska City Station.

1.1 Purpose

The CCR Rule, 40 CFR §257.90(e), specifies that an owner or operator of an existing CCR landfill prepare an annual groundwater monitoring and corrective action report to summarize 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) of the CCR rule. This report provides a summary of CCR groundwater monitoring system activities for calendar year 2022 for the assessment monitoring program under 40 CFR §257.95 and corrective action monitoring under 40 CFR §257.96 for the NC2 Ash Disposal Area which is a lined landfill located at the Site.

1.2 Facility Information

OPPD owns and operates a two-unit fossil fuel-fired generating station (NC1 and NC2), located 5.5 miles southeast of Nebraska City, Nebraska, along the west shore of the Missouri River (**Figure 1**). This Station has two existing CCR landfills: the NC1 Ash Disposal Area and NC2 Ash Disposal Area. The CCR landfills are permitted under the current Nebraska Department of Environment and Energy (NDEE) Title 132 Chapter 7 (Groundwater Monitoring and Remedial Action) regulations for fossil fuel combustion ash disposal areas. This annual report covers the NC2 Ash Disposal Area (NDEE Permit No. NE0204421, Facility ID 58343).

The NC2 Ash Disposal Area is an existing CCR lined landfill permitted for 40.7 acres of disposal; Cell 1 (14.5 acres) and the East Leachate Pond were constructed in 2008/2009 and Cells 2 & 3 (26.2 acres), along with the West Leachate Pond, were completed January 23, 2020. Base liners for Cells 1 through 3 were constructed with 24 inches of re-compacted clay overlain by a 60-mil high-density polyethylene geomembrane and geotextile fabric layer. The leachate collection system for Cell 1 collects leachate at the sump and is then pumped to the East Leachate Pond. The leachate collection system for Cells 2 & 3 collects leachate at two sumps, one sump in Cell 2 and one sump in Cell 3, which is then pumped to the West Leachate Pond. **Figure 2** identifies the relevant CCR unit for this report and the supporting groundwater monitoring network.



2 Monitoring Program Summary

The groundwater monitoring network currently consists of three upgradient/background monitoring wells (NC2MW-4, NC2MW-5, and MW-13), four downgradient monitoring wells (NC2MW-2, NC2MW-3, NC2MW-7, and NC2MW-8), and one cross-gradient monitoring well (NC2MW-6). 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 CCR unit, NC2 Ash Disposal Area, are shown in **Figure 2**.

2.1 Summary of Monitoring Program Transitions

OPPD complies with Nebraska State regulations (NDEE Title 132) and the EPA’s regulations for the disposal of CCR, as specified in 40 CFR Part 257 (CCR Rule). As part of these regulatory programs, the NC2 Ash Disposal Area is monitored semi-annually under detection or assessment monitoring programs. Under the detection monitoring program, constituents listed in Appendix III of 40 CFR part 257 are evaluated for statistically significant increases (SSIs) above background. Under the assessment monitoring program, constituents listed in Appendix IV of 40 CFR Part 257 are evaluated for SSIs above background and for statistically significant levels (SSLs) over groundwater protection standards (GWPS). The following table outlines the transition of groundwater monitoring programs and subsequent actions and reports.

Date	Groundwater Compliance Monitoring Milestones
01/30/2018	Semi-annual detection monitoring. Potential SSIs during fall 2017 sampling event in downgradient monitoring wells for calcium and pH. A successful alternate source demonstration (ASD) indicated the SSIs resulted from an error in statistical evaluation.
06/06/2018	Semi-annual detection monitoring. A potential SSI during spring 2018 sampling event in one downgradient monitoring well for pH. A successful ASD indicated the SSI was a result of sampling error.
01/31/2019	Semi-annual detection monitoring. There were no SSIs during the fall 2018 sampling event.
04/08/2019	Semi-annual detection monitoring. Potential SSI detected for calcium. Verification sampling on 6/26/2019 indicated the SSI was not confirmed and the network continued with detection monitoring.
10/15/2019	Semi-annual detection monitoring. Potential SSI detected for calcium. Verification sampling on 01/08/2020 indicated the SSI was confirmed.
4/24/2020	Notification published for unsuccessful alternate source demonstration (ASD) for calcium within 90-day deadline. Initiation of assessment monitoring program in accordance with 40 CFR §257.95.
4/27/2020	Initial round of sampling for initiation of assessment monitoring. Background threshold values (BTVs) and GWPS were established for assessment monitoring constituents following the first round of sampling.
07/15/2020	Second round of sampling for initiation of assessment monitoring. SSIs detected for downgradient wells for calcium, antimony, arsenic, barium, cadmium, cobalt, and lithium. There were two SSLs detected (arsenic and lithium at NC2MW-7).



Date	Groundwater Compliance Monitoring Milestones
10/05/2020	Semi-annual assessment monitoring. SSIs detected for downgradient wells for calcium, antimony, arsenic, barium, cadmium, and lithium. There were three SSLs detected (arsenic and lithium at NC2MW-7 & arsenic in NC2MW-8).
11/25/2020	Notification published for detected SSLs.
12/14/2020	Initiation of assessment of corrective measures program in accordance with 40 CFR §257.96.
12/22/2020	Assessment of Corrective Measures Report (HDR, 2020b) to evaluate potential remedies for constituents with detected SSLs.
4/12/2021	Semi-annual assessment monitoring. SSIs detected for downgradient wells for antimony, arsenic, barium, fluoride, and lithium. There were two SSLs detected (arsenic and lithium at NC2MW-7).
8/25/2021	Public meeting conducted to discuss corrective measures (HDR, 2021a).
10/4/2021	Semi-annual assessment monitoring. SSIs detected for downgradient wells for arsenic, barium, cadmium, cobalt, radium 226 + 228, and lithium. There were two SSLs detected (arsenic and lithium at NC2MW-7).
11/15/2021	Remedy Selection Report (HDR, 2021a) to select a remedial system for constituents with detected SSLs.
4/4/2022	Semi-annual assessment monitoring. SSIs detected for downgradient wells for antimony, arsenic, barium, calcium, chloride, cobalt, lithium, selenium, sulfate, and TDS. There was one SSL detected (lithium at NC2MW-7).
10/3/2022	Semi-annual assessment monitoring. SSIs detected for downgradient wells for antimony, arsenic, barium, calcium, cobalt, lithium, molybdenum, radium 226+228, and TDS. There was one SSL detected (lithium at NC2MW-7).

2.2 Groundwater Monitoring Network Condition Assessment

OPPD personnel evaluated the condition of each monitoring well in the groundwater monitoring system during the sampling events in April 2022 and October 2022. No repairs were required at the monitoring wells. All wells were noted in good working condition, concrete pads were intact, and no damage was observed to the protective well casings.

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 semi-annual assessment monitoring program while implementation of corrective measures was conducted. Samples were collected in general 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 are summarized in **Table 2**.

Groundwater sampling completed by OPPD personnel was conducted in general accordance with the facility's NDEE Title 132 Groundwater Sampling and Analysis Plan (HDR, 2019c) and the Groundwater Monitoring System Certification (HDR, 2019a). Samples were collected from all background and downgradient network wells. Field sampling forms from the 2022 sampling events are provided in **Appendix A**. The collected groundwater samples were analyzed by Eurofins. The 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 of both monitoring network wells and groundwater elevation only wells, as defined in the CCR Groundwater Monitoring System Certification (HDR, 2019a), were used to determine groundwater contours. 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 southeast and an average flow velocity of 0.0127 feet per day (ft/day) to 0.0719 ft/day. Groundwater measurements collected during the October 2022 sampling event indicated a flow direction to the south-southeast and an average flow velocity of 0.0092 ft/day to 0.0519 ft/day. The April 2022 and October 2022 flow velocities are based on a range of hydraulic conductivity at the Site of 6.96 ft/day to 39.4 ft/day (HDR, 2019a). Estimated groundwater flow direction is consistent with historical observations.

3.3 Assessment Monitoring Groundwater Sampling

Groundwater sampling events were conducted by OPPD personnel in April 2022 and October 2022 as continuation of the semi-annual assessment monitoring program in accordance with 40 CFR §257.96(b). As specified in 40 CFR §257.95(b), monitoring network wells should be resampled at least annually for the full Appendix IV constituent list. In accordance with 40 CFR §257.95(d), monitoring network wells should be resampled at least semi-annually for the full Appendix III constituents and those Appendix IV constituents detected in response to 40 CFR §257.95(b). However, to be conservative, all Appendix III and Appendix IV constituents were analyzed for both the April and October 2022 sampling events. The results of the sampling events conducted in 2022 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 BTVs, and Appendix IV constituents are statistically analyzed to evaluate for SSLs above the GWPS. Statistical analysis was performed using Sanitas™ Statistical Software in accordance with the methods described in the Groundwater Monitoring Statistical Methods (HDR, 2021b). BTVs are updated every two years in accordance with Chapter 21 of the EPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance (EPA, 2009) or during a monitoring program transition. BTVs and GWPS were updated following the spring 2022 sampling event. The next update is planned for the spring 2024 sampling event. Statistically derived BTVs for Appendix III and IV

constituents for detection monitoring are provided in **Table 6**. The established GWPS for 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**.

For the April 2022 sampling event, results of the analysis indicated four SSIs above background for detection monitoring constituents and seven SSIs for assessment monitoring constituents:

- NC2MW-2: Antimony and Calcium
- NC2MW-3: Chloride, Selenium, Sulfate and TDS
- NC2MW-7: Arsenic, Barium and Lithium
- NC2MW-8: Barium and Cobalt

Five new SSIs were detected (chloride, selenium, sulfate and TDS in NC2MW-3 and cobalt in NC2MW-8). Analysis of the assessment monitoring constituents indicated there were no new SSLs and there was one continued SSL detected above the GWPS:

- NC2MW-7: Lithium

A subsequent semi-annual sampling event was conducted in October 2022. Results of the analysis indicated two SSIs above background for detection monitoring constituents and nine SSIs for assessment monitoring constituents:

- NC2MW-2: Antimony, Calcium, Molybdenum, and Radium 226+228
- NC2MW-3: Cobalt and TDS
- NC2MW-6: Radium 226+228
- NC2MW-7: Arsenic, Barium, and Lithium
- NC2MW-8: Barium

One new SSI was detected (radium 226+228 in NC2MW-2). Analysis of the assessment monitoring constituents indicated there were no new SSLs, and there was one continued SSL detected above the GWPS:

- NC2MW-7: Lithium

The site will continue implementation of corrective measures for lithium in accordance with the schedule specified in the Selection of Remedy Report (HDR, 2021a).

3.5 Other Information Required under 40 CFR §257.90-98

In response to previously detected SSIs for arsenic in 2018 and 2019 under NDEE required monitoring, a Groundwater Assessment Report (GAR) was conducted by HDR Engineering, Inc. (HDR) on behalf of OPPD in 2019 to characterize the alternate sources of arsenic at the NC2 Ash Disposal Area (HDR, 2019b). As part of the GAR, upwind/upgradient and downwind/downgradient surface and subsurface soil samples were collected near the NC2 Ash Disposal Area. Additionally, groundwater samples from temporary piezometers and monitoring wells along the downgradient side of the NC2 Ash Disposal Area and ash samples from within the NC2 Ash Disposal Area were collected and analyzed. Surface soil samples, subsurface soil

samples, ash samples, leachate samples, and groundwater samples were evaluated to characterize the NC2 Ash Disposal Area and the nature of the surrounding groundwater. The GAR served as an ASD for arsenic at monitoring well NC2MW-7 and was submitted to NDEE on November 6, 2019. NDEE responded in a May 5, 2020 correspondence stating the ASD for arsenic in NC2MW-7 had been accepted and that arsenic was due to naturally occurring arsenic in the soil and not a result of a release from the NC2 Ash Disposal Area.

Similarly, in response to the previously detected SSI for calcium in 2019 under CCR and NDEE required groundwater monitoring, a Site Assessment Report (SAR) was conducted in February and March 2020 in advance of the initiation of assessment monitoring (HDR, 2020a). HDR, on behalf of OPPD, conducted this additional investigation into two Appendix IV constituents (arsenic and lithium) at the NC2 Ash Disposal Area to evaluate and refine the source(s) of inorganic impacts to groundwater downgradient of the NC2 Ash Disposal Area. The information provided in the SAR was based on a combination of field data obtained during the GAR and field data obtained specifically for the SAR. Data evaluated as part of the SAR included: surface and subsurface soil samples, fly and bottom ash samples, limestone samples, leachate pond and leachate sump samples, clarifier sediment disposal area sediment samples, surface water samples, temporary piezometer groundwater samples, and groundwater samples from permanent monitoring wells and two delineation wells installed as part of the GAR.

Following the July 2020 SSLs for arsenic and lithium, both in NC2MW-7, OPPD was required to characterize the extent of the release and initiate an ACM within 90 days of identifying SSLs in accordance with 40 CFR §257.95(g). Following the October 2020 SSL for arsenic in NC2MW-8, a notification of SSL was prepared and placed in the facility's operating record on November 25, 2020 pursuant to 40 CFR §257.95(g) for all SSLs detected. A Nature and Extent Study (NES) was submitted to NDEE on December 17, 2020 (HDR, 2020b), and an ACM Report (HDR, 2020c) was placed in the facility's operating record on December 22, 2020, both of which were developed by implementing site information obtained through the GAR and SAR.

Results of the site investigations and ACM Report were presented at a public meeting with interested and affected parties on August 25, 2021. The public meeting was held online using Webex™. No comments were received during the meeting or submitted in writing. OPPD published a Remedy Selection Report in November 2021. The selected remedy has been implemented in stages as proposed in the Remedy Selection Report. Draft permit revisions were provided to NDEE during the 2021 reporting period to revise the NDEE Title 132 permit for implementation of the use of a surface binder for dust control as part of the selected remedy. In a letter dated January 14, 2022, the NDEE approved the permit modifications to control fugitive dust. During the 2022 reporting period, a revised fill plan was implemented, and applications of a surface binder to inactive areas of the landfill were conducted on June 16th and October 27th.

No other information is required under 40 CFR §257.90-98 at this time.

4 Key Activities for Upcoming Year

OPPD has selected a remedy for corrective action (HDR, 2021a) and will continue to implement corrective actions. Ongoing remedial activities will occur in 2023 by continuing to implement the revised fill plan to reduce active areas of the landfill and annual applications of a surface binder to inactive areas of the landfill. The next application of the surface binder is tentatively planned for fall 2023. The Site will continue to be monitored in accordance with the corrective action monitoring program as specified in 40 CFR §257.96(b), and the next semi-annual sampling event is anticipated to occur in April 2023.

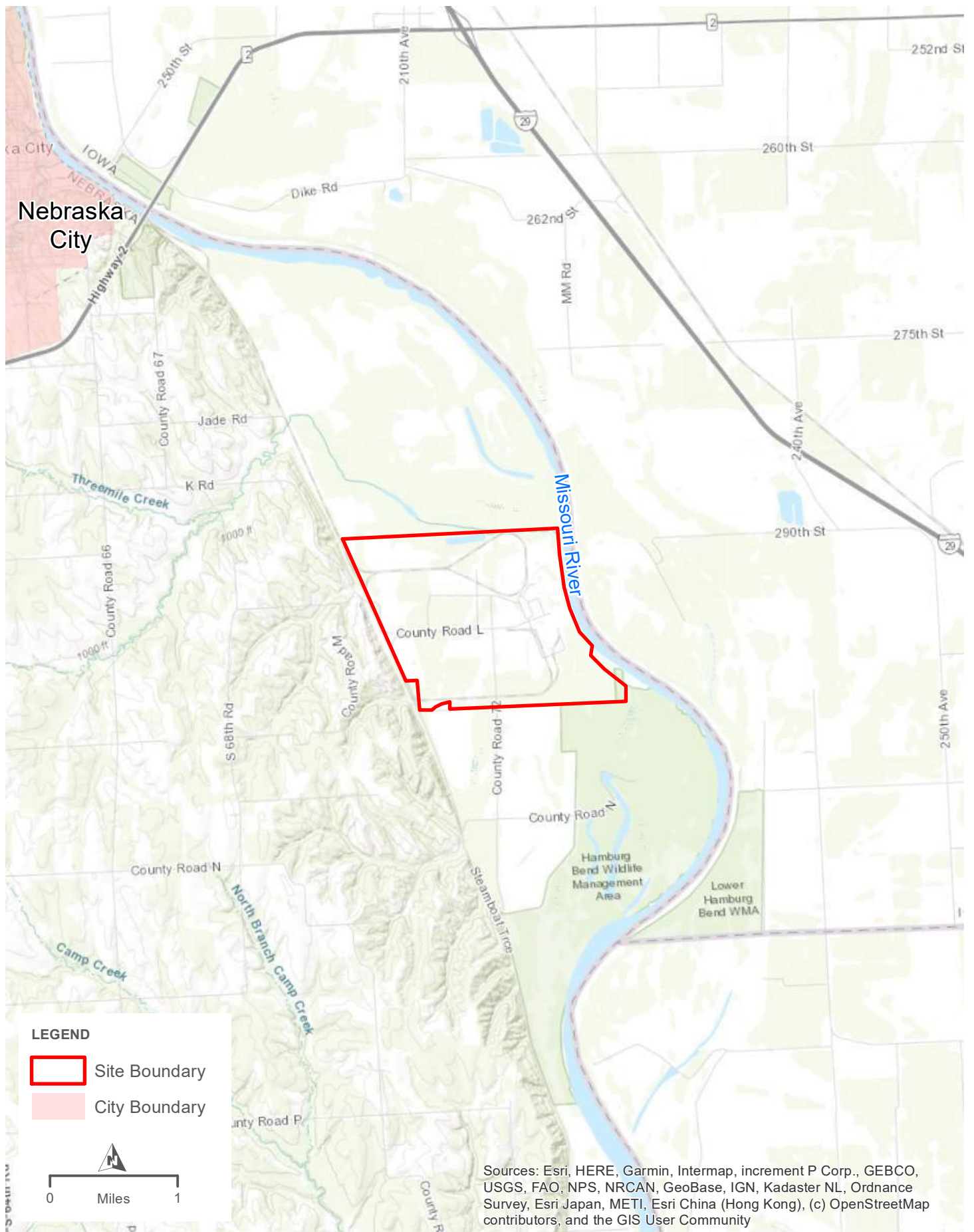
5 References

- 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 parts 257; *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities*; Final Rule, Federal Register Vol. 80, No. 74. Environmental Protection Agency. April 17, 2015.
- HDR, 2019a. *Groundwater Monitoring System Certification*. Nebraska City Station – NC2 Combustion Ash Landfill. Revised June 2019.
- HDR, 2019b. *Title 132: Groundwater Assessment Report*. Nebraska City Station – NC2 Combustion Ash Landfill. November 6, 2019.
- HDR, 2019c. *Groundwater Sampling and Analysis Plan*. Nebraska City Station – NC2 Combustion Ash Landfill. Revised March 2019.
- HDR, 2020a. *Site Assessment Report*. Nebraska City Station – NC2 Combustion Ash Landfill. June 18, 2020.
- HDR, 2020b. *Title 132: Nature and Extent Study*. Nebraska City Station – NC2 Combustion Ash Landfill. December 17, 2020.
- HDR, 2020c. *Assessment of Corrective Measures Report*. Nebraska City Station – NC2 Combustion Ash Landfill. December 22, 2020.
- HDR, 2021a. *Remedy Selection Report*. Nebraska City Station – NC2 Combustion Ash Landfill. November 15, 2021.
- HDR, 2021b. *Groundwater Monitoring Statistical Methods*. Nebraska City Station – NC2 Combustion Ash Landfill. Revised December 2021.

A decorative graphic consisting of several overlapping rectangles. On the left, there is a vertical stack of three rectangles: a large orange one on top, a medium grey one in the middle, and a smaller black one at the bottom. To the right of the orange rectangle is a large dark grey rectangle. Below the dark grey rectangle is a thin black horizontal bar.

Figures

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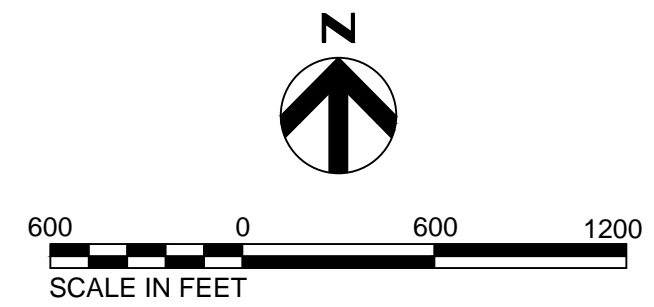
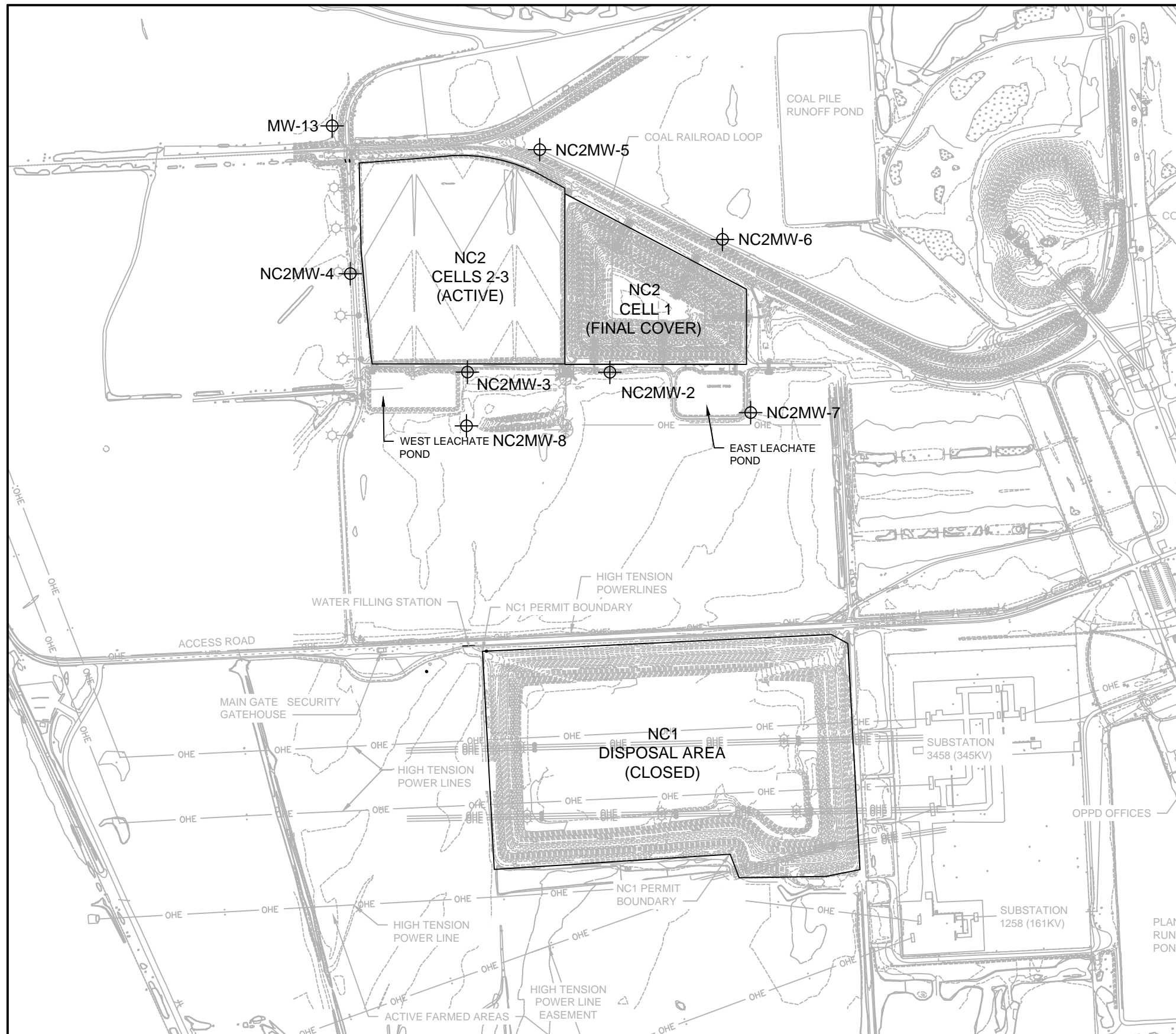
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

SITE LOCATION MAP
OPPD - NEBRASKA CITY STATION

FIGURE 1



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MONITORING WELL NETWORK					
WELL ID	NORTHING	EASTING	ELEVATION (TOC)	WELL DEPTH (BGS)	LOCATION WITH RESPECT TO NC2 ASH DISPOSAL AREA
MW-13	318186.64	2808434.68	918.05	13.0	BACKGROUND / UPGRADIENT
NC2MW-2	316884.69	2809902.40	922.55	17.0	DOWNGRADIENT
NC2MW-3	316885.96	2809149.54	916.22	12.0	DOWNGRADIENT
NC2MW-4	317405.90	2808530.80	919.62	14.0	BACKGROUND / UPGRADIENT
NC2MW-5	318060.54	2809531.90	922.76	15.2	BACKGROUND / UPGRADIENT
NC2MW-6	317587.46	2810497.97	919.72	11.0	CROSSGRADIENT
NC2MW-7	316671.78	2810647.12	918.37	21.0	DOWNGRADIENT
NC2MW-8	316601.90	2809145.16	918.18	15.0	DOWNGRADIENT

- NOTES:**
1. TOC - TOP OF CASING
 2. TOP OF CASING ELEVATION DETERMINED BY SURVEY DATA OBTAINED JUNE 2019.
 3. BGS - BELOW GROUND SURFACE
 4. WELL DEPTH MEASUREMENTS REPRESENT DEPTH BELOW GROUND SURFACE.
 5. NORTHING AND EASTING COORDINATES ARE NEBRASKA STATE PLANE WHICH HAVE BEEN TRANSLATED BY THE SURVEYOR.



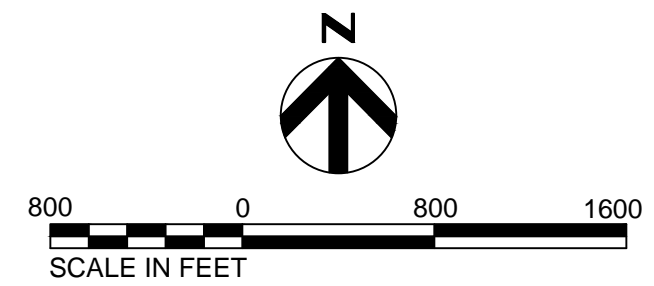
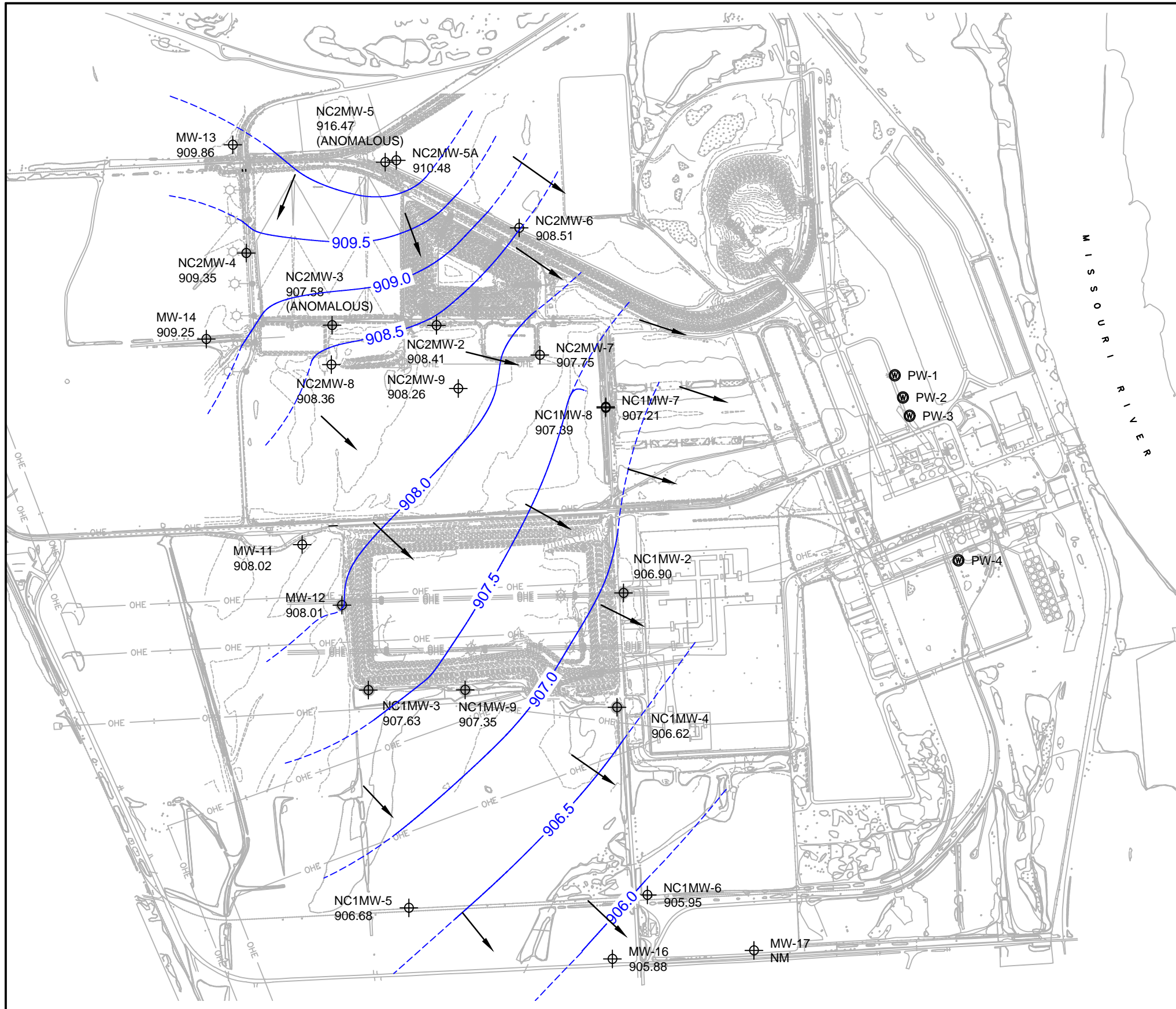
**OPPD NEBRASKA CITY ASH LANDFILL
NEBRASKA CITY UNIT 2 - NC2
MONITORING WELL LOCATION MAP**

2022 GROUNDWATER MONITORING

DATE
NOVEMBER 2022

FIGURE
02

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- LEGEND:**
- PRODUCTION WELL
 - MONITORING WELL
 - 907.21 GROUNDWATER ELEVATION
 - GROUNDWATER CONTOUR
 - INFERRED GROUNDWATER CONTOUR
 - INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. ANOMALOUS - WATER LEVELS LABELED AS SUCH HAVE BEEN OMITTED FROM THE GROUNDWATER CONTOUR DUE TO VAST VARIATIONS IN GROUNDWATER ELEVATIONS BETWEEN WELLS WITH CLOSE PROXIMITY.
 2. MONITORING WELL NC1MW-7 WAS NOT USED IN GENERATION OF CONTOUR MAP DUE TO BEING SCREENED AT A DEEPER INTERVAL.
 3. NM - STATIC WATER LEVEL NOT OBTAINED FROM MONITORING WELL.

VELOCITY COMPUTATIONS

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

K = HYDRAULIC CONDUCTIVITY (SEE TABLE)

i = GRADIENT = $\frac{1.0 \text{ FT}}{1,353 \text{ FT}} = 0.000739 \text{ FT/FT}$

n = POROSITY = 0.405

	K	V_T
LOW	6.96 FT/DAY	0.0127 FT/DAY
HIGH	39.4 FT/DAY	0.0719 FT/DAY



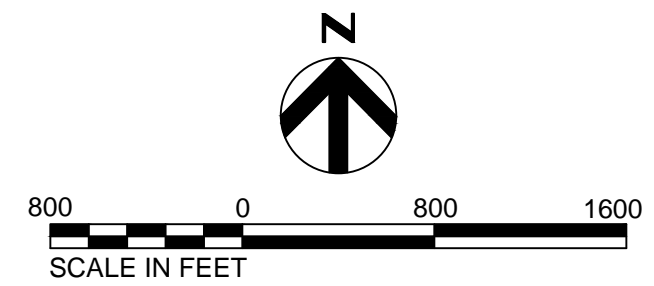
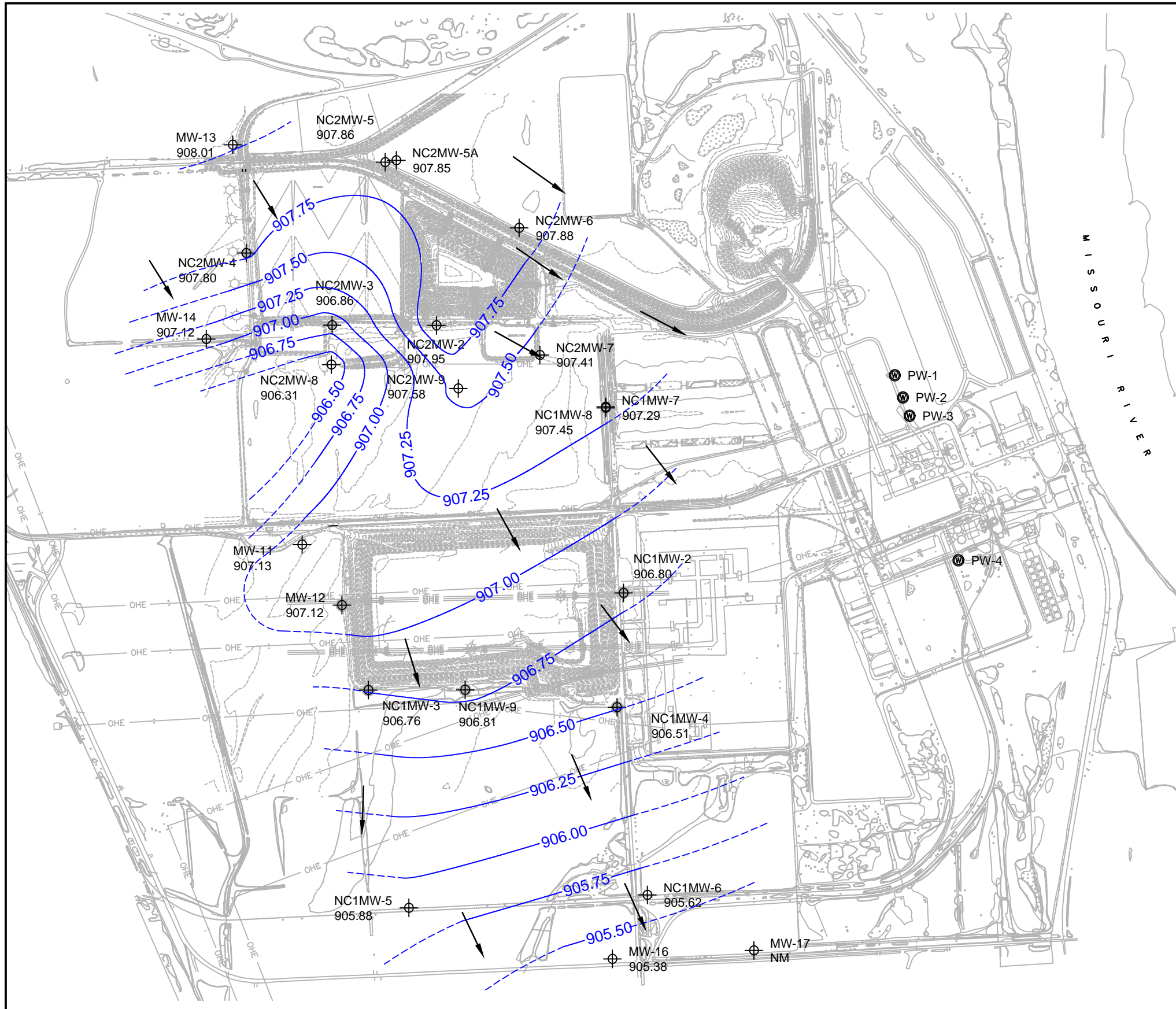
**OPPD NEBRASKA CITY ASH LANDFILL
GROUNDWATER CONTOUR MAP
APRIL 2022**

2022 GROUNDWATER MONITORING

DATE
JUNE 2022

FIGURE
03

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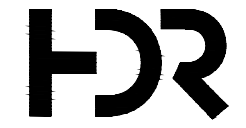
- LEGEND:**
- PRODUCTION WELL
 - MONITORING WELL
 - 907.29 GROUNDWATER ELEVATION
 - GROUNDWATER CONTOUR
 - INFERRED GROUNDWATER CONTOUR
 - INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. MONITORING WELL NC1MW-7 WAS NOT USED IN GENERATION OF CONTOUR MAP DUE TO BEING SCREENED AT A DEEPER INTERVAL.
 2. NM - STATIC WATER LEVEL NOT OBTAINED FROM MONITORING WELL.

VELOCITY COMPUTATIONS

TRACER VELOCITY = $V_T = \frac{K_i}{n}$
 K = HYDRAULIC CONDUCTIVITY (SEE TABLE)
 $i = \text{GRADIENT} = \frac{1.0 \text{ FT}}{1,877 \text{ FT}} = 0.000533 \text{ FT/FT}$
 n = POROSITY = 0.405

	K	V_T
LOW	6.96 FT/DAY	0.0092 FT/DAY
HIGH	39.4 FT/DAY	0.0519 FT/DAY



**OPPD NEBRASKA CITY ASH LANDFILL
 GROUNDWATER CONTOUR MAP
 OCTOBER 2022**

2022 GROUNDWATER MONITORING

DATE
 NOVEMBER 2022

FIGURE
 04



Tables

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Table 1 - Groundwater Monitoring System
 Omaha Public Power District - NC2 Ash Disposal Area

Monitoring Well ID	Date Installed	Well Depth (feet bgs)	Location w/ respect to NC2 Ash Disposal Area	Ground Surface Elevation (feet AMSL)	Top of Well Casing Elevation (feet AMSL)
CCR Monitoring Network Wells					
NC2MW-2	9/8/2004	17	Downgradient	919.80	922.55
NC2MW-3	9/8/2004	16	Downgradient	913.30	919.58
NC2MW-4	9/8/2004	14	Background/Upgradient	917.07	919.62
NC2MW-5	9/16/2004	16	Background/Upgradient	919.34	922.76
NC2MW-6	9/7/2004	14	Crossgradient	916.30	919.72
NC2MW-7	11/6/2013	24	Downgradient	915.11	918.20
NC2MW-8	7/9/2018	15	Downgradient	915.20	917.97
MW-13	1/26/2016	13.0	Background/Upgradient	915.97	918.05
Water Level Only Wells					
NC1MW-2	3/14/1995	17.8	Downgradient	917.23	919.42
NC1MW-3	3/13/1995	19.5	Downgradient	917.10	919.85
NC1MW-4	3/13/1995	20.3	Downgradient	916.79	919.63
NC1MW-5	3/17/1995	16.6	Downgradient	917.61	920.70
NC1MW-6	3/13/1995	16.5	Downgradient	914.01	916.67
NC1MW-7	1/20/1999	40.5	Downgradient	917.12	919.20
NC1MW-8	1/21/1999	20.0	Downgradient	917.19	919.68
NC1MW-9	1/21/1999	20.0	Downgradient	917.52	920.09
NC2MW-5A	9/16/2019	17.2	Upgradient	919.13	922.05
NC2MW-9	9/17/2019	18.0	Downgradient	917.49	920.35
MW-11	1/16/2004	20.0	Downgradient	911.90	918.44
MW-12	3/26/2004	18.1	Downgradient	917.91	920.36
MW-14	7/12/2018	18.0	Crossgradient	917.99	920.99

Notes:

bgs - below ground surface
 AMSL - above mean sea level

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Table 2 - Groundwater Sampling Event Summary
Omaha Public Power District - NC2 Ash Disposal Area

Monitoring Well ID	# of Initial Background Samples	Initial Background Sample Dates	# of Detection Monitoring Samples ^{[1], [6]}	Detection Monitoring Sample Dates	# of Assessment Monitoring Samples	Assessment Monitoring Sample Dates
Current Background Monitoring Wells						
NC2MW-4 ^[5]	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 10/15/2019, 1/30/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
NC2MW-5	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 10/15/2019, 1/30/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
MW-13 ^{[2], [3], [5]}	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	5	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 1/30/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
Downgradient Monitoring Wells						
NC2MW-2	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	8	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 9/23/2019, 10/15/2019, 1/31/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
NC2MW-3 ^[2]	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 9/23/2019, 10/15/2019, 1/31/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
NC2MW-6	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 10/15/2019, 1/31/2020	7	4/27/2020, 7/14/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
NC2MW-7	8	3/14/2016, 6/3/2016, 8/31/2016, 11/17/2016, 2/15/2017, 4/24/2017, 6/15/2017, 7/12/2017	8	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 9/23/2019, 10/15/2019, 2/3/2020	7	4/27/2020, 7/15/2020, 10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022
NC2MW-8 ^[2]	8 ^[4]	10/3/2018, 1/15/2019, 3/5/2019, 9/23/2019, 10/16/2019, 1/31/2020, 4/27/2020, 7/14/2020	0	N/A	5	10/5/2020, 4/12/2021, 10/4/2021, 4/4/2022, 10/3/2022

^[1] The number of detection monitoring samples includes the 3/12/2018 event, which occurred as part of an Alternative Source Demonstration.

^[2] MW-13, NC2MW-3, and NC2MW-8 were submerged under water during April 2019 sampling event and were not sampled.

^[3] MW-13 was surrounded by ponding water during October 2019 sampling event and was not sampled.

^[4] NC2MW-8 was installed July 9, 2018 and was added to the Groundwater Monitoring System Certification in June 2019. The 9/23/2019 sampling event was part of an Alternative Source Demonstration for the Title 132 Groundwater Assessment Report.

^[5] Background wells have been sampled on more dates than are listed for the initial background and detection monitoring sample dates. This is due to two background wells (NC2MW-4 and MW-13) being sampled for both NC1 and NC2 Ash Disposal Areas. Sampling dates for the NC1 Ash Disposal Area have not been included in the sampling event summary, but are included within the dataset used for statistical analysis.

^[6] Four wells, NC2MW-2, NC2MW-3, NC2MW-7, and NC2MW-8, were sampled during the 9/23/2019 fieldwork as part of an Alternative Source Demonstration for the Title 132 Groundwater Assessment Report .

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Table 3 - Groundwater Elevations

Omaha Public Power District - NC2 Ash Disposal Area

CCR Monitoring Network Wells																
NC2MW-4		NC2MW-5		MW-13		NC2MW-2		NC2MW-3		NC2MW-6		NC2MW-7		NC2MW-8		
TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		
919.62		922.76		918.05		922.55		919.58		919.72		918.20		917.97		
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)
3/14/2016	6.91	912.71	6.98	915.78	4.75	913.30	10.80	911.75	4.05	915.53	7.95	911.77	7.04	911.16	<i>Well Installed 7/9/2018</i>	
6/3/2016	5.62	914.00	7.67	915.09	3.51	914.54	8.96	913.59	2.55	917.03	6.02	913.70	4.80	913.40		
8/31/2016	5.05	914.57	5.30	917.46	2.85	915.20	8.91	913.64	2.31	917.27	5.95	913.77	5.40	912.80		
11/17/2016	6.80	912.82	9.25	913.51	4.40	913.65	10.90	911.65	4.10	915.48	8.10	911.62	7.20	911.00		
2/15/2017	7.50	912.12	10.20	912.56	5.21	912.84	11.70	910.85	4.95	914.63	9.00	910.72	8.15	910.05		
4/24/2017	6.11	913.51	8.48	914.28	4.00	914.05	9.85	912.70	3.21	916.37	7.00	912.72	5.96	912.24		
6/15/2017	6.75	912.87	9.82	912.94	4.70	913.35	10.30	912.25	3.42	916.16	7.35	912.37	6.35	911.85		
7/12/2017	7.11	912.51	10.15	912.61	5.02	913.03	10.76	911.79	4.25	915.33	7.90	911.82	6.80	911.40		
11/9/2017	12.20	907.42	14.20	908.56	8.25	909.80	15.10	907.45	12.10	907.48	11.20	908.52	10.50	907.70		
3/12/2018	10.18	909.44	12.95	909.81	8.10	909.95	13.90	908.65	7.15	912.43	10.88	908.84	10.00	908.20		
6/6/2018	6.80	912.82	9.70	913.06	4.65	913.40	10.35	912.20	3.70	915.88	7.25	912.47	6.35	911.85		
10/3/2018	4.14	915.48	4.95	917.81	1.63	916.42	7.39	915.16	0.80	918.78	4.30	915.42	3.20	915.00	3.15	914.82
3/5/2019	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.	6.67	911.30
4/8/2019 ^[1]	3.53	916.09	4.56	918.20	N.M.	N.M.	6.70	915.85	N.M.	N.M.	4.18	915.54	2.74	915.46	N.M.	N.M.
10/14/2019 ^[2]	3.47	916.15	4.48	918.28	N.M.	N.M.	6.34	916.21	0.21	919.37	3.75	915.97	2.27	915.93	2.38	915.59
1/30/2020	5.44	914.18	5.81	916.95	3.39	914.66	9.09	913.46	2.56	917.02	6.11	913.61	5.37	912.83	4.75	913.22
4/20/2020	5.24	914.38	6.37	916.39	2.94	915.11	8.83	913.72	2.36	917.22	5.97	913.75	4.99	913.21	4.59	913.38
7/14/2020	7.19	912.43	10.02	912.74	5.23	912.82	10.44	912.11	7.89	911.69	7.45	912.27	6.32	911.88	6.28	911.69
10/5/2020	9.65	909.97	12.63	910.13	7.76	910.29	12.92	909.63	10.34	909.24	9.90	909.82	8.81	909.39	8.68	909.29
4/6/2021	6.76	912.86	5.87	916.89	4.73	913.32	10.57	911.98	7.72	911.86	7.62	912.10	6.76	911.44	6.03	911.94
10/1/2021	10.17	909.45	13.15	909.61	8.32	908.01	13.48	909.07	11.55	908.03	10.38	909.34	9.37	908.83	9.16	908.81
4/1/2022	10.27	909.35	6.29	916.47	8.19	909.86	14.14	908.41	12.00	907.58	11.21	908.51	10.45	907.75	9.61	908.36
10/1/2022	11.82	907.80	14.90	907.86	10.04	908.01	14.60	907.95	12.72	906.86	11.84	907.88	10.79	907.41	11.66	906.31

TOC = Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

^[1] MW-13, NC2-MW-3, and NC2-MW-8 were surrounded by ponding water during April 2019 sampling event and were not measured.

^[2] MW-13 was surrounded by ponding water during October 2019 sampling event and was not measured.

Table 3 - Groundwater Elevations

Omaha Public Power District - NC2 Ash Disposal Area

Water Level Only Wells																		
NC1MW-2		NC1MW-3		NC1MW-4		NC1MW-5		NC1MW-6		NC1MW-7		NC1MW-8		NC1MW-9		NC2MW-5A		
TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation		
919.42		919.85		919.63		920.70		916.67		919.20		919.68		920.09		922.05		
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)
3/9/2016	8.90	910.52	8.95	910.90	9.50	910.13	10.82	909.88	7.55	909.12	8.25	910.95	8.60	911.08	9.30	910.79		
6/7/2016	7.04	912.38	7.75	912.10	7.41	912.22	9.67	911.03	6.31	910.36	6.43	912.77	6.80	912.88	7.88	912.21		
10/3/2016	8.45	910.97	8.35	911.50	9.10	910.53	12.99	907.71	6.86	909.81	7.94	911.26	8.53	911.15	8.76	911.33		
11/18/2016	9.30	910.12	9.36	910.49	10.10	909.53	11.25	909.45	8.20	908.47	8.72	910.48	9.10	910.58	7.75	912.34		
2/14/2017	10.10	909.32	9.91	909.94	10.85	908.78	11.70	909.00	8.80	907.87	9.60	909.60	10.00	909.68	10.41	909.68		
4/25/2017	8.10	911.32	8.25	911.60	8.84	910.79	10.30	910.40	7.02	909.65	7.41	911.79	7.75	911.93	8.65	911.44		
6/20/2017	7.60	911.82	7.95	911.90	8.20	911.43	10.72	909.98	7.42	909.25	7.85	911.35	8.04	911.64	8.15	911.94		
7/13/2017	8.40	911.02	8.75	911.10	9.10	910.53	10.50	910.20	8.10	908.57	8.32	910.88	8.89	910.79	9.10	910.99		
11/8/2017	11.55	907.87	11.90	907.95	11.60	908.03	10.90	909.80	8.70	907.97	9.05	910.15	9.18	910.50	12.10	907.99		
3/13/2018	11.50	907.92	11.85	908.00	12.16	907.47	NM	NM	NM	NM	NM	NM	NM	NM	12.22	907.87		
6/6/2018	5.30	914.12	7.15	912.70	7.10	912.53	NM	NM	NM	NM	NM	NM	NM	NM	8.90	911.19		
10/4/2018	5.78	913.64	6.60	913.25	6.66	912.97	8.85	911.85	5.41	911.26	4.48	914.72	5.14	914.54	6.87	913.22		
1/15/2019	NM	NM	NM	NM	NM	NM	10.06	910.64	6.56	910.11	NM	NM	NM	NM	NM	NM		
3/5/2019	NM	NM	NM	NM	NM	NM	NM	NM	8.08	908.59	NM	NM	NM	NM	NM	NM		
4/8/2019 ^[1]	4.17	915.25	4.69	915.16	4.58	915.05	NM	NM	NM	NM	3.68	915.52	3.98	915.70	4.85	915.24		
10/14/2019 ^[2]	3.64	915.78	4.56	915.29	4.33	915.30	NM	NM	NM	NM	3.01	916.19	3.33	916.35	4.65	915.44	4.38	917.67
4/20/2020	6.82	912.60	7.42	912.43	7.60	912.03	9.70	911.00	6.16	907.85	6.05	913.15	6.36	913.32	7.69	912.40	7.49	914.56
10/5/2020	10.52	908.90	11.13	908.72	11.17	908.46	12.90	907.80	9.11	907.56	10.06	909.14	10.36	909.32	11.35	908.74	11.88	910.17
4/6/2021	8.91	910.51	8.90	910.95	9.53	910.10	10.95	909.75	7.58	909.09	8.20	911.00	8.54	911.14	9.34	910.75	8.70	913.35
10/1/2021	11.27	908.15	11.74	908.11	11.84	907.79	13.54	907.16	9.66	907.01	10.69	908.51	11.02	908.66	12.00	908.09	12.39	909.66
4/1/2022	12.52	906.90	12.22	907.63	13.01	906.62	14.02	906.68	10.72	905.95	11.99	907.21	12.29	907.39	12.74	907.35	11.57	910.48
10/1/2022	12.62	906.80	13.09	906.76	13.12	906.51	14.82	905.88	11.05	905.62	11.91	907.29	12.23	907.45	13.28	906.81	14.20	907.85

Well Installed 9/16/2019

Notes:

TOC = Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

^[1] MW-13, NC2-MW-3, and NC2-MW-8 were surrounded by ponding water during April 2019 sampling event and were not measured.

^[2] MW-13 was surrounded by ponding water during October 2019 sampling event and was not measured.

Table 3 - Groundwater Elevations

Omaha Public Power District - NC2 Ash Disposal Area

Water Level Only Wells									
NC2MW-9		MW-11		MW-12		MW-14			
TOC Elevation		TOC Elevation		TOC Elevation		TOC Elevation			
920.35		918.44		920.36		920.99			
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)	
3/9/2016			6.90	911.54	9.00	911.36			
6/7/2016			5.85	912.59	7.80	912.56			
10/3/2016			6.34	912.10	8.40	911.96			
11/18/2016			7.37	911.07	9.35	911.01			
2/14/2017			7.95	910.49	9.95	910.41			
4/25/2017			6.24	912.20	8.20	912.16		Well installed 7/12/2018	
6/20/2017			7.85	910.59	8.40	911.96			
7/13/2017	Well Installed 9/17/2019		6.25	912.19	8.52	911.84			
11/8/2017			10.95	907.49	12.55	907.81			
3/13/2018			9.85	908.59	NM	NM			
6/6/2018			6.80	911.64	NM	NM			
10/4/2018			4.45	913.99	6.55	913.81	7.35		913.64
1/15/2019			NM	NM	NM	NM	8.15		912.84
3/5/2019			NM	NM	NM	NM	8.75		912.24
4/8/2019 ^[1]			3.04	915.40	4.89	915.47	5.73		915.26
10/14/2019 ^[2]	4.19	916.16	2.90	915.54	4.77	915.59	5.75	915.24	
4/20/2020	6.76	913.59	5.48	912.96	7.41	912.95	7.59	913.40	
10/5/2020	10.81	909.54	9.37	909.07	11.29	909.07	11.47	909.52	
4/6/2021	8.56	911.79	7.01	911.43	8.97	911.39	8.51	912.48	
10/1/2021	11.42	908.93	9.88	908.56	11.86	908.50	11.98	909.01	
4/1/2022	12.09	908.26	10.42	908.02	12.35	908.01	11.74	909.25	
10/1/2022	12.77	907.58	11.31	907.13	13.24	907.12	13.87	907.12	

Notes:

TOC =Top of PVC well casing

N.M. = not measured

AMSL = above mean sea level

^[1] MW-13, NC2-MW-3, and NC2-MW-8 were surrounded by ponding water during April 2019 sampling event and were not measured.

^[2] MW-13 was surrounded by ponding water during October 2019 sampling event and was not measured.

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Table 4 - Appendix III (Detection Monitoring) Constituents in Groundwater

Omaha Public Power District - NC2 Ash Disposal Area

		Appendix III (Detection Monitoring) Constituents						
Constituent		Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
Reporting Unit		mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
NC2MW-4	3/9/2016	<0.2	131	<5	<0.5	6.94	46.2	546
	3/14/2016	<0.2	126	6.27	0.213	6.84	48.3	536
	6/3/2016	<0.2	130	<5	<0.5	6.90	46.8	668
	6/7/2016	<0.2	129	<5	<0.5	6.95	45.6	660
	8/31/2016	<0.2	91.1	7.13	0.646	7.20	29.7	574
	11/17/2016	<0.2	130	<5	1.28	7.19	34.0	548
	11/18/2016	<0.2	132	<5	1.1	7.30	33.6	574
	2/14/2017	<0.2	148	<5	<0.5	7.72	39.3	544
	2/15/2017	<0.2	142	10.8	2.43	7.63	39.7	526
	4/24/2017	<0.2	126	<5	1.08	7.08	38.6	574
	4/25/2017	<0.2	122	<5	<0.5	7.28	38.3	594
	6/15/2017	<0.2	122	<5	<0.5	7.09	32.2	552
	6/20/2017	<0.2	119	<5	<0.5	7.13	33.1	558
	7/12/2017	<0.2	104	<5	<0.5	7.88	32.7	580
	7/13/2017	<0.2	112	<5	<0.5	7.98	32.7	664
	11/8/2017	<0.2	133	<5	<0.5	7.15	43.50	556.0
	11/9/2017	<0.2	134	<5	<0.5	7.18	42.8	568
	3/12/2018	<0.2	141	<5	<0.5	6.32 / 7.28 ^[1]	42.6	562
	6/6/2018	<0.2	140	<5	<0.5	7.15	44.1	542
	10/3/2018	<0.2	117	<5	<0.5	6.81	42.4	520
	4/8/2019	<0.2	137	<5	<0.5	6.71	40.9	560
	10/15/2019	<0.2	142	5.38	<0.5	6.57	35.0	528
	1/30/2020	0.115J	142	<5	<0.5	6.88	44.5	544
	4/20/2020	<0.1	127	5.05	0.421J	6.54	51.9	526
	4/27/2020	<0.0730	134	5.37	0.315J	6.61	52.6	550
	7/14/2020	0.113	129	4.38J	<0.23	6.53	59.9	454
	10/5/2020	0.0996J	154	5.60	<0.23	6.81	46.1	608
	4/12/2021	0.0838J	103	4.93J	0.311J	6.27	61.6	448
10/4/2021	0.119	128	4.86J	<0.275	6.93	62.6	486	
4/4/2022	0.126	128	3.29J	<0.220	6.02 / 7.3 [^]	60.4	444	
10/4/2022	0.160	118	5.30	<0.220	7.08	37.4	442	
NC2MW-5	3/14/2016	3.73	210	51	<0.5	7.12	611.0	1310
	6/3/2016	3.98	217	36.6	<0.5	7.01	590.0	1390
	8/31/2016	4.08	159	21.5	<0.5	7.11	455.0	1280
	11/17/2016	4.27	228	21.6	1.89	7.54	414.0	1170
	2/15/2017	2.94	217	13.3	0.59	7.30	531.0	1210
	4/24/2017	2.85	183	12.5	1.25	7.55	331.0	1060
	6/15/2017	3.82	190	10.6	<0.5	7.17	243.0	1090
	7/12/2017	4.63	191	7.93	<0.5	7.45	369.0	1190
	11/9/2017	2.91	168	13.2	<0.5	7.20	404.0	1260
	3/12/2018	2	160	34.2	<0.5	6.90 / 7.56 ^[1]	318.0	826
	6/6/2018	3.81	198	14	<0.5	7.02	353.0	1060
	10/3/2018	4.01	227	8.65	<0.5	7.00	503	1230
	4/8/2019	3.72	189	5.42	0.634	7.15	382	1030
	10/15/2019	3.66	195	9.2	<0.5	7.00	322	924
	1/30/2020	2.65	172	8.61	<0.5	7.23	297	692
	4/27/2020	3.31	174	6.39	0.323J	6.84	381	946
	7/14/2020	4.26	216	9.02	<0.23	6.83	324	1020
	10/5/2020	4.27	221	10.6	<0.23	6.96	339	1040
	4/12/2021	2.24	114	9.45	0.356J	6.60	203	606
	10/4/2021	2.86	168	9.28	<0.275	7.19	282	826
4/4/2022	2.31	167	9.57	<0.220	7.37 / 7.5 [^]	336	802	
10/4/2022	3.81	169	7.59	<0.220	7.30	202	832	

Table 4 - Appendix III (Detection Monitoring) Constituents in Groundwater

Omaha Public Power District - NC2 Ash Disposal Area

		Appendix III (Detection Monitoring) Constituents						
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	3/9/2016	<0.2	96.3	11.8	<0.5	7.20	45	408
	3/14/2016	<0.2	90.6	11.4	<0.5	6.97	47.7	438
	6/3/2016	<0.2	87.9	12	<0.5	7.11	37.6	360
	6/7/2016	<0.2	87.1	11.7	<0.5	7.14	39.3	484
	8/31/2016	<0.2	66.6	11.1	<0.5	7.71	31.3	414
	11/17/2016	<0.2	84.2	9.33	0.803	7.79	34.7	430
	11/18/2016	<0.2	86.2	9.65	0.647	7.14	34.4	410
	2/14/2017	<0.2	106	20.7	3.64	7.29	39.9	472
	2/15/2017	<0.2	94.9	11.2	<0.5	7.21	40.9	448
	4/24/2017	<0.2	94.1	12	0.79	7.27	39.5	520
	4/25/2017	<0.2	93.5	12.1	0.80	7.36	38.9	430
	6/15/2017	<0.2	91.1	12.4	<0.5	7.28	34.2	454
	6/20/2017	<0.2	88.6	12.7	0.51	7.17	35.6	456
	7/12/2017	<0.2	95.8	16.8	<0.5	8.10	42.0	676
	7/13/2017	<0.2	94.1	12.5	<0.5	8.09	39.8	592
	11/8/2017	<0.2	90.2	12.7	0.608	7.00	37.4	498
	11/9/2017	<0.2	95.2	12.4	0.55	7.12	36.4	488
	3/12/2018	<0.2	99.8	12.9	<0.5	6.45 / 7.51 ^[1]	37.0	412
	6/6/2018	0.203	102	12.5	<0.5	6.84	71.0	504
	10/3/2018	<0.2	87.3	14.1	0.738	6.88	33.6	410
	4/8/2019	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]
	10/15/2019	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]
	1/30/2020	0.121J	93.7	17.2	<0.5	6.87	44.5	464
	4/20/2020	0.133J	120	17.3	0.399J	6.96	371	742
	4/27/2020	0.134	102	17.2	0.383J	6.93	271	622
	7/14/2020	0.134	103	7.22	0.267J	6.84	299	566
	10/5/2020	0.0955J	118	12.8	<0.23	6.9	46.2	508
	4/12/2021	0.0653J	66.9	5.5	0.441J	6.58	101	350
10/4/2021	0.105	126	11.5	<0.275	6.99	47.4	510	
4/4/2022	0.0931J	130	10.7	<0.220	6.15 / 7.2 [^]	48.8	470	
10/3/2022	0.113	112	9.85	<0.220	6.90	13.3	470	
NC2MW-2	3/14/2016	<0.2	277	<5	0.371	6.80	388.0	1120
	6/3/2016	0.301	196	<5	<0.5	6.79	336.0	972
	8/31/2016	0.511	130	<5	<0.5	7.04	151.0	696
	11/17/2016	0.302	236	<5	<0.5	7.23	298.0	1030
	2/15/2017	0.219	269	13.2	2.51	7.28	290.0	1070
	4/24/2017	0.264	158	5.4	1.38	7.21	135.0	652
	6/15/2017	0.304	165	<5	<0.5	7.04	139.0	780
	7/12/2017	0.325	127	<5	<0.5	7.03	73.0	592
	11/9/2017	0.25	131	<5	<0.5	7.19	130.0	662
	3/12/2018	<0.2	176	5.08	<0.5	6.26 / 6.96 ^[1]	258.0	656
	6/6/2018	0.353	220	15.7	<0.5	6.45 / 6.71 ^[2]	281.0	1180
	10/3/2018	0.438	167	<5	<0.5	6.86	164	668
	4/8/2019	0.270	227	11.8	<0.5	6.68	290	978
	9/23/2019	0.879	151	9.73	0.546	N.S.	238	654
	10/15/2019	0.513	241	10.7	<0.5	6.54	314	972
	1/31/2020	0.322	258	9.78	<0.5	6.39	312	1090
	4/27/2020	0.265	252	9.64	0.256J	6.49	350	1140
	7/14/2020	0.291	261	7.93	<0.23	6.67	319	1070
	10/5/2020	0.289	268	7.67	<0.23	6.70	324	1050
	4/12/2021	0.371	235	24.7	0.392J	6.34	458	1040
	10/4/2021	0.668	183	11.6	<0.275	6.91	266	726
4/4/2022	0.456	231	18.1	<0.220	4.18 / 6.7 [^]	381	934	
10/3/2022	0.559	241	11.3	0.330J	7.03	319	1030	

Table 4 - Appendix III (Detection Monitoring) Constituents in Groundwater

Omaha Public Power District - NC2 Ash Disposal Area

		Appendix III (Detection Monitoring) Constituents						
Constituent		Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
Reporting Unit		mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
NC2MW-3	3/14/2016	<0.2	85.3	<5	0.168	7.05	21.0	334
	6/3/2016	<0.2	121	<5	<0.5	7.14	19.6	500
	8/31/2016	<0.2	51.3	<5	<0.5	7.18	7.4	296
	11/17/2016	<0.2	91	<5	1.28	7.32	5.6	354
	2/15/2017	<0.2	74.2	15.6	5.11	7.09	49.6	378
	4/24/2017	<0.2	63.3	9	2.87	7.68	10.5	324
	6/15/2017	<0.2	89.4	<5	<0.5	7.32	<5	386
	7/12/2017	<0.2	92.8	<5	<0.5	7.99	8.9	528
	11/9/2017	<0.2	148	<5	<0.5	7.33	185.0	604
	3/12/2018	<0.2	167	11.7	0.723	6.61 / 7.41 ^[1]	371.0	792
	6/6/2018	0.654	198	22.9	<0.5	4.40 / 6.91 ^[2]	491.0	978
	10/3/2018	<0.2	127	8.74	0.523	6.94	31.2	478
	4/8/2019	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]
	9/23/2019	<0.2	132	7.53	0.527	N.S.	24	494
	10/15/2019	<0.2	138	7.92	<0.5	6.81	20.3	472
	1/31/2020	<0.1	156	6.90	<0.5	6.61	89.9	600
	4/27/2020	0.0765J	181	8.70	0.300J	6.62	183	774
	7/14/2020	0.401	204	3.86J	<0.23	6.8	407	842
	10/5/2020	0.213	159	7.71	0.535	6.76	156	644
	4/12/2021	0.271	141	22.7	1.37	6.53	379	1080
10/4/2021	0.306	139	12.6	0.492J	7.02	292	860	
4/4/2022	0.198	212	47.0	1.12	4.01 / 7.1 [^]	703	1590	
10/3/2022	0.468	194	12.1	1.17	7.15	563	1440	
NC2MW-6	3/14/2016	3.83	134	16.5	<0.5	7.21	314.0	728
	6/3/2016	4.14	93	6.16	<0.5	7.27	171.0	608
	8/31/2016	4.79	90.4	<5.0	<0.5	7.43	149.0	592
	11/17/2016	5.11	125	15	6.53	7.63	165.0	588
	2/15/2017	4.11	132	<5.0	<0.5	7.77	136.0	602
	4/24/2017	3.08	96.5	10.2	1.71	7.68	99.1	530
	6/15/2017	3.58	119	6.26	<0.5	7.35	196.0	636
	7/12/2017	3.92	102	<5.0	<0.5	7.25	155.0	596
	11/9/2017	4.39	128	6.75	<0.5	7.24	195.0	872
	3/12/2018	3.06	145	7.14	<0.5	6.64 / 7.38 ^[1]	194.0	644
	6/6/2018	3.58	133	5.53	<0.5	7.19	174.0	694
	10/3/2018	4.18	129	<5.0	<0.5	6.97	200	660
	4/8/2019	2.46	94.3	<5	<0.5	7.18	141	520
	10/15/2019	2.79	154	9.08	<0.5	6.82	151	656
	1/31/2020	2.86	149	8.67	<0.5	6.94	171	884
	4/27/2020	2.59	125	8.29	0.335J	6.80	149	586
	7/14/2020	2.60	122	7.83	0.232J	6.93	135	526
	10/5/2020	3.03	126	8.57	0.329J	6.89	147	404
	4/12/2021	1.94	90.4	3.57J	<0.275	6.65	101	406
	10/4/2021	2.48	123	6.30	<0.275	7.20	132	524
4/4/2022	2.42	142	6.45	<0.220	7.48 / 7.2 [^]	134	600	
10/4/2022	2.33	120	6.05	<0.220	7.41	97.9	566	
NC2MW-7	3/14/2016	<0.2	134	6.55	0.312	6.92	6.9	496
	6/3/2016	<0.2	128	7.63	<0.5	7.28	<5	690
	8/31/2016	<0.2	100	6.68	<0.5	7.55	<5	534
	11/17/2016	<0.2	138	5.73	0.544	7.77	<5	510
	2/15/2017	<0.2	143	9.96	<0.5	7.55	<5	552
	4/24/2017	<0.2	139	11.3	1.35	7.83	<5	576
	6/15/2017	<0.2	128	9.81	<0.5	7.40	<5	688
	7/12/2017	<0.2	125	8.07	<0.5	7.25	<5	636

Table 4 - Appendix III (Detection Monitoring) Constituents in Groundwater

Omaha Public Power District - NC2 Ash Disposal Area

		Appendix III (Detection Monitoring) Constituents						
Constituent		Boron	Calcium	Chloride	Fluoride*	pH	Sulfate	TDS
Reporting Unit		mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L
NC2MW-7 (cont'd)	11/9/2017	0.201	131	7.79	<0.5	7.40	17.8	580
	3/12/2018	<0.2	144	9.04	<0.5	6.72 / 7.42 ^[1]	25.7	496
	6/6/2018	<0.2	119	9.41	<0.5	7.21	12.0	528
	10/3/2018	<0.2	122	9.19	0.519	7.31	11.6	494
	4/8/2019	0.214	132	8.64	<0.5	7.33	44.0	820
	9/23/2019	<0.2	129	8.33	<0.5	N.S.	19.1	526
	10/15/2019	<0.2	139	8.41	<0.5	7.02	32.1	520
	2/3/2020	0.133J	123	8.51	0.357J	6.76	30.9	534
	4/27/2020	0.172	126	9.12	0.429J	6.89	9.26	518
	7/14/2020	0.161	121	9.83	<0.23	6.81	<3.55	340
	10/5/2020	0.220	122	9.12	0.322J	7.21	<3.55	396
	4/12/2021	0.227	124	8.69	0.415J	6.85	<2.45	494
	10/4/2021	0.190	118	9.27	<0.275	7.38	<2.45	430
	4/4/2022	0.241	132	7.08	<0.220	7.89 / 7.2^	6.49	484
10/3/2022	0.249	117	8.88	<0.220	7.60	<2.00	482	
NC2MW-8 ^[3]	10/3/2018	<0.2	142	7.05	0.566	7.14	10.7	526
	1/15/2019	<0.2	102	8.10	<0.5	6.73	11.6	504
	3/5/2019	<0.2	153	7.84	<0.5	7.02	11.6	512
	4/8/2019	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]	N.S. ^[4]
	9/23/2019	<0.2	141	8.96	0.582	6.84	<5	534
	10/16/2019	<0.2	140	9.42	<0.5	6.89	<5	476
	1/31/2020	0.747	140	9.19	<0.5	6.71	106	600
	4/27/2020	0.0777J	127	10.8	0.504	6.81	6.46	500
	7/14/2020	0.0838J	127	10.3	<0.23	7.04	6.24	448
	10/5/2020	0.115	116	10.0	0.331J	7.02	5.50	512
	4/12/2021	0.0894J	121	11.8	0.393J	6.58	7.34	470
	10/4/2021	0.107	130	10.3	<0.275	7.26	7.47	436
	4/4/2022	0.114	132	9.66	<0.220	6.61 / 7.3^	9.69	428
10/3/2022	0.153	125	9.91	<0.220	7.30	13.3	492	

N.S. indicates analyte not sampled due to flooding of area around monitoring well.

"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 and was not used as a statistically significant detection.

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

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.

^Field measurements of pH for select samples were observed to be anomalous. The pH for these samples were also analyzed by the laboratory. The first pH value is the field measured value, and the second pH value is the lab measured value.

^[1] The first pH value obtained in the field on March 13, 2018 was found to be inaccurate due to equipment errors. The second pH value was a verification sample obtained in the field on March 19, 2018.

^[2] Verification sampling for pH was completed on August 7, 2018 and determined the June 5, 2018 reading was inaccurate.

^[3] NC2MW-8 was installed July 9, 2018 and was added to the Groundwater Monitoring System Certification in June 2019. The 9/23/2019 sampling event was part of an Alternative Source Demonstration for the Title 132 Groundwater Assessment Report.

^[4] MW-13, NC2MW-3, and NC2MW-8 were surrounded by ponding water during April 2019 sampling event and were not measured. Additionally, MW-13 was surrounded by ponding water and not sampled during the October 2019 sampling event.

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Table 5 - Appendix IV (Assessment Monitoring) Constituents in Groundwater
Omaha Public Power District - NC2 Ash Disposal Area

		Appendix IV (Assessment Monitoring) Constituents														
Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Combined Radium (Ra 226 + Ra 228)	Selenium	Thallium	
Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	
NC2MW-4	3/9/2016	<0.001	<0.002	0.281	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.00199	<0.05	<0.0002	0.00272	1.54	<0.005	<0.001
	3/14/2016	<0.001	<0.002	0.276	<0.001	<0.0005	<0.005	<0.0005	0.213	0.00065	<0.05	<0.0002	0.00507	0.563	<0.005	<0.001
	6/3/2016	<0.001	<0.002	0.288	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000737	<0.05	<0.0002	0.00239	0.739	<0.005	<0.001
	6/7/2016	<0.001	<0.002	0.293	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000951	<0.05	<0.0002	0.00283	1.21	<0.005	<0.001
	8/31/2016	<0.001	<0.002	0.296	<0.001	<0.0005	<0.005	<0.0005	0.646	0.00162	<0.05	<0.0002	0.00252	1.04	<0.005	<0.001
	11/17/2016	<0.001	<0.002	0.284	<0.001	<0.0005	<0.005	<0.0005	1.28	0.000536	<0.05	<0.0002	0.00597	1.03	<0.005	<0.001
	11/18/2016	<0.001	<0.002	0.283	<0.001	<0.0005	<0.005	<0.0005	1.1	0.00127	<0.05	<0.0002	0.00288	0.984	<0.005	<0.001
	2/14/2017	<0.001	<0.002	0.3	<0.001	<0.0005	<0.005	0.00129	<0.5	0.0032	<0.05	<0.0002	0.0028	0.894	<0.005	<0.001
	2/15/2017	<0.001	<0.002	0.272	<0.001	<0.0005	<0.005	0.000584	2.43	0.00196	<0.05	<0.0002	0.00393	0.647	<0.005	<0.001
	4/24/2017	<0.001	<0.002	0.287	<0.001	<0.0005	<0.005	<0.0005	1.08	0.000802	<0.05	<0.0002	0.00224	1.08	<0.005	<0.001
	4/25/2017	<0.001	<0.002	0.3	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000714	<0.05	<0.0002	0.00323	1.23	<0.005	<0.001
	6/15/2017	<0.001	<0.002	0.249	<0.001	<0.0005	<0.005	0.000521	<0.5	0.00165	<0.05	<0.0002	0.00422	1.29	<0.005	<0.001
	6/20/2017	<0.001	<0.002	0.258	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000754	<0.05	<0.0002	0.00551	1.16	0.00593	<0.001
	7/12/2017	<0.001	<0.002	0.232	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000549	<0.05	<0.0002	0.00233	1.42	<0.005	<0.001
	7/13/2017	<0.001	<0.002	0.236	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000787	<0.05	<0.0002	0.00326	0.76	<0.005	<0.001
	3/12/2018	<0.001	<0.002	0.297	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.00192	0.0318	<0.0002	<0.002	1.71	0.0112	<0.001
	6/6/2018	<0.001	<0.002	0.329	<0.001	<0.0005	<0.005	0.000502	<0.5	0.00154	0.0292	<0.0002	0.0049	1.9	0.00754	<0.001
	10/3/2018	N.S.	<0.002	0.321	N.S.	N.S.	N.S.	<0.0005	<0.5	0.000565	0.0332	N.S.	0.00707	1.13	<0.005	N.S.
	4/8/2019	<0.001	<0.002	0.351	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	0.0351	<0.0002	0.00283	0.743	<0.005	<0.001
	10/15/2019	<0.001	<0.002	0.390	<0.001	0.000138	<0.005	<0.0005	<0.5	<0.0005	0.0343	<0.0002	0.00412	1.22	<0.005	<0.001
1/30/2020	<0.00058	0.00109J	0.340	<0.00027	0.0000720J	<0.0011	0.000531	<0.5	0.00167	0.0347	<0.0001	0.00177J	0.610	<0.001	<0.00026	
4/20/2020	0.000609J	<0.000880	0.303	<0.00027	<0.000039	<0.0011	0.000167J	0.421J	0.000624	0.0305	<0.0001	0.00191J	0.684	<0.001	<0.00026	
4/27/2020	<0.00058	<0.000880	0.335	<0.00027	0.0000470J	<0.0011	0.000121J	0.315J	0.000398J	0.0284	<0.0001	0.00192J	0.743	<0.001	<0.00026	
7/14/2020	<0.00051	0.00104J	0.311	<0.00027	0.000119	<0.0011	0.000591	<0.23	0.00181	0.0311	<0.0001	0.00173J	2.19	0.00129J	<0.00026	
10/5/2020	<0.00051	0.00348	0.447	<0.00027	0.0000970J	0.00164J	0.00122	<0.23	0.00243	0.0349	<0.0001	0.00272	-0.927U	<0.001	<0.00026	
4/12/2021	<0.00110	0.00113J	0.268	<0.00027	0.0000580J	<0.00110	0.000256J	0.311J	0.000833	0.023	<0.00015	0.0112	0.984	0.0111	<0.00026	
10/4/2021	<0.00110	0.00275	0.420	0.000571J	0.000469	0.00110J	0.00203	<0.275	0.00610	0.0324	<0.00015	0.00154J	8.390	0.00391J	0.000527J	
4/4/2022	<0.000690	0.00150J	0.338	<0.000270	0.0000820J	<0.00110	0.000723	<0.220	0.00208	0.0301	<0.000110	0.00609	0.555U	0.0146	<0.000260	
10/4/2022	<0.000690	0.00114J	0.347	<0.000270	0.0000600J	<0.00110	0.000383J	<0.220	0.000736	0.0303	<0.000110	0.00422	2.64	<0.000960	<0.000260	
NC2MW-5	3/14/2016	<0.001	<0.002	0.0295	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.00587	0.318	<0.005	<0.001
	6/3/2016	<0.001	0.00291	0.0384	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0237	0.354	<0.005	<0.001
	8/31/2016	<0.001	<0.002	0.0414	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0243	0.365	<0.005	<0.001
	11/17/2016	<0.001	0.00218	0.0558	<0.001	<0.0005	<0.005	<0.0005	1.89	<0.0005	<0.05	<0.0002	0.0204	0.476	<0.005	<0.001
	2/15/2017	<0.001	<0.002	0.0335	<0.001	<0.0005	<0.005	<0.0005	0.59	0.00088	<0.05	<0.0002	0.0168	0.106	<0.005	<0.001
	4/24/2017	<0.001	0.00236	0.0366	<0.001	<0.0005	<0.005	<0.0005	1.25	0.000734	<0.05	<0.0002	0.00818	0.136	<0.005	<0.001
	6/15/2017	<0.001	0.00207	0.0416	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000601	<0.05	0.0002	0.0125	0.265	<0.005	<0.001
	7/12/2017	<0.001	0.0022	0.0484	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000584	<0.05	<0.0002	0.012	0.507	<0.005	<0.001
	3/12/2018	<0.001	0.0026	0.0395	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000562	<0.01	<0.0002	0.0145	0.236 U	0.0238	<0.001
	6/6/2018	<0.001	0.00325	0.0713	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.00159	0.0129	<0.0002	0.0205	0.187	0.0144	<0.001
	10/3/2018	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	<0.5	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	4/8/2019	N.S.	<0.002	0.0341	N.S.	<0.0005	<0.005	N.S.	0.634	<0.0005	N.S.	<0.0002	N.S.	N.S.	<0.005	N.S.
	10/15/2019	<0.001	0.00247	0.0340	<0.001	<0.0001	<0.005	<0.0005	<0.5	<0.0005	0.0152	<0.0002	0.0339	-0.0619 U	<0.005	<0.001
	1/30/2020	0.00110	0.00187J	0.0299	<0.00027	<0.000039	<0.0011	0.0000910J	<0.5	0.000388J	0.00889J	<0.0001	0.0120	0.0845U	0.00283J	<0.00026
	4/27/2020	<0.00058	0.00162J	0.0357	<0.00027	<0.000039	<0.0011	0.0000920J	0.323J	<0.00027	0.0102	<0.0001	0.0147	-0.0625	0.00189J	<0.00026
	7/14/2020	<0.00051	0.00279	0.0536	<0.00027	<0.000049	<0.0011	0.000123J	<0.23	0.000871	0.0194	<0.0001	0.0114	0.0869	0.00551	<0.00026
	10/5/2020	<0.00051	0.00243	0.0588	<0.00027	0.0000990J	<0.0011	0.000236J	<0.23	0.000379J	0.0200	<0.0001	0.0212	0.255U	<0.001	<0.00026
	4/12/2021	<0.00110	0.00170J	0.0245	<0.00027	<0.000051	<0.0011	0.000105J	0.356J	<0.00210	0.00783J	<0.00015	0.0252	-0.0122U	0.00867	<0.00026
	10/4/2021	<0.00110	0.00245	0.0519	<0.00027	0.0000570J	<0.0011	0.000226J	<0.275	0.000630	0.0120	<0.00015	0.0236	1.03	0.00162J	<0.00026
	4/4/2022	<0.000690	0.00165J	0.0377	<0.000270	<0.0000550	<0.00110	0.000275J	<0.220	<0.000240	0.00776J	<0.000110	0.0291	0.163U	0.00944	<0.000260
10/4/2022	<0.000690	0.00225	0.0548	<0.000270	0.0000700J	<0.00110	0.000306J	<0.220	0.00208	0.0142	<0.000110	0.0356	0.716	<0.000960	<0.000260	

Table 5 - Appendix IV (Assessment Monitoring) Constituents in Groundwater
Omaha Public Power District - NC2 Ash Disposal Area

		Appendix IV (Assessment Monitoring) Constituents															
Constituent	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Combined Radium (Ra 226 + Ra 228)	Selenium	Thallium		
Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L		
MW-13	3/9/2016	<0.001	0.00492	0.302	<0.001	<0.0005	<0.005	0.000817	<0.5	<0.0005	<0.05	<0.0002	<0.002	1.14	<0.005	<0.001	
	3/14/2016	<0.001	0.00545	0.288	<0.001	<0.0005	<0.005	0.00105	<0.5	<0.0005	<0.05	<0.0002	0.0167	0.741	<0.005	<0.001	
	6/3/2016	<0.001	0.00607	0.324	<0.001	<0.0005	<0.005	0.00122	<0.5	0.000704	<0.05	<0.0002	<0.002	1.01	<0.005	<0.001	
	6/7/2016	<0.001	0.00591	0.317	<0.001	<0.0005	<0.005	0.00118	<0.5	0.000623	<0.05	<0.0002	<0.002	0.69	<0.005	<0.001	
	8/31/2016	<0.001	0.00623	0.342	<0.001	<0.0005	<0.005	0.00107	<0.5	<0.0005	<0.05	<0.0002	0.00216	1.09	<0.005	<0.001	
	11/17/2016	<0.001	0.00515	0.322	<0.001	<0.0005	<0.005	0.000873	0.803	0.00089	<0.05	<0.0002	0.00258	1.37	<0.005	<0.001	
	11/18/2020	<0.001	0.0058	0.333	<0.001	<0.0005	<0.005	0.000916	0.647	<0.0005	<0.05	<0.0002	0.00235	0.745	<0.005	<0.001	
	2/14/2017	<0.001	0.00304	0.349	<0.001	<0.0005	<0.005	0.000925	3.64	<0.0005	<0.05	<0.0002	0.00228	0.532	<0.005	<0.001	
	2/15/2017	<0.001	0.00289	0.321	<0.001	<0.0005	<0.005	0.000883	<0.5	<0.0005	<0.05	<0.0002	0.00221	0.407	<0.005	<0.001	
	4/24/2017	<0.001	0.0024	0.336	<0.001	<0.0005	<0.005	0.00135	0.79	0.000516	<0.05	<0.0002	0.00207	0.579	<0.005	<0.001	
	4/25/2017	<0.001	0.00269	0.358	<0.001	<0.0005	<0.005	0.00141	0.80	0.000522	<0.05	<0.0002	<0.002	0.429	<0.005	<0.001	
	6/15/2017	<0.001	0.00371	0.318	<0.001	<0.0005	<0.005	0.00127	<0.5	<0.0005	<0.05	<0.0002	<0.002	0.8	<0.005	<0.001	
	6/20/2017	<0.001	0.00268	0.311	<0.001	<0.0005	<0.005	0.00119	0.505	0.00171	<0.05	<0.0002	<0.002	0.483	<0.005	<0.001	
	7/12/2017	<0.001	0.00263	0.328	<0.001	<0.0005	<0.005	0.00112	<0.5	<0.0005	<0.05	<0.0002	0.0021	1.56	<0.005	<0.001	
	7/13/2017	<0.001	0.00325	0.33	<0.001	<0.0005	<0.005	0.00108	<0.5	<0.0005	<0.05	<0.0002	0.00206	0.502	<0.005	<0.001	
	3/12/2018	<0.001	0.00295	0.306	<0.001	<0.0005	<0.005	0.00189	<0.5	0.00086	0.0297	<0.0002	<0.002	0.492	<0.005	<0.001	
	6/6/2018	<0.001	0.00262	0.282	<0.001	<0.0005	<0.005	0.00236	<0.5	0.00577	0.0423	<0.0002	<0.002	1.89	0.00553	<0.001	
	10/3/2018	N.S.	0.00965	0.388	N.S.	N.S.	N.S.	0.00191	0.738	0.00216	0.0316	N.S.	0.00243	1.62	<0.005	<0.001	
	4/8/2019	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]
	10/15/2019	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]
1/30/2020	<0.00058	0.00824	0.230	<0.00027	<0.000039	<0.0011	0.00198	<0.5	0.000335J	0.0273	<0.0001	0.00187J	0.0337U	<0.001	<0.00026		
4/20/2020	<0.00058	0.00867	0.177	<0.00027	<0.000039	<0.0011	0.00193	0.399J	0.000311J	0.0374	<0.0001	0.00457	0.438	<0.001	<0.00026		
4/27/2020	<0.00058	0.0111	0.167	<0.00027	<0.000039	<0.0011	0.00208	0.383J	0.000297J	0.0348	<0.0001	0.00335	-0.0922	<0.001	<0.00026		
7/14/2020	<0.00051	0.0118	0.182	<0.00027	<0.000049	<0.0011	0.000549	0.267J	0.000250J	0.0277	<0.0001	0.00130J	0.539	<0.001	<0.00026		
10/5/2020	<0.00051	0.0188	0.225	<0.00027	<0.000049	<0.0011	0.000384J	<0.23	0.000178J	0.0322	<0.0001	<0.0011	0.872	<0.001	<0.00026		
4/12/2021	<0.00110	0.00487	0.0815	<0.00027	<0.000051	<0.0011	0.000099	0.441J	0.000353J	0.0199	<0.00015	0.00443	0.429U	0.00194J	<0.00026		
10/4/2021	<0.00110	0.0402	0.257J	<0.00027	<0.000051	<0.0011	0.001020	<0.275	<0.000210	0.0330	<0.00015	<0.00130	1.84	<0.000960	<0.00026		
4/4/2022	<0.000690	0.0134	0.202	<0.000270	<0.0000550	<0.00110	0.000879	<0.220	0.000698	0.0329	<0.000110	<0.00120	0.500U	<0.000960	<0.000260		
10/3/2022	<0.000690	0.0151	0.253	<0.000270	<0.0000550	<0.00110	0.000419J	<0.220	<0.000240	0.0301	<0.000110	<0.00120	1.24	<0.000960	<0.000260		
NC2MW-2	3/14/2016	0.00188	<0.002	0.0679	<0.001	<0.0005	<0.005	<0.0005	0.371	<0.0005	0.0512	<0.0002	0.00207	0.967	<0.005	<0.001	
	6/3/2016	0.00944	<0.002	0.136	<0.001	<0.0005	0.0153	<0.0005	<0.5	0.000538	<0.05	<0.0002	0.00368	0.535	<0.005	<0.001	
	8/31/2016	0.00812	<0.002	0.0814	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000872	<0.05	<0.0002	0.00757	0.996	<0.005	<0.001	
	11/17/2016	0.00452	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.00519	1.39	<0.005	<0.001	
	2/15/2017	0.00331	<0.002	0.144	<0.001	<0.0005	<0.005	<0.0005	2.51	0.000671	<0.05	<0.0002	0.0093	0.304	<0.005	<0.001	
	4/24/2017	0.00303	<0.002	0.076	<0.001	<0.0005	<0.005	<0.0005	1.38	<0.0005	<0.05	<0.0002	0.0158	0.518	<0.005	<0.001	
	6/15/2017	0.00282	<0.002	0.0828	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000721	<0.05	<0.0002	0.0106	0.48	<0.005	<0.001	
	7/12/2017	0.00266	<0.002	0.0837	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000949	<0.05	<0.0002	0.0174	0.721	<0.005	<0.001	
	3/12/2018	0.00261	<0.002	0.12	<0.001	<0.0005	<0.005	0.000626	<0.5	0.000604	0.0165	<0.0002	0.0402	0.882	<0.005	<0.001	
	6/6/2018	0.00345	<0.002	0.179	<0.001	<0.0005	<0.005	0.00132	<0.5	<0.0005	0.0201	<0.0002	0.137	1.15	<0.005	<0.001	
	10/3/2018	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	<0.5	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	
	4/8/2019	N.S.	<0.002	0.127	N.S.	<0.0005	<0.005	N.S.	<0.5	0.00206	N.S.	<0.0002	N.S.	N.S.	<0.005	N.S.	
	9/23/2019	0.00388	<0.002	0.107	<0.001	<0.0001	<0.005	<0.0005	0.546	0.00183	0.0150	<0.0002	0.0938	N.S.	<0.005	<0.001	
	10/15/2019	0.00900	<0.002	0.142	<0.001	0.000220	<0.005	<0.0005	<0.5	0.000787	0.0313	<0.0002	0.0361	0.650	<0.005	<0.001	
	1/31/2020	0.00510	<0.000880	0.133	<0.00027	0.000111	<0.0011	0.000277J	<0.5	0.00106	0.0406	<0.0001	0.0158	0.736	0.00165J	<0.00026	
	4/27/2020	0.00243	<0.000880	0.141	<0.00027	0.0000980J	<0.0011	0.000161J	0.256J	0.00106	0.0411	<0.0001	0.00966	0.987	0.00116J	<0.00026	
	7/14/2020	0.00268	0.000989J	0.152	<0.00027	0.000306	<0.0011	0.000202J	<0.23	0.000908	0.0468	<0.0001	0.0163	0.995	<0.001	<0.00026	
	10/5/2020	0.00381	0.00117J	0.170	<0.00027	0.000186	<0.0011	0.000208J	<0.23	0.000797	0.0523	<0.0001	0.0177	1.06	<0.001	<0.00026	
	4/12/2021	0.00524	<0.000750	0.0967	<0.000270	0.0000690J	<0.00110	0.000118J	0.392J	0.000752	0.0311	<0.00015	0.0178	1.01	0.00641	<0.00026	
	10/4/2021	0.00323	0.000907J	0.106	<0.000270	0.000287	<0.00110	0.00224	<0.275	0.000609	0.0247	<0.00015	0.0505	1.92	0.00128J	<0.00026	
4/4/2022	0.00298	0.000766J	0.124	<0.000270	0.0000900J	<0.00110	0.000522	<0.220	0.000861	0.0254	<0.000110	0.0322	1.09	0.00627	<0.000260		
10/3/2022	0.00298	0.00104J	0.108	<0.000270	0.000206	<0.00110	0.000713	0.330J	0.000853	0.0338	<0.000110	0.0354	2.08	<0.000960	<0.000260		

Table 5 - Appendix IV (Assessment Monitoring) Constituents in Groundwater
Omaha Public Power District - NC2 Ash Disposal Area

		Appendix IV (Assessment Monitoring) Constituents															
Constituent	Reporting Unit	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Combined Radium (Ra 226 + Ra 228)	Selenium	Thallium	
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	
NC2MW-3	3/14/2016	<0.001	0.00762	0.253	<0.001	<0.0005	<0.005	<0.0005	0.168	<0.0005	<0.05	<0.0002	0.00293	0.948	<0.005	<0.001	
	6/3/2016	<0.001	0.0191	0.362	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.00377	0.924	<0.005	<0.001	
	8/31/2016	<0.001	0.0103	0.211	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000692	<0.05	<0.0002	0.00301	0.446	<0.005	<0.001	
	11/17/2016	<0.001	0.0113	0.234	<0.001	<0.0005	<0.005	<0.0005	1.28	<0.0005	<0.05	<0.0002	<0.002	0.616	<0.005	<0.001	
	2/15/2017	0.00111	0.0066	0.281	<0.001	<0.0005	<0.005	0.00051	5.11	<0.0005	<0.05	<0.0002	0.0176	0.381	<0.005	<0.001	
	4/24/2017	<0.001	0.00892	0.174	<0.001	<0.0005	<0.005	0.00216	2.87	0.000691	<0.05	<0.0002	0.00677	0.521	<0.005	<0.001	
	6/15/2017	<0.001	0.0101	0.225	<0.001	<0.0005	<0.005	0.00103	<0.5	0.00103	<0.05	<0.0002	0.00298	0.928	<0.005	<0.001	
	7/12/2017	<0.001	0.00286	0.267	<0.001	<0.0005	<0.005	0.000806	<0.5	0.000913	<0.05	<0.0002	0.00206	0.479	<0.005	<0.001	
	3/12/2018	<0.001	0.0027	0.125	<0.001	<0.0005	<0.005	0.000997	0.723	0.00178	0.0128	<0.0002	0.00454	0.6	<0.005	<0.001	
	6/6/2019	<0.001	0.00835	0.163	<0.001	<0.0005	<0.005	0.00768	<0.5	<0.0005	0.0182	<0.0002	0.0628	1.22	<0.005	<0.001	
	10/3/2018	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	0.532	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	
	4/8/2019	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]
	9/23/2019	<0.001	0.00325	0.289	<0.001	<0.0001	<0.005	0.00224	0.527	<0.0005	0.0452	<0.0002	0.00550	N.S.	<0.005	<0.001	
	10/15/2019	<0.001	0.00344	0.312	<0.001	<0.0001	<0.005	0.00232	<0.5	<0.0005	0.0428	<0.0002	0.00526	0.878	<0.005	<0.001	
	1/31/2020	<0.00058	0.00338	0.297	<0.00027	<0.000039	<0.0011	0.00197	<0.5	<0.00027	0.0333	<0.0001	0.00392	0.707	<0.001	<0.00026	
	4/27/2020	<0.00058	0.00483	0.340	<0.00027	<0.000039	<0.0011	0.00991	0.300J	0.000617	0.0333	<0.0001	0.00565	0.552	<0.001	<0.00026	
	7/14/2020	<0.00051	0.00685	0.171	<0.00027	<0.000049	<0.0011	0.00274	<0.23	0.000595	0.0317	<0.0001	0.0112	0.885	<0.001	<0.00026	
10/5/2020	<0.00051	0.00735	0.191	<0.00027	<0.000049	<0.0011	0.000647	0.535	0.000163J	0.0399	<0.0001	0.00487	1.32	<0.001	<0.00026		
4/12/2021	<0.00110	0.00113J	0.113	<0.00027	0.0000680J	<0.0011	0.000188J	1.37	<0.000210	0.0146	<0.0015	0.00306	0.188U	<0.00096	<0.00026		
10/4/2021	<0.00110	0.00354	0.0769	<0.00027	0.0000820J	<0.0011	0.0115	0.492J	0.000485J	0.0241	<0.00015	0.00356	0.898	<0.00096	<0.00026		
4/4/2022	<0.000690	0.00171J	0.0977	<0.000270	0.000104	<0.00110	0.00101	1.12	0.000288J	0.0201	<0.000110	0.00371	0.955	0.0174	<0.000260		
10/3/2022	<0.000690	0.00344	0.0718	<0.000270	<0.0000550	<0.00110	0.00328	1.17	<0.000240	0.0234	<0.000110	0.00250	1.00	<0.000960	<0.000260		
NC2MW-6	3/14/2016	<0.001	<0.002	0.0818	<0.001	<0.0005	0.00629	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0210	0.392	0.00645	<0.001	
	6/3/2016	<0.001	<0.002	0.0823	<0.001	<0.0005	0.00535	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0593	0.603	<0.005	<0.001	
	8/31/2016	<0.001	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0677	1.03	<0.005	<0.001	
	11/17/2016	<0.001	<0.002	0.109	<0.001	<0.0005	<0.005	<0.0005	6.53	<0.0005	<0.05	<0.0002	0.0455	1.48	<0.005	<0.001	
	2/15/2017	<0.001	<0.002	0.0948	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.000901	<0.05	<0.0002	0.0265	0.429	<0.005	<0.001	
	4/24/2017	<0.001	<0.002	0.0791	<0.001	<0.0005	<0.005	<0.0005	1.71	<0.0005	<0.05	<0.0002	0.041	0.425	<0.005	<0.001	
	6/15/2017	<0.001	<0.002	0.105	<0.001	<0.0005	0.00501	<0.0005	<0.5	0.00329	<0.05	<0.0002	0.0354	0.641	<0.005	<0.001	
	7/12/2017	<0.001	<0.002	0.0916	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	<0.05	<0.0002	0.0419	0.949	<0.005	<0.001	
	3/12/2018	<0.001	<0.002	0.107	<0.001	<0.0005	<0.005	0.000505	<0.5	0.00258	0.0371	<0.0002	0.00672	0.530	<0.005	<0.001	
	6/6/2018	<0.001	<0.002	0.12	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.00193	0.0321	<0.0002	0.0108	1.020	0.00679	<0.001	
	10/3/2018	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	<0.5	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	
	4/8/2019	N.S.	<0.002	0.121	<0.001	<0.0005	<0.005	N.S.	<0.5	0.000527	N.S.	<0.0002	N.S.	N.S.	<0.005	N.S.	
	10/15/2019	<0.001	<0.002	0.145	<0.001	<0.0001	<0.005	<0.0005	<0.5	<0.0005	0.0408	<0.0002	0.0121	0.494	<0.005	<0.001	
	1/31/2020	<0.00058	<0.000880	0.118	<0.00027	<0.000039	<0.0011	<0.000091	<0.5	0.000635	0.0321	<0.0001	0.0123	0.616	<0.001	<0.00026	
	4/27/2020	<0.00058	<0.000880	0.114	<0.00027	0.0000540J	<0.0011	<0.000091	0.335J	<0.00027	0.0258	<0.0001	0.0114	0.155	<0.001	<0.00026	
	7/14/2020	<0.00051	<0.000880	0.118	<0.00027	0.0000680J	<0.0011	0.000122J	0.232J	0.000482J	0.0309	<0.0001	0.0133	0.870	<0.001	<0.00026	
	10/5/2020	<0.00051	0.000889J	0.132	<0.00027	0.0000810J	<0.0011	0.000438J	0.329J	0.000929	0.0362	<0.0001	0.0144	1.310	<0.001	<0.00026	
4/12/2021	<0.00110	<0.000750	0.0825	<0.00027	<0.000051	0.001796J	<0.000091	<0.275	0.000264J	0.0143	<0.00015	0.0207	0.436	0.00154J	<0.00026		
10/4/2021	<0.00110	0.000925J	0.133	<0.00027	0.000080J	<0.00110	0.000504	<0.275	0.000719	0.0345	<0.00015	0.0124	4.990	<0.00096	<0.00026		
4/4/2022	0.00123J	0.00118J	0.143	<0.000270	<0.0000550	0.00188J	0.000289J	<0.220	0.00221	0.0420	<0.000110	0.00630	0.778	0.00329J	<0.000260		
10/4/2022	<0.000690	0.00123J	0.146	<0.000270	<0.0000550	<0.00110	0.000724	<0.220	0.000568	0.0387	<0.000110	0.0137	2.78	<0.000960	<0.000260		
NC2MW-7	3/14/2016	<0.001	0.0994	0.687	<0.001	<0.0005	<0.005	0.000794	0.312	<0.0005	0.0602	<0.0002	<0.002	1.43	<0.005	<0.001	
	6/3/2016	<0.001	0.0529	0.591	<0.001	<0.0005	<0.005	<0.0005	<0.5	0.00166	0.0542	<0.0002	<0.002	1.14	<0.005	<0.001	
	8/31/2016	<0.001	0.0418	0.526	<0.001	<0.0005	<0.005	0.000681	<0.5	<0.0005	0.0581	<0.0002	<0.002	0.847	<0.005	<0.001	
	11/17/2016	<0.001	0.0473	0.544	<0.001	<0.0005	<0.005	<0.0005	0.544	<0.0005	0.0613	<0.0002	<0.002	0.851	<0.005	<0.001	
	2/15/2017	<0.001	0.0608	0.558	<0.001	<0.0005	<0.005	0.000639	<0.5	<0.0005	0.0638	<0.0002	<0.002	0.745	<0.005	<0.001	
	4/24/2017	<0.001	0.0592	0.614	<0.001	<0.0005	<0.005	0.000629	1.35	<0.0005	0.0624	<0.0002	<0.002	1.04	<0.005	<0.001	
6/15/2017	<0.001	0.0469	0.538	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	0.0579	<0.0002	<0.002	0.815	<0.005	<0.001		

Table 5 - Appendix IV (Assessment Monitoring) Constituents in Groundwater
Omaha Public Power District - NC2 Ash Disposal Area

		Appendix IV (Assessment Monitoring) Constituents														
Constituent	Reporting Unit	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Combined Radium (Ra 226 + Ra 228)	Selenium	Thallium
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L
NC2MW-7 (cont'd)	7/12/2017	<0.001	0.041	0.501	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	0.0602	<0.0002	<0.002	1.15	<0.005	<0.001
	3/12/2018	<0.001	0.0387	0.473	<0.001	<0.0005	<0.005	<0.0005	<0.5	<0.0005	0.0546	<0.0002	<0.002	1.06	<0.005	<0.001
	6/6/2019	<0.001	0.0418	0.624	<0.001	<0.0005	<0.005	0.000876	<0.5	0.00069	0.0535	<0.0002	<0.002	0.986	<0.005	<0.001
	10/3/2018	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	0.519	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	4/8/2019	N.S.	0.0391	0.565	N.S.	<0.0005	<0.005	N.S.	<0.5	<0.0005	N.S.	<0.0002	N.S.	N.S.	<0.005	N.S.
	9/23/2019	<0.001	0.0416	0.619	<0.001	<0.0001	<0.005	<0.0005	<0.5	<0.0005	0.0622	<0.0002	<0.002	N.S.	<0.005	<0.001
	10/15/2019	<0.001	0.0384	0.597	<0.001	<0.0001	<0.005	<0.0005	<0.5	<0.0005	0.0633	<0.0002	<0.002	0.532	<0.005	<0.001
	2/3/2020	<0.00058	0.0348	0.512	<0.00027	<0.000039	<0.0011	0.000353J	0.357J	<0.00027	0.0545	<0.0001	0.00163J	0.615	<0.001	<0.00026
	4/27/2020	<0.00058	0.0388	0.534	<0.00027	<0.000039	<0.0011	0.000396J	0.429J	<0.00027	0.0568	<0.0001	0.00185J	0.722	<0.001	<0.00026
	7/14/2020	<0.00051	0.0381	0.515	<0.00027	<0.000049	<0.0011	0.000233J	<0.23	<0.00011	0.0580	<0.0001	0.00170J	0.804	<0.001	<0.00026
	10/5/2020	<0.00051	0.0435	0.585	<0.00027	<0.000049	<0.0011	0.000233J	0.322J	<0.00011	0.0641	<0.0001	0.00122J	0.71	<0.001	<0.00026
	4/12/2021	<0.00110	0.0439	0.53	<0.00027	<0.000051	<0.0011	0.000384J	0.415J	<0.00021	0.064	<0.00015	0.00195J	1.05	<0.00096	<0.00026
	10/4/2021	<0.00110	0.0427	0.592	<0.00027	<0.000051	<0.0011	0.000253J	<0.275	<0.00021	0.0566	<0.00015	0.00183J	1.77	<0.00096	<0.00026
4/4/2022	<0.000690	0.0487	0.563	<0.000270	<0.0000550	<0.00110	0.000422J	<0.220	<0.000240	0.0654	<0.000110	0.00159J	0.747	<0.000960	<0.000260	
10/3/2022	<0.000690	0.0478	0.607	<0.000270	<0.0000550	<0.00110	0.000236J	<0.220	<0.000240	0.0572	<0.000110	0.00186J	1.24	<0.000960	<0.000260	
NC2MW-8 ⁽¹⁾	10/3/2018	<0.001	0.0223	0.617	<0.001	<0.0005	<0.005	0.0025	0.566	0.00125	0.0347	<0.0002	0.00307	1.7	<0.005	<0.001
	1/15/2019	<0.001	0.0177	0.503	<0.001	<0.0005	<0.005	0.00224	<0.5	<0.0005	0.0292	<0.0002	0.00288	0.716	<0.005	<0.001
	3/5/2019	<0.001	0.00716	0.566	<0.001	<0.0005	<0.005	0.00304	<0.5	<0.0005	0.036	<0.0002	0.00304	N.S.	<0.005	<0.001
	4/8/2019	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]	N/A ^[2]
	9/23/2019	<0.001	0.0175	0.609	<0.001	<0.0001	<0.005	0.00172	0.582	<0.0005	0.0369	<0.0002	0.00327	N.S.	<0.005	<0.001
	10/16/2019	<0.001	0.0206	0.596	<0.001	<0.0001	<0.005	0.00175	<0.5	<0.0005	0.0333	<0.0002	0.00347	0.735	<0.005	<0.001
	1/31/2020	<0.00058	0.00168J	0.191	<0.00027	0.000160	<0.0011	0.00133	<0.5	<0.00027	0.0249	<0.0001	<0.0011	0.445	<0.001	<0.00026
	4/27/2020	<0.00058	0.0190	0.548	<0.00027	<0.000039	<0.0011	0.00201	0.504	<0.00027	0.0297	<0.0001	0.00291	0.587	<0.001	<0.00026
	7/14/2020	<0.00051	0.0195	0.523	<0.00027	<0.000049	<0.0011	0.00178	<0.23	0.000201J	0.0306	<0.0001	0.00285	0.598	<0.001	<0.00026
	10/5/2020	<0.00051	0.0322	0.579	<0.00027	<0.000049	<0.0011	0.00176	0.331J	0.000486J	0.0325	<0.0001	0.00220	1.24	<0.001	<0.00026
	4/12/2021	<0.00110	0.0108	0.489	<0.00027	0.0000520J	<0.0011	0.0022	0.393J	0.000490J	0.0340	<0.00015	0.00267	0.615	0.00142J	<0.00026
	10/4/2021	<0.00110	0.00958	0.616	<0.00027	<0.000051	<0.0011	0.00229	<0.275	0.000393J	0.0340	<0.00015	0.00281	2.32	<0.00096	<0.00026
	4/4/2022	<0.000690	0.00887	0.552	<0.000270	<0.0000550	<0.00110	0.00264	<0.220	<0.000240	0.0363	<0.000110	0.00202	0.912	<0.000960	<0.000260
10/3/2022	<0.000690	0.0181	0.618	<0.000270	<0.0000550	<0.00110	0.00230	<0.220	0.000321J	0.0364	<0.000110	0.00184J	1.57	<0.000960	<0.000260	

N.S. indicates analyte not sampled because NC2 was detection monitoring.

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.

"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.

⁽¹⁾ NC2MW-8 was installed July 9, 2018 and was added to the Groundwater Monitoring System Certification in June 2019. The 9/23/2019 sampling event was part of an Alternative Source Demonstration for the Title 132 Groundwater Assessment Report.

⁽²⁾ MW-13, NC2MW-3, and NC2MW-8 were surrounded by ponding water during April 2019 sampling event and were not sampled. MW-13 was surrounded by ponding water during October 2019 sample and was not sampled.

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

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Table 6 - Background Threshold Values for Assessment Monitoring

Omaha Public Power District - NC2 Ash Disposal Area

Constituents	Units	Background Threshold Values (BTVs)
Appendix III (Detection Monitoring)		
Boron	mg/l	4.63
Calcium	mg/l	229
Chloride	mg/l	36.6
Fluoride ^[1]	mg/l	1.89
pH (LPL) ^[2]	SU	6.38
pH (UPL) ^[3]	SU	7.87
Sulfate	mg/l	611
TDS	mg/l	1,390
Appendix IV (Assessment Monitoring)		
Antimony ^[4]	mg/l	0.0020
Arsenic	mg/l	0.0402
Barium	mg/l	0.447
Beryllium	mg/l	0.001
Cadmium	mg/l	0.0005
Chromium	mg/l	0.005
Cobalt	mg/l	0.00236
Fluoride ^[1]	mg/l	1.89
Lead	mg/l	0.0061
Lithium	mg/l	0.0423
Mercury	mg/l	0.0002
Molybdenum	mg/l	0.0339
Radium 226 + 228	pCi/l	1.94
Selenium	mg/l	0.0146
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).

^[4] Antimony UPL was previously 0.001 mg/l based on the laboratory's reporting limit (RL). The lab adjusted the RL for antimony to 0.002 mg/l during their annual quality control review. The UPL has been updated to 0.002 mg/l to reflect the change in the laboratory's RL.

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Table 7 - Established Groundwater Protection Standards
 Omaha Public Power District - NC2 Ash Disposal Area

Constituents	Units	Established Groundwater Protection Standard (GWPS) ^[1]
Appendix IV (Assessment Monitoring)		
Antimony	mg/l	0.006
Arsenic	mg/l	0.0402 ^[2]
Barium	mg/l	2.0
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	0.0423 ^[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 prediction limit (UPL) 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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NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	4/1/2022	Time of Sampling	12:17	Static Water Level	12.52
NC1MW3	Date of Sampling	4/1/2022	Time of Sampling	13:11	Static Water Level	12.22
NC1MW4	Date of Sampling	4/1/2022	Time of Sampling	12:21	Static Water Level	13.01
NC1MW5	Date of Sampling	4/1/2022	Time of Sampling	12:50	Static Water Level	14.02
NC1MW6	Date of Sampling	4/1/2022	Time of Sampling	12:30	Static Water Level	10.72
NC1MW7	Date of Sampling	4/1/2022	Time of Sampling	11:57	Static Water Level	11.99
NC1MW8	Date of Sampling	4/1/2022	Time of Sampling	11:55	Static Water Level	12.29
NC1MW9	Date of Sampling	4/1/2022	Time of Sampling	13:17	Static Water Level	12.74
NC2MW2	Date of Sampling	4/1/2022	Time of Sampling	11:33	Static Water Level	14.14
NC2MW3	Date of Sampling	4/1/2022	Time of Sampling	11:23	Static Water Level	12.00
NC2MW4	Date of Sampling	4/1/2022	Time of Sampling	10:43	Static Water Level	10.27
NC2MW5	Date of Sampling	4/1/2022	Time of Sampling	11:02	Static Water Level	6.29
NC2MW6	Date of Sampling	4/1/2022	Time of Sampling	11:11	Static Water Level	11.21
NC2MW7	Date of Sampling	4/1/2022	Time of Sampling	11:37	Static Water Level	10.45
NC2MW8	Date of Sampling	4/1/2022	Time of Sampling	11:27	Static Water Level	9.61
MW11	Date of Sampling	4/1/2022	Time of Sampling	12:04	Static Water Level	10.42
MW12	Date of Sampling	4/1/2022	Time of Sampling	12:10	Static Water Level	12.35
MW13	Date of Sampling	4/1/2022	Time of Sampling	10:40	Static Water Level	8.19
MW14	Date of Sampling	4/1/2022	Time of Sampling	10:50	Static Water Level	11.74

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Equipment Calibration Sheet

Date: 4/4/2022

Time: 6:26

Person Calibrating Instrument: Kyle K. Uhing

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

Parameter:	Reading	Units
pH 4	4.00	NA
Conductivity	4.48	$\mu\text{S}/\text{cm}$
Turbidity	0.0	NTU
DO	10.96	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

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NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	10/1/2022	Time of Sampling	13:50	Static Water Level	12.62
NC1MW3	Date of Sampling	10/1/2022	Time of Sampling	14:35	Static Water Level	13.09
NC1MW4	Date of Sampling	10/1/2022	Time of Sampling	13:55	Static Water Level	13.12
NC1MW5	Date of Sampling	10/1/2022	Time of Sampling	14:17	Static Water Level	14.82
NC1MW6	Date of Sampling	10/1/2022	Time of Sampling	14:26	Static Water Level	11.05
NC1MW7	Date of Sampling	10/1/2022	Time of Sampling	13:35	Static Water Level	11.91
NC1MW8	Date of Sampling	10/1/2022	Time of Sampling	13:33	Static Water Level	12.23
NC1MW9	Date of Sampling	10/1/2022	Time of Sampling	14:41	Static Water Level	13.28
NC2MW2	Date of Sampling	10/1/2022	Time of Sampling	13:14	Static Water Level	14.60
NC2MW3	Date of Sampling	10/1/2022	Time of Sampling	13:07	Static Water Level	12.72
NC2MW4	Date of Sampling	10/1/2022	Time of Sampling	12:31	Static Water Level	11.82
NC2MW5	Date of Sampling	10/1/2022	Time of Sampling	12:48	Static Water Level	14.90
NC2MW6	Date of Sampling	10/1/2022	Time of Sampling	12:56	Static Water Level	11.84
NC2MW7	Date of Sampling	10/1/2022	Time of Sampling	13:29	Static Water Level	10.79
NC2MW8	Date of Sampling	10/1/2022	Time of Sampling	13:10	Static Water Level	11.66
MW11	Date of Sampling	10/1/2022	Time of Sampling	13:43	Static Water Level	11.31
MW12	Date of Sampling	10/1/2022	Time of Sampling	13:38	Static Water Level	13.24
MW13	Date of Sampling	10/1/2022	Time of Sampling	12:27	Static Water Level	10.04
MW14	Date of Sampling	10/1/2022	Time of Sampling	12:34	Static Water Level	13.87

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Equipment Calibration Sheet

Date: 10/3/2022

Time: 8:43

Person Calibrating Instrument: Kyle K. Uhing

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

Parameter:	Reading	Units
pH 4	4.00	NA
Conductivity	4.54	$\mu\text{S}/\text{cm}$
Turbidity	0.3	NTU
DO	9.77	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

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Appendix B

Laboratory Analytical Reports

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228285-1
Client Project/Site: Nebraska City Station Unit 1 & 2 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:
4/21/2022 11:35:23 AM

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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Laboratory Job ID: 310-228285-1

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

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

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Job ID: 310-228285-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-228285-1

Comments

No additional comments.

Receipt

The samples were received on 4/5/2022 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

HPLC/IC

No analytical or quality issues were noted, other than those described 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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228285-1	NC2MW4	Water	04/04/22 08:49	04/05/22 17:00
310-228285-2	MW13	Water	04/04/22 09:58	04/05/22 17:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-228285-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.29	J	5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	60.4		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.00150	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.338		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.126		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.0000820	J	0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	128		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000723		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.00208		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0301		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00609		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0146		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	444		50.0	26.0	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW13

Lab Sample ID: 310-228285-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	48.8		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0134		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.202		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.0931	J	0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	130		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000879		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.000698		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0329		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	470		50.0	26.0	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-228285-1

Date Collected: 04/04/22 08:49

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.29	J	5.00	2.25	mg/L		04/11/22 15:35	04/11/22 15:35	5
Fluoride	<0.220		0.500	0.220	mg/L		04/11/22 15:35	04/11/22 15:35	5
Sulfate	60.4		5.00	2.00	mg/L		04/11/22 15:35	04/11/22 15:35	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		04/07/22 09:00	04/20/22 18:20	1
Arsenic	0.00150	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:20	1
Barium	0.338		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:20	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:20	1
Boron	0.126		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:20	1
Cadmium	0.0000820	J	0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:20	1
Calcium	128		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:20	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:20	1
Cobalt	0.000723		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:20	1
Lead	0.00208		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:20	1
Lithium	0.0301		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:20	1
Molybdenum	0.00609		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:20	1
Selenium	0.0146		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:20	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 18:20	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		04/14/22 14:03	04/15/22 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	444		50.0	26.0	mg/L		04/07/22 16:37	04/07/22 16:37	1
pH	7.3	HF	0.1	0.1	SU		04/06/22 14:13	04/06/22 14:13	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Client Sample ID: MW13

Date Collected: 04/04/22 09:58

Date Received: 04/05/22 17:00

Lab Sample ID: 310-228285-2

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.7		5.00	2.25	mg/L			04/11/22 16:22	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 16:22	5
Sulfate	48.8		5.00	2.00	mg/L			04/11/22 16:22	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		04/07/22 09:00	04/20/22 18:23	1
Arsenic	0.0134		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:23	1
Barium	0.202		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:23	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:23	1
Boron	0.0931	J	0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:23	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:23	1
Calcium	130		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:23	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:23	1
Cobalt	0.000879		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:23	1
Lead	0.000698		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:23	1
Lithium	0.0329		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:23	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:23	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:23	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 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		04/14/22 14:03	04/15/22 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	470		50.0	26.0	mg/L			04/07/22 16:37	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.1	0.1	SU			04/06/22 14:15	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

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

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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
SQL	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
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-349722/3
Matrix: Water
Analysis Batch: 349722

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.450		1.00	0.450	mg/L			04/11/22 15:03	1
Fluoride	<0.0440		0.100	0.0440	mg/L			04/11/22 15:03	1
Sulfate	<0.400		1.00	0.400	mg/L			04/11/22 15:03	1

Lab Sample ID: LCS 310-349722/4
Matrix: Water
Analysis Batch: 349722

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	10.0	10.23		mg/L		102	90 - 110
Fluoride	2.00	1.944		mg/L		97	90 - 110
Sulfate	10.0	10.55		mg/L		105	90 - 110

Lab Sample ID: 310-228285-1 MS
Matrix: Water
Analysis Batch: 349722

Client Sample ID: NC2MW4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Chloride	3.29	J	25.0	26.36		mg/L		92	80 - 120
Fluoride	<0.220		5.00	4.847		mg/L		97	80 - 120
Sulfate	60.4		25.0	85.64		mg/L		101	80 - 120

Lab Sample ID: 310-228285-1 MSD
Matrix: Water
Analysis Batch: 349722

Client Sample ID: NC2MW4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
Chloride	3.29	J	25.0	26.06		mg/L		91	80 - 120	1	15
Fluoride	<0.220		5.00	4.771		mg/L		95	80 - 120	2	15
Sulfate	60.4		25.0	85.09		mg/L		99	80 - 120	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-348978/1-A
Matrix: Water
Analysis Batch: 350581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348978

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	0.0009760	J	0.00200	0.000690	mg/L		04/07/22 09:00	04/20/22 17:13	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 17:13	1
Barium	<0.000880		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 17:13	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 17:13	1
Boron	<0.0580		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 17:13	1
Calcium	<0.190		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lithium	<0.00250		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 17:13	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 17:13	1

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

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

Lab Sample ID: MB 310-348978/1-A
Matrix: Water
Analysis Batch: 350581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348978

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 17:13	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 17:13	1

Lab Sample ID: LCS 310-348978/2-A
Matrix: Water
Analysis Batch: 350581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348978

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	0.200	0.2182		mg/L		109	80 - 120
Arsenic	0.200	0.2149		mg/L		107	80 - 120
Barium	0.100	0.1072		mg/L		107	80 - 120
Beryllium	0.100	0.1004		mg/L		100	80 - 120
Boron	0.200	0.2060		mg/L		103	80 - 120
Cadmium	0.100	0.1030		mg/L		103	80 - 120
Calcium	2.00	1.967		mg/L		98	80 - 120
Chromium	0.100	0.1018		mg/L		102	80 - 120
Cobalt	0.100	0.1066		mg/L		107	80 - 120
Lead	0.200	0.2128		mg/L		106	80 - 120
Lithium	0.200	0.2103		mg/L		105	80 - 120
Molybdenum	0.200	0.2063		mg/L		103	80 - 120
Selenium	0.400	0.4092		mg/L		102	80 - 120
Thallium	0.200	0.2113		mg/L		106	80 - 120

Lab Sample ID: 310-228285-2 DU
Matrix: Water
Analysis Batch: 350581

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 348978

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
Antimony	<0.000690		<0.000690		mg/L		NC	20
Arsenic	0.0134		0.01308		mg/L		3	20
Barium	0.202		0.2029		mg/L		0.6	20
Beryllium	<0.000270		<0.000270		mg/L		NC	20
Boron	0.0931	J	0.1043		mg/L		11	20
Cadmium	<0.0000550		<0.0000550		mg/L		NC	20
Calcium	130		128.9		mg/L		0.6	20
Chromium	<0.00110		<0.00110		mg/L		NC	20
Cobalt	0.000879		0.0009570		mg/L		8	20
Lead	0.000698		0.0007140		mg/L		2	20
Lithium	0.0329		0.03457		mg/L		5	20
Molybdenum	<0.00120		<0.00120		mg/L		NC	20
Selenium	<0.000960		0.001026	J	mg/L		NC	20
Thallium	<0.000260		<0.000260		mg/L		NC	20

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-349871/1-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349871

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000110		0.000200	0.000110	mg/L		04/14/22 14:03	04/15/22 12:34	1

Lab Sample ID: LCS 310-349871/2-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349871

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

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

Lab Sample ID: MB 310-349178/1
Matrix: Water
Analysis Batch: 349178

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<26.0		50.0	26.0	mg/L			04/07/22 16:37	1

Lab Sample ID: LCS 310-349178/2
Matrix: Water
Analysis Batch: 349178

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 310-228285-1 DU
Matrix: Water
Analysis Batch: 349178

Client Sample ID: NC2MW4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

HPLC/IC

Analysis Batch: 349722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	9056A	
310-228285-2	MW13	Total/NA	Water	9056A	
MB 310-349722/3	Method Blank	Total/NA	Water	9056A	
LCS 310-349722/4	Lab Control Sample	Total/NA	Water	9056A	
310-228285-1 MS	NC2MW4	Total/NA	Water	9056A	
310-228285-1 MSD	NC2MW4	Total/NA	Water	9056A	

Metals

Prep Batch: 348978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	3005A	
310-228285-2	MW13	Total/NA	Water	3005A	
MB 310-348978/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-228285-2 DU	MW13	Total/NA	Water	3005A	

Prep Batch: 349871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	7470A	
310-228285-2	MW13	Total/NA	Water	7470A	
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 350063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	7470A	349871
310-228285-2	MW13	Total/NA	Water	7470A	349871
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	349871
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	349871

Analysis Batch: 350581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	6020A	348978
310-228285-2	MW13	Total/NA	Water	6020A	348978
MB 310-348978/1-A	Method Blank	Total/NA	Water	6020A	348978
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	6020A	348978
310-228285-2 DU	MW13	Total/NA	Water	6020A	348978

General Chemistry

Analysis Batch: 348982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	SM 4500 H+ B	
310-228285-2	MW13	Total/NA	Water	SM 4500 H+ B	
LCS 310-348982/27	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 349178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	SM 2540C	
310-228285-2	MW13	Total/NA	Water	SM 2540C	
MB 310-349178/1	Method Blank	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

General Chemistry (Continued)

Analysis Batch: 349178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-349178/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-228285-1 DU	NC2MW4	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-228285-1

Date Collected: 04/04/22 08:49

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	349722	04/11/22 15:35	JNR	TAL CF
Total/NA	Prep	3005A			348978	04/07/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	350581	04/20/22 18:20	SAP	TAL CF
Total/NA	Prep	7470A			349871	04/14/22 14:03	EAM	TAL CF
Total/NA	Analysis	7470A		1	350063	04/15/22 13:18	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349178	04/07/22 16:37	ARG	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	348982	04/06/22 14:13	JAJ	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-228285-2

Date Collected: 04/04/22 09:58

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	349722	04/11/22 16:22	JNR	TAL CF
Total/NA	Prep	3005A			348978	04/07/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	350581	04/20/22 18:23	SAP	TAL CF
Total/NA	Prep	7470A			349871	04/14/22 14:03	EAM	TAL CF
Total/NA	Analysis	7470A		1	350063	04/15/22 13:20	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349178	04/07/22 16:37	ARG	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	348982	04/06/22 14:15	JAJ	TAL CF

Laboratory References:

TAL 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: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

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)	09-29-22
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	04-06-23
North Dakota	State	R-186	09-29-22
Oregon	NELAP	IA100001	09-29-22

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

Eurofins Cedar Falls

Method Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-1

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
SM 4500 H+ B	pH	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

Eurofins Cedar Falls

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228285-1
SDG Number:

Login Number: 228285
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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

- 1
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- 13
- 14



**Environment Testing
America**

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228285-2
Client Project/Site: Nebraska City Station Unit 1 & 2 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:
5/10/2022 10:38:26 AM

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



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

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

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Case Narrative

Job ID: 310-228285-2

Laboratory: Eurofins Cedar Falls

Narrative

**Job Narrative
310-228285-2**

Comments

No additional comments.

Receipt

The samples were received on 4/5/2022 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

RAD

Method PrecSep_0: Radium-228 Prep Batch 160-559628

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW4 (310-228285-1) and MW13 (310-228285-2).

Method PrecSep-21: Radium-226 Prep Batch 160-559626

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW4 (310-228285-1) and MW13 (310-228285-2).

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: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228285-1	NC2MW4	Water	04/04/22 08:49	04/05/22 17:00
310-228285-2	MW13	Water	04/04/22 09:58	04/05/22 17:00

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-228285-1

Date Collected: 04/04/22 08:49

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.295	U	0.254	0.255	1.00	0.395	pCi/L	04/11/22 12:07	05/07/22 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/11/22 12:07	05/07/22 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.438	0.439	1.00	0.741	pCi/L	04/11/22 12:30	05/03/22 12:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/11/22 12:30	05/03/22 12:49	1
Y Carrier	86.4		40 - 110					04/11/22 12:30	05/03/22 12:49	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	0.555	U	0.506	0.508	5.00	0.741	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Client Sample ID: MW13

Lab Sample ID: 310-228285-2

Date Collected: 04/04/22 09:58

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.170	U	0.147	0.148	1.00	0.224	pCi/L	04/11/22 12:07	05/07/22 13:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110	04/11/22 12:07	05/07/22 13:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.329	U	0.330	0.331	1.00	0.536	pCi/L	04/11/22 12:30	05/03/22 12:49	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110	04/11/22 12:30	05/03/22 12:49	1
Y Carrier	86.7		40 - 110	04/11/22 12:30	05/03/22 12:49	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	0.500	U	0.361	0.363	5.00	0.536	pCi/L		05/09/22 22:46	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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
SQL	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
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-559626/23-A
Matrix: Water
Analysis Batch: 564353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559626

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.009138	U	0.0765	0.0766	1.00	0.152	pCi/L	04/11/22 12:07	05/07/22 13:46	1
Carrier		MB MB	Limits		Prepared	Analyzed	Dil Fac			
%Yield	Qualifier									
Ba Carrier	91.0		40 - 110		04/11/22 12:07	05/07/22 13:46	1			

Lab Sample ID: LCS 160-559626/1-A
Matrix: Water
Analysis Batch: 563515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559626

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-226	11.3	10.56		1.26	1.00	0.203	pCi/L	93	75 - 125
Carrier		LCS LCS	Limits		Prepared	Analyzed	Dil Fac		
%Yield	Qualifier								
Ba Carrier	87.3		40 - 110						

Lab Sample ID: LCSD 160-559626/2-A
Matrix: Water
Analysis Batch: 563515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559626

Analyte	Spike Added	LCSD	LCSD	Total	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
		Result	Qual	Uncert. (2σ+/-)							
Radium-226	11.3	10.23		1.23	1.00	0.217	pCi/L	90	75 - 125	0.13	1
Carrier		LCSD LCSD	Limits		Prepared	Analyzed	Dil Fac				
%Yield	Qualifier										
Ba Carrier	88.3		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-559628/23-A
Matrix: Water
Analysis Batch: 563488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559628

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.07525	U	0.233	0.233	1.00	0.428	pCi/L	04/11/22 12:30	05/03/22 12:49	1
Carrier		MB MB	Limits		Prepared	Analyzed	Dil Fac			
%Yield	Qualifier									
Ba Carrier	91.0		40 - 110		04/11/22 12:30	05/03/22 12:49	1			
Y Carrier	88.2		40 - 110		04/11/22 12:30	05/03/22 12:49	1			

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

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

Lab Sample ID: LCS 160-559628/1-A
Matrix: Water
Analysis Batch: 563489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559628

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	8.65	9.320		1.11	1.00	0.410	pCi/L	108	75 - 125
Carrier		LCS LCS	Limits		Prepared	Analyzed	Dil Fac		
%Yield	Qualifier								
Ba Carrier	87.3		40 - 110						
Y Carrier	82.6		40 - 110						

Lab Sample ID: LCSD 160-559628/2-A
Matrix: Water
Analysis Batch: 563489

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559628

Analyte	Spike Added	LCSD	LCSD	Total	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
		Result	Qual	Uncert. (2σ+/-)							
Radium-228	8.65	8.716		1.10	1.00	0.447	pCi/L	101	75 - 125	0.27	1
Carrier		LCSD LCSD	Limits		Prepared	Analyzed	Dil Fac				
%Yield	Qualifier										
Ba Carrier	88.3		40 - 110								
Y Carrier	82.6		40 - 110								

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Rad

Prep Batch: 559626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	PrecSep-21	
310-228285-2	MW13	Total/NA	Water	PrecSep-21	
MB 160-559626/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-559626/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-559626/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 559628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228285-1	NC2MW4	Total/NA	Water	PrecSep_0	
310-228285-2	MW13	Total/NA	Water	PrecSep_0	
MB 160-559628/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-559628/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-559628/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-228285-1

Date Collected: 04/04/22 08:49

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564351	05/07/22 13:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563488	05/03/22 12:49	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: MW13

Lab Sample ID: 310-228285-2

Date Collected: 04/04/22 09:58

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564353	05/07/22 13:46	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563488	05/03/22 12:49	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

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: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

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

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228285-2
SDG Number:

Login Number: 228285
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 04/07/22 12:06 PM

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

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Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/ Landfill

Job ID: 310-228285-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y
310-228285-1	NC2MW4	102	86.4
310-228285-2	MW13	91.3	86.7
LCS 160-559626/1-A	Lab Control Sample	87.3	82.6
LCS 160-559626/2-A	Lab Control Sample Dup	88.3	82.6
MB 160-559626/23-A	Method Blank	91.0	88.2

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
310-228285-1	NC2MW4	102	86.4
310-228285-2	MW13	91.3	86.7
LCS 160-559628/1-A	Lab Control Sample	87.3	82.6
LCS 160-559628/2-A	Lab Control Sample Dup	88.3	82.6
MB 160-559628/23-A	Method Blank	91.0	88.2

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

- 1
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- 12
- 13
- 14



Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228286-1
Client Project/Site: Nebraska City Station Unit 1 & 2
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:
4/21/2022 11:56:50 AM

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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Laboratory Job ID: 310-228286-1

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

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

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Job ID: 310-228286-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-228286-1

Comments

No additional comments.

Receipt

The sample was received on 4/5/2022 5:00 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

HPLC/IC

No analytical or quality issues were noted, other than those described 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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228286-1	NC2MW5A	Water	04/04/22 12:32	04/05/22 17:00

Detection Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Client Sample ID: NC2MW5A

Lab Sample ID: 310-228286-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.25		5.00	2.25	mg/L	5		9056A	Total/NA
Fluoride	0.551		0.500	0.220	mg/L	5		9056A	Total/NA
Sulfate	168		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.00104	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.0456		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	1.59		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000162		0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	113		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000397	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.000811		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0171		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00313		0.00200	0.00120	mg/L	1		6020A	Total/NA
Selenium	0.0115		0.00500	0.000960	mg/L	1		6020A	Total/NA
Total Dissolved Solids	522		50.0	26.0	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Client Sample ID: NC2MW5A

Lab Sample ID: 310-228286-1

Date Collected: 04/04/22 12:32

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.25		5.00	2.25	mg/L		04/11/22 16:38	04/11/22 16:38	5
Fluoride	0.551		0.500	0.220	mg/L		04/11/22 16:38	04/11/22 16:38	5
Sulfate	168		5.00	2.00	mg/L		04/11/22 16:38	04/11/22 16:38	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		04/07/22 09:00	04/20/22 18:31	1
Arsenic	0.00104	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:31	1
Barium	0.0456		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:31	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:31	1
Boron	1.59		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:31	1
Cadmium	0.000162		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:31	1
Calcium	113		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:31	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:31	1
Cobalt	0.000397	J	0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:31	1
Lead	0.000811		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:31	1
Lithium	0.0171		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:31	1
Molybdenum	0.00313		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:31	1
Selenium	0.0115		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:31	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 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		04/14/22 14:03	04/15/22 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	522		50.0	26.0	mg/L			04/07/22 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6	HF	0.1	0.1	SU			04/06/22 13:59	1

Eurofins Cedar Falls

Definitions/Glossary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Qualifiers

Metals

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

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-349722/3
 Matrix: Water
 Analysis Batch: 349722

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.450		1.00	0.450	mg/L			04/11/22 15:03	1
Fluoride	<0.0440		0.100	0.0440	mg/L			04/11/22 15:03	1
Sulfate	<0.400		1.00	0.400	mg/L			04/11/22 15:03	1

Lab Sample ID: LCS 310-349722/4
 Matrix: Water
 Analysis Batch: 349722

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	10.0	10.23		mg/L		102	90 - 110
Fluoride	2.00	1.944		mg/L		97	90 - 110
Sulfate	10.0	10.55		mg/L		105	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-348978/1-A
 Matrix: Water
 Analysis Batch: 350581

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 348978

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	0.0009760	J	0.00200	0.000690	mg/L		04/07/22 09:00	04/20/22 17:13	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 17:13	1
Barium	<0.000880		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 17:13	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 17:13	1
Boron	<0.0580		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 17:13	1
Calcium	<0.190		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lithium	<0.00250		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 17:13	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 17:13	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 17:13	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 17:13	1

Lab Sample ID: LCS 310-348978/2-A
 Matrix: Water
 Analysis Batch: 350581

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 348978

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	0.200	0.2182		mg/L		109	80 - 120
Arsenic	0.200	0.2149		mg/L		107	80 - 120
Barium	0.100	0.1072		mg/L		107	80 - 120
Beryllium	0.100	0.1004		mg/L		100	80 - 120
Boron	0.200	0.2060		mg/L		103	80 - 120
Cadmium	0.100	0.1030		mg/L		103	80 - 120
Calcium	2.00	1.967		mg/L		98	80 - 120
Chromium	0.100	0.1018		mg/L		102	80 - 120
Cobalt	0.100	0.1066		mg/L		107	80 - 120

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QC Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

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

Lab Sample ID: LCS 310-348978/2-A
 Matrix: Water
 Analysis Batch: 350581

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 348978

Analyte	Spike		LCS		Unit	D	%Rec	%Rec Limits
	Added	Result	Result	Qualifier				
Lead	0.200	0.2128	0.2103		mg/L		106	80 - 120
Lithium	0.200	0.2103	0.2063		mg/L		105	80 - 120
Molybdenum	0.200	0.2063	0.2113		mg/L		103	80 - 120
Selenium	0.400	0.4092			mg/L		102	80 - 120
Thallium	0.200	0.2113			mg/L		106	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-349871/1-A
 Matrix: Water
 Analysis Batch: 350063

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 349871

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000110		0.000200	0.000110	mg/L		04/14/22 14:03	04/15/22 16:34	1

Lab Sample ID: LCS 310-349871/2-A
 Matrix: Water
 Analysis Batch: 350063

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 349871

Analyte	Spike		LCS		Unit	D	%Rec	%Rec Limits
	Added	Result	Result	Qualifier				
Mercury	0.00167	0.001509			mg/L		91	80 - 120

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

Lab Sample ID: MB 310-349178/1
 Matrix: Water
 Analysis Batch: 349178

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<26.0		50.0	26.0	mg/L			04/07/22 16:37	1

Lab Sample ID: LCS 310-349178/2
 Matrix: Water
 Analysis Batch: 349178

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

Analyte	Spike		LCS		Unit	D	%Rec	%Rec Limits
	Added	Result	Result	Qualifier				
Total Dissolved Solids	1000	940.0			mg/L		94	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-348982/1
 Matrix: Water
 Analysis Batch: 348982

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

Analyte	Spike		LCS		Unit	D	%Rec	%Rec Limits
	Added	Result	Result	Qualifier				
pH	7.00	7.0			SU		100	98 - 102

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

HPLC/IC

Analysis Batch: 349722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	9056A	
MB 310-349722/3	Method Blank	Total/NA	Water	9056A	
LCS 310-349722/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 348978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	3005A	
MB 310-348978/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 349871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	7470A	
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 350063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	7470A	349871
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	349871
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	349871

Analysis Batch: 350581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	6020A	348978
MB 310-348978/1-A	Method Blank	Total/NA	Water	6020A	348978
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	6020A	348978

General Chemistry

Analysis Batch: 348982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	SM 4500 H+ B	
LCS 310-348982/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 349178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	SM 2540C	
MB 310-349178/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-349178/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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Lab Chronicle

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

Client Sample ID: NC2MW5A

Lab Sample ID: 310-228286-1

Date Collected: 04/04/22 12:32

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	349722	04/11/22 16:38	JNR	TAL CF
Total/NA	Prep	3005A			348978	04/07/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020A		1	350581	04/20/22 18:31	SAP	TAL CF
Total/NA	Prep	7470A			349871	04/14/22 14:03	EAM	TAL CF
Total/NA	Analysis	7470A		1	350063	04/15/22 13:22	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	349178	04/07/22 16:37	ARG	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	348982	04/06/22 13:59	JAJ	TAL CF

Laboratory References:

TAL 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: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

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)	09-29-22
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	04-06-23
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: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-1

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
SM 4500 H+ B	pH	SM	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CF

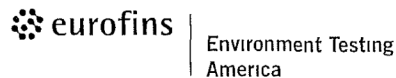
Protocol References:

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

Client Information			
Client <u>Omaha Public Power District</u>			
City/State	CITY <u>Omaha</u>	STATE <u>NE</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4-5-22</u>	TIME <u>1700</u>	Received By <u>HED</u>
Delivery Type	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
		<input type="checkbox"/> Other	
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler ID
Multiple Coolers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Cooler # ___ of ___
Cooler Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Which VOA samples are in cooler? ↓
Temperature Record			
Coolant	<input checked="" type="checkbox"/> Wet ice	<input type="checkbox"/> Blue ice	<input type="checkbox"/> Dry ice
		<input type="checkbox"/> Other	<input type="checkbox"/> NONE
Thermometer ID	<u>N</u>	Correction Factor (°C)	<u>0</u>
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	Corrected Temp (°C)		
* Sample Container Temperature			
Container(s) used	CONTAINER 1 <u>NC2MWS 250ml Nitric</u>	CONTAINER 2	
Uncorrected Temp (°C)	<u>2.9</u>		
Corrected Temp (°C)	<u>2.9</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Eurofins Cedar Falls

Document: CED-P-SAM-FRM45521
 Revision: 26
 Date: 27 Jan 2022

Eurofins Cedar Falls
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General temperature criteria is 0 to 6°C
 Bacteria temperature criteria is 0 to 10°C

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Client Information Sampler: Kyle K. Uhlig Lab P/N: Payne, Shawn M City: Cedar Falls Email: Shawn.payne@testamericasc.com Phone: (515) 226-2515		COC No: Page: Job #:	
Due Date Requested: TAT Requested (days):		Preservation Codes: M: Hexane A: HCL N: Nitrogen O: AAM/2 C: Zn Acetate P: Na2CO3 D: Nitric Acid E: NaHSO4 F: Hydrochloric Acid G: Anhydrous H: Ascorbic Acid I: Ion Water J: Acetone K: EDTA L: EDTA W: pH 4-5 Z: other (specify)	
Address: Omaha Public Power District 444 South 16th Street, Wall 9E/EP1 City: Omaha State, Zip: NE 68102-2247 Phone: (531) 226-2515 Email: kkuhlig@ppd.com		Analysis Requested Total Number of Containers: 4 Special Instructions/Note: CCR Appendix III and IV Constituents	
Project Name: Nebraska City Station Unit 1 & 2 CCR / Landfill Address: Nebraska City Station Unit 1 & 2		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/COC Requirements:	
Deliverable Requested: <input type="checkbox"/> I, II, III, IV Other (specify)		Method of Shipment:	
Empty Kit Relinquished by:		Date: 4/5/22 7:50 Received by: [Signature] Date/Time: 4-5-22 0750 Company: [Signature] Date/Time: 4-5-22 1700 Company:	
Relinquished by: [Signature] Date/Time: 4-5-22 0900 Company:		Relinquished by: [Signature] Date/Time: 4-5-22 1700 Company:	
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:	
Custody Seals intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Δ: Yes Δ: No		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228286-1

SDG Number:

Login Number: 228286

List Number: 1

Creator: Homolar, Dana J

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



Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228286-2
Client Project/Site: Nebraska City Station Unit 1 & 2
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:
5/5/2022 4:37:52 PM

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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Laboratory Job ID: 310-228286-2

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

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

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Job ID: 310-228286-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-228286-2

Comments

No additional comments.

Receipt

The sample was received on 4/5/2022 5:00 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

RAD

Method PrecSep_0: Radium-228 Prep Batch 559860

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW5A (310-228286-1).

Method PrecSep-21: Radium-226 Prep Batch 559855

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW5A (310-228286-1).

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: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228286-1	NC2MW5A	Water	04/04/22 12:32	04/05/22 17:00

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Client Sample ID: NC2MW5A

Lab Sample ID: 310-228286-1

Date Collected: 04/04/22 12:32

Matrix: Water

Date Received: 04/05/22 17:00

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	0.190	0.191	1.00	0.310	pCi/L	04/12/22 13:54	05/04/22 07:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					04/12/22 13:54	05/04/22 07:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.176	U	0.312	0.313	1.00	0.530	pCi/L	04/12/22 14:39	05/02/22 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					04/12/22 14:39	05/02/22 12:09	1
Y Carrier	88.2		40 - 110					04/12/22 14:39	05/02/22 12:09	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	0.341	U	0.365	0.367	5.00	0.530	pCi/L		05/05/22 12:40	1

Definitions/Glossary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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
SQL	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
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-559855/21-A
Matrix: Water
Analysis Batch: 563515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559855

Analyte	MB Result	MB Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.06447	U	0.0869	0.0871	1.00	0.146	pCi/L	04/12/22 13:54	05/04/22 15:46	1
Carrier			%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Ba Carrier			99.3		40 - 110			04/12/22 13:54	05/04/22 15:46	1

Lab Sample ID: LCS 160-559855/1-A
Matrix: Water
Analysis Batch: 563516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559855

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec
		Result	Qual	Uncert. (2σ+/-)					Limits
Radium-226	11.3	10.18		1.21	1.00	0.262	pCi/L	90	75 - 125
Carrier			%Yield	Qualifier	Limits				
Ba Carrier			91.0		40 - 110				

Lab Sample ID: LCSD 160-559855/2-A
Matrix: Water
Analysis Batch: 563516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559855

Analyte	Spike Added	LCSD	LCSD	Total	RL	MDC	Unit	%Rec	%Rec	RER	RER
		Result	Qual	Uncert. (2σ+/-)					Limits	Limit	
Radium-226	11.3	11.17		1.27	1.00	0.212	pCi/L	99	75 - 125	0.40	1
Carrier			%Yield	Qualifier	Limits						
Ba Carrier			92.0		40 - 110						

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-559860/21-A
Matrix: Water
Analysis Batch: 563272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559860

Analyte	MB Result	MB Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1173	U	0.189	0.189	1.00	0.319	pCi/L	04/12/22 14:39	05/02/22 12:13	1
Carrier			%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Ba Carrier			99.3		40 - 110			04/12/22 14:39	05/02/22 12:13	1
Y Carrier			91.6		40 - 110			04/12/22 14:39	05/02/22 12:13	1

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

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

Lab Sample ID: LCS 160-559860/1-A
Matrix: Water
Analysis Batch: 563273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559860

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec
		Result	Qual	Uncert. (2σ+/-)					Limits
Radium-228	8.66	10.03		1.15	1.00	0.379	pCi/L	116	75 - 125
Carrier			%Yield	Qualifier	Limits				
Ba Carrier			91.0		40 - 110				
Y Carrier			87.1		40 - 110				

Lab Sample ID: LCSD 160-559860/2-A
Matrix: Water
Analysis Batch: 563273

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559860

Analyte	Spike Added	LCSD	LCSD	Total	RL	MDC	Unit	%Rec	%Rec	RER	RER
		Result	Qual	Uncert. (2σ+/-)					Limits	Limit	
Radium-228	8.66	9.708		1.11	1.00	0.357	pCi/L	112	75 - 125	0.14	1
Carrier			%Yield	Qualifier	Limits						
Ba Carrier			92.0		40 - 110						
Y Carrier			90.1		40 - 110						

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Rad

Prep Batch: 559855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	PrecSep-21	
MB 160-559855/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-559855/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-559855/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 559860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228286-1	NC2MW5A	Total/NA	Water	PrecSep_0	
MB 160-559860/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-559860/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-559860/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Client Sample ID: NC2MW5A

Lab Sample ID: 310-228286-1

Date Collected: 04/04/22 12:32

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559855	04/12/22 13:54	BMP	TAL SL
Total/NA	Analysis	9315		1	563514	05/04/22 07:49	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559860	04/12/22 14:39	BMP	TAL SL
Total/NA	Analysis	9320		1	563273	05/02/22 12:09	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563897	05/05/22 12:40	CAH	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

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: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

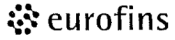
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)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



Environment Testing
America



310-228286 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Omaha Public Power District</u>			
City/State	CITY <u>Omaha</u> STATE <u>NE</u>	Project	
Receipt Information			
Date/Time Received	DATE <u>4-5-22</u> TIME <u>1700</u>	Received By <u>HED</u>	
Delivery Type <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes Cooler ID			
Multiple Coolers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes Cooler # ___ of ___			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other _____ <input type="checkbox"/> NONE			
Thermometer ID <u>N</u>		Correction Factor (°C) <u>0</u>	
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)		Corrected Temp (°C)	
* Sample Container Temperature			
Container(s) used	CONTAINER 1 <u>NC2MWS 250mL Nitric</u>	CONTAINER 2	
Uncorrected Temp (°C)	<u>2.9</u>		
Corrected Temp (°C)	<u>2.9</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Document: CED-P-SAM-FRM45521
Revision: 25
Date: 27 Jan 2022

Eurofins Cedar Falls
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General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

5/5/2022

TestAmerica Cedar Falls

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

Client Information	Lab P/N: <u>Playe, Shawn M</u>
Sampler: <u>Kyle K. Uhlig</u>	Email: <u>Shawn.playe@testamericainc.com</u>
City: <u>Omaha</u>	State: <u>NE</u>
Address: <u>Omaha Public Power District</u>	City: <u>Omaha</u>
<u>444 South 16th Street, Mail 9E1E11</u>	State: <u>NE</u>
City: <u>Omaha</u>	Zip: <u>68102-2247</u>
State: <u>NE</u>	Phone: <u>(531) 228-2515</u>
City: <u>Omaha</u>	Email: <u>kuhlig@ppd.com</u>
Project Name: <u>Redwing@ppd.com</u>	Reference Project #:
Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>	<u>31027358</u>
City: <u>Nebraska City</u>	State: <u>NE</u>
Station: <u>Nebraska City Station Unit 1 & 2</u>	

Chain of Custody Record

TestAmerica Omaha SC
268

Client Information		COC No:		Page:		Job #:	
Sampler: <u>Kyle K. Uhlig</u>		Lab P/N: <u>Playe, Shawn M</u>		Carrier Tracking Note:		Preservation Codes:	
City: <u>Omaha</u>		State: <u>NE</u>		Email: <u>Shawn.playe@testamericainc.com</u>		M: Hezane N: Nitric Acid P: Nitric Acid Q: Nitric Acid R: Nitric Acid S: Nitric Acid T: TSP Dodecylsulfate U: Acetone V: Acetone W: pH 4-5 X: EDTA Y: EDTA Z: Other (specify)	
Address: <u>Omaha Public Power District</u>		City: <u>Omaha</u>		State: <u>NE</u>		Other: _____	
City: <u>Omaha</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		CCR Appendix II and IV Constituents	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Total Number of Containers: <u>4</u>	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
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Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Station: <u>Nebraska City Station Unit 1 & 2</u>		Special Instructions/Note:	
Station: <u>Nebraska City Station Unit 1 & 2</u>		City: <u>Nebraska City</u>		State: <u>NE</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</u>		Zip: <u>68102-2247</u>		Special Instructions/Note:	
Phone: <u>(531) 228-2515</u>		Email: <u>kuhlig@ppd.com</u>		Reference Project #:		Special Instructions/Note:	
Project Name: <u>Redwing@ppd.com</u>		Reference Project #:		Address: <u>Nebraska City Station Unit 1 & 2 CCR / Landfill</u>		Special Instructions/Note:	
City: <u>Nebraska City</u>		State: <u>NE</</u>					

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228286-2
SDG Number:

Login Number: 228286
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 04/07/22 12:06 PM

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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 1 & 2 CCR/Landfill

Job ID: 310-228286-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
310-228286-1	NC2MW5A	84.6	88.2
LCS 160-559855/1-A	Lab Control Sample	91.0	87.1
LCSD 160-559855/2-A	Lab Control Sample Dup	92.0	90.1
MB 160-559855/21-A	Method Blank	99.3	91.6

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
310-228286-1	NC2MW5A	84.6	88.2
LCS 160-559860/1-A	Lab Control Sample	91.0	87.1
LCSD 160-559860/2-A	Lab Control Sample Dup	92.0	90.1
MB 160-559860/21-A	Method Blank	99.3	91.6

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228287-1
Client Project/Site: Nebraska City Station Unit 2 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:
4/21/2022 12:00:02 PM

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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Laboratory Job ID: 310-228287-1

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

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

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Job ID: 310-228287-1

Laboratory: Eurofins Cedar Falls

Narrative

**Job Narrative
310-228287-1**

Comments

No additional comments.

Receipt

The samples were received on 4/5/2022 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.3° C.

HPLC/IC

No analytical or quality issues were noted, other than those described 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

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228287-1	NC2MW2	Water	04/04/22 16:00	04/05/22 17:00
310-228287-2	NC2MW3	Water	04/04/22 14:29	04/05/22 17:00
310-228287-3	NC2MW5	Water	04/04/22 11:55	04/05/22 17:00
310-228287-4	NC2MW6	Water	04/04/22 13:12	04/05/22 17:00
310-228287-5	NC2MW7	Water	04/04/22 17:40	04/05/22 17:00
310-228287-6	NC2MW8	Water	04/04/22 15:21	04/05/22 17:00
310-228287-7	DUP2	Water	04/04/22 00:00	04/05/22 17:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-228287-1

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Antimony, Arsenic, Barium, Boron, Cadmium, Calcium, Cobalt, Lead, Lithium, Molybdenum, Selenium, Total Dissolved Solids, pH.

Client Sample ID: NC2MW3

Lab Sample ID: 310-228287-2

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Fluoride, Sulfate, Arsenic, Barium, Boron, Cadmium, Calcium, Cobalt, Lead, Lithium, Molybdenum, Selenium, Total Dissolved Solids, pH.

Client Sample ID: NC2MW5

Lab Sample ID: 310-228287-3

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Arsenic, Barium, Boron, Calcium, Cobalt, Lithium, Molybdenum, Selenium, Total Dissolved Solids, pH.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Antimony, Arsenic, Barium, Boron, Calcium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium, Total Dissolved Solids, pH.

Client Sample ID: NC2MW7

Lab Sample ID: 310-228287-5

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Arsenic, Barium, Boron, Calcium, Cobalt, Lithium, Molybdenum, Total Dissolved Solids, pH.

Client Sample ID: NC2MW8

Lab Sample ID: 310-228287-6

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Arsenic, Barium, Boron, Calcium, Cobalt, Lithium, Molybdenum, Total Dissolved Solids, pH.

Client Sample ID: DUP2

Lab Sample ID: 310-228287-7

Table with 10 columns: Analyte, Result, Qualifier, RL, MDL, Unit, Dil Fac, D, Method, Prep Type. Rows include Chloride, Sulfate, Arsenic.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: DUP2 (Continued)

Lab Sample ID: 310-228287-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.570		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.204		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	130		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000546		0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0649		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00151	J	0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	482		50.0	26.0	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

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This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-228287-1

Date Collected: 04/04/22 16:00

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.1		5.00	2.25	mg/L		04/11/22 16:53	04/11/22 16:53	5
Fluoride	<0.220		0.500	0.220	mg/L		04/11/22 16:53	04/11/22 16:53	5
Sulfate	381		5.00	2.00	mg/L		04/11/22 16:53	04/11/22 16:53	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00298	B	0.00200	0.000690	mg/L		04/07/22 09:00	04/20/22 18:35	1
Arsenic	0.000766	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:35	1
Barium	0.124		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:35	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:35	1
Boron	0.456		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:35	1
Cadmium	0.0000900	J	0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:35	1
Calcium	231		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:35	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:35	1
Cobalt	0.000522		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:35	1
Lead	0.000861		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:35	1
Lithium	0.0254		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:35	1
Molybdenum	0.0322		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:35	1
Selenium	0.00627		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:35	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 18:35	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		04/14/22 14:03	04/15/22 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	934		50.0	26.0	mg/L		04/07/22 16:37	04/07/22 16:37	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.7	HF	0.1	0.1	SU		04/06/22 14:03	04/06/22 14:03	1

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Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW3

Lab Sample ID: 310-228287-2

Date Collected: 04/04/22 14:29

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.0		5.00	2.25	mg/L			04/11/22 17:09	5
Fluoride	1.12		0.500	0.220	mg/L			04/11/22 17:09	5
Sulfate	703		20.0	8.00	mg/L			04/12/22 11:05	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		04/07/22 09:00	04/20/22 18:39	1
Arsenic	0.00171	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:39	1
Barium	0.0977		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:39	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:39	1
Boron	0.198		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:39	1
Cadmium	0.000104		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:39	1
Calcium	212		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:39	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:39	1
Cobalt	0.00101		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:39	1
Lead	0.000288	J	0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:39	1
Lithium	0.0201		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:39	1
Molybdenum	0.00371		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:39	1
Selenium	0.0174		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:39	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 18:39	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		04/14/22 14:03	04/15/22 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1590		50.0	26.0	mg/L			04/07/22 16:37	1
pH	7.1	HF	0.1	0.1	SU			04/06/22 14:02	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW5

Lab Sample ID: 310-228287-3

Date Collected: 04/04/22 11:55

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.57		5.00	2.25	mg/L			04/11/22 17:24	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 17:24	5
Sulfate	336		5.00	2.00	mg/L			04/11/22 17:24	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		04/07/22 09:00	04/20/22 18:43	1
Arsenic	0.00165	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 18:43	1
Barium	0.0377		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 18:43	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 18:43	1
Boron	2.31		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 18:43	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 18:43	1
Calcium	167		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 18:43	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 18:43	1
Cobalt	0.000275	J	0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 18:43	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 18:43	1
Lithium	0.00776	J	0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 18:43	1
Molybdenum	0.0291		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 18:43	1
Selenium	0.00944		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 18:43	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 18:43	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		04/14/22 14:03	04/15/22 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	802		50.0	26.0	mg/L			04/07/22 16:37	1
pH	7.5	HF	0.1	0.1	SU			04/06/22 14:04	1

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Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Date Collected: 04/04/22 13:12

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.45		5.00	2.25	mg/L			04/11/22 18:11	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 18:11	5
Sulfate	134		5.00	2.00	mg/L			04/11/22 18:11	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00123	J B	0.00200	0.000690	mg/L		04/07/22 09:00	04/20/22 19:02	1
Arsenic	0.00118	J	0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 19:02	1
Barium	0.143		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 19:02	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 19:02	1
Boron	2.42		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 19:02	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 19:02	1
Calcium	142		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 19:02	1
Chromium	0.00188	J	0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 19:02	1
Cobalt	0.000289	J	0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 19:02	1
Lead	0.00221		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 19:02	1
Lithium	0.0420		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 19:02	1
Molybdenum	0.00630		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 19:02	1
Selenium	0.00329	J	0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 19:02	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 19:02	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		04/14/22 14:03	04/15/22 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	600		50.0	26.0	mg/L			04/07/22 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.1	0.1	SU			04/06/22 14:16	1

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Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-228287-5

Date Collected: 04/04/22 17:40

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.08		5.00	2.25	mg/L			04/11/22 18:27	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 18:27	5
Sulfate	6.49		5.00	2.00	mg/L			04/11/22 18:27	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		04/07/22 09:00	04/20/22 19:06	1
Arsenic	0.0487		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 19:06	1
Barium	0.563		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 19:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 19:06	1
Boron	0.241		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 19:06	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 19:06	1
Calcium	132		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 19:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 19:06	1
Cobalt	0.000422	J	0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 19:06	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 19:06	1
Lithium	0.0654		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 19:06	1
Molybdenum	0.00159	J	0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 19:06	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 19:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 19:06	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		04/14/22 14:03	04/15/22 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	484		50.0	26.0	mg/L			04/07/22 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.1	0.1	SU			04/06/22 14:05	1

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Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW8

Lab Sample ID: 310-228287-6

Date Collected: 04/04/22 15:21

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.66		5.00	2.25	mg/L			04/11/22 18:42	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 18:42	5
Sulfate	9.69		5.00	2.00	mg/L			04/11/22 18:42	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		04/07/22 09:00	04/20/22 19:10	1
Arsenic	0.00887		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 19:10	1
Barium	0.552		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 19:10	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 19:10	1
Boron	0.114		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 19:10	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 19:10	1
Calcium	132		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 19:10	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 19:10	1
Cobalt	0.00264		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 19:10	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 19:10	1
Lithium	0.0363		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 19:10	1
Molybdenum	0.00202		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 19:10	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 19:10	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 19:10	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		04/15/22 11:41	04/15/22 15:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	428		50.0	26.0	mg/L			04/07/22 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF	0.1	0.1	SU			04/06/22 14:00	1

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Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: DUP2

Lab Sample ID: 310-228287-7

Date Collected: 04/04/22 00:00

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.34		5.00	2.25	mg/L			04/11/22 18:58	5
Fluoride	<0.220		0.500	0.220	mg/L			04/11/22 18:58	5
Sulfate	6.69		5.00	2.00	mg/L			04/11/22 18:58	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		04/07/22 09:00	04/20/22 19:14	1
Arsenic	0.0481		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 19:14	1
Barium	0.570		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 19:14	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 19:14	1
Boron	0.204		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 19:14	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 19:14	1
Calcium	130		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 19:14	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 19:14	1
Cobalt	0.000546		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 19:14	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 19:14	1
Lithium	0.0649		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 19:14	1
Molybdenum	0.00151	J	0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 19:14	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 19:14	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 19:14	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		04/15/22 11:41	04/15/22 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	482		50.0	26.0	mg/L			04/07/22 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.1	0.1	SU			04/06/22 14:01	1

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Definitions/Glossary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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
ML	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

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QC Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-349722/3

Matrix: Water

Analysis Batch: 349722

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.450		1.00	0.450	mg/L			04/11/22 15:03	1
Fluoride	<0.0440		0.100	0.0440	mg/L			04/11/22 15:03	1
Sulfate	<0.400		1.00	0.400	mg/L			04/11/22 15:03	1

Lab Sample ID: LCS 310-349722/4

Matrix: Water

Analysis Batch: 349722

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	Result	Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.23		mg/L		102	90 - 110
Fluoride	2.00	1.944		mg/L		97	90 - 110
Sulfate	10.0	10.55		mg/L		105	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-348978/1-A

Matrix: Water

Analysis Batch: 350581

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 348978

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0009760	J	0.00200	0.000690	mg/L		04/07/22 09:00	04/20/22 17:13	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		04/07/22 09:00	04/20/22 17:13	1
Barium	<0.000880		0.00200	0.000880	mg/L		04/07/22 09:00	04/20/22 17:13	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/07/22 09:00	04/20/22 17:13	1
Boron	<0.0580		0.100	0.0580	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		04/07/22 09:00	04/20/22 17:13	1
Calcium	<0.190		0.500	0.190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/07/22 09:00	04/20/22 17:13	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/07/22 09:00	04/20/22 17:13	1
Lithium	<0.00250		0.0100	0.00250	mg/L		04/07/22 09:00	04/20/22 17:13	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		04/07/22 09:00	04/20/22 17:13	1
Selenium	<0.000960		0.00500	0.000960	mg/L		04/07/22 09:00	04/20/22 17:13	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/07/22 09:00	04/20/22 17:13	1

Lab Sample ID: LCS 310-348978/2-A

Matrix: Water

Analysis Batch: 350581

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 348978

Analyte	Spike Added	Result	Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2182		mg/L		109	80 - 120
Arsenic	0.200	0.2149		mg/L		107	80 - 120
Barium	0.100	0.1072		mg/L		107	80 - 120
Beryllium	0.100	0.1004		mg/L		100	80 - 120
Boron	0.200	0.2060		mg/L		103	80 - 120
Cadmium	0.100	0.1030		mg/L		103	80 - 120
Calcium	2.00	1.967		mg/L		98	80 - 120
Chromium	0.100	0.1018		mg/L		102	80 - 120
Cobalt	0.100	0.1066		mg/L		107	80 - 120

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QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

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

Lab Sample ID: LCS 310-348978/2-A
Matrix: Water
Analysis Batch: 350581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Lead	0.200	0.2128		mg/L		106	80 - 120	
Lithium	0.200	0.2103		mg/L		105	80 - 120	
Molybdenum	0.200	0.2063		mg/L		103	80 - 120	
Selenium	0.400	0.4092		mg/L		102	80 - 120	
Thallium	0.200	0.2113		mg/L		106	80 - 120	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-349871/1-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349871

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000110		0.000200	0.000110	mg/L		04/14/22 14:03	04/15/22 12:34	1

Lab Sample ID: LCS 310-349871/2-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349871

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	0.00167	0.001509		mg/L		91	80 - 120	

Lab Sample ID: MB 310-350018/1-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350018

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000110		0.000200	0.000110	mg/L		04/15/22 11:41	04/15/22 15:20	1

Lab Sample ID: LCS 310-350018/2-A
Matrix: Water
Analysis Batch: 350063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350018

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	0.00167	0.001553		mg/L		93	80 - 120	

Lab Sample ID: 310-228287-6 MS
Matrix: Water
Analysis Batch: 350063

Client Sample ID: NC2MW8
Prep Type: Total/NA
Prep Batch: 350018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Mercury	<0.000110		0.00167	0.001549		mg/L		93	80 - 120	

Lab Sample ID: 310-228287-6 MSD
Matrix: Water
Analysis Batch: 350063

Client Sample ID: NC2MW8
Prep Type: Total/NA
Prep Batch: 350018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits			
Mercury	<0.000110		0.00167	0.001559		mg/L		94	80 - 120	1	20	

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

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

Lab Sample ID: MB 310-349178/1
Matrix: Water
Analysis Batch: 349178

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<26.0		50.0	26.0	mg/L			04/07/22 16:37	1

Lab Sample ID: LCS 310-349178/2
Matrix: Water
Analysis Batch: 349178

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	940.0		mg/L		94	90 - 110	

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-348982/1
Matrix: Water
Analysis Batch: 348982

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
pH	7.00	7.0		SU		100	98 - 102	

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

HPLC/IC

Analysis Batch: 349722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	9056A	
310-228287-2	NC2MW3	Total/NA	Water	9056A	
310-228287-2	NC2MW3	Total/NA	Water	9056A	
310-228287-3	NC2MW5	Total/NA	Water	9056A	
310-228287-4	NC2MW6	Total/NA	Water	9056A	
310-228287-5	NC2MW7	Total/NA	Water	9056A	
310-228287-6	NC2MW8	Total/NA	Water	9056A	
310-228287-7	DUP2	Total/NA	Water	9056A	
MB 310-349722/3	Method Blank	Total/NA	Water	9056A	
LCS 310-349722/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 348978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	3005A	
310-228287-2	NC2MW3	Total/NA	Water	3005A	
310-228287-3	NC2MW5	Total/NA	Water	3005A	
310-228287-4	NC2MW6	Total/NA	Water	3005A	
310-228287-5	NC2MW7	Total/NA	Water	3005A	
310-228287-6	NC2MW8	Total/NA	Water	3005A	
310-228287-7	DUP2	Total/NA	Water	3005A	
MB 310-348978/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 349871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	7470A	
310-228287-2	NC2MW3	Total/NA	Water	7470A	
310-228287-3	NC2MW5	Total/NA	Water	7470A	
310-228287-4	NC2MW6	Total/NA	Water	7470A	
310-228287-5	NC2MW7	Total/NA	Water	7470A	
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 350018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-6	NC2MW8	Total/NA	Water	7470A	
310-228287-7	DUP2	Total/NA	Water	7470A	
MB 310-350018/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-350018/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-228287-6 MS	NC2MW8	Total/NA	Water	7470A	
310-228287-6 MSD	NC2MW8	Total/NA	Water	7470A	

Analysis Batch: 350063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	7470A	349871
310-228287-2	NC2MW3	Total/NA	Water	7470A	349871
310-228287-3	NC2MW5	Total/NA	Water	7470A	349871
310-228287-4	NC2MW6	Total/NA	Water	7470A	349871
310-228287-5	NC2MW7	Total/NA	Water	7470A	349871

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Metals (Continued)

Analysis Batch: 350063 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-6	NC2MW8	Total/NA	Water	7470A	350018
310-228287-7	DUP2	Total/NA	Water	7470A	350018
MB 310-349871/1-A	Method Blank	Total/NA	Water	7470A	349871
MB 310-350018/1-A	Method Blank	Total/NA	Water	7470A	350018
LCS 310-349871/2-A	Lab Control Sample	Total/NA	Water	7470A	349871
LCS 310-350018/2-A	Lab Control Sample	Total/NA	Water	7470A	350018
310-228287-6 MS	NC2MW8	Total/NA	Water	7470A	350018
310-228287-6 MSD	NC2MW8	Total/NA	Water	7470A	350018

Analysis Batch: 350581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	6020A	348978
310-228287-2	NC2MW3	Total/NA	Water	6020A	348978
310-228287-3	NC2MW5	Total/NA	Water	6020A	348978
310-228287-4	NC2MW6	Total/NA	Water	6020A	348978
310-228287-5	NC2MW7	Total/NA	Water	6020A	348978
310-228287-6	NC2MW8	Total/NA	Water	6020A	348978
310-228287-7	DUP2	Total/NA	Water	6020A	348978
MB 310-348978/1-A	Method Blank	Total/NA	Water	6020A	348978
LCS 310-348978/2-A	Lab Control Sample	Total/NA	Water	6020A	348978

General Chemistry

Analysis Batch: 348982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	SM 4500 H+ B	
310-228287-2	NC2MW3	Total/NA	Water	SM 4500 H+ B	
310-228287-3	NC2MW5	Total/NA	Water	SM 4500 H+ B	
310-228287-4	NC2MW6	Total/NA	Water	SM 4500 H+ B	
310-228287-5	NC2MW7	Total/NA	Water	SM 4500 H+ B	
310-228287-6	NC2MW8	Total/NA	Water	SM 4500 H+ B	
310-228287-7	DUP2	Total/NA	Water	SM 4500 H+ B	
LCS 310-348982/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCS 310-348982/27	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 349178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	SM 2540C	
310-228287-2	NC2MW3	Total/NA	Water	SM 2540C	
310-228287-3	NC2MW5	Total/NA	Water	SM 2540C	
310-228287-4	NC2MW6	Total/NA	Water	SM 2540C	
310-228287-5	NC2MW7	Total/NA	Water	SM 2540C	
310-228287-6	NC2MW8	Total/NA	Water	SM 2540C	
310-228287-7	DUP2	Total/NA	Water	SM 2540C	
MB 310-349178/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-349178/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-228287-1

Date Collected: 04/04/22 16:00

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Client Sample ID: NC2MW3

Lab Sample ID: 310-228287-2

Date Collected: 04/04/22 14:29

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Client Sample ID: NC2MW5

Lab Sample ID: 310-228287-3

Date Collected: 04/04/22 11:55

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Date Collected: 04/04/22 13:12

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Date Collected: 04/04/22 13:12

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Prep and Analysis with various batch numbers and methods.

Client Sample ID: NC2MW7

Lab Sample ID: 310-228287-5

Date Collected: 04/04/22 17:40

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Client Sample ID: NC2MW8

Lab Sample ID: 310-228287-6

Date Collected: 04/04/22 15:21

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Client Sample ID: DUP2

Lab Sample ID: 310-228287-7

Date Collected: 04/04/22 00:00

Matrix: Water

Date Received: 04/05/22 17:00

Table with 10 columns: Prep Type, Batch Type, Batch Method, Run, Dilution Factor, Batch Number, Prepared or Analyzed, Analyst, Lab. Rows include Total/NA for Analysis and Prep with various batch numbers and methods.

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Laboratory References:

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

Job ID: 310-228287-1



Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1



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)	09-29-22
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	04-06-23
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: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-1

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
SM 4500 H+ B	pH	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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Environment Testing
 America



310-228287 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Omaha Public Power District</u>			
City/State	CITY <u>Omaha</u>	STATE <u>NE</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4-5-22</u>	TIME <u>1700</u>	Received By <u>HED</u>
Delivery Type	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
		<input type="checkbox"/> Other: _____	
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler ID _____
Multiple Coolers?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Which VOA samples are in cooler? <u>↓</u>
Temperature Record			
Coolant	<input checked="" type="checkbox"/> Wet ice	<input type="checkbox"/> Blue ice	<input type="checkbox"/> Dry ice
		<input type="checkbox"/> Other: _____	
		<input type="checkbox"/> NONE	
Thermometer ID	<u>N</u>	Correction Factor (°C) <u>0</u>	
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	<u>4.3</u>	Corrected Temp (°C) <u>4.3</u>	
* 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? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>NC2MWB, NC2MW6, NC2MW3,</u>			
<u>NC2MWSA</u>			
<u>MW14</u>			

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Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228287-1
SDG Number:

Login Number: 228287
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	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 <math><6\text{mm}</math> (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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**Environment Testing
America**

ANALYTICAL REPORT

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

Laboratory Job ID: 310-228287-2
Client Project/Site: Nebraska City Station Unit 2 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:
5/10/2022 10:45:22 AM

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



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www.eurofinsus.com/Env

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

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

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Case Narrative

Job ID: 310-228287-2

Laboratory: Eurofins Cedar Falls

Narrative

**Job Narrative
310-228287-2**

Comments

No additional comments.

Receipt

The samples were received on 4/5/2022 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.3° C.

RAD

Method PrecSep_0: Radium-228 Prep Batch 160-559628

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW2 (310-228287-1), NC2MW3 (310-228287-2), NC2MW5 (310-228287-3), NC2MW6 (310-228287-4), NC2MW7 (310-228287-5), NC2MW8 (310-228287-6) and DUP2 (310-228287-7).

Method PrecSep-21: Radium-226 Prep Batch 160-559626

The following samples were prepared at a reduced aliquot due to Matrix: NC2MW2 (310-228287-1), NC2MW3 (310-228287-2), NC2MW5 (310-228287-3), NC2MW6 (310-228287-4), NC2MW7 (310-228287-5), NC2MW8 (310-228287-6) and DUP2 (310-228287-7).

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: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-228287-1	NC2MW2	Water	04/04/22 16:00	04/05/22 17:00
310-228287-2	NC2MW3	Water	04/04/22 14:29	04/05/22 17:00
310-228287-3	NC2MW5	Water	04/04/22 11:55	04/05/22 17:00
310-228287-4	NC2MW6	Water	04/04/22 13:12	04/05/22 17:00
310-228287-5	NC2MW7	Water	04/04/22 17:40	04/05/22 17:00
310-228287-6	NC2MW8	Water	04/04/22 15:21	04/05/22 17:00
310-228287-7	DUP2	Water	04/04/22 00:00	04/05/22 17:00

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-228287-1

Date Collected: 04/04/22 16:00

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176	U	0.174	0.175	1.00	0.275	pCi/L	04/11/22 12:07	05/06/22 17:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					04/11/22 12:07	05/06/22 17:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.914		0.404	0.413	1.00	0.570	pCi/L	04/11/22 12:30	05/03/22 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					04/11/22 12:30	05/03/22 12:45	1
Y Carrier	85.2		40 - 110					04/11/22 12:30	05/03/22 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	1.09		0.440	0.449	5.00	0.570	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW3

Lab Sample ID: 310-228287-2

Date Collected: 04/04/22 14:29

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.180	U	0.179	0.179	1.00	0.282	pCi/L	04/11/22 12:07	05/06/22 19:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					04/11/22 12:07	05/06/22 19:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.775		0.406	0.412	1.00	0.598	pCi/L	04/11/22 12:30	05/03/22 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					04/11/22 12:30	05/03/22 12:45	1
Y Carrier	86.4		40 - 110					04/11/22 12:30	05/03/22 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	0.955		0.444	0.449	5.00	0.598	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW5

Lab Sample ID: 310-228287-3

Date Collected: 04/04/22 11:55

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0293	U	0.113	0.113	1.00	0.244	pCi/L	04/11/22 12:07	05/06/22 19:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		40 - 110					04/11/22 12:07	05/06/22 19:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.315	0.316	1.00	0.534	pCi/L	04/11/22 12:30	05/03/22 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		40 - 110					04/11/22 12:30	05/03/22 12:45	1
Y Carrier	86.7		40 - 110					04/11/22 12:30	05/03/22 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	0.163	U	0.335	0.336	5.00	0.534	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Date Collected: 04/04/22 13:12

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0910	U	0.191	0.191	1.00	0.336	pCi/L	04/11/22 12:07	05/06/22 19:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.3		40 - 110					04/11/22 12:07	05/06/22 19:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.687		0.360	0.366	1.00	0.528	pCi/L	04/11/22 12:30	05/03/22 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.3		40 - 110					04/11/22 12:30	05/03/22 12:45	1
Y Carrier	87.9		40 - 110					04/11/22 12:30	05/03/22 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	0.778		0.408	0.413	5.00	0.528	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-228287-5

Date Collected: 04/04/22 17:40

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.397		0.186	0.189	1.00	0.227	pCi/L	04/11/22 12:07	05/07/22 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					04/11/22 12:07	05/07/22 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.350	U	0.298	0.300	1.00	0.476	pCi/L	04/11/22 12:30	05/03/22 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					04/11/22 12:30	05/03/22 12:46	1
Y Carrier	90.1		40 - 110					04/11/22 12:30	05/03/22 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	0.747		0.351	0.355	5.00	0.476	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW8

Lab Sample ID: 310-228287-6

Date Collected: 04/04/22 15:21

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.557		0.206	0.212	1.00	0.218	pCi/L	04/11/22 12:07	05/07/22 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					04/11/22 12:07	05/07/22 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356	U	0.340	0.342	1.00	0.550	pCi/L	04/11/22 12:30	05/03/22 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					04/11/22 12:30	05/03/22 12:46	1
Y Carrier	80.7		40 - 110					04/11/22 12:30	05/03/22 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	0.912		0.398	0.402	5.00	0.550	pCi/L		05/09/22 22:46	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: DUP2

Lab Sample ID: 310-228287-7

Date Collected: 04/04/22 00:00

Matrix: Water

Date Received: 04/05/22 17:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.196	U	0.165	0.166	1.00	0.251	pCi/L	04/11/22 12:07	05/07/22 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					04/11/22 12:07	05/07/22 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.539		0.311	0.315	1.00	0.462	pCi/L	04/11/22 12:30	05/03/22 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					04/11/22 12:30	05/03/22 12:46	1
Y Carrier	83.0		40 - 110					04/11/22 12:30	05/03/22 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	0.735		0.352	0.356	5.00	0.462	pCi/L		05/09/22 22:46	1

Definitions/Glossary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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
MLQ	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
PRE	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

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-559626/23-A
 Matrix: Water
 Analysis Batch: 564353

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559626

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-226	0.009138	U	0.0765	0.0766	1.00	0.152	pCi/L	04/11/22 12:07	05/07/22 13:46	1
Carrier										
	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Yield	Qualifier								
Ba Carrier	91.0		40 - 110					04/11/22 12:07	05/07/22 13:46	1

Lab Sample ID: LCS 160-559626/1-A
 Matrix: Water
 Analysis Batch: 563515

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 559626

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
										Radium-226
Carrier										
	LCS LCS		Limits							
	%Yield	Qualifier								
Ba Carrier	87.3		40 - 110							

Lab Sample ID: LCSD 160-559626/2-A
 Matrix: Water
 Analysis Batch: 563515

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 559626

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	Limit
Carrier											
	LCSD LCSD		Limits								
	%Yield	Qualifier									
Ba Carrier	88.3		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-559628/23-A
 Matrix: Water
 Analysis Batch: 563488

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559628

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	-0.07525	U	0.233	0.233	1.00	0.428	pCi/L	04/11/22 12:30	05/03/22 12:49	1
Carrier										
	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Yield	Qualifier								
Ba Carrier	91.0		40 - 110					04/11/22 12:30	05/03/22 12:49	1
Y Carrier	88.2		40 - 110					04/11/22 12:30	05/03/22 12:49	1

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

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

Lab Sample ID: LCS 160-559628/1-A
 Matrix: Water
 Analysis Batch: 563489

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 559628

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.65	9.320		1.11	1.00	0.410	pCi/L	108	75 - 125

Carrier	%Yield	Qualifier	Limits
Ba Carrier	87.3		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: LCSD 160-559628/2-A
 Matrix: Water
 Analysis Batch: 563489

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 559628

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	8.65	8.716		1.10	1.00	0.447	pCi/L	101	75 - 125	0.27	1

Carrier	%Yield	Qualifier	Limits
Ba Carrier	88.3		40 - 110
Y Carrier	82.6		40 - 110

QC Association Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Rad

Prep Batch: 559626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	PrecSep-21	
310-228287-2	NC2MW3	Total/NA	Water	PrecSep-21	
310-228287-3	NC2MW5	Total/NA	Water	PrecSep-21	
310-228287-4	NC2MW6	Total/NA	Water	PrecSep-21	
310-228287-5	NC2MW7	Total/NA	Water	PrecSep-21	
310-228287-6	NC2MW8	Total/NA	Water	PrecSep-21	
310-228287-7	DUP2	Total/NA	Water	PrecSep-21	
MB 160-559626/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-559626/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-559626/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 559628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-228287-1	NC2MW2	Total/NA	Water	PrecSep_0	
310-228287-2	NC2MW3	Total/NA	Water	PrecSep_0	
310-228287-3	NC2MW5	Total/NA	Water	PrecSep_0	
310-228287-4	NC2MW6	Total/NA	Water	PrecSep_0	
310-228287-5	NC2MW7	Total/NA	Water	PrecSep_0	
310-228287-6	NC2MW8	Total/NA	Water	PrecSep_0	
310-228287-7	DUP2	Total/NA	Water	PrecSep_0	
MB 160-559628/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-559628/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-559628/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-228287-1

Date Collected: 04/04/22 16:00

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564085	05/06/22 17:59	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: NC2MW3

Lab Sample ID: 310-228287-2

Date Collected: 04/04/22 14:29

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564085	05/06/22 19:52	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: NC2MW5

Lab Sample ID: 310-228287-3

Date Collected: 04/04/22 11:55

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564108	05/06/22 19:51	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: NC2MW6

Lab Sample ID: 310-228287-4

Date Collected: 04/04/22 13:12

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564108	05/06/22 19:51	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:45	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-228287-5

Date Collected: 04/04/22 17:40

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564351	05/07/22 13:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:46	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: NC2MW8

Lab Sample ID: 310-228287-6

Date Collected: 04/04/22 15:21

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564351	05/07/22 13:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:46	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Client Sample ID: DUP2

Lab Sample ID: 310-228287-7

Date Collected: 04/04/22 00:00

Matrix: Water

Date Received: 04/05/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			559626	04/11/22 12:07	HRT	TAL SL
Total/NA	Analysis	9315		1	564351	05/07/22 13:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559628	04/11/22 12:30	HRT	TAL SL
Total/NA	Analysis	9320		1	563489	05/03/22 12:46	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	564727	05/09/22 22:46	EMH	TAL SL

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

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: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

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



Environment Testing
America



310-228287 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Omaha Public Power District</u>			
City/State	CITY <u>Omaha</u>	STATE <u>NE</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4-5-22</u>	TIME <u>1700</u>	Received By <u>HED</u>
Delivery Type <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler ID _____			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>1</u> of <u>2</u>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID <u>N</u>		Correction Factor (°C) <u>0</u>	
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>4.3</u>		Corrected Temp (°C) <u>4.3</u>	
* 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? <input type="checkbox"/> Yes <input type="checkbox"/> No a) <i>If yes</i> Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>NC2MWB, NC2MW6, NC2MW3,</u>			
<u>NC2MWSA</u>			
<u>MW14</u>			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

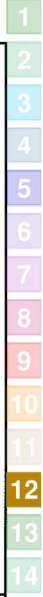
Client Information			
Client <u>Omaha Public Power District</u>			
City/State	CITY <u>Omaha</u>	STATE <u>NE</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4-5-22</u>	TIME <u>1700</u>	Received By <u>HED</u>
Delivery Type <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler ID _____			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>2</u> of <u>2</u>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID <u>N</u>		Correction Factor (°C) <u>0</u>	
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)		Corrected Temp (°C)	
* Sample Container Temperature			
Container(s) used	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C)	<u>NC2MWS 250ml Nitric</u>		
Corrected Temp (°C)	<u>2.9</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) <i>If yes</i> Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>NC2MWS, NC2MW2, DUP2, NC2MW1</u>			

Chain of Custody Record

Client Information		Lab P/N	
Client Contact: Kyle Ulling		Haynes, Shawn M	
Phone: (531) 228-2515		E-Mail: Shawn.Haynes@testamericainc.com	
Onsite		Carrier Tracking No(s)	
Customer: Omaha Public Power District			
Address: 444 South 18th Street Mail REEP1			
City: Omaha			
State, Zip: NE 68102-2247			
Phone: (531) 228-2515			
E-Mail: kulling@oppd.com			
Project Name: Nebraska City Station Unit 2 CCR / Landfill			
Site: Nebraska City Station Unit 2			
State: Nebraska			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Overhead, Ambient, Soil, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	315 Rad226, 920 Ra228, Combined Ra226 and Ra228	920 Ra226, 920 Ra228, Combined Ra226 and Ra228	254OC TDS, 9098A Chloride, Fluoride, Sulfate	Analysis Requested	Special Instructions/Note:
NC2MW2	4/4/22	16:00	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW3	4/4/22	14:28	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW5	4/4/22	11:55	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW6	4/4/22	13:12	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW7	4/4/22	17:40	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW8	4/4/22	15:21	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents
DUP2	4/4/22	--	G	W		X	X	X	X	X		CCR Appendix II and IV Constituents

Possible Hazard Identification	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	
Deliverable Requested: I, II, III, IV Other (specify)	
Empty Kit Relinquished by	
Relinquished by: <i>[Signature]</i>	Date: 4/5/22 07:50
Relinquished by: <i>[Signature]</i>	Date: 4/5/22 08:00
Relinquished by: <i>[Signature]</i>	Date: 4/5/22 07:50
Relinquished by: <i>[Signature]</i>	Date: 4/5/22 08:00
Custody Seal Intact: <input type="checkbox"/> Custody Seal No. <input type="checkbox"/>	
A. Yes <input type="checkbox"/> B. No <input type="checkbox"/>	



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)		Lab P/N	
Client Contact: Shawn Haynes		Haynes, Shawn M	
Phone: (531) 228-2515		E-Mail: Shawn.Haynes@eurofins.com	
Onsite		Carrier Tracking No(s)	
Customer: TestAmerica Laboratories, Inc.			
Address: 13715 Rider Trail North			
City: Earth City			
State, Zip: MO, 63045			
Phone: 314-298-8566 (Tel) 314-298-8757 (Fax)			
E-Mail: shawn.haynes@eurofins.com			
Project Name: Nebraska City Station Unit 2 CCR/Landfill			
Site: Nebraska City Station Unit 2			
State: Nebraska			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Overhead, Ambient, Soil, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	920 Ra226, 920 Ra228, Combined Ra226 and Ra228	920 Ra226, 920 Ra228, Combined Ra226 and Ra228	254OC TDS, 9098A Chloride, Fluoride, Sulfate	Analysis Requested	Special Instructions/Note:
NC2MW2 (310-228287-1)	4/4/22	16:00	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW3 (310-228287-2)	4/4/22	14:29	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW5 (310-228287-3)	4/4/22	11:55	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW6 (310-228287-4)	4/4/22	13:12	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW7 (310-228287-5)	4/4/22	17:40	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
NC2MW8 (310-228287-6)	4/4/22	15:21	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents
DUP2 (310-228287-7)	4/4/22	--	G	Water		X	X	X	X	X		CCR Appendix II and IV Constituents

Possible Hazard Identification	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	
Deliverable Requested: I, II, III, IV Other (specify)	
Empty Kit Relinquished by	
Relinquished by: <i>[Signature]</i>	Date: 4/6/22 12:05
Relinquished by: <i>[Signature]</i>	Date: 4/6/22 12:05
Relinquished by: <i>[Signature]</i>	Date: 4/6/22 12:05
Relinquished by: <i>[Signature]</i>	Date: 4/6/22 12:05
Custody Seal Intact: <input type="checkbox"/> Custody Seal No. <input type="checkbox"/>	
A. Yes <input type="checkbox"/> B. No <input type="checkbox"/>	



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-228287-2
SDG Number:

List Source: Eurofins Cedar Falls

Login Number: 228287
List Number: 1
Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	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 <math><6\text{mm}</math> (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: 310-228287-2
SDG Number:

List Source: Eurofins St. Louis
List Creation: 04/07/22 12:06 PM

Login Number: 228287
List Number: 2
Creator: Worthington, Sierra M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (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
 Project/Site: Nebraska City Station Unit 2 CCR/Landfill

Job ID: 310-228287-2

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Method: 9315 - Radium-226 (GFPC)

Matrix: Water Prep Type: Total/NA

Percent Yield (Acceptance Limits)		
Lab Sample ID	Client Sample ID	Ba (40-110)
310-228287-1	NC2MW2	78.6
310-228287-2	NC2MW3	74.9
310-228287-3	NC2MW5	83.1
310-228287-4	NC2MW6	83.3
310-228287-5	NC2MW7	93.8
310-228287-6	NC2MW8	91.3
310-228287-7	DUP2	92.5
LCS 160-559626/1-A	Lab Control Sample	87.3
LCSD 160-559626/2-A	Lab Control Sample Dup	88.3
MB 160-559626/23-A	Method Blank	91.0

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)
310-228287-1	NC2MW2	78.6	85.2
310-228287-2	NC2MW3	74.9	86.4
310-228287-3	NC2MW5	83.1	86.7
310-228287-4	NC2MW6	83.3	87.9
310-228287-5	NC2MW7	93.8	90.1
310-228287-6	NC2MW8	91.3	80.7
310-228287-7	DUP2	92.5	83.0
LCS 160-559628/1-A	Lab Control Sample	87.3	82.6
LCSD 160-559628/2-A	Lab Control Sample Dup	88.3	82.6
MB 160-559628/23-A	Method Blank	91.0	88.2

Tracer/Carrier Legend
 Ba = Ba Carrier
 Y = Y Carrier

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-241714-1
Client Project/Site: Nebraska City Unit 2 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:
10/21/2022 4:54:06 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

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

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

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Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Laboratory Job ID: 310-241714-1

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results through

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www.eurofinsus.com/Env

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Job ID: 310-241714-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241714-1

Comments

No additional comments.

Receipt

The samples were received on 10/5/2022 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.1° C.

Receipt Exceptions

The following container was received with only 125mL in the container. NC2MW2 (310-241714-1), NC2MW3 (310-241714-2), NC2MW5 (310-241714-3), NC2MW6 (310-241714-4), NC2MW7 (310-241714-5), NC2MW8 (310-241714-6) and DUP2 (310-241714-7)

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: NC2MW5 (310-241714-3), NC2MW6 (310-241714-4), NC2MW7 (310-241714-5), NC2MW8 (310-241714-6) and DUP2 (310-241714-7). 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

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241714-1	NC2MW2	Water	10/03/22 15:20	10/05/22 16:50
310-241714-2	NC2MW3	Water	10/03/22 13:17	10/05/22 16:50
310-241714-3	NC2MW5	Water	10/04/22 08:36	10/05/22 16:50
310-241714-4	NC2MW6	Water	10/04/22 08:47	10/05/22 16:50
310-241714-5	NC2MW7	Water	10/03/22 16:10	10/05/22 16:50
310-241714-6	NC2MW8	Water	10/03/22 14:39	10/05/22 16:50
310-241714-7	DUP2	Water	10/03/22 00:00	10/05/22 16:50

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-241714-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	11.3		5.00	2.25	mg/L	5	9056A		Total/NA	
Fluoride	0.330	J	0.500	0.220	mg/L	5	9056A		Total/NA	
Sulfate	319		5.00	2.00	mg/L	5	9056A		Total/NA	
Antimony	0.00298		0.00200	0.000690	mg/L	1	6020A		Total/NA	
Arsenic	0.00104	J	0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.108		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	0.559		0.100	0.0580	mg/L	1	6020A		Total/NA	
Cadmium	0.000206		0.000100	0.0000550	mg/L	1	6020A		Total/NA	
Calcium	241		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.000713		0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lead	0.000853		0.000500	0.000240	mg/L	1	6020A		Total/NA	
Lithium	0.0338		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.0354		0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	1030		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: NC2MW3

Lab Sample ID: 310-241714-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	12.1		5.00	2.25	mg/L	5	9056A		Total/NA	
Fluoride	1.17		0.500	0.220	mg/L	5	9056A		Total/NA	
Sulfate	563		20.0	8.00	mg/L	20	9056A		Total/NA	
Arsenic	0.00344		0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.0718		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	0.468		0.100	0.0580	mg/L	1	6020A		Total/NA	
Calcium	194		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.00328		0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lithium	0.0234		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.00250		0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	1440		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: NC2MW5

Lab Sample ID: 310-241714-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	7.59		5.00	2.25	mg/L	5	9056A		Total/NA	
Sulfate	202		5.00	2.00	mg/L	5	9056A		Total/NA	
Arsenic	0.00225		0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.0548		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	3.81		0.100	0.0580	mg/L	1	6020A		Total/NA	
Cadmium	0.0000700	J	0.000100	0.0000550	mg/L	1	6020A		Total/NA	
Calcium	169		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.000306	J	0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lead	0.00208		0.000500	0.000240	mg/L	1	6020A		Total/NA	
Lithium	0.0142		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.0356		0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	832		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: NC2MW6

Lab Sample ID: 310-241714-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	6.05		5.00	2.25	mg/L	5	9056A		Total/NA	
Sulfate	97.9		5.00	2.00	mg/L	5	9056A		Total/NA	
Arsenic	0.00123	J	0.00200	0.000750	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: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW6 (Continued)

Lab Sample ID: 310-241714-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	0.146		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	2.33		0.100	0.0580	mg/L	1	6020A		Total/NA	
Calcium	120		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.000724		0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lead	0.000568		0.000500	0.000240	mg/L	1	6020A		Total/NA	
Lithium	0.0387		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.0137		0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	566		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: NC2MW7

Lab Sample ID: 310-241714-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	8.88		5.00	2.25	mg/L	5	9056A		Total/NA	
Arsenic	0.0478		0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.607		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	0.249		0.100	0.0580	mg/L	1	6020A		Total/NA	
Calcium	117		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.000236	J	0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lithium	0.0572		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.00186	J	0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	482		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: NC2MW8

Lab Sample ID: 310-241714-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	9.91		5.00	2.25	mg/L	5	9056A		Total/NA	
Sulfate	13.3		5.00	2.00	mg/L	5	9056A		Total/NA	
Arsenic	0.0181		0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.618		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	0.153		0.100	0.0580	mg/L	1	6020A		Total/NA	
Calcium	125		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.00230		0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lead	0.000321	J	0.000500	0.000240	mg/L	1	6020A		Total/NA	
Lithium	0.0364		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.00184	J	0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	492		50.0	26.0	mg/L	1	SM 2540C		Total/NA	

Client Sample ID: DUP2

Lab Sample ID: 310-241714-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	8.99		5.00	2.25	mg/L	5	9056A		Total/NA	
Arsenic	0.0533		0.00200	0.000750	mg/L	1	6020A		Total/NA	
Barium	0.653		0.00200	0.000880	mg/L	1	6020A		Total/NA	
Boron	0.188		0.100	0.0580	mg/L	1	6020A		Total/NA	
Calcium	115		0.500	0.190	mg/L	1	6020A		Total/NA	
Cobalt	0.000259	J	0.000500	0.000190	mg/L	1	6020A		Total/NA	
Lithium	0.0572		0.0100	0.00250	mg/L	1	6020A		Total/NA	
Molybdenum	0.00156	J	0.00200	0.00120	mg/L	1	6020A		Total/NA	
Total Dissolved Solids	478		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: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-241714-1

Date Collected: 10/03/22 15:20

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.3		5.00	2.25	mg/L			10/21/22 02:08	5
Fluoride	0.330	J	0.500	0.220	mg/L			10/21/22 02:08	5
Sulfate	319		5.00	2.00	mg/L			10/21/22 02:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00298		0.00200	0.000690	mg/L		10/07/22 09:45	10/17/22 21:06	1
Arsenic	0.00104	J	0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:06	1
Barium	0.108		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:06	1
Boron	0.559		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:06	1
Cadmium	0.000206		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:06	1
Calcium	241		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:06	1
Cobalt	0.000713		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:06	1
Lead	0.000853		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:06	1
Lithium	0.0338		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:06	1
Molybdenum	0.0354		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:06	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:06	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 14:47	10/17/22 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1030		50.0	26.0	mg/L			10/06/22 13:40	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW3

Lab Sample ID: 310-241714-2

Date Collected: 10/03/22 13:17

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.1		5.00	2.25	mg/L			10/21/22 02:24	5
Fluoride	1.17		0.500	0.220	mg/L			10/21/22 02:24	5
Sulfate	563		20.0	8.00	mg/L			10/21/22 02:39	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		10/07/22 09:45	10/17/22 21:09	1
Arsenic	0.00344		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:09	1
Barium	0.0718		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:09	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:09	1
Boron	0.468		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:09	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:09	1
Calcium	194		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:09	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:09	1
Cobalt	0.00328		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:09	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:09	1
Lithium	0.0234		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:09	1
Molybdenum	0.00250		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:09	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:09	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:09	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 14:47	10/17/22 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1440		50.0	26.0	mg/L			10/06/22 13:40	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW5

Lab Sample ID: 310-241714-3

Date Collected: 10/04/22 08:36

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.59		5.00	2.25	mg/L			10/21/22 02:55	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 02:55	5
Sulfate	202		5.00	2.00	mg/L			10/21/22 02:55	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		10/07/22 09:45	10/17/22 21:13	1
Arsenic	0.00225		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:13	1
Barium	0.0548		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:13	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:13	1
Boron	3.81		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:13	1
Cadmium	0.0000700	J	0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:13	1
Calcium	169		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:13	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:13	1
Cobalt	0.000306	J	0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:13	1
Lead	0.00208		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:13	1
Lithium	0.0142		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:13	1
Molybdenum	0.0356		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:13	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:13	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:13	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 14:47	10/17/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	832		50.0	26.0	mg/L			10/07/22 16:28	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-241714-4

Date Collected: 10/04/22 08:47

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.05		5.00	2.25	mg/L			10/21/22 03:10	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 03:10	5
Sulfate	97.9		5.00	2.00	mg/L			10/21/22 03:10	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		10/07/22 09:45	10/17/22 21:34	1
Arsenic	0.00123	J	0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:34	1
Barium	0.146		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:34	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:34	1
Boron	2.33		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:34	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:34	1
Calcium	120		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:34	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:34	1
Cobalt	0.000724		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:34	1
Lead	0.000568		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:34	1
Lithium	0.0387		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:34	1
Molybdenum	0.0137		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:34	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:34	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:34	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 14:47	10/17/22 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	566		50.0	26.0	mg/L			10/07/22 16:28	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-241714-5

Date Collected: 10/03/22 16:10

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.88		5.00	2.25	mg/L			10/21/22 03:57	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 03:57	5
Sulfate	<2.00		5.00	2.00	mg/L			10/21/22 03:57	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		10/07/22 09:45	10/17/22 21:41	1
Arsenic	0.0478		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:41	1
Barium	0.607		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:41	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:41	1
Boron	0.249		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:41	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:41	1
Calcium	117		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:41	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:41	1
Cobalt	0.000236	J	0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:41	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:41	1
Lithium	0.0572		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:41	1
Molybdenum	0.00186	J	0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:41	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:41	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:41	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 14:47	10/17/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	482		50.0	26.0	mg/L			10/06/22 13:40	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW8

Lab Sample ID: 310-241714-6

Date Collected: 10/03/22 14:39

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.91		5.00	2.25	mg/L			10/21/22 04:13	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 04:13	5
Sulfate	13.3		5.00	2.00	mg/L			10/21/22 04:13	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		10/07/22 09:45	10/17/22 21:45	1
Arsenic	0.0181		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:45	1
Barium	0.618		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:45	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:45	1
Boron	0.153		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:45	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:45	1
Calcium	125		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:45	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:45	1
Cobalt	0.00230		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:45	1
Lead	0.000321	J	0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:45	1
Lithium	0.0364		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:45	1
Molybdenum	0.00184	J	0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:45	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:45	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:45	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 14:47	10/17/22 15:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	492		50.0	26.0	mg/L			10/06/22 13:40	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: DUP2

Lab Sample ID: 310-241714-7

Date Collected: 10/03/22 00:00

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.99		5.00	2.25	mg/L			10/21/22 04:28	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 04:28	5
Sulfate	<2.00		5.00	2.00	mg/L			10/21/22 04:28	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		10/07/22 09:45	10/17/22 21:48	1
Arsenic	0.0533		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 21:48	1
Barium	0.653		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 21:48	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 21:48	1
Boron	0.188		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 21:48	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 21:48	1
Calcium	115		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 21:48	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 21:48	1
Cobalt	0.000259 J		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 21:48	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 21:48	1
Lithium	0.0572		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 21:48	1
Molybdenum	0.00156 J		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 21:48	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 21:48	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 21:48	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 14:47	10/17/22 15:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	478		50.0	26.0	mg/L			10/06/22 13:40	1

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Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

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
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
MLQ	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

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-369461/3
Matrix: Water
Analysis Batch: 369461

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

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.450		1.00	0.450	mg/L			10/21/22 00:50	1
Fluoride	<0.0440		0.100	0.0440	mg/L			10/21/22 00:50	1
Sulfate	<0.400		1.00	0.400	mg/L			10/21/22 00:50	1

Lab Sample ID: LCS 310-369461/4
Matrix: Water
Analysis Batch: 369461

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	9.263		mg/L		93	90 - 110
Fluoride	2.00	1.884		mg/L		94	90 - 110
Sulfate	10.0	9.452		mg/L		95	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-367783/1-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/07/22 09:45	10/17/22 18:28	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 18:28	1
Barium	<0.000880		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 18:28	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 18:28	1
Boron	<0.0580		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 18:28	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 18:28	1
Calcium	<0.190		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 18:28	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 18:28	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 18:28	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 18:28	1
Lithium	<0.00250		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 18:28	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 18:28	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 18:28	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 18:28	1

Lab Sample ID: LCS 310-367783/2-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.1872		mg/L		94	80 - 120
Arsenic	0.200	0.1926		mg/L		96	80 - 120
Barium	0.100	0.09836		mg/L		98	80 - 120
Beryllium	0.100	0.1057		mg/L		106	80 - 120
Boron	0.200	0.1993		mg/L		100	80 - 120
Cadmium	0.100	0.09815		mg/L		98	80 - 120
Calcium	2.00	1.979		mg/L		99	80 - 120
Chromium	0.100	0.09547		mg/L		95	80 - 120
Cobalt	0.100	0.09942		mg/L		99	80 - 120

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QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

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

Lab Sample ID: LCS 310-367783/2-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.200	0.2054		mg/L		103	80 - 120
Lithium	0.200	0.1941		mg/L		97	80 - 120
Molybdenum	0.200	0.1924		mg/L		96	80 - 120
Selenium	0.400	0.3578		mg/L		89	80 - 120
Thallium	0.200	0.2064		mg/L		103	80 - 120

Lab Sample ID: 310-241714-4 DU
Matrix: Water
Analysis Batch: 368920

Client Sample ID: NC2MW6
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.000690		<0.000690		mg/L		NC	20
Arsenic	0.00123	J	0.001213	J	mg/L		2	20
Barium	0.146		0.1460		mg/L		0.2	20
Beryllium	<0.000270		<0.000270		mg/L		NC	20
Boron	2.33		2.365		mg/L		1	20
Cadmium	<0.0000550		<0.0000550		mg/L		NC	20
Calcium	120		120.9		mg/L		0.8	20
Chromium	<0.00110		<0.00110		mg/L		NC	20
Cobalt	0.000724		0.0007500		mg/L		4	20
Lead	0.000568		0.0006210		mg/L		9	20
Lithium	0.0387		0.03895		mg/L		0.7	20
Molybdenum	0.0137		0.01378		mg/L		0.6	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 310-368713/1-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368713

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:47	10/17/22 14:53	1

Lab Sample ID: LCS 310-368713/2-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001567		mg/L		94	80 - 120

Lab Sample ID: 310-241714-1 MS
Matrix: Water
Analysis Batch: 368887

Client Sample ID: NC2MW2
Prep Type: Total/NA
Prep Batch: 368713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.000110		0.00167	0.001487		mg/L		89	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 310-241714-1 MSD
Matrix: Water
Analysis Batch: 368887

Client Sample ID: NC2MW2
Prep Type: Total/NA
Prep Batch: 368713

Table with columns: Analyte, Sample Result, Sample Qualifier, Spike Added, MSD Result, MSD Qualifier, Unit, D, %Rec, %Rec Limits, RPD, RPD Limit. Row for Mercury.

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

Lab Sample ID: MB 310-367788/1
Matrix: Water
Analysis Batch: 367788

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

Table with columns: Analyte, MB Result, MB Qualifier, RL, MDL, Unit, D, Prepared, Analyzed, Dil Fac. Row for Total Dissolved Solids.

Lab Sample ID: LCS 310-367788/2
Matrix: Water
Analysis Batch: 367788

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

Table with columns: Analyte, Spike Added, LCS Result, LCS Qualifier, Unit, D, %Rec, %Rec Limits. Row for Total Dissolved Solids.

Lab Sample ID: MB 310-367956/1
Matrix: Water
Analysis Batch: 367956

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

Table with columns: Analyte, MB Result, MB Qualifier, RL, MDL, Unit, D, Prepared, Analyzed, Dil Fac. Row for Total Dissolved Solids.

Lab Sample ID: LCS 310-367956/2
Matrix: Water
Analysis Batch: 367956

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

Table with columns: Analyte, Spike Added, LCS Result, LCS Qualifier, Unit, D, %Rec, %Rec Limits. Row for Total Dissolved Solids.

Lab Sample ID: 310-241714-4 DU
Matrix: Water
Analysis Batch: 367956

Client Sample ID: NC2MW6
Prep Type: Total/NA

Table with columns: Analyte, Sample Result, Sample Qualifier, DU Result, DU Qualifier, Unit, D, RPD, RPD Limit. Row for Total Dissolved Solids.

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

HPLC/IC

Analysis Batch: 369461

Table with columns: Lab Sample ID, Client Sample ID, Prep Type, Matrix, Method, Prep Batch. Lists various sample IDs and their associated data.

Metals

Prep Batch: 367783

Table with columns: Lab Sample ID, Client Sample ID, Prep Type, Matrix, Method, Prep Batch. Lists various sample IDs and their associated data.

Prep Batch: 368713

Table with columns: Lab Sample ID, Client Sample ID, Prep Type, Matrix, Method, Prep Batch. Lists various sample IDs and their associated data.

Analysis Batch: 368887

Table with columns: Lab Sample ID, Client Sample ID, Prep Type, Matrix, Method, Prep Batch. Lists various sample IDs and their associated data.

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Metals (Continued)

Analysis Batch: 368887 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-1 MS	NC2MW2	Total/NA	Water	7470A	368713
310-241714-1 MSD	NC2MW2	Total/NA	Water	7470A	368713

Analysis Batch: 368920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-1	NC2MW2	Total/NA	Water	6020A	367783
310-241714-2	NC2MW3	Total/NA	Water	6020A	367783
310-241714-3	NC2MW5	Total/NA	Water	6020A	367783
310-241714-4	NC2MW6	Total/NA	Water	6020A	367783
310-241714-5	NC2MW7	Total/NA	Water	6020A	367783
310-241714-6	NC2MW8	Total/NA	Water	6020A	367783
310-241714-7	DUP2	Total/NA	Water	6020A	367783
MB 310-367783/1-A	Method Blank	Total/NA	Water	6020A	367783
LCS 310-367783/2-A	Lab Control Sample	Total/NA	Water	6020A	367783
310-241714-4 DU	NC2MW6	Total/NA	Water	6020A	367783

General Chemistry

Analysis Batch: 367788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-1	NC2MW2	Total/NA	Water	SM 2540C	
310-241714-2	NC2MW3	Total/NA	Water	SM 2540C	
310-241714-5	NC2MW7	Total/NA	Water	SM 2540C	
310-241714-6	NC2MW8	Total/NA	Water	SM 2540C	
310-241714-7	DUP2	Total/NA	Water	SM 2540C	
MB 310-367788/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-367788/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 367956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-3	NC2MW5	Total/NA	Water	SM 2540C	
310-241714-4	NC2MW6	Total/NA	Water	SM 2540C	
MB 310-367956/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-367956/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-241714-4 DU	NC2MW6	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-241714-1

Date Collected: 10/03/22 15:20
Date Received: 10/05/22 16:50

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHM5	EET CF	10/21/22 02:08
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:06
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 14:57
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Client Sample ID: NC2MW3

Lab Sample ID: 310-241714-2

Date Collected: 10/03/22 13:17
Date Received: 10/05/22 16:50

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHM5	EET CF	10/21/22 02:24
Total/NA	Analysis	9056A		20	369461	DHM5	EET CF	10/21/22 02:39
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:09
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:03
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Client Sample ID: NC2MW5

Lab Sample ID: 310-241714-3

Date Collected: 10/04/22 08:36
Date Received: 10/05/22 16:50

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHM5	EET CF	10/21/22 02:55
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:13
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:15
Total/NA	Analysis	SM 2540C		1	367956	ENB7	EET CF	10/07/22 16:28

Client Sample ID: NC2MW6

Lab Sample ID: 310-241714-4

Date Collected: 10/04/22 08:47
Date Received: 10/05/22 16:50

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHM5	EET CF	10/21/22 03:10
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:34
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:17
Total/NA	Analysis	SM 2540C		1	367956	ENB7	EET CF	10/07/22 16:28

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

Client Sample ID: NC2MW7

Date Collected: 10/03/22 16:10

Date Received: 10/05/22 16:50

Lab Sample ID: 310-241714-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHMS	EET CF	10/21/22 03:57
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:41
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:19
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Client Sample ID: NC2MW8

Date Collected: 10/03/22 14:39

Date Received: 10/05/22 16:50

Lab Sample ID: 310-241714-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHMS	EET CF	10/21/22 04:13
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:45
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:21
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Client Sample ID: DUP2

Date Collected: 10/03/22 00:00

Date Received: 10/05/22 16:50

Lab Sample ID: 310-241714-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHMS	EET CF	10/21/22 04:28
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 21:48
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:23
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

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	09-29-22 *
Oregon	NELAP	IA100001	09-29-23

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

Eurofins Cedar Falls

Method Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-1

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



Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power</u>		
City/State: <u>Omaha NE</u>	Project:	
Receipt Information		
Date/Time Received: <u>DATE 10-5-22 TIME 10:50</u>	Received By: <u>EH</u>	
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____		
Condition of Cooler/Containers		
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record		
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID: <u>R</u>	Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>1.1</u>	Corrected Temp (°C): <u>1.1</u>	
• Sample Container Temperature		
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>
Uncorrected Temp (°C):		
Corrected Temp (°C):		
Exceptions Noted		
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No		
NOTE: If yes, contact PM before proceeding. If no, proceed with login		
Additional Comments		



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information	
Client: <u>Omaha Public Power</u>	
City/State: <u>Omaha NE</u>	Project:
Receipt Information	
Date/Time Received: DATE <u>10-5-22</u> TIME <u>10:50</u>	Received By: <u>EH</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:	
Condition of Cooler/Containers	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>2 of 2</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2 of 8</u>
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Report	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: <input type="checkbox"/> NONE	
Thermometer ID: <u>R</u>	Correction Factor (°C): <u>0</u>
Temp Blank Temperature: If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C):	Corrected Temp (°C):
Sample Container Temperature	
Container(s) used: <u>CONTAINER 1</u>	CONTAINER 2
Uncorrected Temp (°C): <u>1.0</u>	
Corrected Temp (°C): <u>1.0</u>	
Exceptions Noted:	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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)? <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
Additional Comments:	

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TestAmerica Cedar Falls

704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2435

Client Information

Client Contact: Kyle Uring
Company: Omaha Public Power District
Address: 444 South 16th Street Mail 9E8P1 Omaha
State, Zip: NE 68102-2247
Phone: (531) 226-2515
Email: ksuring@opd.com
Project Name: Leak Detection Project # 26707253
Site: Nebraska City Station Unit 2 CCR / Landfill
Nebraska City Station Unit 2

Due Date Requested:

TAT Requested (days):
PO #:
WO #:

Lab Pk:

Hayes, Shawn M
E-Mail: shawn.hayes@testamerica.com

Carrier Tracking Info:

COC No:
Page:
Job #:



Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab, E-Grab)	Matrix (Water, Overhead, Other)	Analysis Requested				Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	915 Pa226, 920 Pa228, Combined Ra226 and Ra228	25403 TDS, 9056A Chloride, Fluoride, Sulfate	
NC2MW2	10/3/22	15:20	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
NC2MW3	10/3/22	13:17	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
NC2MW5	10/4/22	15:36	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
NC2MW6	10/4/22	8:47	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
NC2MW7	10/3/22	16:10	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
NC2MW8	10/3/22	14:39	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
DUP2	10/3/22		G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CCR Appendix III and IV Constituents
Possible Hazard Identification					Special Instructions/CC Requirements:				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested I, II, III, IV, Other (specify)					Special Instructions/CC Requirements:				
Empty Kit Relinquished by					Method of Shipment:				
Relinquished by: <u>[Signature]</u>	Date: <u>10/4/2022</u>	Time: <u>15:57</u>	Company: <u>Omaha</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10-5-22 15:57</u>	Company: <u>Omaha</u>	Received by: <u>MC</u>	Date/Time: <u>10-5-22 14:50</u>	Company: <u>Omaha</u>
Relinquished by: <u>[Signature]</u>	Date: <u>10-5-22</u>	Time: <u>0600</u>	Company: <u>Omaha</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10-5-22 0600</u>	Company: <u>Omaha</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10-5-22</u>	Company: <u>Omaha</u>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					Cooler Temperature(s) °C and Other Remarks:				

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Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-241714-1

Login Number: 241714

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Costello, Mackenzie K

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 310-241714-2
Client Project/Site: Nebraska City Unit 2 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:
11/11/2022 1:19:12 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

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

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

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the (0) Project Manager.



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www.eurofinsus.com/Env

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Case Narrative

Job ID: 310-241714-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241714-2

Comments

This report was revised on 11/11/22. The narrative statement about bottles being received with limited sample in them was edited to make it clear that only one sample bottle was received in that condition.

Receipt

The samples were received on 10/5/2022 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.1° C.

Receipt Exceptions

The following sample was received with one of the bottles containing only 125mL in the container. NC2MW5 (310-241714-3) This had no impact on the data. The only impact was that there was not enough sample to use it for QA/QC purposes so another sample would need to be chosen.

RAD

Methods 903.0, 9315: Radium-226 batch 586466

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

NC2MW2 (310-241714-1), NC2MW3 (310-241714-2), NC2MW5 (310-241714-3), NC2MW6 (310-241714-4), NC2MW7 (310-241714-5), NC2MW8 (310-241714-6), DUP2 (310-241714-7), (LCS 160-586466/2-A), (MB 160-586466/1-A), (480-202269-A-1-A) and (480-202269-B-1-A DU)

Methods 904.0, 9320: Radium-228 batch 586471

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.

NC2MW2 (310-241714-1), NC2MW3 (310-241714-2), NC2MW5 (310-241714-3), NC2MW6 (310-241714-4), NC2MW7 (310-241714-5), NC2MW8 (310-241714-6), DUP2 (310-241714-7), (LCS 160-586471/2-A), (MB 160-586471/1-A), (480-202269-A-1-B) and (480-202269-B-1-B DU)

Method PrecSep_0:

Method PrecSep-21:

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: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241714-1	NC2MW2	Water	10/03/22 15:20	10/05/22 16:50
310-241714-2	NC2MW3	Water	10/03/22 13:17	10/05/22 16:50
310-241714-3	NC2MW5	Water	10/04/22 08:36	10/05/22 16:50
310-241714-4	NC2MW6	Water	10/04/22 08:47	10/05/22 16:50
310-241714-5	NC2MW7	Water	10/03/22 16:10	10/05/22 16:50
310-241714-6	NC2MW8	Water	10/03/22 14:39	10/05/22 16:50
310-241714-7	DUP2	Water	10/03/22 00:00	10/05/22 16:50

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW2	Lab Sample ID: 310-241714-1
<input type="checkbox"/> No Detections.	
Client Sample ID: NC2MW3	Lab Sample ID: 310-241714-2
<input type="checkbox"/> No Detections.	
Client Sample ID: NC2MW5	Lab Sample ID: 310-241714-3
<input type="checkbox"/> No Detections.	
Client Sample ID: NC2MW6	Lab Sample ID: 310-241714-4
<input type="checkbox"/> No Detections.	
Client Sample ID: NC2MW7	Lab Sample ID: 310-241714-5
<input type="checkbox"/> No Detections.	
Client Sample ID: NC2MW8	Lab Sample ID: 310-241714-6
<input type="checkbox"/> No Detections.	
Client Sample ID: DUP2	Lab Sample ID: 310-241714-7
<input type="checkbox"/> No Detections.	

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-241714-1

Date Collected: 10/03/22 15:20

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.217		0.0956	0.0976	1.00	0.103	pCi/L	10/19/22 09:46	11/10/22 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/19/22 09:46	11/10/22 09:17	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	1.87		0.454	0.486	1.00	0.459	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	86.0		40 - 110					10/19/22 10:22	11/03/22 11:06	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	2.08		0.464	0.496	5.00	0.459	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW3

Lab Sample ID: 310-241714-2

Date Collected: 10/03/22 13:17

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101	U	0.0764	0.0769	1.00	0.107	pCi/L	10/19/22 09:46	11/10/22 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		40 - 110					10/19/22 09:46	11/10/22 09:17	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	0.903		0.359	0.369	1.00	0.446	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	82.2		40 - 110					10/19/22 10:22	11/03/22 11:06	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	1.00		0.367	0.377	5.00	0.446	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW5

Lab Sample ID: 310-241714-3

Date Collected: 10/04/22 08:36

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0280	U	0.0706	0.0707	1.00	0.130	pCi/L	10/19/22 09:46	11/10/22 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/22 09:46	11/10/22 09:17	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	0.688		0.369	0.375	1.00	0.526	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	86.7		40 - 110					10/19/22 10:22	11/03/22 11:06	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		0.376	0.382	5.00	0.526	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-241714-4

Date Collected: 10/04/22 08:47

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.294		0.125	0.128	1.00	0.131	pCi/L	10/19/22 09:46	11/10/22 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.8		40 - 110					10/19/22 09:46	11/10/22 09:18	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	2.49		0.612	0.653	1.00	0.653	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.8		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	86.4		40 - 110					10/19/22 10:22	11/03/22 11:06	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	2.78		0.625	0.665	5.00	0.653	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-241714-5

Date Collected: 10/03/22 16:10

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.318		0.128	0.131	1.00	0.139	pCi/L	10/19/22 09:46	11/10/22 11:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/19/22 09:46	11/10/22 11:24	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	0.927		0.408	0.417	1.00	0.539	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	85.6		40 - 110					10/19/22 10:22	11/03/22 11:06	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	1.24		0.428	0.437	5.00	0.539	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW8

Lab Sample ID: 310-241714-6

Date Collected: 10/03/22 14:39

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.300		0.140	0.142	1.00	0.166	pCi/L	10/19/22 09:46	11/10/22 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/19/22 09:46	11/10/22 11:25	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	1.27		0.449	0.464	1.00	0.531	pCi/L	10/19/22 10:22	11/03/22 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/19/22 10:22	11/03/22 11:06	1
Y Carrier	87.5		40 - 110					10/19/22 10:22	11/03/22 11:06	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	1.57		0.470	0.485	5.00	0.531	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: DUP2
Date Collected: 10/03/22 00:00
Date Received: 10/05/22 16:50

Lab Sample ID: 310-241714-7
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	0.394		0.125	0.130	1.00	0.108	pCi/L	10/19/22 09:46	11/10/22 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					10/19/22 09:46	11/10/22 11:25	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	1.25		0.402	0.418	1.00	0.458	pCi/L	10/19/22 10:22	11/03/22 11:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					10/19/22 10:22	11/03/22 11:08	1
Y Carrier	87.5		40 - 110					10/19/22 10:22	11/03/22 11:08	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	1.65		0.421	0.438	5.00	0.458	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-586466/1-A
Matrix: Water
Analysis Batch: 589595

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586466

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	(2σ+/-)	Uncert.						
Ra. ium-229	0.01712	U	0.0373	0.0373	1.00	0.0627	pCi/L	10/16/22 06:49	11/10/22 06:21	1
Carrier			%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Ba Carrier			109		40 - 110			10/19/22 09:46	11/10/22 09:21	1

Lab Sample ID: LCS 160-586466/2-A
Matrix: Water
Analysis Batch: 589595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586466

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Ra. ium-229	11.5	6.609		1.04	1.00	0.014	pCi/L	ET	78 - 128
Carrier			%Yield	Qualifier	Limits				
Ba Carrier			106		40 - 110				

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586471/1-A
Matrix: Water
Analysis Batch: 588336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586471

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	(2σ+/-)	Uncert.						
Ra. ium-228	0.02760	U	0.032E	0.0326	1.00	0.041	pCi/L	10/16/22 10:22	11/03/22 11:03	1
Carrier			%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Ba Carrier			109		40 - 110			10/19/22 10:22	11/03/22 11:03	1
Y Carrier			84.9		40 - 110			10/19/22 10:22	11/03/22 11:03	1

Lab Sample ID: LCS 160-586471/2-A
Matrix: Water
Analysis Batch: 588336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586471

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Ra. ium-228	8.9E	6.062		1.03	1.00	0.011	pCi/L	113	78 - 128
Carrier			%Yield	Qualifier	Limits				
Ba Carrier			106		40 - 110				
Y Carrier			84.5		40 - 110				

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QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Rad

Prep Batch: 586466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-1	NC2MW2	Total/NA	Water	PrecSep-21	
310-241714-2	NC2MW3	Total/NA	Water	PrecSep-21	
310-241714-3	NC2MW5	Total/NA	Water	PrecSep-21	
310-241714-4	NC2MW6	Total/NA	Water	PrecSep-21	
310-241714-5	NC2MW7	Total/NA	Water	PrecSep-21	
310-241714-6	NC2MW8	Total/NA	Water	PrecSep-21	
310-241714-7	DUP2	Total/NA	Water	PrecSep-21	
MB 160-586466/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586466/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 586471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241714-1	NC2MW2	Total/NA	Water	PrecSep_0	
310-241714-2	NC2MW3	Total/NA	Water	PrecSep_0	
310-241714-3	NC2MW5	Total/NA	Water	PrecSep_0	
310-241714-4	NC2MW6	Total/NA	Water	PrecSep_0	
310-241714-5	NC2MW7	Total/NA	Water	PrecSep_0	
310-241714-6	NC2MW8	Total/NA	Water	PrecSep_0	
310-241714-7	DUP2	Total/NA	Water	PrecSep_0	
MB 160-586471/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586471/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Euofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-241714-1

Date Collected: 10/03/22 15:20

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 09:17
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: NC2MW3

Lab Sample ID: 310-241714-2

Date Collected: 10/03/22 13:17

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 09:17
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: NC2MW5

Lab Sample ID: 310-241714-3

Date Collected: 10/04/22 08:36

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 09:17
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: NC2MW6

Lab Sample ID: 310-241714-4

Date Collected: 10/04/22 08:47

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 09:18
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-241714-5

Date Collected: 10/03/22 16:10

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 11:24
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: NC2MW8

Lab Sample ID: 310-241714-6

Date Collected: 10/03/22 14:39

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 11:25
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588336	FLC	EET SL	11/03/22 11:06
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: DUP2

Lab Sample ID: 310-241714-7

Date Collected: 10/03/22 00:00

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 11:25
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588335	FLC	EET SL	11/03/22 11:08
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

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.

Eurofins Cedar Falls

Method Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

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 Cedar Falls



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power</u>			
City/State: <u>Omaha NE</u>	Project:		
Receipt Information			
Date/Time Received: <u>DATE 10-5-22 TIME 10:50</u>	Received By: <u>EH</u>		
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>2</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>	Correction Factor (°C): <u>0</u>		
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.1</u>	Corrected Temp (°C): <u>1.1</u>		
* 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? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power</u>			
City/State: <u>Omaha NE</u>	Project:		
Receipt Information			
Date/Time Received: <u>DATE 10-5-22 TIME 10:50</u>	Received By: <u>EH</u>		
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>2</u> of <u>2</u>	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>	Correction Factor (°C): <u>0</u>		
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	Corrected Temp (°C):		
* Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):	<u>250ml nitric Acetic</u>		
Corrected Temp (°C):	<u>1.0</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

1
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Chain of Custody Record

Client Contact: Kyle Uthing
Client Contact: Kyle Uthing
Company: Onaha Public Power District
Address: 444 South 16th Street Mail 9E/EP1
Onaha, IA 50455
State, Zip: IA 50455
Phone: NE 68102-2247
Fax: (531) 226-2515
Email: TestAm@ppd.com

Lab Pk: Kyle K. Uthing
Lab Pk: Hayes, Shawn M
E-Mail: shawn.hayes@testamericainc.com

Current Tracking Req's: _____

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix (Water, Air, Soil, Sediment, etc.)	Preservation Code	D	D	I	N	Total Number of Containers	Special Instructions/Note:
NC2MW2	10/13/22	15:20	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
NC2MW3	10/13/22	13:17	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
NC2MW5	10/14/22	15:36	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
NC2MW6	10/14/22	15:47	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
NC2MW7	10/13/22	16:10	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
NC2MW8	10/13/22	14:59	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents
DUP2	10/13/22	-	G	W	X	X	X	X	X	4	CCR Appendix III and IV Constituents

Field Filled Sample (Yes or No) _____
Perform MS/MSD (Yes or No) _____
Total 8028a, 920 Radium, 228Ra, 228Ac and Ra228 _____
Total 8028a, 920 Radium, 228Ra, 228Ac and Ra228 _____
2540 TDS, 9056a Chloride, Fluoride, Sulfate _____

Preservation Codes:
A - HCL
B - NiOH
C - NiOH
D - NiOH
E - NiOH
F - NiOH
G - NiOH
H - NiOH
I - NiOH
J - NiOH
K - NiOH
L - NiOH
M - NiOH
N - NiOH
O - NiOH
P - NiOH
Q - NiOH
R - NiOH
S - NiOH
T - NiOH
U - NiOH
V - NiOH
W - NiOH
X - NiOH
Y - NiOH
Z - other (specify)

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radioisotopic
Deliverable Requested I, II, III, IV, Other (specify) _____

Empty Kit Relinquished by: _____
Relinquished by: _____
Relinquished by: _____
Relinquished by: _____

Date: _____
Date/Time: 10/11/2022 15:57
Date/Time: 10-5-22 0900
Date/Time: _____

Custody Seals Intact: Yes No
Custody Seal No: _____

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

Special Instructions/QC Requirements: _____

Method of Shipment: _____
Received by: _____
Received by: _____
Received by: _____
Received by: _____

Color Temperature(s) °C and Other Remarks: _____

Chain of Custody Record

Client Contact: Shipping/Receiving
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North, Earth, City, IA 50645
Phone: (319) 298-8660 (Tel) 314-298-8757 (Fax)
Email: _____

Lab Pk: Thompson, Shirley J
Lab Pk: Thompson, Shirley J
E-Mail: Shirley.Thompson@eurofins.com
Address: Nebraska
State of Origin: Nebraska

Current Tracking Req's: _____

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix (Water, Air, Soil, Sediment, etc.)	Preservation Code	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	Radon-222 (pCi/L)	Radon-220 (pCi/L)	Radon-228 (pCi/L)	Radon-228 (pCi/L)	Total Number of Containers	Special Instructions/Note:
NC2MW2 (310-241714-1)	10/3/22	15:20	Central	Water	X	X	X	X	X	X	X	2	
NC2MW3 (310-241714-2)	10/3/22	13:17	Central	Water	X	X	X	X	X	X	X	2	
NC2MW5 (310-241714-3)	10/4/22	08:35	Central	Water	X	X	X	X	X	X	X	2	
NC2MW6 (310-241714-4)	10/4/22	08:47	Central	Water	X	X	X	X	X	X	X	2	
NC2MW7 (310-241714-5)	10/3/22	14:39	Central	Water	X	X	X	X	X	X	X	2	
NC2MW8 (310-241714-6)	10/3/22	14:39	Central	Water	X	X	X	X	X	X	X	2	
DUP2 (310-241714-7)	10/3/22	14:39	Central	Water	X	X	X	X	X	X	X	2	

Field Filled Sample (Yes or No) _____
Perform MS/MSD (Yes or No) _____
Radon-222 (pCi/L) _____
Radon-220 (pCi/L) _____
Radon-228 (pCi/L) _____
Radon-228 (pCi/L) _____

Preservation Codes:
A - HCL
B - NiOH
C - NiOH
D - NiOH
E - NiOH
F - NiOH
G - NiOH
H - NiOH
I - NiOH
J - NiOH
K - NiOH
L - NiOH
M - NiOH
N - NiOH
O - NiOH
P - NiOH
Q - NiOH
R - NiOH
S - NiOH
T - NiOH
U - NiOH
V - NiOH
W - NiOH
X - NiOH
Y - NiOH
Z - other (specify)

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

Special Instructions/QC Requirements: _____

Method of Shipment: _____
Received by: _____
Received by: _____
Received by: _____
Received by: _____

Color Temperature(s) °C and Other Remarks: _____

Primary Deliverable Rank: 2

Relinquished by: _____
Relinquished by: _____
Relinquished by: _____
Relinquished by: _____

Date: 10/11/22 12:50
Date/Time: _____
Date/Time: _____
Date/Time: _____

Custody Seals Intact: Yes No
Custody Seal No: _____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-241714-2

Login Number: 241714

List Number: 1

Creator: Costello, Mackenzie K

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 <math><6\text{mm}</math> (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: 310-241714-2

Login Number: 241714

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 10/07/22 12:26 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (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
Project/Site: Nebraska City Unit 2 CCR

Job ID: 310-241714-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

			Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)		
310-241714-1	NC2MW2	94.6		
310-241714-2	NC2MW3	93.1		
310-241714-3	NC2MW5	88.0		
310-241714-4	NC2MW6	97.8		
310-241714-5	NC2MW7	105		
310-241714-6	NC2MW8	103		
310-241714-7	DUP2	89.2		
LCS 160-586466/2-A	Lab Control Sample	106		
MB 160-586466/1-A	Method Blank	109		

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)		
310-241714-1	NC2MW2	94.6	86.0		
310-241714-2	NC2MW3	93.1	82.2		
310-241714-3	NC2MW5	88.0	86.7		
310-241714-4	NC2MW6	97.8	86.4		
310-241714-5	NC2MW7	105	85.6		
310-241714-6	NC2MW8	103	87.5		
310-241714-7	DUP2	89.2	87.5		
LCS 160-586471/2-A	Lab Control Sample	106	84.5		
MB 160-586471/1-A	Method Blank	109	84.9		

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Eurofins Cedar Falls



Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-241716-1
Client Project/Site: Nebraska City Unit 1 & 2 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:
10/21/2022 5:19:36 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

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

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

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Case Narrative

Job ID: 310-241716-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241716-1

Comments

No additional comments.

Receipt

The samples were received on 10/5/2022 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.6° C.

HPLC/IC

Method 9056A: The following sample was diluted due to the nature of the sample matrix: NC2MW4 (310-241716-1). 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

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241716-1	NC2MW4	Water	10/04/22 08:14	10/05/22 16:50
310-241716-2	MW13	Water	10/03/22 09:08	10/05/22 16:50

Detection Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-241716-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.30		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	37.4		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.00114	J	0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.347		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.160		0.100	0.0580	mg/L	1		6020A	Total/NA
Cadmium	0.000600	J	0.000100	0.0000550	mg/L	1		6020A	Total/NA
Calcium	118		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000383	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lead	0.000736		0.000500	0.000240	mg/L	1		6020A	Total/NA
Lithium	0.0303		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00422		0.00200	0.00120	mg/L	1		6020A	Total/NA
Total Dissolved Solids	442		50.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13

Lab Sample ID: 310-241716-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.85		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	13.3		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0151		0.00200	0.000750	mg/L	1		6020A	Total/NA
Barium	0.253		0.00200	0.000880	mg/L	1		6020A	Total/NA
Boron	0.113		0.100	0.0580	mg/L	1		6020A	Total/NA
Calcium	112		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000419	J	0.000500	0.000190	mg/L	1		6020A	Total/NA
Lithium	0.0301		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	470		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: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Client Sample ID: MC2Wr 4

Lab Sample ID: 310-24171N-1

Date Collected: 10/04/22 0v:14

Wetlab: r atex

Date Redeel: 10/09/22 1N:h0

Wet8c / Sr v4N90hNA - Anicns, lcn C8xmatcgpap8y

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
C8lcx/ e	h.30		5.00	2.25	mg/L			10/21/22 05:46	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 05:46	5
Sulfate	37.4		5.00	2.00	mg/L			10/21/22 05:46	5

Wet8c / Sr v4N020A - Wetals JCP9VS(

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Antimony	<0.000690		0.00200	0.000690	mg/L		10/07/22 09:45	10/17/22 22:06	1
Arsenid	0.00114)		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 22:06	1
Barium	0.347		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 22:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 22:06	1
Borcn	0.1ND		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 22:06	1
Ca/ mium	0.0000ND0)		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 22:06	1
Calcium	11v		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 22:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 22:06	1
Ccobalt	0.0003v3)		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 22:06	1
Lead	0.00073N		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 22:06	1
Lithium	0.0303		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 22:06	1
Molybdenum	0.00422		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 22:06	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 22:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 22:06	1

Wet8c / Sr v4N7470A - Wexluxy JCVAA(

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:47	10/17/22 15:34	1

Genexal C8emisty

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Total Disscl6e/ Scil/ s .SW 2h40C(442		50.0	26.0	mg/L			10/07/22 16:28	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Client Sample ID: Wr 13

Lab Sample ID: 310-24171N-2

Date Collected: 10/03/22 09:0v

Wetlab: r atex

Date Redeel: 10/09/22 1N:h0

Wet8c / Sr v4N90hNA - Anicns, lcn C8xmatcgpap8y

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
C8lcx/ e	9.vh		5.00	2.25	mg/L			10/21/22 10:44	5
Fluoride	<0.220		0.500	0.220	mg/L			10/21/22 10:44	5
Sulfate	13.3		5.00	2.00	mg/L			10/21/22 10:44	5

Wet8c / Sr v4N020A - Wetals JCP9VS(

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Antimony	<0.000690		0.00200	0.000690	mg/L		10/07/22 09:45	10/17/22 22:27	1
Arsenid	0.01h1		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 22:27	1
Barium	0.2h3		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 22:27	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 22:27	1
Borcn	0.113		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 22:27	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 22:27	1
Calcium	112		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 22:27	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 22:27	1
Ccobalt	0.000419)		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 22:27	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 22:27	1
Lithium	0.0301		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 22:27	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 22:27	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 22:27	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 22:27	1

Wet8c / Sr v4N7470A - Wexluxy JCVAA(

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Mercury	<0.000110		0.000200	0.000110	mg/L		10/14/22 14:47	10/17/22 15:40	1

Genexal C8emisty

Analyte	Result	Qualiflex	RL	WDL	Unit	D	Рерае/	Analyze/	Dil Fad
Total Disscl6e/ Scil/ s .SW 2h40C(470		50.0	26.0	mg/L			10/06/22 13:40	1

Eurofins Cedar Falls

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Qualifiers

Metals

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

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
ML	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

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-369461/3
Matrix: Water
Analysis Batch: 369461

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.450		1.00	0.450	mg/L			10/21/22 00:50	1
Fluoride	<0.0440		0.100	0.0440	mg/L			10/21/22 00:50	1
Sulfate	<0.400		1.00	0.400	mg/L			10/21/22 00:50	1

Lab Sample ID: LCS 310-369461/4
Matrix: Water
Analysis Batch: 369461

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

Analyte	Spike Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	10.0	9.263		mg/L		93	90 - 110
Fluoride	2.00	1.884		mg/L		94	90 - 110
Sulfate	10.0	9.452		mg/L		95	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-367783/1-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000690		0.00200	0.000690	mg/L		10/07/22 09:45	10/17/22 18:28	1
Arsenic	<0.000750		0.00200	0.000750	mg/L		10/07/22 09:45	10/17/22 18:28	1
Barium	<0.000880		0.00200	0.000880	mg/L		10/07/22 09:45	10/17/22 18:28	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/07/22 09:45	10/17/22 18:28	1
Boron	<0.0580		0.100	0.0580	mg/L		10/07/22 09:45	10/17/22 18:28	1
Cadmium	<0.0000550		0.000100	0.0000550	mg/L		10/07/22 09:45	10/17/22 18:28	1
Calcium	<0.190		0.500	0.190	mg/L		10/07/22 09:45	10/17/22 18:28	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/07/22 09:45	10/17/22 18:28	1
Cobalt	<0.000190		0.000500	0.000190	mg/L		10/07/22 09:45	10/17/22 18:28	1
Lead	<0.000240		0.000500	0.000240	mg/L		10/07/22 09:45	10/17/22 18:28	1
Lithium	<0.00250		0.0100	0.00250	mg/L		10/07/22 09:45	10/17/22 18:28	1
Molybdenum	<0.00120		0.00200	0.00120	mg/L		10/07/22 09:45	10/17/22 18:28	1
Selenium	<0.000960		0.00500	0.000960	mg/L		10/07/22 09:45	10/17/22 18:28	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/07/22 09:45	10/17/22 18:28	1

Lab Sample ID: LCS 310-367783/2-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Spike Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.200	0.1872		mg/L		94	80 - 120
Arsenic	0.200	0.1926		mg/L		96	80 - 120
Barium	0.100	0.09836		mg/L		98	80 - 120
Beryllium	0.100	0.1057		mg/L		106	80 - 120
Boron	0.200	0.1993		mg/L		100	80 - 120
Cadmium	0.100	0.09815		mg/L		98	80 - 120
Calcium	2.00	1.979		mg/L		99	80 - 120
Chromium	0.100	0.09547		mg/L		95	80 - 120
Cobalt	0.100	0.09942		mg/L		99	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

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

Lab Sample ID: LCS 310-367783/2-A
Matrix: Water
Analysis Batch: 368920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.200	0.2054		mg/L		103	80 - 120
Lithium	0.200	0.1941		mg/L		97	80 - 120
Molybdenum	0.200	0.1924		mg/L		96	80 - 120
Selenium	0.400	0.3578		mg/L		89	80 - 120
Thallium	0.200	0.2064		mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-368713/1-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368713

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 14:47	10/17/22 14:53	1

Lab Sample ID: LCS 310-368713/2-A
Matrix: Water
Analysis Batch: 368887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001567		mg/L		94	80 - 120

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

Lab Sample ID: MB 310-367788/1
Matrix: Water
Analysis Batch: 367788

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			10/06/22 13:40	1

Lab Sample ID: LCS 310-367788/2
Matrix: Water
Analysis Batch: 367788

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	976.0		mg/L		98	90 - 110

Lab Sample ID: MB 310-367956/1
Matrix: Water
Analysis Batch: 367956

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			10/07/22 16:28	1

Lab Sample ID: LCS 310-367956/2
Matrix: Water
Analysis Batch: 367956

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	944.0		mg/L		94	90 - 110

Eurofins Cedar Falls

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

HPLC/IC

Analysis Batch: 369461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	9056A	
310-241716-2	MW13	Total/NA	Water	9056A	
MB 310-369461/3	Method Blank	Total/NA	Water	9056A	
LCS 310-369461/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 367783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	3005A	
310-241716-2	MW13	Total/NA	Water	3005A	
MB 310-367783/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-367783/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 368713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	7470A	
310-241716-2	MW13	Total/NA	Water	7470A	
MB 310-368713/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-368713/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 368887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	7470A	368713
310-241716-2	MW13	Total/NA	Water	7470A	368713
MB 310-368713/1-A	Method Blank	Total/NA	Water	7470A	368713
LCS 310-368713/2-A	Lab Control Sample	Total/NA	Water	7470A	368713

Analysis Batch: 368920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	6020A	367783
310-241716-2	MW13	Total/NA	Water	6020A	367783
MB 310-367783/1-A	Method Blank	Total/NA	Water	6020A	367783
LCS 310-367783/2-A	Lab Control Sample	Total/NA	Water	6020A	367783

General Chemistry

Analysis Batch: 367788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-2	MW13	Total/NA	Water	SM 2540C	
MB 310-367788/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-367788/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 367956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	SM 2540C	
MB 310-367956/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-367956/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

Client Sample ID: NC2MW4

Date Collected: 10/04/22 08:14

Date Received: 10/05/22 16:50

Lab Sample ID: 310-241716-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHMS	EET CF	10/21/22 05:46
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 22:06
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:34
Total/NA	Analysis	SM 2540C		1	367956	ENB7	EET CF	10/07/22 16:28

Client Sample ID: MW13

Date Collected: 10/03/22 09:08

Date Received: 10/05/22 16:50

Lab Sample ID: 310-241716-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	369461	DHMS	EET CF	10/21/22 10:44
Total/NA	Prep	3005A			367783	QTZ5	EET CF	10/07/22 09:45
Total/NA	Analysis	6020A		1	368920	A6US	EET CF	10/17/22 22:27
Total/NA	Prep	7470A			368713	XXW3	EET CF	10/14/22 14:47
Total/NA	Analysis	7470A		1	368887	XXW3	EET CF	10/17/22 15:40
Total/NA	Analysis	SM 2540C		1	367788	ENB7	EET CF	10/06/22 13:40

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

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	09-29-22 *
Oregon	NELAP	IA100001	09-29-23

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

Eurofins Cedar Falls

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-1

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

Eurofins Cedar Falls



310-241716 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power</u>		
City/State: <u>Omaha NE</u>	Project:	
Receipt Information		
Date/Time Received: <u>10-3-22 10:50</u>	Received By: <u>EH</u>	
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:		
Condition of Cooler/Containers		
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>4</u> of <u>5</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record		
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: <input type="checkbox"/> NONE		
Thermometer ID: <u>R2</u>	Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C):	Corrected Temp (°C):	
• Sample Container Temperature		
Container(s) used:	<u>25ml Plastic Nitric</u>	CONTAINER 2:
Uncorrected Temp (°C):	<u>0.6</u>	
Corrected Temp (°C):	<u>0.6</u>	
Exceptions Noted		
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> 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
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General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

Chain of Custody Record



Client Information Company: Omaha Public Power District 444 South 16th Street, Mail REEP1 City: Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 Email: scott@oppd.com TestAmerica Project #: Nebraska City Station Unit 1 & 2 CCR / Landfill Site: Nebraska City Station Unit 1 & 2		Lab Pk: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Camer Trading No(s):	
Sample: Kyle K. Uihing Phone: (531) 226-2515		GOC No: Page: Job #:	
Due Date Requested: (AT Requested (days))		Preservation Codes: M - Heavine B - Bicarbonate O - AmN02 P - Na2CO3 E - NiH2 Acid Q - NaHSO4 S - H2SO4 H - Amchlor T - TSP Dioxide/hydrate U - Fluoride L - B Water W - pH 4-5 L - EDA Z - other (specify)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/> Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/Note: CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents	
Sample Identification Sample Date: 10/1/2022 8:14 Sample Time: 10/1/2022 9:08 Sample Type (C=Comp, O=Org) (M=Metals): G W Matrix (C=Comp, O=Org, S=Soil, W=Water): W Field Filtered Sample (Yes or No): N Total Number of Containers: 4		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/OC Requirements:	
Requisitioned by: [Signature] Date: 10/1/2022 15:37 Company: OPPD		Received by: [Signature] Date: 10-1-22 15:15 Company: BPR	
Requisitioned by: [Signature] Date: 10-1-22 08:00 Company: BPR		Received by: [Signature] Date: 10-1-22 14:50 Company:	
Custody Seals Intact: <input type="checkbox"/> Custody Seal No <input type="checkbox"/> Δ, Yes Δ, No		Cooler Temperature(s) °C and Other Remarks:	

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Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-24171/ -1

Login Number: 241716
List Number: 1
Creator: Costello, Mackenzie K

List Source: Eurofins Cedar Falls

Question	Answer	Comment
d avioactiyit' wasnk chec-ev or is =A bac<. rounv as measurev b' a surye' meterT	NAR	
, he coolerle custov' sealf ipSresentf is intactT	NAR	
I amSte custov' sealf ipSresentf are intactT	NAR	
, he cooler or samSes vo not aSSear to have been comSromisev or tamSerev withT	, rue	
I amSes were receivev on iceT	, rue	
Cooler , emSerature is acceStableT	, rue	
Cooler , emSerature is recorvevT	, rue	
COC is SresentT	, rue	
COC is pillev out in in< anv le. ibleT	, rue	
COC is pillev out with all Sertinent ipmrationT	, rue	
Rs the ?ielv I amSlerle name Sresent on COCH	, rue	
, here are no visceSancies between the containers receivev anv the COCT	, rue	
I amSes are receivev within (olvin , ime x) olvlin. tests with immeviate (, sv	, rue	
I amSte containers haye le. ible labelsT	, rue	
Containers are not bro<en or lea<in. T	, rue	
I amSte collection vateAimes are SroyivevT	, rue	
RSSroSriate samSes containers are usevT	, rue	
I amSte bottles are comSetel' pillevT	, rue	
I amSte Preseryation qeripevT	, rue	
, here is suppicion yoiTpor all reMuestev anal' sevf inciTan' reMuestev z I & I Ds	, rue	
Containers reMirin. 6ero heavsSace haye no heavsSace or bubble is =/ mm x1A"VT	, rue	
z uliShasic samSes are not SresentT	, rue	
I amSes vo not reMiure sSittin. or comSositin. T	, rue	
desivual Chlorine Chec<evT	NAR	

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Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 310-241716-2
Client Project/Site: Nebraska City Unit 1 & 2 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 4:59:33 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

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

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

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the (0) Project Manager.

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Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Laboratory Job ID: 310-241716-2

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LINKS

Review your project results through

Have a Question?

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Job ID: 310-241716-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-241716-2

Comments

No additional comments.

Receipt

The samples were received on 10/5/2022 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.6° C.

RAD

Methods 903.0, 9315: Radium-226 batch 586466

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

NC2MW4 (310-241716-1), MW13 (310-241716-2), (LCS 160-586466/2-A), (MB 160-586466/1-A), (480-202269-A-1-A) and (480-202269-B-1-A DU)

Methods 904.0, 9320: Radium-228 batch 586471

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.

NC2MW4 (310-241716-1), MW13 (310-241716-2), (LCS 160-586471/2-A), (MB 160-586471/1-A), (480-202269-A-1-B) and (480-202269-B-1-B DU)

Method PrecSep_0:

Method PrecSep-21:

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: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-241716-1	NC2MW4	Water	10/04/22 08:14	10/05/22 16:50
310-241716-2	MW13	Water	10/03/22 09:08	10/05/22 16:50

Detection Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-241716-1

No Detections.

Client Sample ID: MW13

Lab Sample ID: 310-241716-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-241716-1

Matrix: Water

Date Collected: 10/04/22 08:14

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.597		0.227	0.234	1.00	0.245	pCi/L	10/19/22 09:46	11/10/22 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/19/22 09:46	11/10/22 11:25	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	2.05		0.759	0.782	1.00	0.959	pCi/L	10/19/22 10:22	11/03/22 11:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/19/22 10:22	11/03/22 11:08	1
Y Carrier	88.2		40 - 110					10/19/22 10:22	11/03/22 11:08	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	2.64		0.792	0.816	5.00	0.959	pCi/L		11/10/22 16:20	1

Eurofins Cedar Falls

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Client Sample ID: MW13

Lab Sample ID: 310-241716-2

Date Collected: 10/03/22 09:08

Matrix: Water

Date Received: 10/05/22 16:50

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.228		0.142	0.144	1.00	0.203	pCi/L	10/19/22 09:46	11/10/22 11:25	1
Carrier	%Yield	Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	98.3		40 - 110					10/19/22 09:46	11/10/22 11:25	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	1.01		0.416	0.426	1.00	0.519	pCi/L	10/19/22 10:22	11/03/22 11:08	1
Carrier	%Yield	Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	98.3		40 - 110					10/19/22 10:22	11/03/22 11:08	1
Y Carrier	89.3		40 - 110		10/19/22 10:22	11/03/22 11:08	1			

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	1.24		0.440	0.450	5.00	0.519	pCi/L		11/10/22 16:20	1

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Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Qualifiers

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
M	disteg under the pDpcolumn to gesixnate that the result is reLorteg on a gry weixht basis
v R	Percent Reco. ery
C=d	Contains "ree d" uig
C=U	Colony "orminx Unit
CN=	Contains No "ree d" uig
D%R	DuLicate %"ror Ratio f"ormalEag absolute gi(lerencez
Dil #ac	Dilution #actor
Dd	Detection dimit fDoD/DO%
Ddf R) f R%if IN	Ingicates a Dilutionf Re-analysisif Re-e, tractionf or aggtional Initial metals/anion analysis o(the samLe
DdC	Decision de. el Concentration fRaggiochemistryz
%Dd	%limateg Detection dimit fDio, inz
dOD	dimit o(Detection fDoD/DO%
dOA	dimit o(Auantitation fDoD/DO%
QCd	%P) recommeneg pQa, imum Contaminant de. elp
QD)	Qinum Detectable) cti. ity fRaggiochemistryz
QDC	Qinum Detectable Concentration fRaggiochemistryz
QDd	Qethog Detection dimit
Qd	Qinum de. el fDio, inz
QPN	Qost Probable Number
QA d	Qethog Auantitation dimit
NC	Not Calculateg
ND	Not Detecteg at the reLortinx limit fR QDd or %Dd i(shownz
N%G	Nexati. e /) bsent
POS	Positi. e / Present
PA d	Practical Auantitation dimit
PR%S	PresumLti. e
AC	Auality Control
R%R	Relati. e %"ror Ratio fRaggiochemistryz
Rd	ReLortinx dimit or Re" uesteg dimit fRaggiochemistryz
RPD	Relati. e Percent Di(lerencef a measure o(the relati. e gi(lerence between two Loints
T%P	To, icity % ui. alent #actor fDio, inz
T%A	To, icity % ui. alent #autient fDio, inz
TNTC	Too Numerous To Count

Eurofins Cedar Falls

QC Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-586466/1-A
Matrix: Water
Analysis Batch: 589595

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586466

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Ra. ium-226	-0.01712	U	0.0373	0.0373	1.00	0.0527	9Ci/p	10/15/22 05:46	11/10/22 05:21	1
Carrier		%Yield	Qualifier	Limits	Prepared		Analyzed		Dil Fac	
Ba Carrier		109		40 - 110	10/19/22 09:46		11/10/22 09:21		1	

Lab Sample ID: LCS 160-586466/2-A
Matrix: Water
Analysis Batch: 589595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586466

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Ra. ium-226	11.3	5.506		1.04	1.00	0.114	9Ci/p	ET	78 - 128
Carrier		%Yield	Qualifier	Limits	Prepared		Analyzed		Dil Fac
Ba Carrier		106		40 - 110					

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586471/1-A
Matrix: Water
Analysis Batch: 588336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586471

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Ra. ium-228	0.2750	U	0.32E	0.325	1.00	0.1841	9Ci/p	10/15/22 10:22	11/03/22 11:03	1
Carrier		%Yield	Qualifier	Limits	Prepared		Analyzed		Dil Fac	
Ba Carrier		109		40 - 110	10/19/22 10:22		11/03/22 11:03		1	
Y Carrier		84.9		40 - 110	10/19/22 10:22		11/03/22 11:03		1	

Lab Sample ID: LCS 160-586471/2-A
Matrix: Water
Analysis Batch: 588336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586471

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Ra. ium-228	11.4E	5.852		1.23	1.00	0.1411	9Ci/p	113	78 - 128
Carrier		%Yield	Qualifier	Limits	Prepared		Analyzed		Dil Fac
Ba Carrier		106		40 - 110					
Y Carrier		84.5		40 - 110					

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QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Rad

Prep Batch: 586466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	PrecSep-21	
310-241716-2	MW13	Total/NA	Water	PrecSep-21	
MB 160-586466/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586466/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 586471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-241716-1	NC2MW4	Total/NA	Water	PrecSep_0	
310-241716-2	MW13	Total/NA	Water	PrecSep_0	
MB 160-586471/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586471/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Eurofins Cedar Falls

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-241716-1

Date Collected: 10/04/22 08:14

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 11:25
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588335	FLC	EET SL	11/03/22 11:08
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Client Sample ID: MW13

Lab Sample ID: 310-241716-2

Date Collected: 10/03/22 09:08

Matrix: Water

Date Received: 10/05/22 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586466	BMP	EET SL	10/19/22 09:46
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 11:25
Total/NA	Prep	PrecSep_0			586471	BMP	EET SL	10/19/22 10:22
Total/NA	Analysis	9320		1	588335	FLC	EET SL	11/03/22 11:08
Total/NA	Analysis	Ra226_Ra228		1	589646	CAH	EET SL	11/10/22 16:20

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

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	10259	06-30-22 *
California	Districts		
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.

Eurofins Cedar Falls

Method Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

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



Environment Testing
 America



310-241716 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power</u>		
City/State: <u>Omaha NE</u>	Project:	
Receipt Information		
Date/Time Received: DATE <u>10-3-22</u> TIME <u>10:50</u>	Received By: <u>EH</u>	
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:		
Condition of Cooler/Containers		
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>4</u> of <u>5</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record		
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: <input type="checkbox"/> NONE		
Thermometer ID: <u>R2</u>	Correction Factor (°C): <u>0</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C):	Corrected Temp (°C):	
* Sample Container Temperature		
Container(s) used:	CONTAINER 1 <u>25ml Plastic Nitric</u>	CONTAINER 2
Uncorrected Temp (°C):	<u>0.6</u>	
Corrected Temp (°C):	<u>0.6</u>	
Exceptions Noted		
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No		
NOTE: If yes, contact PM before proceeding. If no, proceed with login		
Additional Comments		

Chain of Custody Record

Company Omaha Public Power District		Lab P# Hayes, Shawn M		Carrier Tracking No(s) GOC No:	
Client Contact Kyle Uhing		Phone: (531) 226-2515		Page: Job #:	
Due Date Requested: TAT Requested (days):		Analysis Requested		Preservation Codes: M - Heane A - HCL B - Nickel C - Zn Acetate D - Nitric Acid E - NiHSO4 F - NiSO4 G - Amchlor H - Ascorbic Acid I - DI Water K - EDTA L - EDA Other:	
444 South 16th Street, Mail REEP1 Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 Email: shawn.hayes@testamericainc.com		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)		Total Number of Containers	
PO #: WO #: SAC/Analyst: Nebraska City Station Unit 1 & 2 CCR / Landfill Nebraska City Station Unit 1 & 2		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)		Special Instructions/Note: CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents	
Sample Identification		Sample Type (C=Comp, G=Grab)		Sample Date	
NC2MW4		G		10/1/22 8:14	
MM13		G		10/3/22 9:08	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Date Time: 10/1/2022 15:37 Date Time: 10/3/22 08:00 Date Time:		Received by: MC Received by: Company	
Empty Kit Requisitioned by: Requisitioned by: Requisitioned by:		Date: 10/1/2022 15:37 Date Time: 10/3/22 08:00 Date Time:		Method of Shipment: 10-1-22 15:37 10-3-22 16:50 Company	
Custody Seals Intact: <input type="checkbox"/> Custody Seal No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:		Special Instructions/OC Requirements: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	



Chain of Custody Record

Client Contact Shirley Thompson		Lab P# Thompson, Shirley J		Carrier Tracking No(s) GOC No: 310-54486.1	
Company TestAmerica Laboratories, Inc.		Phone: 31007559		Page: Page 1 of 1	
Address: 13715 Rider Trail North Earth City MO 63045 Phone: 314-298-6566(Tel) 314-298-8757(Fax) Email:		E-Mail: Shirley.Thompson@eurofins.com		State of Origin: Nebraska	
Project Name: Nebraska City Unit 1 & 2 CCR		Due Date Requested: 10/18/2022		Job #: 310-241716-1	
Site: 310 OPPD Nebraska City Unit 2		TAT Requested (days):		Preservation Codes: A - HCL B - Nickel C - Zn Acetate D - Nitric Acid E - NiHSO4 F - NiSO4 G - Amchlor H - Ascorbic Acid I - DI Water K - EDTA L - EDA Other:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
NC2MW4 (310-241716-1)		10/4/22		08:14	
MW13 (310-241716-2)		10/3/22		09:08	
Matrix (C=Comp, G=Grab) (In-house, Army)		Sample Type (C=Comp, G=Grab)		Field Filtered Sample (Yes or No)	
Water		Water		X	
Water		Water		X	
Matrix (In-house, Army)		Sample Type (C=Comp, G=Grab)		Field Filtered Sample (Yes or No)	
Water		Water		X	
Water		Water		X	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
		2		2	
Possible Hazard Identification Deliverable Requested I, II, III, IV, Other (specify)		Date Time: 10/7/2022 09:00 Date Time:		Received by: Diana Westinghouse Received by: Company	
Empty Kit Requisitioned by: Requisitioned by: Requisitioned by:		Date: 10/7/2022 09:00 Date Time:		Method of Shipment: FED EX Received by: Diana Westinghouse Received by: Company	
Custody Seals Intact: <input type="checkbox"/> Custody Seal No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:		Special Instructions/OC Requirements: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-24171/-2

Login Number: 241716

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Costello, Mackenzie K

Question	Answer	Comment
d avioactiyit' wasnk chec<ev or is =Aj bac<. rounv as measurev b' a surye' meterT	NAR	
, he coolerle custov' sealf ipSresentf is intactT	NAR	
I amSle custov' sealfs ipSresentf are intactT	NAR	
, he cooler or samSles vo not aSSear to have been comSromisev or tamSerev withT	, rue	
I amSles were receiyev on iceT	, rue	
Cooler , emSerature is acceStableT	, rue	
Cooler , emSerature is recorvevT	, rue	
COC is SresentT	, rue	
COC is pllev out in in< anv le. ibleT	, rue	
COC is pllev out with all Sertinent inprmationT	, rue	
Rs the ?ielv I amSlerle name Sresent on COCH	, rue	
, here are no viscreSancies between the containers receiyev anv the COCT	, rue	
I amSles are receiyev within (olvin. , ime x) cluvin. tests with immeviate (, sv	, rue	
I amSle containers haye le. ible labelsT	, rue	
Containers are not bro<en or lea<in. T	, rue	
I amSle collection vateAimes are SroyivevT	, rue	
RSSroSriate samSle containers are usevT	, rue	
I amSle bottles are comStete' pllevT	, rue	
I amSle Preseryation qeripevT	, rue	
, here is supcipient yolTpr all reMuestev anal' sef inclTan' reMuestev z I & I Ds	, rue	
Containers reMurin. 6ero heavsSace haye no heavsSace or bubble is =/ mm x1A"VT	, rue	
z ultiShasic samSles are not SresentT	, rue	
I amSles vo not reMiire sSlittin. or comSositin. T	, rue	
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Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-24171/-2

Login Number: 241716

List Source: Eurofins St. Louis

List Number: 2

List Creation: 10/07/22 12:35 PM

Creator: Worthington, Sierra M

Question	Answer	Comment
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Tracer/Carrier Summary

Client: Omaha Public Power District
 Project/Site: Nebraska City Unit 1 & 2 CCR

Job ID: 310-241716-2

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Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
310-241716-1	NC2MW4	94.6	
310-241716-2	MW13	98.3	
LCS 160-586466/2-A	Lab Control Sample	106	
MB 160-586466/1-A	Method Blank	109	
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)
310-241716-1	NC2MW4	94.6	88.2
310-241716-2	MW13	98.3	89.3
LCS 160-586471/2-A	Lab Control Sample	106	84.5
MB 160-586471/1-A	Method Blank	109	84.9
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

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Appendix C

April 2022 & October 2022
Statistical Memo

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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
Nebraska City Station NC2 Ash Disposal Area
NDEE Title 132 & Federal CCR Groundwater Monitoring Network

Omaha Public Power District operates a two-unit (Unit 1 and Unit 2) fossil fuel-fired generating plant at the Nebraska City Station, herein referenced as “Station” or “Site”. The Station is located southeast of Nebraska City, Nebraska. The Station has two existing coal combustion residuals (CCR) landfills for fossil fuel combustion ash disposal known as the NC1 Ash Disposal Area and the NC2 Ash Disposal Area. Both NC1 and NC2 Ash Disposal Areas are subject to the United States Environmental Protection Agency’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 Title 132 regulations for fossil fuel combustion ash disposal areas. This memorandum provides a discussion and evaluation of the NC2 Ash Disposal Area. The NC2 Ash Disposal Area is a CCR landfill permitted under the Title 132 regulations for 40.7 acres. Cell 1 was constructed in 2008/2009. The NC2 Ash Disposal Area Cells 2 and 3 and West Leachate Pond were completed in January 2018. Cells 1 through 3 were constructed with a composite liner and leachate collection system.

Groundwater sampling was completed as part of an assessment monitoring program for the NC2 Ash Disposal Area, as specified in 40 CFR §257.95(d) and 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 Methods Certification*, amended December 2021, and the facility’s most recent Groundwater Sampling and Analysis Plan (dated January 4, 2019; revised March 1, 2019) as permitted under Title 132. Sampling results used to calculate the background threshold values (BTVs) were obtained during monitoring events performed between March 2016 and April 2022. The BTVs were updated as part of this sampling event and will be reevaluated following the spring 2024 sampling event.

Downgradient sampling results from the spring 2022 assessment monitoring were used to evaluate for statistically significant increases (SSIs) over background and statistically significant levels (SSLs) over the groundwater protection standards (GWPS). The calculated BTVs and the evaluation for SSIs for the Appendix III (herein referred to as “detection monitoring”) constituents and Appendix IV (herein referred to as “assessment monitoring”) constituents are provided in **Table D-1**. The calculated lower confidence levels and the evaluation for SSLs over the GWPS for the assessment monitoring constituents are provided in **Table D-2**.



Table D-1. Summary of Evaluations for SSIs over Background (April 2022)

Well ID:		NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8	
Constituent	BTV (UPL):	Unit	Assessment Monitoring Results				
Appendix III (Detection Monitoring) Constituents							
Boron	4.63	mg/L	0.456	0.198	2.42	0.241	0.114
Calcium	229	mg/L	231	212	142	132	132
Chloride	36.6	mg/L	18.1	47.0	6.45	7.08	9.66
Fluoride	1.89	mg/L	<0.220	1.12	<0.220	<0.220	<0.220
pH	6.38 – 7.87*	SU	6.70	7.10	7.20	7.20	7.30
Sulfate	611	mg/L	381	703	134	6.49	9.69
TDS	1,390	mg/L	934	1590	600	484	428
Appendix IV (Assessment Monitoring) Constituents							
Antimony	0.00200	mg/L	0.00298	0.000690	0.00123	<0.000690	<0.000690
Arsenic	0.0402	mg/L	0.000766	0.00171	0.00118	0.0487	0.00887
Barium	0.447	mg/L	0.124	0.0977	0.143	0.563	0.552
Beryllium	0.00100	mg/L	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium	0.000500	mg/L	0.0000900	0.000104	0.0000550	<0.0000550	<0.0000550
Chromium	0.00500	mg/L	<0.00110	<0.00110	0.00188	<0.00110	<0.00110
Cobalt	0.00236	mg/L	0.000522	0.00101	0.000289	0.000422	0.00264
Radium 226+228	1.94	pCi/L	1.09	0.955	0.778	0.747	0.912
Fluoride	1.89	mg/L	<0.220	1.12	<0.220	<0.220	<0.220
Lead	0.00610	mg/L	0.000861	0.000288	0.00221	<0.000240	<0.000240
Lithium	0.0423	mg/L	0.0254	0.0201	0.0420	0.0654	0.0363
Mercury	0.000200	mg/L	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110
Molybdenum	0.0339	mg/L	0.0322	0.00371	0.00630	0.00159	0.00202
Selenium	0.0146	mg/L	0.00627	0.0174	0.00329	<0.000960	<0.000960
Thallium	0.00100	mg/L	<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).

J – Value is less than the Reporting Limit but above the Method Detection Limit, therefore value is an approximation.

U – 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.



Table D-2. Summary of Evaluation for SSLs (April 2022)

Constituent	Well ID:		NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8
	GWPS ^[1]	Unit	Lower Confidence Levels – Appendix IV (Assessment Monitoring) Constituents				
Antimony	0.006	mg/L	0.002857	0.0069	0.001	0.00069	0.00069
Arsenic	0.0402 ^[2]	mg/L	0.0008601	0.002543	0.000889	0.03817	0.00895
Barium	2.0	mg/L	0.1174	0.1302	0.1097	0.5300	0.454
Beryllium	0.004	mg/L	0.00027	0.00027	0.00027	0.00027	0.00027
Cadmium	0.005	mg/L	0.0001088	0.000068	0.00005946	0.000051	0.00004102
Chromium	0.1	mg/L	0.0011	0.0011	0.0011	0.0011	0.0011
Cobalt	0.006	mg/L	0.0001628	0.0008543	0.000122	0.0002809	0.001699
Fluoride	4.0	mg/L	0.2306	0.3754	0.2335	0.2744	0.2513
Lead	0.015	mg/L	0.0007511	0.0002706	0.0003818	0.00021	0.0003089
Lithium	0.0423 ^[2]	mg/L	0.02991	0.02349	0.02611	<u>0.05747</u>	0.02956
Mercury	0.002	mg/L	0.00011	0.00011	0.00011	0.00011	0.00011
Molybdenum	0.1	mg/L	0.01529	0.003547	0.0102	0.001554	0.002275
Radium 226+228	5.0	pCi/L	0.7996	0.5769	0.4624	0.6111	0.5552
Selenium	0.05	mg/L	0.001159	0.00096	0.00096	0.00096	0.00096
Thallium	0.002	mg/L	0.00026	0.00026	0.00026	0.00026	0.00026

Bold and underlined concentration indicates an SSL over the GWPS.

[1] GWPS is established as the Environmental Protection Agency's (EPA) Maximum Contaminant Level (MCL) or the GWPS specified in 40 CFR §257.95(h)(2), unless otherwise specified.

[2] GWPS is established as the UPL when the background level is higher than the EPA MCL.

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Technical Memorandum

Date: Monday, December 19, 2022

To: Omaha Public Power District (OPPD)

From: HDR Engineering, Inc.

Subject: Summary of Statistical Analysis and Evaluation for SSLs
Nebraska City Station NC2 Ash Disposal Area
NDEE Title 132 & Federal CCR Groundwater Monitoring Network

Omaha Public Power District operates a two-unit (Unit 1 and Unit 2) fossil fuel-fired generating plant at the Nebraska City Station, herein referenced as “Station” or “Site”. The Station is located southeast of Nebraska City, Nebraska. The Station has two existing coal combustion residuals (CCR) landfills for fossil fuel combustion ash disposal known as the NC1 Ash Disposal Area and the NC2 Ash Disposal Area. Both NC1 and NC2 Ash Disposal Areas are subject to the United States Environmental Protection Agency’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 Title 132 regulations for fossil fuel combustion ash disposal areas. This memorandum provides a discussion and evaluation of the NC2 Ash Disposal Area. The NC2 Ash Disposal Area is a CCR landfill permitted under the Title 132 regulations for 40.7 acres. Cell 1 was constructed in 2008/2009. The NC2 Ash Disposal Area Cells 2 and 3 and West Leachate Pond were completed in January 2018. Cells 1 through 3 were constructed with a composite liner and leachate collection system.

Groundwater sampling was completed as part of an assessment monitoring program for the NC2 Ash Disposal Area, as specified in 40 CFR §257.95(d) and 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 Methods Certification*, amended December 2021, and the facility’s most recent Groundwater Sampling and Analysis Plan (dated January 4, 2019; revised March 1, 2019) as permitted under Title 132. 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 background threshold values (BTVs) were updated as part of the April 2022 sampling event and will be reevaluated following the spring 2024 sampling event. The current BTVs were calculated with data obtained during monitoring events performed between March 2016 and April 2022.

Downgradient sampling results from the fall 2022 assessment monitoring were used to evaluate for statistically significant increases (SSIs) over background and statistically significant levels (SSLs) over the groundwater protection standards (GWPS). The calculated BTVs and the evaluation for SSIs for the Appendix III (herein referred to as “detection monitoring”) constituents and Appendix IV (herein referred to as “assessment monitoring”) constituents are provided in **Table D-1**. The calculated lower confidence levels and the evaluation for SSLs over the GWPS for the assessment monitoring constituents are provided in **Table D-2**.



Table D-1. Summary of Evaluations for SSIs over Background (October 2022)

Well ID: NC2MW-2 NC2MW-3 NC2MW-6 NC2MW-7 NC2MW-8							
Constituent	BTV (UPL):	Unit	Assessment Monitoring Results				
Appendix III (Detection Monitoring) Constituents							
Boron	4.63	mg/L	0.559	0.468	2.33	0.249	0.153
Calcium	229	mg/L	241	194	120	117	125
Chloride	36.6	mg/L	11.3	12.1	6.05	8.88	9.91
Fluoride	1.89	mg/L	0.330J	1.17	<0.220	<0.220	<0.220
pH	6.38 – 7.87*	SU	7.03	7.15	7.41	7.60	7.30
Sulfate	611	mg/L	319	563	97.9	<2.00	13.3
TDS	1,390	mg/L	1030	1440	566	482	492
Appendix IV (Assessment Monitoring) Constituents							
Antimony	0.00200	mg/L	0.00298	<0.000690	<0.000690	<0.000690	<0.000690
Arsenic	0.0402	mg/L	0.00104J	0.00344	0.00123J	0.0478	0.0181
Barium	0.447	mg/L	0.108	0.0718	0.146	0.607	0.618
Beryllium	0.00100	mg/L	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium	0.000500	mg/L	0.000206	<0.0000550	<0.0000550	<0.0000550	<0.0000550
Chromium	0.00500	mg/L	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Cobalt	0.00236	mg/L	0.000713	0.00328	0.000724	0.000236J	0.00230
Radium 226+228	1.94	pCi/L	2.08	1.00	2.78	1.24	1.57
Fluoride	1.89	mg/L	0.330J	1.17	<0.220	<0.220	<0.220
Lead	0.00610	mg/L	0.000853	<0.000240	0.000568	<0.000240	0.000321J
Lithium	0.0423	mg/L	0.0338	0.0234	0.0387	0.0572	0.0364
Mercury	0.000200	mg/L	<0.000110	<0.000110	<0.000110	<0.000110	<0.000110
Molybdenum	0.0339	mg/L	0.0354	0.00250	0.0137	0.00186J	0.00184J
Selenium	0.0146	mg/L	<0.000960	<0.000960	<0.000960	<0.000960	<0.000960
Thallium	0.00100	mg/L	<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).

J – Value is less than the Reporting Limit but above the Method Detection Limit, therefore value is an approximation.

U – 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.



Table D-2. Summary of Evaluation for SSLs (October 2022)

Constituent	Well ID:		NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8
	GWPS ^[1]	Unit	Lower Confidence Levels – Appendix IV (Assessment Monitoring) Constituents				
Antimony	0.006	mg/L	0.002998	0.001	0.001	0.001	0.001
Arsenic	0.0402 ^[2]	mg/L	0.000907	0.002746	0.000925	0.03925	0.01106
Barium	2.0	mg/L	0.1156	0.1349	0.1141	0.5447	0.5389
Beryllium	0.004	mg/L	0.00027	0.00027	0.00027	0.00027	0.00027
Cadmium	0.005	mg/L	0.0001206	0.000082	0.000055	0.000055	0.000055
Chromium	0.1	mg/L	0.0011	0.0011	0.00176	0.0011	0.0011
Cobalt	0.006	mg/L	0.0004534	0.001255	0.0002413	0.000269	0.001848
Fluoride	4.0	mg/L	0.2579	0.4391	0.2382	0.2815	0.2724
Lead	0.015	mg/L	0.0008017	0.0003571	0.000419	0.00024	0.000321
Lithium	0.0423 ^[2]	mg/L	0.02772	0.02497	0.02747	0.05791	0.03093
Mercury	0.002	mg/L	0.00015	0.00015	0.00015	0.00015	0.00015
Molybdenum	0.1	mg/L	0.01806	0.003551	0.01065	0.001578	0.00222
Radium 226+228	5.0	pCi/L	0.8632	0.7499	0.4549	0.6729	0.6644
Selenium	0.05	mg/L	0.0008861	0.005	0.00154	0.00096	0.00142
Thallium	0.002	mg/L	0.00026	0.00026	0.00026	0.00026	0.00026

Bold and underlined concentration indicates an SSL over the GWPS.

[1] GWPS is established as the Environmental Protection Agency's (EPA) Maximum Contaminant Level (MCL) or the GWPS specified in 40 CFR §257.95(h)(2), unless otherwise specified.

[2] GWPS is established as the UPL when the background level is higher than the EPA MCL.