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2020 NC2 Landfill Annual Groundwater Report

Nebraska City Station NC2
Ash Disposal Area

Nebraska City, Nebraska

January 29, 2021

Professional Engineer Certification

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am duly licensed Professional Engineer under the laws of the State of Nebraska.

Print Name: Megan B. Seymour

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My license renewal date is December 31, 2022.



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Executive Summary

Omaha Public Power District (OPPD) has 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. On April 17, 2015, the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of CCR under Subtitle D of the Resource Conservation and Recovery Act (EPA, 2015). The coal combustion residual (CCR) rule is formally promulgated in the U.S. Code of Federal Regulations (CFR), Title 40, Part 257. This generating station (Station) has two existing CCR landfills for fossil fuel combustion ash disposal area: the NC1 Ash Disposal Area and NC2 Ash Disposal Area. This annual report covers the NC2 Ash Disposal Area and provides a summary of CCR groundwater monitoring system activities for calendar year 2020 for the assessment monitoring program under 40 CFR §257.95.

The NC2 Ash Disposal Area transitioned from detection monitoring to assessment monitoring following the fall 2019 sampling event due to calcium detected above the background threshold values (BTVs) in monitoring location NC2MW-2. An alternate source demonstration (ASD) for calcium was unsuccessful, and OPPD published a notification (dated April 24, 2020) stating the facility will initiate an assessment monitoring program in accordance with 40 CFR §257.95. For the initiation of assessment monitoring, two sampling events were conducted: an April 2020 sampling event to determine the BTVs and the groundwater protection standards (GWPS) for Appendix IV constituents and a subsequent July 2020 sampling event to evaluate for statistically significant increases (SSIs) over background and statistically significant levels (SSLs) over the GWPS.

For the July 2020 sampling event, results of the analysis indicated one SSI above background for Appendix III constituents and nine SSIs above background for Appendix IV constituents:

- Calcium in NC2MW-2
- Antimony in NC2MW-2
- Arsenic in NC2MW-7 and NC2MW-8
- Barium in NC2MW-7 and NC2 MW-8
- Cadmium in NC2MW-2
- Cobalt in NC2MW-3
- Lithium in NC2MW-2 and NC2MW-7

Analysis of the Appendix IV constituents indicated there were two SSLs detected above their GWPS during the July 2020 sampling event:

- Arsenic in NC2MW-7
- Lithium in NC2MW-7

A subsequent semi-annual sampling event was conducted in October 2020. Results of the analysis indicated one SSI above background for Appendix III constituents and eight SSIs for Appendix IV constituents:

- Calcium in NC2MW-2
- Antimony in NC2MW-2
- Arsenic in NC2MW-7 and NC2MW-8
- Barium in NC2MW-7 and NC2 MW-8
- Cadmium in NC2MW-2
- Lithium in NC2MW-2 and NC2MW-7



Analysis of the Appendix IV constituents indicated there were three SSLs detected above their GWPS during the October 2020 sampling event:

- Arsenic in NC2MW-7 and NC2MW-8
- Lithium in NC2MW-7

OPPD published a notification of the exceedances and initiation of assessment of corrective measures (ACM) on November 25, 2020. Pursuant to 40 CFR §257.95(g), a statistical exceedance over a GWPS triggers corrective measures as required by 40 CFR §257.96. An assessment into potential corrective measures was placed in the operating record on December 22, 2020. In accordance with 40 CFR §257.97(a), semi-annual updates describing the progress in selecting and designing a remedy for corrective action at the NC2 Ash Landfill will be placed in the operating record following the submittal of the ACM. OPPD will continue to make progress towards selection and design of remedy for corrective action at the NC2 Ash Landfill. The site will continue to be monitored in accordance with the assessment monitoring program as specified in 40 CFR §257.96(b), and the next semi-annual sampling event is anticipated to occur in April 2021.



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

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 2020 for the assessment monitoring program pursuant to 40 CFR §257.95.

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. 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 and CCR regulations for fossil fuel combustion ash disposal. 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 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 1** 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** (attached). The location of the monitoring wells in the groundwater monitoring program with respect to the CCR unit, NC2 Ash Disposal Area, are shown in the attached **Figure 1**.

2.1 Summary of Monitoring Program Transitions

During the April 2019 sampling event, a potential statistically significant increases (SSI) was identified for calcium in monitoring well NC2MW-2. On June 26, 2019, a verification sampling event was completed by OPPD personnel and analyzed for calcium. A duplicate sample was collected at NC2MW-2 and analyzed for calcium as a quality assurance check and due to the natural variability of calcium detected in the monitoring well during previous sampling events. The results of the two samples collected during verification confirmed calcium at NC2MW-2 can be highly variable. The two samples had detections that differed by 25 mg/L but had a relative percent difference (RPD) of less than 15 percent, so the field duplicate precision indicates acceptable error control. The average of the two calcium detections were below background threshold value (BTV); therefore, an SSI was not confirmed, and the monitoring network remained in detection monitoring for the 2019 fall semi-annual sampling event.

During the fall 2019 sampling event, calcium was detected above the BTV in monitoring well NC2MW-2. On January 8, 2020, a verification sampling event was completed by OPPD personnel as part of an alternate source demonstration (ASD). Monitoring well NC2MW-2 was sampled and analyzed for calcium. A duplicate sample was collected at NC2MW-2 and analyzed for calcium as a quality assurance check and due to the natural variability of calcium detected in the monitoring well. The RPD of the two samples was less than 15 percent, so the field duplicate precision indicates acceptable error control. The average of the two calcium detections was above the BTV; therefore, an SSI was confirmed. The ASD for calcium at NC2MW-2 was unsuccessful, and OPPD published a notification (dated April 24, 2020) stating the facility will initiate an assessment monitoring program in accordance with 40 CFR §257.95.

The initiation of assessment monitoring consisted of two initial sampling events; April 2020 and July 2020. These two initial sampling events consisted of the monitoring network analyzed for Appendix III and Appendix IV constituents, as specified in 40 CFR §257.95(b), in April 2020 and for Appendix III and detected Appendix IV constituents, as specified in 40 CFR §257.95(d), in July 2020. Results of the April 2020 statistical analysis conducted under the assessment monitoring program were statistically analyzed and used to set both the BTVs and GWPS, as specified in 40 CFR §257.95(d). The July 2020 sampling event identified one SSI for Appendix III constituents and nine SSIs for Appendix IV constituents. In addition, two statically significant levels (SSLs) over GWPS were identified. OPPD published a notification of the exceedances and initiation of ACM on November 25, 2020. Pursuant to 40 CFR §257.95(g) this statistical

exceedance over GWPS has triggered corrective measures as required by 40 CFR §257.96. An assessment into potential corrective measures was placed in the operating record on December 22, 2020. In accordance with 40 CFR §257.97(a), semi-annual updates describing the progress in selecting and designing a remedy for corrective action at the NC2 Ash Landfill will be placed in the operating record following the submittal of the ACM. The site will continue to be monitored in accordance with the assessment monitoring program as specified in 40 CFR §257.96(b).

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 2020, July 2020, and October 2020. 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 2020 and July 2020 as initiation of the assessment monitoring program, and again in October 2020 as continuation of the semi-annual assessment monitoring program while evaluation of corrective measures is 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 is summarized in **Table 2**.

Groundwater sampling completed by OPPD personnel was conducted in general accordance with the facility's 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 2020 sampling events are provided in **Appendix A**. The collected groundwater samples were analyzed by Eurofins TestAmerica. 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 2020 sampling event indicated a flow direction to the south/southeast and an average flow velocity of 0.00636 ft/day to 0.063 ft/day. Groundwater measurement collected during the October 2020



sampling event indicated a flow direction to the south/southeast and an average flow velocity of 0.00553 ft/day to 0.0312 ft/day. The April 2020 and October 2020 flow velocities are based on a range of hydraulic conductivity at the Site of 6.96 ft/day to 39.4 ft/day, respectively (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 2020 and July 2020 as initiation of the assessment monitoring program and in October 2020 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 2020 sampling events. The results of the sampling events conducted in 2020 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 Certification (HDR, 2018). As discussed in **Section 2.1**, results of the analysis for the April 2020 sampling event were used to set both the BTVs and the GWPS. 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 July 2020 and October 2020 sampling events are provided in **Appendix C**.

For the July 2020 sampling event, results of the analysis indicated one SSI above background for Appendix III constituents and nine SSIs above background for Appendix IV constituents:

- Calcium in NC2MW-2
- Antimony in NC2MW-2
- Arsenic in NC2MW-7 and NC2MW-8
- Barium in NC2MW-7 and NC2 MW-8
- Cadmium in NC2MW-2
- Cobalt in NC2MW-3
- Lithium in NC2MW-2 and NC2MW-7

Analysis of the Appendix IV constituents indicated there were two SSLs detected above the GWPS during the July 2020 sampling event:

- Arsenic in NC2MW-7
- Lithium in NC2MW-7

A subsequent semi-annual sampling event was conducted in October 2020. Results of the analysis indicated one SSI above background for Appendix III constituents and eight SSIs for Appendix IV constituents:

- Calcium in NC2MW-2
- Antimony in NC2MW-2
- Arsenic in NC2MW-7 and NC2MW-8
- Barium in NC2MW-7 and NC2 MW-8
- Cadmium in NC2MW-2
- Lithium in NC2MW-2 and NC2MW-7

Analysis of the Appendix IV constituents indicated there were three SSLs detected above the GWPS during the October 2020 sampling event:

- Arsenic in NC2MW-7 and NC2MW-8
- Lithium in NC2MW-7

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 monitoring, a Site Assessment Report (SAR) was conducted in February and March 2020 in advance of the initiation of assessment monitoring (HDR, 2020). 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 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 is 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 December 17, 2020 and an ACM 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.

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

4 Key Activities for Upcoming Year

OPPD will continue to make progress towards selection and design of remedy for corrective action at the NC2 Ash Landfill. The site will continue to be monitored in accordance with the assessment monitoring program as specified in 40 CFR §257.96(b), and the next semi-annual sampling event is anticipated to occur in April 2021.

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, 2018. *Groundwater Monitoring Statistical Methods*. NC2 Ash Disposal Area. Nebraska City, Nebraska. Revised July 2018.

HDR, 2019a. *Groundwater Monitoring System Certification*. Nebraska City Station – NC2 Combustion Ash Landfill. Revised June 2019.

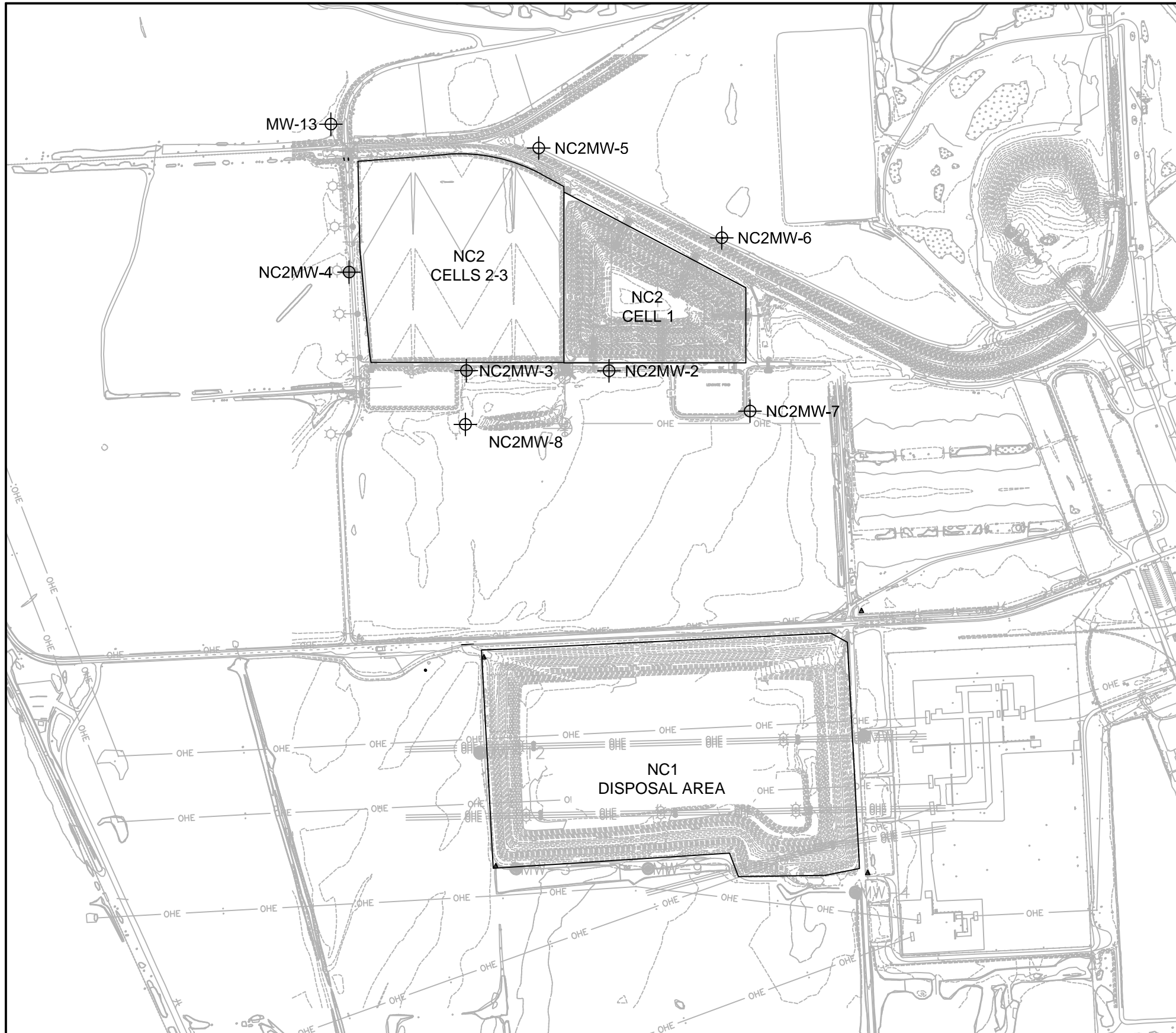
HDR, 2019b. *Title 132: Groundwater Assessment Report*. Nebraska City Unit 2 – NC2. November 6, 2019.

HDR, 2019c. *Groundwater Sampling and Analysis Plan*. NC2 Ash Disposal Area. Nebraska City, Nebraska. Revised March 2019.

HDR, 2020. *Site Assessment Report*. Nebraska City Station Unit 2 – NC2. June 18, 2020.

A decorative graphic consisting of several overlapping colored 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 black rectangle. The word "Figures" is written in black text on the white background to the right of the orange rectangle.

Figures



MONITORING WELL NETWORK					
WELL ID	NORTHING	EASTING	ELEVATION (TOC)	WELL DEPTH	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. WELL DEPTH MEASUREMENTS REPRESENT DEPTH BELOW GROUND SURFACE.
4. NORTHING AND EASTING COORDINATES ARE NEBRASKA STATE PLANE WHICH HAVE BEEN TRANSLATED BY THE SURVEYOR.

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

2020 GROUNDWATER MONITORING

DATE
JANUARY 2021

FIGURE
01



Tables

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	922.548
NC2MW-3	9/8/2004	16	Downgradient	913.30	916.225
NC2MW-4	9/8/2004	14	Background/Upgradient	917.07	919.616
NC2MW-5	9/16/2004	16	Background/Upgradient	919.34	922.758
NC2MW-6	9/7/2004	14	Crossgradient	916.30	919.720
NC2MW-7	11/6/2013	24	Downgradient	915.11	918.372
NC2MW-8	7/9/2018	15	Downgradient	915.20	918.180
MW-13	1/26/2016	13	Background/Upgradient	915.97	918.054
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	Downgradient/Crossgradient	917.99	920.99

bgs - below ground surface

AMSL - above mean sea level

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]	Detection Monitoring Sample Dates ^[5]	# of Assessment Monitoring Samples	Assessment Monitoring Sample Dates
Current background Monitoring Wells						
NC2MW-4	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, 4/20/2020	3	4/27/2020, 7/14/2020, 10/5/2020
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	3	4/27/2020, 7/14/2020, 10/5/2020
MW-13 ^{[2], [3]}	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, 4/20/2020	3	4/27/2020, 7/14/2020, 10/5/2020
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	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 10/15/2019, 1/31/2020	3	4/27/2020, 7/14/2020, 10/5/2020
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	6	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 10/15/2019, 1/31/2020	3	4/27/2020, 7/14/2020, 10/5/2020
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	3	4/27/2020, 7/14/2020, 10/5/2020
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	7	11/9/2017, 3/12/2018, 6/6/2018, 10/3/2018, 4/8/2019, 10/15/2019, 2/3/2020	3	4/27/2020, 7/15/2020, 10/5/2020
NC2MW-8 ^[2]	8 ^[4]	10/3/2018, 1/15/2019, 3/5/2019, 10/16/2019, 1/31/2020, 4/27/2020, 7/14/2020, 10/5/2020	2	10/16/2019, 1/31/2020	3	4/27/2020, 7/14/2020, 10/5/2020

^[1] The number of detection monitoring samples includes the 3/12/2018 event, which occurred as part of an Alternative Source Demonstration. Only Appendix III constituents were sampled in this event; results are presented in Table 4.

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

^[3] MW-13 submerged under 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. NC2MW-8 was statistically analyzed during the fall 2019 detection monitoring event. The eighth background sample was obtained for full Appendix III and Appendix IV lists as of the October 2020 sampling event.

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		916.22		919.72		918.37		918.18		
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	912.17	7.95	911.77	7.04	911.33	<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	913.67	6.02	913.70	4.80	913.57		
8/31/2016	5.05	914.57	5.30	917.46	2.85	915.20	8.91	913.64	2.31	913.91	5.95	913.77	5.40	912.97		
11/17/2016	6.80	912.82	9.25	913.51	4.40	913.65	10.90	911.65	4.10	912.12	8.10	911.62	7.20	911.17		
2/15/2017	7.50	912.12	10.20	912.56	5.21	912.84	11.70	910.85	4.95	911.27	9.00	910.72	8.15	910.22		
4/24/2017	6.11	913.51	8.48	914.28	4.00	914.05	9.85	912.70	3.21	913.01	7.00	912.72	5.96	912.41		
6/15/2017	6.75	912.87	9.82	912.94	4.70	913.35	10.30	912.25	3.42	912.80	7.35	912.37	6.35	912.02		
7/12/2017	7.11	912.51	10.15	912.61	5.02	913.03	10.76	911.79	4.25	911.97	7.90	911.82	6.80	911.57		
11/9/2017	12.20	907.42	14.20	908.56	8.25	909.80	15.10	907.45	12.10	904.12	11.20	908.52	10.50	907.87		
3/12/2018	10.18	909.44	12.95	909.81	8.10	909.95	13.90	908.65	7.15	909.07	10.88	908.84	10.00	908.37		
6/6/2018	6.80	912.82	9.70	913.06	4.65	913.40	10.35	912.20	3.70	912.52	7.25	912.47	6.35	912.02		
10/3/2018	4.14	915.48	4.95	917.81	1.63	916.42	7.39	915.16	0.80	915.42	4.30	915.42	3.20	915.17	3.15	915.03
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	911.51
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	915.63	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	916.01	3.75	915.97	2.27	916.10	2.38	915.80
1/30/2020	5.44	914.18	5.81	916.95	3.39	914.66	9.09	913.46	2.56	913.66	6.11	913.61	5.37	913.00	4.75	913.43
4/20/2020	5.24	914.38	6.37	916.39	2.94	915.11	8.83	913.72	2.36	913.86	5.97	913.75	4.99	913.38	4.59	913.59
7/14/2020	7.19	912.43	10.02	912.74	5.23	912.82	10.44	912.11	7.89	908.33	7.45	912.27	6.32	912.05	6.28	911.90
10/5/2020	9.65	909.97	12.63	910.13	7.76	910.29	12.92	909.63	10.34	905.88	9.90	909.82	8.81	909.56	8.68	909.50

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 submerged under water during April 2019 sampling event and were not measured.

^[2] MW-13 submerged under 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		914.01		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	906.46	8.25	910.95	8.60	911.08	9.30	910.79	Well Installed 9/16/2019	
6/7/2016	7.04	912.38	7.75	912.10	7.41	912.22	9.67	911.03	6.31	907.70	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	907.15	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	905.81	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	905.21	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	906.99	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	906.59	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	905.91	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	905.31	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	908.60	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	907.45	NM	NM	NM	NM	NM	NM		
3/5/2019	NM	NM	NM	NM	NM	NM	NM	NM	8.08	905.93	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	904.90	10.06	909.14	10.36	909.32	11.35	908.74	11.88	910.17

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 submerged under water during April 2019 sampling event and were not measured.

^[2] MW-13 submerged under 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		<i>Well installed 7/12/2018</i>	
6/20/2017			7.85	910.59	8.40	911.96			
7/13/2017		<i>Well Installed 9/17/2019</i>	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
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	

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 submerged under water during April 2019 sampling event and were not measured.

^[2] MW-13 submerged under water during October 2019 sampling event and was not measured.

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	3/14/2016	<0.200	126	6.27	0.213	6.84	48.3	536
	6/3/2016	<0.200	130	<5.00	<0.500	6.90	46.8	668
	8/31/2016	<0.200	91.1	7.13	0.646	7.20	29.7	574
	11/17/2016	<0.200	130	<5.00	1.28	7.19	34.0	548
	2/15/2017	<0.200	142	10.8	2.43	7.63	39.7	526
	4/24/2017	<0.200	126	<5.00	1.08	7.08	38.6	574
	6/15/2017	<0.200	122	<5.00	<0.500	7.09	32.2	552
	7/12/2017	<0.200	104	<5.00	<0.500	7.88	32.7	580
	11/9/2017	<0.200	134	<5.00	<0.500	7.18	42.8	568
	3/12/2018	<0.200	141	<5.00	<0.500	6.32 / 7.28 ^[1]	42.6	562
	6/6/2018	<0.200	140	<5.00	<0.500	7.15	44.1	542
	10/3/2018	<0.200	117	<5.00	<0.500	6.81	42.4	520
	4/8/2019	<0.200	137	<5.00	<0.500	6.71	40.9	560
	10/15/2019	<0.200	142	5.38	<0.500	6.57	35.0	528
	1/30/2020	0.115J	142	<5.00	<0.500	6.88	44.5	544
4/20/2020	<0.100	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	<0.230	6.53	59.9	454	
10/5/2020	0.0996J	154	5.60	<0.230	6.81	46.1	608	
NC2MW-5	3/14/2016	3.73	210	51	<0.500	7.12	611.0	1310
	6/3/2016	3.98	217	36.6	<0.500	7.01	590.0	1390
	8/31/2016	4.08	159	21.5	<0.500	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	<0.500	7.17	243.0	1090
	7/12/2017	4.63	191	7.93	<0.500	7.45	369.0	1190
	11/9/2017	2.91	168	13.2	<0.500	7.20	404.0	1260
	3/12/2018	2	160	34.2	<0.500	6.90 / 7.56 ^[1]	318.0	826
	6/6/2018	3.81	198	14	<0.500	7.02	353.0	1060
	10/3/2018	4.01	227	8.65	<0.500	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	<0.500	7.00	322	924
	1/30/2020	2.65	172	8.61	<0.500	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	<0.230	6.83	324	1020	
10/5/2020	4.27	221	10.6	<0.230	6.96	339	1040	
MW-13	3/14/2016	<0.200	90.6	11.4	<0.500	6.97	47.7	438
	6/3/2016	<0.200	87.9	12	<0.500	7.11	37.6	360
	8/31/2016	<0.200	66.6	11.1	<0.500	7.71	31.3	414
	11/17/2016	<0.200	84.2	9.33	0.803	7.79	34.7	430
	2/15/2017	<0.200	94.9	11.2	<0.500	7.21	40.9	448
	4/24/2017	<0.200	94.1	12	0.79	7.27	39.5	520
	6/15/2017	<0.200	91.1	12.4	<0.500	7.28	34.2	454
	7/12/2017	<0.200	95.8	16.8	<0.500	8.10	42.0	676
	11/9/2017	<0.200	95.2	12.4	0.55	7.12	36.4	488
	3/12/2018	<0.200	99.8	12.9	<0.500	6.45 / 7.51 ^[1]	37.0	412
	6/6/2018	0.203	102	12.5	<0.500	6.84	71.0	504
	10/3/2018	<0.200	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	<0.500	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	<0.230	6.9	46.2	508	

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-2	3/14/2016	<0.200	277	<5.00	0.371	6.80	388.0	1120
	6/3/2016	0.301	196	<5.00	<0.500	6.79	336.0	972
	8/31/2016	0.511	130	<5.00	<0.500	7.04	151.0	696
	11/17/2016	0.302	236	<5.00	<0.500	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	<5.00	<0.500	7.04	139.0	780
	7/12/2017	0.325	127	<5.00	<0.500	7.03	73.0	592
	11/9/2017	0.25	131	<5.00	<0.500	7.19	130.0	662
	3/12/2018	<0.200	176	5.08	<0.500	6.26 / 6.96 ^[1]	258.0	656
	6/6/2018	0.353	220	15.7	<0.500	6.45 / 6.71 ^[2]	281.0	1180
	10/3/2018	0.438	167	<5.00	<0.500	6.86	164	668
	4/8/2019	0.270	227	11.8	<0.500	6.68	290	978
	10/15/2019	0.513	241	10.7	<0.500	6.54	314	972
	1/31/2020	0.322	258	9.78	<0.500	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	<0.230	6.67	319	1070	
10/5/2020	0.289	268	7.67	<0.230	6.70	324	1050	
NC2MW-3	3/14/2016	<0.200	85.3	<5.00	0.168	7.05	21.0	334
	6/3/2016	<0.200	121	<5.00	<0.500	7.14	19.6	500
	8/31/2016	<0.200	51.3	<5.00	<0.500	7.18	7.4	296
	11/17/2016	<0.200	91	<5.00	1.28	7.32	5.6	354
	2/15/2017	<0.200	74.2	15.6	5.11	7.09	49.6	378
	4/24/2017	<0.200	63.3	9	2.87	7.68	10.5	324
	6/15/2017	<0.200	89.4	<5.00	<0.500	7.32	<5.00	386
	7/12/2017	<0.200	92.8	<5.00	<0.500	7.99	8.9	528
	11/9/2017	<0.200	148	<5.00	<0.500	7.33	185.0	604
	3/12/2018	<0.200	167	11.7	0.723	6.61 / 7.41 ^[1]	371.0	792
	6/6/2018	0.654	198	22.9	<0.500	4.40 / 6.91 ^[2]	491.0	978
	10/3/2018	<0.200	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]
	10/15/2019	<0.200	138	7.92	<0.500	6.81	20.3	472
	1/31/2020	<0.100	156	6.90	<0.500	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	<0.230	6.8	407	842	
10/5/2020	0.213	159	7.71	0.535	6.76	156	644	
NC2MW-6	3/14/2016	3.83	134	16.5	<0.500	7.21	314.0	728
	6/3/2016	4.14	93	6.16	<0.500	7.27	171.0	608
	8/31/2016	4.79	90.4	<5.00	<0.500	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	<5.00	<0.500	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	<0.500	7.35	196.0	636
	7/12/2017	3.92	102	<5.00	<0.500	7.25	155.0	596
	11/9/2017	4.39	128	6.75	<0.500	7.24	195.0	872
	3/12/2018	3.06	145	7.14	<0.500	6.64 / 7.38 ^[1]	194.0	644
	6/6/2018	3.58	133	5.53	<0.500	7.19	174.0	694
	10/3/2018	4.18	129	<5.00	<0.500	6.97	200	660
	4/8/2019	2.46	94.3	<5.00	<0.500	7.18	141	520
	10/15/2019	2.79	154	9.08	<0.500	6.82	151	656
	1/31/2020	2.86	149	8.67	<0.500	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	

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	3/14/2016	<0.200	134	6.55	0.312	6.92	6.9	496
	6/3/2016	<0.200	128	7.63	<0.500	7.28	<5.00	690
	8/31/2016	<0.200	100	6.68	<0.500	7.55	<5.00	534
	11/17/2016	<0.200	138	5.73	0.544	7.77	<5.00	510
	2/15/2017	<0.200	143	9.96	<0.500	7.55	<5.00	552
	4/24/2017	<0.200	139	11.3	1.35	7.83	<5.00	576
	6/15/2017	<0.200	128	9.81	<0.500	7.40	<5.00	688
	7/12/2017	<0.200	125	8.07	<0.500	7.25	<5.00	636
	11/9/2017	0.201	131	7.79	<0.500	7.40	17.8	580
	3/12/2018	<0.200	144.0	9.04	<0.500	6.72 / 7.42 ^[1]	25.7	496
	6/6/2018	<0.200	119	9.41	<0.500	7.21	12.0	528
	10/3/2018	<0.200	122	9.19	0.519	7.31	11.6	494
	4/8/2019	0.214	132	8.64	<0.500	7.33	44.0	820
	10/15/2019	<0.200	139	8.41	<0.500	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	<0.230	6.81	<3.55	340	
10/5/2020	0.220	122	9.12	0.322J	7.21	<3.55	396	
NC2MW-8	3/14/2016	<i>NC2-MW-8 was installed on 7/9/2018^[3]</i>						
	6/3/2016							
	8/31/2016							
	11/17/2016							
	2/15/2017							
	4/24/2017							
	6/15/2017							
	7/12/2017							
	11/9/2017							
	3/12/2018							
	6/6/2018							
	10/3/2018	<0.200	142	7.05	0.566	7.14	10.7	526
	1/15/2019	<0.200	102	8.10	<0.500	6.73	11.6	504
	3/5/2019	<0.200	153	7.84	<0.500	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]	
10/16/2019	<0.200	140	9.42	<0.500	6.89	<5.00	476	
1/31/2020	0.747	140	9.19	<0.500	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	<0.230	7.04	6.24	448	
10/5/2020	0.115	116	10.0	0.331J	7.02	5.50	512	

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.

* 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.

^[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. NC2MW-8 was statistically analyzed during the fall 2019 detection monitoring event. The eighth background sample was obtained for full Appendix III and Appendix IV lists as of the October 2020 sampling event.

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

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

Constituent Reporting Unit		Appendix IV (Assessment Monitoring) Constituents														
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NC2MW-4	3/14/2016	<0.001	<0.002	0.276	<0.001	<0.0005	<0.005	<0.0005	0.563	0.213	0.00065	<0.05	<0.0002	0.00507	<0.005	<0.001
	6/3/2016	<0.001	<0.002	0.288	<0.001	<0.0005	<0.005	<0.0005	0.739	<0.5	0.000737	<0.05	<0.0002	0.00239	<0.005	<0.001
	8/31/2016	<0.001	<0.002	0.296	<0.001	<0.0005	<0.005	<0.0005	1.04	0.646	0.00162	<0.05	<0.0002	0.00252	<0.005	<0.001
	11/17/2016	<0.001	<0.002	0.284	<0.001	<0.0005	<0.005	<0.0005	1.03	1.28	0.000536	<0.05	<0.0002	0.00597	<0.005	<0.001
	2/15/2017	<0.001	<0.002	0.272	<0.001	<0.0005	<0.005	0.000584	0.647	2.43	0.00196	<0.05	<0.0002	0.00393	<0.005	<0.001
	4/24/2017	<0.001	<0.002	0.287	<0.001	<0.0005	<0.005	<0.0005	1.08	1.08	0.000802	<0.05	<0.0002	0.00224	<0.005	<0.001
	6/15/2017	<0.001	<0.002	0.249	<0.001	<0.0005	<0.005	0.000521	1.29	<0.5	0.00165	<0.05	<0.0002	0.00422	<0.005	<0.001
	7/12/2017	<0.001	<0.002	0.232	<0.001	<0.0005	<0.005	<0.0005	1.42	<0.5	0.000549	<0.05	<0.0002	0.00233	<0.005	<0.001
	3/12/2018	<0.001	<0.002	0.297	<0.001	<0.0005	<0.005	<0.0005	1.71	<0.5	0.00192	0.0318	<0.0002	<0.002	0.0112	<0.001
	6/6/2018	<0.001	<0.002	0.329	<0.001	<0.0005	<0.005	0.000502	1.9	<0.5	0.00154	0.0292	<0.0002	0.0049	0.00754	<0.001
	10/3/2018	N.S.	<0.002	0.321	N.S.	N.S.	N.S.	<0.0005	1.13	<0.5	0.000565	0.0332	N.S.	0.00707	<0.005	N.S.
	4/8/2019	<0.001	<0.002	0.351	<0.001	<0.0005	<0.005	<0.0005	0.743	<0.5	<0.0005	0.0351	<0.0002	0.00283	<0.005	<0.001
	10/15/2019	<0.001	<0.002	0.390	<0.001	0.000138	<0.005	<0.0005	1.22	<0.5	<0.0005	0.0343	<0.0002	0.00412	<0.005	<0.001
	1/30/2020	<0.000580	0.00109J	0.340	<0.000270	0.0000720J	<0.00110	0.000531	0.610	<0.500	0.00167	0.0347	<0.000100	0.00177J	<0.00100	<0.000260
	4/20/2020	0.000609J	<0.000880	0.303	<0.000270	<0.0000390	<0.00110	0.000167J	0.684	0.421J	0.000624	0.0305	<0.000100	0.00191J	<0.00100	<0.000260
4/27/2020	<0.000580	<0.000880	0.335	<0.000270	0.0000470J	<0.00110	0.000121J	0.743	0.315J	0.000398J	0.0284	<0.000100	0.00192J	<0.00100	<0.000260	
7/14/2020	<0.000510	0.00104J	0.311	<0.000270	0.000119	<0.00110	0.000591	2.19	<0.230	0.00181	0.0311	<0.000100	0.00173J	0.00129J	<0.000260	
10/5/2020	<0.000510	0.00348	0.447	<0.000270	0.0000970J	0.00164J	0.00122	-0.927U	<0.230	0.00243	0.0349	<0.000100	0.00272	<0.00100	<0.000260	
NC2MW-5	3/14/2016	<0.001	<0.002	0.0295	<0.001	<0.0005	<0.005	<0.0005	0.318	<0.5	<0.0005	<0.05	<0.0002	0.00587	<0.005	<0.001
	6/3/2016	<0.001	0.00291	0.0384	<0.001	<0.0005	<0.005	<0.0005	0.354	<0.5	<0.0005	<0.05	<0.0002	0.0237	<0.005	<0.001
	8/31/2016	<0.001	<0.002	0.0414	<0.001	<0.0005	<0.005	<0.0005	0.365	<0.5	<0.0005	<0.05	<0.0002	0.0243	<0.005	<0.001
	11/17/2016	<0.001	0.00218	0.0558	<0.001	<0.0005	<0.005	<0.0005	0.476	1.89	<0.0005	<0.05	<0.0002	0.0204	<0.005	<0.001
	2/15/2017	<0.001	<0.002	0.0335	<0.001	<0.0005	<0.005	<0.0005	0.106	0.59	0.00088	<0.05	<0.0002	0.0168	<0.005	<0.001
	4/24/2017	<0.001	0.00236	0.0366	<0.001	<0.0005	<0.005	<0.0005	0.136	1.25	0.000734	<0.05	<0.0002	0.00818	<0.005	<0.001
	6/15/2017	<0.001	0.00207	0.0416	<0.001	<0.0005	<0.005	<0.0005	0.265	<0.5	0.000601	<0.05	0.0002	0.0125	<0.005	<0.001
	7/12/2017	<0.001	0.0022	0.0484	<0.001	<0.0005	<0.005	<0.0005	0.507	<0.5	0.000584	<0.05	<0.0002	0.012	<0.005	<0.001
	3/12/2018	<0.001	0.0026	0.0395	<0.001	<0.0005	<0.005	<0.0005	0.236 U	<0.5	0.000562	<0.01	<0.0002	0.0145	0.0238	<0.001
	6/6/2018	<0.001	0.00325	0.0713	<0.001	<0.0005	<0.005	<0.0005	0.187	<0.5	0.00159	0.0129	<0.0002	0.0205	0.0144	<0.001
	10/3/2018	N.S.	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.
	4/8/2019	N.S.	<0.002	0.0341	N.S.	<0.0005	<0.005	N.S.	N.S.	0.634	<0.0005	N.S.	<0.0002	N.S.	<0.005	N.S.
	10/15/2019	<0.001	0.00247	0.0340	<0.001	<0.0001	<0.005	<0.0005	-0.0619 U	<0.5	<0.0005	0.0152	<0.0002	0.0339	<0.005	<0.001
	1/30/2020	0.00110	0.00187J	0.0299	<0.000270	<0.0000390	<0.00110	0.0000910J	0.0845U	<0.500	0.000388J	0.00889J	<0.000100	0.0120	0.00283J	<0.000260
	4/27/2020	<0.000580	0.00162J	0.0357	<0.000270	<0.0000390	<0.00110	0.0000920J	-0.0625	0.323J	<0.000270	0.0102	<0.000100	0.0147	0.00189J	<0.000260
7/14/2020	<0.000510	0.00279	0.0536	<0.000270	<0.0000490	<0.00110	0.000123J	0.0869	<0.230	0.000871	0.0194	<0.000100	0.0114	0.00551	<0.000260	
10/5/2020	<0.000510	0.00243	0.0588	<0.000270	0.0000990J	<0.00110	0.000236J	0.255U	<0.230	0.000379J	0.0200	<0.000100	0.0212	<0.00100	<0.000260	
MW-13	3/14/2016	<0.001	0.00545	0.288	<0.001	<0.0005	<0.005	0.00105	0.741	<0.5	<0.0005	<0.05	<0.0002	0.0167	<0.005	<0.001
	6/3/2016	<0.001	0.00607	0.324	<0.001	<0.0005	<0.005	0.00122	1.01	<0.5	0.000704	<0.05	<0.0002	<0.002	<0.005	<0.001
	8/31/2016	<0.001	0.00623	0.342	<0.001	<0.0005	<0.005	0.00107	1.09	<0.5	<0.0005	<0.05	<0.0002	0.00216	<0.005	<0.001
	11/17/2016	<0.001	0.00515	0.322	<0.001	<0.0005	<0.005	0.000873	1.37	0.803	0.00089	<0.05	<0.0002	0.00258	<0.005	<0.001
	2/15/2017	<0.001	0.00289	0.321	<0.001	<0.0005	<0.005	0.000883	0.407	<0.5	<0.0005	<0.05	<0.0002	0.00221	<0.005	<0.001
	4/24/2017	<0.001	0.0024	0.336	<0.001	<0.0005	<0.005	0.00135	0.579	0.79	0.000516	<0.05	<0.0002	0.00207	<0.005	<0.001
	6/15/2017	<0.001	0.00371	0.318	<0.001	<0.0005	<0.005	0.00127	0.8	<0.5	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	7/12/2017	<0.001	0.00263	0.328	<0.001	<0.0005	<0.005	0.00112	1.56	<0.5	<0.0005	<0.05	<0.0002	0.0021	<0.005	<0.001
	3/12/2018	<0.001	0.00295	0.306	<0.001	<0.0005	<0.005	0.00189	0.492	<0.5	0.00086	0.0297	<0.0002	<0.002	<0.005	<0.001
6/6/2018	<0.001	0.00262	0.282	<0.001	<0.0005	<0.005	0.00236	1.89	<0.5	0.00577	0.0423	<0.0002	<0.002	0.00553	<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	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-13	10/3/2018	N.S.	0.00965	0.388	N.S.	N.S.	N.S.	0.00191	1.62	0.738	0.00216	0.0316	N.S.	0.00243	<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]
	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]
	1/30/2020	<0.000580	0.00824	0.230	<0.000270	<0.0000390	<0.00110	0.00198	0.0337U	<0.500	0.000335J	0.0273	<0.000100	0.00187J	<0.00100	<0.000260
	4/20/2020	<0.000580	0.00867	0.177	<0.000270	<0.0000390	<0.00110	0.00193	0.438	0.399J	0.000311J	0.0374	<0.000100	0.00457	<0.00100	<0.000260
	4/27/2020	<0.000580	0.0111	0.167	<0.000270	<0.0000390	<0.00110	0.00208	-0.0922	0.383J	0.000297J	0.0348	<0.000100	0.00335	<0.00100	<0.000260
	7/14/2020	<0.000510	0.0118	0.182	<0.000270	<0.0000490	<0.00110	0.000549	0.539	0.267J	0.000250J	0.0277	<0.000100	0.00130J	<0.00100	<0.000260
10/5/2020	<0.000510	0.0188	0.225	<0.000270	<0.0000490	<0.00110	0.000384J	0.872	<0.230	0.000178J	0.0322	<0.000100	<0.00110	<0.00100	<0.000260	
NC2MW-2	3/14/2016	0.00188	<0.002	0.0679	<0.001	<0.0005	<0.005	<0.0005	0.967	0.371	<0.0005	0.0512	<0.0002	0.00207	<0.005	<0.001
	6/3/2016	0.00944	<0.002	0.136	<0.001	<0.0005	0.0153	<0.0005	0.535	<0.5	0.000538	<0.05	<0.0002	0.00368	<0.005	<0.001
	8/31/2016	0.00812	<0.002	0.0814	<0.001	<0.0005	<0.005	<0.0005	0.996	<0.5	0.000872	<0.05	<0.0002	0.00757	<0.005	<0.001
	11/17/2016	0.00452	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	1.39	<0.5	<0.0005	<0.05	<0.0002	0.00519	<0.005	<0.001
	2/15/2017	0.00331	<0.002	0.144	<0.001	<0.0005	<0.005	<0.0005	0.304	2.51	0.000671	<0.05	<0.0002	0.0093	<0.005	<0.001
	4/24/2017	0.00303	<0.002	0.076	<0.001	<0.0005	<0.005	<0.0005	0.518	1.38	<0.0005	<0.05	<0.0002	0.0158	<0.005	<0.001
	6/15/2017	0.00282	<0.002	0.0828	<0.001	<0.0005	<0.005	<0.0005	0.48	<0.5	0.000721	<0.05	<0.0002	0.0106	<0.005	<0.001
	7/12/2017	0.00266	<0.002	0.0837	<0.001	<0.0005	<0.005	<0.0005	0.721	<0.5	0.000949	<0.05	<0.0002	0.0174	<0.005	<0.001
	3/12/2018	0.00261	<0.002	0.12	<0.001	<0.0005	<0.005	0.000626	0.882	<0.5	0.000604	0.0165	<0.0002	0.0402	<0.005	<0.001
	6/6/2018	0.00345	<0.002	0.179	<0.001	<0.0005	<0.005	0.00132	1.15	<0.5	<0.0005	0.0201	<0.0002	0.137	<0.005	<0.001
	10/3/2018	N.S.	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.
	4/8/2019	N.S.	<0.002	0.127	N.S.	<0.0005	<0.005	N.S.	N.S.	<0.5	0.00206	N.S.	<0.0002	N.S.	<0.005	N.S.
	10/15/2019	0.00900	<0.002	0.142	<0.001	0.000220	<0.005	<0.0005	0.650	<0.5	0.000787	0.0313	<0.0002	0.0361	<0.005	<0.001
1/31/2020	0.00510	<0.000880	0.133	<0.000270	0.000111	<0.00110	0.000277J	0.736	<0.500	0.00106	0.0406	<0.000100	0.0158	0.00165J	<0.000260	
4/27/2020	0.00243	<0.000880	0.141	<0.000270	0.0000980J	<0.00110	0.000161J	0.987	0.256J	0.00106	0.0411	<0.000100	0.00966	0.00116J	<0.000260	
7/14/2020	0.00268	0.000989J	0.152	<0.000270	0.000306	<0.00110	0.000202J	0.995	<0.230	0.000908	0.0468	<0.000100	0.0163	<0.00100	<0.000260	
10/5/2020	0.00381	0.00117J	0.170	<0.000270	0.000186	<0.00110	0.000208J	1.06	<0.230	0.000797	0.0523	<0.000100	0.0177	<0.00100	<0.000260	
NC2MW-3	3/14/2016	<0.001	0.00762	0.253	<0.001	<0.0005	<0.005	<0.0005	0.948	0.168	<0.0005	<0.05	<0.0002	0.00293	<0.005	<0.001
	6/3/2016	<0.001	0.0191	0.362	<0.001	<0.0005	<0.005	<0.0005	0.924	<0.5	<0.0005	<0.05	<0.0002	0.00377	<0.005	<0.001
	8/31/2016	<0.001	0.0103	0.211	<0.001	<0.0005	<0.005	<0.0005	0.446	<0.5	0.000692	<0.05	<0.0002	0.00301	<0.005	<0.001
	11/17/2016	<0.001	0.0113	0.234	<0.001	<0.0005	<0.005	<0.0005	0.616	1.28	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001
	2/15/2017	0.00111	0.0066	0.281	<0.001	<0.0005	<0.005	0.00051	0.381	5.11	<0.0005	<0.05	<0.0002	0.0176	<0.005	<0.001
	4/24/2017	<0.001	0.00892	0.174	<0.001	<0.0005	<0.005	0.00216	0.521	2.87	0.000691	<0.05	<0.0002	0.00677	<0.005	<0.001
	6/15/2017	<0.001	0.0101	0.225	<0.001	<0.0005	<0.005	0.00103	0.928	<0.5	0.00103	<0.05	<0.0002	0.00298	<0.005	<0.001
	7/12/2017	<0.001	0.00286	0.267	<0.001	<0.0005	<0.005	0.000806	0.479	<0.5	0.000913	<0.05	<0.0002	0.00206	<0.005	<0.001
	3/12/2018	<0.001	0.0027	0.125	<0.001	<0.0005	<0.005	0.000997	0.6	0.723	0.00178	0.0128	<0.0002	0.00454	<0.005	<0.001
	6/6/2019	<0.001	0.00835	0.163	<0.001	<0.0005	<0.005	0.00768	1.22	<0.5	<0.0005	0.0182	<0.0002	0.0628	<0.005	<0.001
	10/3/2018	N.S.	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.
	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]
	10/15/2019	<0.001	0.00344	0.312	<0.001	<0.0001	<0.005	0.00232	0.878	<0.5	<0.0005	0.0428	<0.0002	0.00526	<0.005	<0.001
1/31/2020	<0.000580	0.00338	0.297	<0.000270	<0.0000390	<0.00110	0.00197	0.707	<0.5	<0.000270	0.0333	<0.000100	0.00392	<0.00100	<0.000260	
4/27/2020	<0.000580	0.00483	0.340	<0.000270	<0.0000390	<0.00110	0.00991	0.552	0.300J	0.000617	0.0333	<0.000100	0.00565	<0.00100	<0.000260	
7/14/2020	<0.000510	0.00685	0.171	<0.000270	<0.0000490	<0.00110	0.00274	0.885	<0.230	0.000595	0.0317	<0.000100	0.0112	<0.00100	<0.000260	
10/5/2020	<0.000510	0.00735	0.191	<0.000270	<0.0000490	<0.00110	0.000647	1.32	0.535	0.000163J	0.0399	<0.000100	0.00487	<0.00100	<0.000260	

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

Constituent		Appendix IV (Assessment Monitoring) Constituents														
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
Reporting Unit		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NC2MW-6	3/14/2016	<0.001	<0.002	0.0818	<0.001	<0.0005	0.00629	<0.0005	0.392	<0.5	<0.0005	<0.05	<0.0002	0.0210	0.00645	<0.001
	6/3/2016	<0.001	<0.002	0.0823	<0.001	<0.0005	0.00535	<0.0005	0.603	<0.5	<0.0005	<0.05	<0.0002	0.0593	<0.005	<0.001
	8/31/2016	<0.001	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	1.03	<0.5	<0.0005	<0.05	<0.0002	0.0677	<0.005	<0.001
	11/17/2016	<0.001	<0.002	0.109	<0.001	<0.0005	<0.005	<0.0005	1.48	6.53	<0.0005	<0.05	<0.0002	0.0455	<0.005	<0.001
	2/15/2017	<0.001	<0.002	0.0948	<0.001	<0.0005	<0.005	<0.0005	0.429	<0.5	0.000901	<0.05	<0.0002	0.0265	<0.005	<0.001
	4/24/2017	<0.001	<0.002	0.0791	<0.001	<0.0005	<0.005	<0.0005	0.425	1.71	<0.0005	<0.05	<0.0002	0.041	<0.005	<0.001
	6/15/2017	<0.001	<0.002	0.105	<0.001	<0.0005	0.00501	<0.0005	0.641	<0.5	0.00329	<0.05	<0.0002	0.0354	<0.005	<0.001
	7/12/2017	<0.001	<0.002	0.0916	<0.001	<0.0005	<0.005	<0.0005	0.949	<0.5	<0.0005	<0.05	<0.0002	0.0419	<0.005	<0.001
	3/12/2018	<0.001	<0.002	0.107	<0.001	<0.0005	<0.005	0.000505	0.530	<0.5	0.00258	0.0371	<0.0002	0.00672	<0.005	<0.001
	6/6/2018	<0.001	<0.002	0.12	<0.001	<0.0005	<0.005	<0.0005	1.020	<0.5	0.00193	0.0321	<0.0002	0.0108	0.00679	<0.001
	10/3/2018	N.S.	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.
	4/8/2019	N.S.	<0.002	0.121	<0.001	<0.0005	<0.005	N.S.	N.S.	<0.5	0.000527	N.S.	<0.0002	N.S.	<0.005	N.S.
	10/15/2019	<0.001	<0.002	0.145	<0.001	<0.0001	<0.005	<0.0005	0.494	<0.5	<0.0005	0.0408	<0.0002	0.0121	<0.005	<0.001
	1/31/2020	<0.000580	<0.000880	0.118	<0.000270	<0.0000390	<0.00110	<0.0000910	0.616	<0.500	0.000635	0.0321	<0.000100	0.0123	<0.00100	<0.000260
	4/27/2020	<0.000580	<0.000880	0.114	<0.000270	0.0000540J	<0.00110	<0.0000910	0.155	0.335J	<0.000270	0.0258	<0.000100	0.0114	<0.00100	<0.000260
7/14/2020	<0.000510	<0.000880	0.118	<0.000270	0.0000680J	<0.00110	0.000122J	0.870	0.232J	0.000482J	0.0309	<0.000100	0.0133	<0.00100	<0.000260	
10/5/2020	<0.000510	0.000889J	0.132	<0.000270	0.0000810J	<0.00110	0.000438J	1.31	0.329J	0.000929	0.0362	<0.000100	0.0144	<0.00100	<0.000260	
NC2MW-7	3/14/2016	<0.001	0.0994	0.687	<0.001	<0.0005	<0.005	0.000794	1.43	0.312	<0.0005	0.0602	<0.0002	<0.002	<0.005	<0.001
	6/3/2016	<0.001	0.0529	0.591	<0.001	<0.0005	<0.005	<0.0005	1.14	<0.5	0.00166	0.0542	<0.0002	<0.002	<0.005	<0.001
	8/31/2016	<0.001	0.0418	0.526	<0.001	<0.0005	<0.005	0.000681	0.847	<0.5	<0.0005	0.0581	<0.0002	<0.002	<0.005	<0.001
	11/17/2016	<0.001	0.0473	0.544	<0.001	<0.0005	<0.005	<0.0005	0.851	0.544	<0.0005	0.0613	<0.0002	<0.002	<0.005	<0.001
	2/15/2017	<0.001	0.0608	0.558	<0.001	<0.0005	<0.005	0.000639	0.745	<0.5	<0.0005	0.0638	<0.0002	<0.002	<0.005	<0.001
	4/24/2017	<0.001	0.0592	0.614	<0.001	<0.0005	<0.005	0.000629	1.04	1.35	<0.0005	0.0624	<0.0002	<0.002	<0.005	<0.001
	6/15/2017	<0.001	0.0469	0.538	<0.001	<0.0005	<0.005	<0.0005	0.815	<0.5	<0.0005	0.0579	<0.0002	<0.002	<0.005	<0.001
	7/12/2017	<0.001	0.041	0.501	<0.001	<0.0005	<0.005	<0.0005	1.15	<0.5	<0.0005	0.0602	<0.0002	<0.002	<0.005	<0.001
	3/12/2018	<0.001	0.0387	0.473	<0.001	<0.0005	<0.005	<0.0005	1.06	<0.5	<0.0005	0.0546	<0.0002	<0.002	<0.005	<0.001
	6/6/2019	<0.001	0.0418	0.624	<0.001	<0.0005	<0.005	0.000876	0.986	<0.5	0.00069	0.0535	<0.0002	<0.002	<0.005	<0.001
	10/3/2018	N.S.	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.
	4/8/2019	N.S.	0.0391	0.565	N.S.	<0.0005	<0.005	N.S.	N.S.	<0.5	<0.0005	N.S.	<0.0002	N.S.	<0.005	N.S.
	10/15/2019	<0.001	0.0384	0.597	<0.001	<0.0001	<0.005	<0.0005	0.532	<0.5	<0.0005	0.0633	<0.0002	<0.002	<0.005	<0.001
	2/3/2020	<0.000580	0.0348	0.512	<0.000270	<0.0000390	<0.00110	0.000353J	0.615	0.357J	<0.000270	0.0545	<0.000100	0.00163J	<0.00100	<0.000260
	4/27/2020	<0.000580	0.0388	0.534	<0.000270	<0.0000390	<0.00110	0.000396J	0.722	0.429J	<0.000270	0.0568	<0.000100	0.00185J	<0.00100	<0.000260
7/14/2020	<0.000510	0.0381	0.515	<0.000270	<0.0000490	<0.00110	0.000233J	0.804	<0.230	<0.000110	0.0580	<0.000100	0.00170J	<0.00100	<0.000260	
10/5/2020	<0.000510	0.0435	0.585	<0.000270	<0.0000490	<0.00110	0.000233J	0.710	0.322J	<0.000110	0.0641	<0.000100	0.00122J	<0.00100	<0.000260	
NC2MW-8	<i>NC2-MW-8 was installed on 7/9/2018^[1]</i>															
	10/3/2018	<0.001	0.0223	0.617	<0.001	<0.0005	<0.005	0.0025	1.7	0.566	0.00125	0.0347	<0.0002	0.00307	<0.005	<0.001
	1/15/2019	<0.00100	0.0177	0.503	<0.00100	<0.0005	<0.005	0.00224	0.716	<0.5	<0.0005	0.0292	<0.0002	0.00288	<0.005	<0.001
	3/5/2019	<0.00100	0.00716	0.566	<0.00100	<0.0005	<0.005	0.00304	N.S.	<0.5	<0.0005	0.036	<0.0002	0.00304	<0.005	<0.001

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

Constituent	Appendix IV (Assessment Monitoring) Constituents															
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium (Ra 226 + Ra 228)	Fluoride*	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	
	Reporting Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
NC2MW-8	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]	
	10/16/2019	<0.00100	0.0206	0.596	<0.00100	<0.0001	<0.005	0.00175	0.735	<0.5	<0.0005	0.0333	<0.0002	0.00347	<0.005	<0.001
	1/31/2020	<0.000580	0.00168J	0.191	<0.000270	0.000160	<0.00110	0.00133	0.445	<0.500	<0.000270	0.0249	<0.000100	<0.00110	<0.00100	<0.000260
	4/27/2020	<0.000580	0.0190	0.548	<0.000270	<0.0000390	<0.00110	0.00201	0.587	0.504	<0.000270	0.0297	<0.000100	0.00291	<0.00100	<0.000260
	7/14/2020	<0.000510	0.0195	0.523	<0.000270	<0.0000490	<0.00110	0.00178	0.598	<0.230	0.000201J	0.0306	<0.000100	0.00285	<0.00100	<0.000260
	10/5/2020	<0.000510	0.0322	0.579	<0.000270	<0.0000490	<0.00110	0.00176	1.24	0.331J	0.000486J	0.0325	<0.000100	0.00220	<0.00100	<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. NC2MW-8 was statistically analyzed during the fall 2019 detection monitoring event. The eighth background sample was obtained for full Appendix III and Appendix IV lists as of the October 2020 sampling event.

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

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	237
Chloride	mg/l	36.6
Fluoride ^[1]	mg/l	1.28
pH (LPL) ^[2]	SU	6.48
pH (UPL) ^[3]	SU	7.92
Sulfate	mg/l	611
TDS	mg/l	1,390
Appendix IV (Assessment Monitoring)		
Antimony	mg/l	0.00110
Arsenic	mg/l	0.0111
Barium	mg/l	0.390
Beryllium	mg/l	0.00100
Cadmium	mg/l	0.000138
Chromium	mg/l	0.00500
Cobalt	mg/l	0.00236
Lead	mg/l	0.00320
Lithium	mg/l	0.0423
Mercury	mg/l	0.000200
Molybdenum	mg/l	0.0339
Radium 226 + 228	pCi/l	1.97
Selenium	mg/l	0.0238
Thallium	mg/l	0.00100

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).

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	0.0111 ^[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	4.0
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	5.0
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).



Appendix A

Field Sampling Forms

NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	4/20/2020	Time of Sampling	12:13	Static Water Level	6.82
NC1MW3	Date of Sampling	4/20/2020	Time of Sampling	12:48	Static Water Level	7.42
NC1MW4	Date of Sampling	4/20/2020	Time of Sampling	12:34	Static Water Level	7.60
NC1MW5	Date of Sampling	4/20/2020	Time of Sampling	13:12	Static Water Level	9.70
NC1MW6	Date of Sampling	4/20/2020	Time of Sampling	13:16	Static Water Level	6.16
NC1MW7	Date of Sampling	4/20/2020	Time of Sampling	12:09	Static Water Level	6.05
NC1MW8	Date of Sampling	4/20/2020	Time of Sampling	12:10	Static Water Level	6.36
NC1MW9	Date of Sampling	4/20/2020	Time of Sampling	12:55	Static Water Level	7.69
NC2MW2	Date of Sampling	4/20/2020	Time of Sampling	12:03	Static Water Level	8.83
NC2MW3	Date of Sampling	4/20/2020	Time of Sampling	11:56	Static Water Level	2.36
NC2MW4	Date of Sampling	4/20/2020	Time of Sampling	11:34	Static Water Level	5.24
NC2MW5	Date of Sampling	4/20/2020	Time of Sampling	11:45	Static Water Level	6.37
NC2MW6	Date of Sampling	4/20/2020	Time of Sampling	11:52	Static Water Level	5.97
NC2MW7	Date of Sampling	4/20/2020	Time of Sampling	12:06	Static Water Level	4.99
NC2MW8	Date of Sampling	4/20/2020	Time of Sampling	12:00	Static Water Level	4.59
MW11	Date of Sampling	4/20/2020	Time of Sampling	12:20	Static Water Level	5.48
MW12	Date of Sampling	4/20/2020	Time of Sampling	12:23	Static Water Level	7.41
MW13	Date of Sampling	4/20/2020	Time of Sampling	11:27	Static Water Level	2.94
MW14	Date of Sampling	4/20/2020	Time of Sampling	11:37	Static Water Level	7.59

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	4/27/2020	Time of Sampling	8:58	Static Water Level	7.02
NC1MW3	Date of Sampling	4/20/2020	Time of Sampling	12:48	Static Water Level	7.42
NC1MW4	Date of Sampling	4/20/2020	Time of Sampling	12:34	Static Water Level	7.60
NC1MW5	Date of Sampling	4/20/2020	Time of Sampling	13:12	Static Water Level	9.70
NC1MW6	Date of Sampling	4/20/2020	Time of Sampling	13:16	Static Water Level	6.16
NC1MW7	Date of Sampling	4/27/2020	Time of Sampling	8:53	Static Water Level	6.22
NC1MW8	Date of Sampling	4/27/2020	Time of Sampling	8:54	Static Water Level	6.54
NC1MW9	Date of Sampling	4/20/2020	Time of Sampling	12:55	Static Water Level	7.69
NC2MW2	Date of Sampling	4/27/2020	Time of Sampling	8:38	Static Water Level	8.87
NC2MW3	Date of Sampling	4/27/2020	Time of Sampling	8:27	Static Water Level	2.40
NC2MW4	Date of Sampling	4/27/2020	Time of Sampling	7:57	Static Water Level	5.33
NC2MW5	Date of Sampling	4/27/2020	Time of Sampling	8:15	Static Water Level	6.45
NC2MW6	Date of Sampling	4/27/2020	Time of Sampling	8:19	Static Water Level	5.86
NC2MW7	Date of Sampling	4/27/2020	Time of Sampling	8:42	Static Water Level	5.07
NC2MW8	Date of Sampling	4/27/2020	Time of Sampling	8:32	Static Water Level	4.63
MW11	Date of Sampling	4/27/2020	Time of Sampling	8:07	Static Water Level	5.47
MW12	Date of Sampling	4/20/2020	Time of Sampling	12:23	Static Water Level	7.41
MW13	Date of Sampling	4/27/2020	Time of Sampling	7:52	Static Water Level	3.11
MW14	Date of Sampling	4/27/2020	Time of Sampling	8:02	Static Water Level	7.53

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW2 - 7	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 77°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:38	Pump Start Time	15:45
Static Water Level (+/- 0.01 feet)*	8.87	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	17.61	Time to Purge Well (hours:minutes)	0:20
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	5.40		
Actual Volume of Water Purged (mL)	5,000		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:50	1,250	15.99	1.87	10.9	6.58	1.48	9.31
15:53	2,000	15.87	1.61	6.0	6.55	1.52	9.40
15:56	2,750	15.64	1.33	3.4	6.51	1.53	9.41
15:59	3,500	15.53	1.35	7.2	6.50	1.54	9.48
16:02	4,250	15.29	1.39	14.7	6.49	1.54	9.54
16:05	5,000	15.34	1.37	16.9	6.49	1.54	9.59

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:05	5,000	15.34	1.37	16.9	6.49	1.54	9.59
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)	250		

Sample Physical Characteristics

Sample Physical Characteristics		Equipment Information	
Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW3 - 5	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant (See Notes)	Weather Conditions: Partly Cloudy, Sunny, 75°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:27	Pump Start Time	13:12
Static Water Level (+/- 0.01 feet)*	2.40	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	16.00	Time to Purge Well (hours:minutes)	0:29
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	8.40		
Actual Volume of Water Purged (mL)	7,250		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:17	1,250	14.34	1.56	158	6.69	1.23	2.60
13:20	2,000	14.52	1.48	119	6.67	1.25	2.61
13:23	2,750	14.98	1.50	102	6.65	1.22	2.62
13:26	3,500	16.00	1.44	91.7	6.64	1.18	2.62
13:29	4,250	16.04	1.40	95.6	6.64	1.18	2.62
13:32	5,000	16.52	1.38	76.5	6.63	1.17	2.62
13:35	5,750	16.56	1.35	60.2	6.63	1.18	2.62
13:38	6,500	16.68	1.35	40.0	6.62	1.16	2.62
13:41	7,250	16.70	1.30	21.2	6.62	1.16	2.62

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:41	7,250	16.70	1.30	21.2	6.62	1.16	2.62
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals		Pump Rate (mL/minute)		250

Sample Physical Characteristics

Sample Physical Characteristics	Equipment Information
Sample Clarity	Clear QED Pump Control Information CPM-2, 27/3, ~20 psi
Sample Color	Clear Decontamination Procedure Alconox and DI Water Rinse
Sample Odor	Odorless Instrument Calibration By Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No Date and Time of Calibration 4/27/2020, 6:30

Notes / Unusual Occurrences: Concrete pad was partially submerged under water.

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW4 - 2	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, Breezy, 66°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	7:57	Pump Start Time	10:51
Static Water Level (+/- 0.01 feet)*	5.33	Purge Rate (mL/minute)	300
Bottom of Well Casing (+/- 0.01 feet)*	14.50	Time to Purge Well (hours:minutes)	0:14
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	5.66		
Actual Volume of Water Purged (mL)	4,200		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:56	1,500	12.47	2.14	23.9	6.62	1.02	6.47
10:59	2,400	12.32	1.93	16.3	6.62	1.02	6.77
11:02	3,300	12.31	1.89	13.3	6.61	1.02	6.89
11:05	4,200	12.26	1.83	12.7	6.61	1.02	6.98

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:05	4,200	12.26	1.83	12.7	6.61	1.02	6.98
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals		Pump Rate (mL/minute)		300

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW5 - 3	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 70°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:15	Pump Start Time	11:32
Static Water Level (+/- 0.01 feet)*	6.45	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	15.80	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	5.77		
Actual Volume of Water Purged (mL)	2,750		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:37	1,250	12.99	2.09	1.8	6.84	1.32	8.56
11:40	2,000	12.77	2.05	1.4	6.85	1.32	8.70
11:43	2,750	12.74	2.02	1.2	6.84	1.32	8.73

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:43	2,750	12.74	2.02	1.2	6.84	1.32	8.73
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals		Pump Rate (mL/minute)		250

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW6 - 4	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, 72°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:19	Pump Start Time	12:02
Static Water Level (+/- 0.01 feet)*	5.86	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	14.50	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	5.33		
Actual Volume of Water Purged (mL)	2,750		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:07	1,250	12.42	1.80	3.4	6.84	1.05	6.20
12:10	2,000	12.36	1.74	1.7	6.81	1.07	6.22
12:13	2,750	12.23	1.87	2.7	6.80	1.04	6.22

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
12:13	2,750	12.23	1.87	2.7	6.80	1.04	6.22
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)		250	

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW7 - 8	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 78°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:42	Pump Start Time	16:40
Static Water Level (+/- 0.01 feet)*	5.07	Purge Rate (mL/minute)	400
Bottom of Well Casing (+/- 0.01 feet)*	24.10	Time to Purge Well (hours:minutes)	0:53
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	11.75		
Actual Volume of Water Purged (mL)	21,200		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:45	2,000	17.14	0.80	249	6.80	0.981	4.86
16:48	3,200	17.06	0.84	239	6.82	0.984	4.86
16:51	4,400	17.00	0.96	162	6.84	0.989	4.86
16:54	5,600	17.03	1.18	145	6.86	0.995	4.86
16:57	6,800	17.00	1.52	135	6.86	1.00	4.86
17:00	8,000	16.88	1.78	129	6.86	1.00	4.86
17:03	9,200	16.64	1.92	112	6.87	1.00	4.86
17:06	10,400	16.58	2.14	92.9	6.88	1.00	4.86
17:09	11,600	16.44	2.22	80.1	6.88	1.00	4.86
17:12	12,800	16.52	2.44	80.6	6.88	1.00	4.86
17:15	14,000	16.46	2.48	71.0	6.88	0.997	4.86
17:18	15,200	16.58	2.55	54.9	6.88	1.00	4.86
17:21	16,400	16.64	2.58	54.1	6.88	1.01	4.86
17:24	17,600	16.73	2.61	43.2	6.88	1.01	4.86
17:27	18,800	16.63	2.61	36.3	6.89	1.00	4.86
17:30	20,000	16.68	2.65	29.3	6.89	1.01	4.86
17:33	21,200	16.54	2.67	23.7	6.89	1.00	4.86

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
17:33	21,200	16.54	2.67	24	6.89	1.00	4.86
Duplicate?	Yes, DUP1	Preservation?	Cool on Ice, HNO ₃ for Metals		Pump Rate (mL/minute)		300

Sample Physical Characteristics

Sample Physical Characteristics		Equipment Information	
Sample Clarity	Mostly Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Light Brown	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW8 - 6	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Partly Cloudy, Sunny, 76°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	8:32	Pump Start Time	14:21
Static Water Level (+/- 0.01 feet)*	4.63	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	15.60	Time to Purge Well (hours:minutes)	0:41
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	6.77		
Actual Volume of Water Purged (mL)	10,250		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:26	1,250	19.66	1.70	55.0	6.82	0.896	4.76
14:29	2,000	19.62	1.20	92.3	6.81	0.851	4.76
14:32	2,750	19.62	0.96	94.3	6.81	0.843	4.76
14:35	3,500	19.69	0.80	97.4	6.81	0.842	4.76
14:38	4,250	19.76	0.70	94.4	6.81	0.839	4.76
14:41	5,000	19.84	0.69	69.5	6.81	0.840	4.76
14:44	5,750	19.94	0.69	48.8	6.81	0.839	4.76
14:47	6,500	19.99	0.74	56.9	6.81	0.838	4.76
14:50	7,250	20.22	0.72	60.3	6.81	0.834	4.76
14:53	8,000	20.34	0.71	40.7	6.82	0.822	4.76
14:56	8,750	20.50	0.68	35.7	6.83	0.815	4.76
14:59	9,500	20.64	0.71	29.6	6.82	0.812	4.76
15:02	10,250	20.82	0.70	23.3	6.81	0.811	4.76

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:02	10,250	20.82	0.70	23.3	6.81	0.811	4.76
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)	250		

Sample Physical Characteristics

Equipment Information

Sample Clarity	Mostly Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW13 - 1	Date: 4/27/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Clear, Sunny, Breezy, 59°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	7:52	Pump Start Time	9:52
Static Water Level (+/- 0.01 feet)*	3.11	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	15.19	Time to Purge Well (hours:minutes)	0:20
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	7.46		
Actual Volume of Water Purged (mL)	5,000		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:57	1,250	14.33	1.64	16.4	6.97	0.947	
10:00	2,000	14.00	0.92	11.4	6.95	0.958	
10:03	2,750	13.36	0.90	9.7	6.95	0.960	
10:06	3,500	13.20	0.88	9.2	6.94	0.961	
10:09	4,250	13.16	0.84	7.5	6.93	0.963	
10:12	5,000	13.08	0.78	7.1	6.93	0.964	

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:12	5,000	13.08	0.78	7.1	6.93	0.964	#N/A
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)		250	

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	4/27/2020, 6:30

Notes / Unusual Occurrences: None

Equipment Calibration Sheet

Date: 4/27/2020

Time: 6:30

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	10.78	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	7/13/2020	Time of Sampling	14:21	Static Water Level	8.20
NC1MW3	Date of Sampling	7/13/2020	Time of Sampling	15:23	Static Water Level	8.94
NC1MW4	Date of Sampling	7/13/2020	Time of Sampling	15:06	Static Water Level	9.02
NC1MW5	Date of Sampling	7/13/2020	Time of Sampling	NM	Static Water Level	NM
NC1MW6	Date of Sampling	7/13/2020	Time of Sampling	14:57	Static Water Level	7.45
NC1MW7	Date of Sampling	7/13/2020	Time of Sampling	13:52	Static Water Level	7.54
NC1MW8	Date of Sampling	7/13/2020	Time of Sampling	13:53	Static Water Level	7.85
NC1MW9	Date of Sampling	7/13/2020	Time of Sampling	15:29	Static Water Level	9.14
NC2MW2	Date of Sampling	7/13/2020	Time of Sampling	13:44	Static Water Level	10.44
NC2MW3	Date of Sampling	7/13/2020	Time of Sampling	13:32	Static Water Level	7.89
NC2MW4	Date of Sampling	7/13/2020	Time of Sampling	12:59	Static Water Level	7.19
NC2MW5	Date of Sampling	7/13/2020	Time of Sampling	13:20	Static Water Level	10.02
NC2MW6	Date of Sampling	7/13/2020	Time of Sampling	13:27	Static Water Level	7.45
NC2MW7	Date of Sampling	7/13/2020	Time of Sampling	13:48	Static Water Level	6.32
NC2MW8	Date of Sampling	7/13/2020	Time of Sampling	13:38	Static Water Level	6.28
MW11	Date of Sampling	7/13/2020	Time of Sampling	14:11	Static Water Level	7.02
MW12	Date of Sampling	7/13/2020	Time of Sampling	14:15	Static Water Level	8.99
MW13	Date of Sampling	7/13/2020	Time of Sampling	12:54	Static Water Level	5.23
MW14	Date of Sampling	7/13/2020	Time of Sampling	13:03	Static Water Level	8.89

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW2 - 7	Date: 7/14/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Sunny, 92°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	16:15	Pump Start Time	16:17
Static Water Level (+/- 0.01 feet)*	10.55	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	17.61	Time to Purge Well (hours:minutes)	0:17
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	4.36		
Actual Volume of Water Purged (mL)	4,250		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:22	1,250	17.47	2.25	5.8	6.74	1.61	11.08
16:25	2,000	17.29	2.31	6.4	6.70	1.68	11.24
16:28	2,750	16.91	2.32	13.3	6.68	1.65	11.46
16:31	3,500	16.71	2.31	33.4	6.69	1.62	11.54
16:34	4,250	16.84	2.28	24.7	6.67	1.64	11.60

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
16:34	4,250	16.84	2.28	24.7	6.67	1.64	11.60
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)		250	

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/14/2020, 7:03
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW3 - 5	Date: 7/14/2020
Wellhead Inspection (Condition): Compliant (See Notes)	Weather Conditions: Mostly Clear, Sunny, 91°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	14:36	Pump Start Time	14:40
Static Water Level (+/- 0.01 feet)*	8.02	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	Not Measured	Time to Purge Well (hours:minutes)	0:20
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	Not Measured		
Actual Volume of Water Purged (mL)	5,000		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
14:45	1,250	21.32	2.33	388	6.83	1.30	8.21
14:48	2,000	19.67	2.00	131	6.83	1.29	8.44
14:51	2,750	19.80	1.94	65.0	6.82	1.30	8.48
14:54	3,500	19.02	1.63	35.2	6.81	1.30	8.48
14:57	4,250	19.04	1.73	25.9	6.81	1.28	8.48
15:00	5,000	19.15	1.65	24.8	6.80	1.27	8.48

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:00	5,000	19.15	1.65	24.8	6.80	1.27	8.48
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)		250	

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/14/2020, 7:03

Notes / Unusual Occurrences: Well casing extended, no longer sitting in surface water.

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW4 - 2	Date: 7/14/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Overcast, 75°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	9:32	Pump Start Time	9:35
Static Water Level (+/- 0.01 feet)*	7.25	Purge Rate (mL/minute)	300
Bottom of Well Casing (+/- 0.01 feet)*	14.50	Time to Purge Well (hours:minutes)	0:11
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	4.48		
Actual Volume of Water Purged (mL)	3,300		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:40	1,500	15.81	1.11	9.0	6.57	1.01	8.44
9:43	2,400	16.02	1.14	10.5	6.54	1.01	8.76
9:46	3,300	16.14	1.11	15.5	6.53	1.00	9.05

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
9:46	3,300	16.14	1.11	15.5	6.53	1.00	9.05
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)	300		

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/14/2020, 7:03

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW6 - 4	Date: 7/14/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Light Breeze, 89°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	13:33	Pump Start Time	13:34
Static Water Level (+/- 0.01 feet)*	7.55	Purge Rate (mL/minute)	300
Bottom of Well Casing (+/- 0.01 feet)*	14.50	Time to Purge Well (hours:minutes)	0:14
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	4.29		
Actual Volume of Water Purged (mL)	4,200		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:39	1,500	18.33	0.94	7.7	6.98	1.11	8.02
13:42	2,400	18.25	0.86	11.0	6.95	1.05	8.02
13:45	3,300	18.33	0.74	11.4	6.94	1.02	8.03
13:48	4,200	18.36	0.77	13.8	6.93	1.01	8.03

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
13:48	4,200	18.36	0.77	13.8	6.93	1.01	8.03
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals		Pump Rate (mL/minute)		300

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/14/2020, 7:03

Notes / Unusual Occurrences: None

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW7 - 8	Date: 7/15/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Overcast, 69°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	10:38	Pump Start Time	10:39
Static Water Level (+/- 0.01 feet)*	6.25	Purge Rate (mL/minute)	300
Bottom of Well Casing (+/- 0.01 feet)*	24.10	Time to Purge Well (hours:minutes)	0:29
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	11.02		
Actual Volume of Water Purged (mL)	8,700		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
10:44	1,500	16.50	0.69	27.0	6.86	1.10	6.25
10:47	2,400	16.43	0.75	19.9	6.84	1.10	6.25
10:50	3,300	16.24	0.75	15.8	6.83	1.10	6.25
10:53	4,200	16.15	0.83	13.8	6.81	1.10	6.25
10:56	5,100	16.04	0.89	12.5	6.81	1.09	6.25
10:59	6,000	16.05	0.98	12.4	6.81	1.09	6.25
11:02	6,900	16.16	1.14	11.6	6.81	1.09	6.25
11:05	7,800	16.04	1.20	9.8	6.81	1.09	6.25
11:08	8,700	16.00	1.18	9.4	6.81	1.09	6.25

Well Evacuated to Dryness? No

Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
11:08	8,700	16.00	1.18	9.4	6.81	1.09	6.25
Duplicate?	Yes, DUP1	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)	300		

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/15/2020, 9:16
Notes / Unusual Occurrences: None			

Field Notes For Monitoring Well Sampling

Facility Name: OPPD Nebraska City Station 2	Sampler Name(s): Kyle K. Uhing (79776)
Monitoring Well Identification - Sample Number: MW8 - 6	Date: 7/14/2020
Wellhead Inspection (Condition): Compliant	Weather Conditions: Mostly Clear, Sunny, 92°F

Groundwater Measurements and Purge Data

Time of Water Level Measurement	15:27	Pump Start Time	15:31
Static Water Level (+/- 0.01 feet)*	6.40	Purge Rate (mL/minute)	250
Bottom of Well Casing (+/- 0.01 feet)*	15.60	Time to Purge Well (hours:minutes)	0:14
Pump Intake Elevation (+/- 0.01 feet)*	Not Measured	Purge and Sample Equipment: Dedicated Bladder Pump with QED Flow Controller and Nitrogen Gas, Graduated Measuring Bucket and Cup, Multi-Parameter Water Meter, and Electronic Water Level Indicator	
2" Well Casing Volume (L)	5.68		
Actual Volume of Water Purged (mL)	3,500		

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

Groundwater Parameter Data

Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:36	1,250	18.26	1.08	32.7	7.03	0.944	6.41
15:39	2,000	17.63	0.70	18.9	7.04	0.946	6.41
15:42	2,750	17.60	0.71	15.0	7.04	0.948	6.41
15:45	3,500	17.60	0.68	12.8	7.04	0.951	6.41

Well Evacuated to Dryness? No Recharge time? Not Measured

Groundwater Sample Information

Sample Time	Volume Purged (mL)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	pH	Conductivity (mS/cm)	Water Level (feet)
15:45	3,500	17.60	0.68	12.8	7.04	0.951	6.41
Duplicate?	No	Preservation?	Cool on Ice, HNO ₃ for Metals	Pump Rate (mL/minute)		250	

Sample Physical Characteristics

Equipment Information

Sample Clarity	Clear	QED Pump Control Information	CPM-2, 27/3, ~20 psi
Sample Color	Clear	Decontamination Procedure	Alconox and DI Water Rinse
Sample Odor	Odorless	Instrument Calibration By	Kyle K. Uhing
Immiscible Layer Observed? If so, thickness?	No	Date and Time of Calibration	7/14/2020, 7:03
Notes / Unusual Occurrences: None			

Equipment Calibration Sheet

Date: 7/14/2020

Time: 7:03

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	4.01	NA
Conductivity	4.52	$\mu\text{S}/\text{cm}$
Turbidity	0.0	NTU
DO	8.12	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

Equipment Calibration Sheet

Date: 7/15/2020

Time: 9:16

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	4.01	NA
Conductivity	4.49	$\mu\text{S}/\text{cm}$
Turbidity	0.0	NTU
DO	8.24	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.

NEBRASKA CITY STATION

Water Levels Prior to Purging (Feet Below TOC)

NC1MW2	Date of Sampling	10/2/2020	Time of Sampling	13:54	Static Water Level	10.52
NC1MW3	Date of Sampling	10/2/2020	Time of Sampling	15:01	Static Water Level	11.13
NC1MW4	Date of Sampling	10/2/2020	Time of Sampling	14:51	Static Water Level	11.17
NC1MW5	Date of Sampling	10/2/2020	Time of Sampling	14:15	Static Water Level	12.90
NC1MW6	Date of Sampling	10/2/2020	Time of Sampling	14:26	Static Water Level	9.11
NC1MW7	Date of Sampling	10/2/2020	Time of Sampling	13:41	Static Water Level	10.06
NC1MW8	Date of Sampling	10/2/2020	Time of Sampling	13:40	Static Water Level	10.36
NC1MW9	Date of Sampling	10/2/2020	Time of Sampling	15:06	Static Water Level	11.35
NC2MW2	Date of Sampling	10/2/2020	Time of Sampling	13:21	Static Water Level	12.92
NC2MW3	Date of Sampling	10/2/2020	Time of Sampling	13:18	Static Water Level	10.34
NC2MW4	Date of Sampling	10/2/2020	Time of Sampling	11:09	Static Water Level	9.65
NC2MW5	Date of Sampling	10/2/2020	Time of Sampling	13:00	Static Water Level	12.63
NC2MW6	Date of Sampling	10/2/2020	Time of Sampling	13:08	Static Water Level	9.90
NC2MW7	Date of Sampling	10/2/2020	Time of Sampling	13:25	Static Water Level	8.81
NC2MW8	Date of Sampling	10/2/2020	Time of Sampling	13:15	Static Water Level	8.68
MW11	Date of Sampling	10/2/2020	Time of Sampling	13:47	Static Water Level	9.37
MW12	Date of Sampling	10/2/2020	Time of Sampling	13:50	Static Water Level	11.29
MW13	Date of Sampling	10/2/2020	Time of Sampling	11:05	Static Water Level	7.76
MW14	Date of Sampling	10/2/2020	Time of Sampling	11:13	Static Water Level	11.47

NOTES:

TOC = Top of Casing

NM = Not Measured, Inaccessible

Equipment Calibration Sheet

Date: 10/5/2020

Time: 7:24

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	4.45	$\mu\text{S/cm}$
Turbidity	0.0	NTU
DO	10.27	mg/L

Comments:

The Horiba was calibrated using pH 4.0 AutoCal buffer solution.



Appendix B

Laboratory Analytical Reports

ANALYTICAL REPORT

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

Laboratory Job ID: 310-180616-1
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:
5/6/2020 3:27:02 PM

Shawn Hayes, Senior Project Manager
(319)229-8211
shawn.hayes@testamericainc.com

LINKS

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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

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

Job ID: 310-180616-1

Job ID: 310-180616-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-180616-1

Receipt

The samples were received on 4/29/2020 9:40 AM; the samples arrived in good condition, properly preserved, and where required, on ice. The temperatures of the 2 coolers at receipt time were 0.7°C and 3.2°C

Department HPLC/IC

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

Department Metals

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

Department General Chemistry

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

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Sample Summary

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

Job ID: 310-180616-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-180616-1	NC2MW2	Water	04/27/20 16:05	04/29/20 09:40	
310-180616-2	NC2MW3	Water	04/27/20 13:41	04/29/20 09:40	
310-180616-3	NC2MW4	Water	04/27/20 11:05	04/29/20 09:40	
310-180616-4	NC2MW5	Water	04/27/20 11:43	04/29/20 09:40	
310-180616-5	NC2MW6	Water	04/27/20 12:13	04/29/20 09:40	
310-180616-6	NC2MW7	Water	04/27/20 17:33	04/29/20 09:40	
310-180616-7	NC2MW8	Water	04/27/20 15:02	04/29/20 09:40	
310-180616-8	MW13	Water	04/27/20 10:12	04/29/20 09:40	
310-180616-9	DUP1	Water	04/27/20 00:10	04/29/20 09:40	

Detection Summary

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

Job ID: 310-180616-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-180616-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.64		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.256	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	350		5.00	3.55	mg/L	5		9056A	Total/NA
Antimony	0.00243		0.00100	0.000580	mg/L	1		6020A	Total/NA
Barium	0.141		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.265		0.100	0.0730	mg/L	1		6020A	Total/NA
Cadmium	0.0000980	J	0.000100	0.0000390	mg/L	1		6020A	Total/NA
Calcium	252		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000161	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.00106		0.000500	0.000270	mg/L	1		6020A	Total/NA
Lithium	0.0411		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00966		0.00200	0.00110	mg/L	1		6020A	Total/NA
Selenium	0.00116	J	0.00500	0.00100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1140		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW3

Lab Sample ID: 310-180616-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.70		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.300	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	183		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00483		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.340		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.0765	J	0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	181		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00991		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000617		0.000500	0.000270	mg/L	1		6020A	Total/NA
Lithium	0.0333		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00565		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	774		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW4

Lab Sample ID: 310-180616-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.37		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.315	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	52.6		5.00	3.55	mg/L	5		9056A	Total/NA
Barium	0.335		0.00200	0.000900	mg/L	1		6020A	Total/NA
Cadmium	0.0000470	J	0.000100	0.0000390	mg/L	1		6020A	Total/NA
Calcium	134		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000121	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000398	J	0.000500	0.000270	mg/L	1		6020A	Total/NA
Lithium	0.0284		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00192	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	550		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW5

Lab Sample ID: 310-180616-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.39		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.323	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	381		5.00	3.55	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-180616-1

Client Sample ID: NC2MW5 (Continued)

Lab Sample ID: 310-180616-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00162	J	0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.0357		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	3.31		0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	174		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.0000920	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0102		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.0147		0.00200	0.00110	mg/L	1		6020A	Total/NA
Selenium	0.00189	J	0.00500	0.00100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	946		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW6

Lab Sample ID: 310-180616-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.29		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.335	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	149		5.00	3.55	mg/L	5		9056A	Total/NA
Barium	0.114		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	2.59		0.100	0.0730	mg/L	1		6020A	Total/NA
Cadmium	0.0000540	J	0.000100	0.0000390	mg/L	1		6020A	Total/NA
Calcium	125		0.500	0.190	mg/L	1		6020A	Total/NA
Lithium	0.0258		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.0114		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	586		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW7

Lab Sample ID: 310-180616-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.12		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.429	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	9.26		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0388		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.534		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.172		0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	126		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000396	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0568		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00185	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	518		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW8

Lab Sample ID: 310-180616-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.8		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.504		0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	6.46		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0190		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.548		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.0777	J	0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	127		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00201		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0297		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00291		0.00200	0.00110	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-180616-1

Client Sample ID: NC2MW8 (Continued)

Lab Sample ID: 310-180616-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	500		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13

Lab Sample ID: 310-180616-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17.2		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.383	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	271		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0111		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.167		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.134		0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	102		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00208		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000297	J	0.000500	0.000270	mg/L	1		6020A	Total/NA
Lithium	0.0348		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00335		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	622		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP1

Lab Sample ID: 310-180616-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.04		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.484	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	8.93		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0371		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.514		0.00200	0.000900	mg/L	1		6020A	Total/NA
Boron	0.144		0.100	0.0730	mg/L	1		6020A	Total/NA
Calcium	120		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000380	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000350	J	0.000500	0.000270	mg/L	1		6020A	Total/NA
Lithium	0.0537		0.0100	0.00230	mg/L	1		6020A	Total/NA
Molybdenum	0.00170	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	512		30.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-180616-1

Date Collected: 04/27/20 16:05

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.64		5.00	2.00	mg/L			05/04/20 16:38	5
Fluoride	0.256	J	0.500	0.230	mg/L			05/04/20 16:38	5
Sulfate	350		5.00	3.55	mg/L			05/04/20 16:38	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00243		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 18:56	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 18:56	1
Barium	0.141		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 18:56	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 18:56	1
Boron	0.265		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 18:56	1
Cadmium	0.0000980	J	0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 18:56	1
Calcium	252		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 18:56	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 18:56	1
Cobalt	0.000161	J	0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 18:56	1
Lead	0.00106		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 18:56	1
Lithium	0.0411		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 18:56	1
Molybdenum	0.00966		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 18:56	1
Selenium	0.00116	J	0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 18:56	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 18:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1140		30.0	26.0	mg/L			04/30/20 16:27	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW3

Lab Sample ID: 310-180616-2

Date Collected: 04/27/20 13:41

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.70		5.00	2.00	mg/L			05/04/20 17:25	5
Fluoride	0.300	J	0.500	0.230	mg/L			05/04/20 17:25	5
Sulfate	183		5.00	3.55	mg/L			05/04/20 17:25	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 18:58	1
Arsenic	0.00483		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 18:58	1
Barium	0.340		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 18:58	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 18:58	1
Boron	0.0765	J	0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 18:58	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 18:58	1
Calcium	181		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 18:58	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 18:58	1
Cobalt	0.00991		0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 18:58	1
Lead	0.000617		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 18:58	1
Lithium	0.0333		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 18:58	1
Molybdenum	0.00565		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 18:58	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 18:58	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 18:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	774		30.0	26.0	mg/L			04/30/20 16:27	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-180616-3

Date Collected: 04/27/20 11:05

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.37		5.00	2.00	mg/L			05/04/20 17:40	5
Fluoride	0.315	J	0.500	0.230	mg/L			05/04/20 17:40	5
Sulfate	52.6		5.00	3.55	mg/L			05/04/20 17:40	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:01	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:01	1
Barium	0.335		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:01	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:01	1
Boron	<0.0730		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:01	1
Cadmium	0.0000470	J	0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:01	1
Calcium	134		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:01	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:01	1
Cobalt	0.000121	J	0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:01	1
Lead	0.000398	J	0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:01	1
Lithium	0.0284		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:01	1
Molybdenum	0.00192	J	0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:01	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:01	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	550		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW5

Lab Sample ID: 310-180616-4

Date Collected: 04/27/20 11:43

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.39		5.00	2.00	mg/L			05/04/20 17:56	5
Fluoride	0.323	J	0.500	0.230	mg/L			05/04/20 17:56	5
Sulfate	381		5.00	3.55	mg/L			05/04/20 17:56	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:04	1
Arsenic	0.00162	J	0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:04	1
Barium	0.0357		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:04	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:04	1
Boron	3.31		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:04	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:04	1
Calcium	174		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:04	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:04	1
Cobalt	0.0000920	J	0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:04	1
Lead	<0.000270		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:04	1
Lithium	0.0102		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:04	1
Molybdenum	0.0147		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:04	1
Selenium	0.00189	J	0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:04	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	946		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-180616-5

Date Collected: 04/27/20 12:13

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.29		5.00	2.00	mg/L			05/04/20 18:11	5
Fluoride	0.335	J	0.500	0.230	mg/L			05/04/20 18:11	5
Sulfate	149		5.00	3.55	mg/L			05/04/20 18:11	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:06	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:06	1
Barium	0.114		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:06	1
Boron	2.59		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:06	1
Cadmium	0.0000540	J	0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:06	1
Calcium	125		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:06	1
Cobalt	<0.0000910		0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:06	1
Lead	<0.000270		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:06	1
Lithium	0.0258		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:06	1
Molybdenum	0.0114		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:06	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	586		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-180616-6

Date Collected: 04/27/20 17:33

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.12		5.00	2.00	mg/L			05/04/20 18:27	5
Fluoride	0.429	J	0.500	0.230	mg/L			05/04/20 18:27	5
Sulfate	9.26		5.00	3.55	mg/L			05/04/20 18:27	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:19	1
Arsenic	0.0388		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:19	1
Barium	0.534		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:19	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:19	1
Boron	0.172		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:19	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:19	1
Calcium	126		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:19	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:19	1
Cobalt	0.000396	J	0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:19	1
Lead	<0.000270		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:19	1
Lithium	0.0568		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:19	1
Molybdenum	0.00185	J	0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:19	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:19	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	518		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: NC2MW8

Lab Sample ID: 310-180616-7

Date Collected: 04/27/20 15:02

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.8		5.00	2.00	mg/L			05/04/20 18:42	5
Fluoride	0.504		0.500	0.230	mg/L			05/04/20 18:42	5
Sulfate	6.46		5.00	3.55	mg/L			05/04/20 18:42	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:22	1
Arsenic	0.0190		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:22	1
Barium	0.548		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:22	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:22	1
Boron	0.0777	J	0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:22	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:22	1
Calcium	127		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:22	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:22	1
Cobalt	0.00201		0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:22	1
Lead	<0.000270		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:22	1
Lithium	0.0297		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:22	1
Molybdenum	0.00291		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:22	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:22	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	500		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: MW13

Lab Sample ID: 310-180616-8

Date Collected: 04/27/20 10:12

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.2		5.00	2.00	mg/L			05/04/20 18:58	5
Fluoride	0.383	J	0.500	0.230	mg/L			05/04/20 18:58	5
Sulfate	271		5.00	3.55	mg/L			05/04/20 18:58	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:24	1
Arsenic	0.0111		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:24	1
Barium	0.167		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:24	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:24	1
Boron	0.134		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:24	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:24	1
Calcium	102		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:24	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:24	1
Cobalt	0.00208		0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:24	1
Lead	0.000297	J	0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:24	1
Lithium	0.0348		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:24	1
Molybdenum	0.00335		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:24	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:24	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	622		30.0	26.0	mg/L			05/01/20 12:41	1

Client Sample Results

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

Job ID: 310-180616-1

Client Sample ID: DUP1

Lab Sample ID: 310-180616-9

Date Collected: 04/27/20 00:10

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.04		5.00	2.00	mg/L			05/04/20 19:45	5
Fluoride	0.484	J	0.500	0.230	mg/L			05/04/20 19:45	5
Sulfate	8.93		5.00	3.55	mg/L			05/04/20 19:45	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 19:27	1
Arsenic	0.0371		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 19:27	1
Barium	0.514		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 19:27	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 19:27	1
Boron	0.144		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 19:27	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 19:27	1
Calcium	120		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 19:27	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 19:27	1
Cobalt	0.000380	J	0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 19:27	1
Lead	0.000350	J	0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 19:27	1
Lithium	0.0537		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 19:27	1
Molybdenum	0.00170	J	0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 19:27	1
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 19:27	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 19:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	512		30.0	26.0	mg/L			05/01/20 12:41	1

Definitions/Glossary

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

Job ID: 310-180616-1

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Sample Results

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

Job ID: 310-180616-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-277881/3
Matrix: Water
Analysis Batch: 277881

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.400		1.00	0.400	mg/L			05/04/20 10:33	1
Fluoride	<0.0460		0.100	0.0460	mg/L			05/04/20 10:33	1
Sulfate	<0.710		1.00	0.710	mg/L			05/04/20 10:33	1

Lab Sample ID: LCS 310-277881/4
Matrix: Water
Analysis Batch: 277881

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	9.500		mg/L		95	90 - 110
Fluoride	2.00	1.951		mg/L		98	90 - 110
Sulfate	10.0	9.858		mg/L		99	90 - 110

Lab Sample ID: 310-180616-1 MS
Matrix: Water
Analysis Batch: 277881

Client Sample ID: NC2MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	9.64		25.0	32.88		mg/L		93	80 - 120
Fluoride	0.256	J	5.00	5.370		mg/L		102	80 - 120
Sulfate	350		25.0	363.1	4	mg/L		53	80 - 120

Lab Sample ID: 310-180616-1 MSD
Matrix: Water
Analysis Batch: 277881

Client Sample ID: NC2MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	9.64		25.0	32.91		mg/L		93	80 - 120	0	15
Fluoride	0.256	J	5.00	5.468		mg/L		104	80 - 120	2	15
Sulfate	350		25.0	366.2	4	mg/L		65	80 - 120	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-277317/1-A
Matrix: Water
Analysis Batch: 277453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 277317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000580		0.00100	0.000580	mg/L		04/30/20 08:17	04/30/20 18:17	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		04/30/20 08:17	04/30/20 18:17	1
Barium	<0.000900		0.00200	0.000900	mg/L		04/30/20 08:17	04/30/20 18:17	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		04/30/20 08:17	04/30/20 18:17	1
Boron	<0.0730		0.100	0.0730	mg/L		04/30/20 08:17	04/30/20 18:17	1
Cadmium	<0.0000390		0.000100	0.0000390	mg/L		04/30/20 08:17	04/30/20 18:17	1
Calcium	<0.190		0.500	0.190	mg/L		04/30/20 08:17	04/30/20 18:17	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/30/20 08:17	04/30/20 18:17	1
Cobalt	<0.0000910		0.000500	0.0000910	mg/L		04/30/20 08:17	04/30/20 18:17	1
Lead	<0.000270		0.000500	0.000270	mg/L		04/30/20 08:17	04/30/20 18:17	1
Lithium	<0.00230		0.0100	0.00230	mg/L		04/30/20 08:17	04/30/20 18:17	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		04/30/20 08:17	04/30/20 18:17	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

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

Job ID: 310-180616-1

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

Lab Sample ID: MB 310-277317/1-A
Matrix: Water
Analysis Batch: 277453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 277317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00100		0.00500	0.00100	mg/L		04/30/20 08:17	04/30/20 18:17	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/30/20 08:17	04/30/20 18:17	1

Lab Sample ID: LCS 310-277317/2-A
Matrix: Water
Analysis Batch: 277453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 277317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0400	0.03630		mg/L		91	80 - 120
Arsenic	0.0800	0.07595		mg/L		95	80 - 120
Barium	0.0800	0.08392		mg/L		105	80 - 120
Beryllium	0.0400	0.04134		mg/L		103	80 - 120
Boron	1.76	1.827		mg/L		104	80 - 120
Cadmium	0.0400	0.04218		mg/L		105	80 - 120
Calcium	4.00	4.158		mg/L		104	80 - 120
Chromium	0.0800	0.08349		mg/L		104	80 - 120
Cobalt	0.0400	0.04288		mg/L		107	80 - 120
Lead	0.0400	0.04201		mg/L		105	80 - 120
Lithium	0.200	0.1925		mg/L		96	80 - 120
Molybdenum	0.0800	0.07857		mg/L		98	80 - 120
Selenium	0.0800	0.07708		mg/L		96	80 - 120
Thallium	0.0320	0.03188		mg/L		100	80 - 120

Lab Sample ID: 310-180616-5 DU
Matrix: Water
Analysis Batch: 277453

Client Sample ID: NC2MW6
Prep Type: Total/NA
Prep Batch: 277317

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.000580		<0.000580		mg/L		NC	20
Arsenic	<0.000880		<0.000880		mg/L		NC	20
Barium	0.114		0.1130		mg/L		1	20
Beryllium	<0.000270		<0.000270		mg/L		NC	20
Boron	2.59		2.519		mg/L		3	20
Cadmium	0.0000540	J	0.00007300	J F5	mg/L		30	20
Calcium	125		125.9		mg/L		0.4	20
Chromium	<0.00110		<0.00110		mg/L		NC	20
Cobalt	<0.0000910		<0.0000910		mg/L		NC	20
Lead	<0.000270		<0.000270		mg/L		NC	20
Lithium	0.0258		0.02636		mg/L		2	20
Molybdenum	0.0114		0.01153		mg/L		1	20
Selenium	<0.00100		0.001135	J	mg/L		NC	20
Thallium	<0.000260		<0.000260		mg/L		NC	20

QC Sample Results

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

Job ID: 310-180616-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-277264/1-A
 Matrix: Water
 Analysis Batch: 277570

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 277264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		04/29/20 16:09	05/01/20 14:18	1

Lab Sample ID: LCS 310-277264/2-A
 Matrix: Water
 Analysis Batch: 277570

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 277264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001858		mg/L		111	80 - 120

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

Lab Sample ID: MB 310-277413/1
 Matrix: Water
 Analysis Batch: 277413

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		30.0	26.0	mg/L			04/30/20 16:27	1

Lab Sample ID: LCS 310-277413/2
 Matrix: Water
 Analysis Batch: 277413

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	994.0		mg/L		99	90 - 110

Lab Sample ID: MB 310-277517/1
 Matrix: Water
 Analysis Batch: 277517

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		30.0	26.0	mg/L			05/01/20 12:41	1

Lab Sample ID: LCS 310-277517/2
 Matrix: Water
 Analysis Batch: 277517

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	986.0		mg/L		99	90 - 110

Lab Sample ID: 310-180616-3 DU
 Matrix: Water
 Analysis Batch: 277517

Client Sample ID: NC2MW4
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	550		544.0		mg/L		1	24

QC Association Summary

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

Job ID: 310-180616-1

HPLC/IC

Analysis Batch: 277881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	9056A	
310-180616-2	NC2MW3	Total/NA	Water	9056A	
310-180616-3	NC2MW4	Total/NA	Water	9056A	
310-180616-4	NC2MW5	Total/NA	Water	9056A	
310-180616-5	NC2MW6	Total/NA	Water	9056A	
310-180616-6	NC2MW7	Total/NA	Water	9056A	
310-180616-7	NC2MW8	Total/NA	Water	9056A	
310-180616-8	MW13	Total/NA	Water	9056A	
310-180616-9	DUP1	Total/NA	Water	9056A	
MB 310-277881/3	Method Blank	Total/NA	Water	9056A	
LCS 310-277881/4	Lab Control Sample	Total/NA	Water	9056A	
310-180616-1 MS	NC2MW2	Total/NA	Water	9056A	
310-180616-1 MSD	NC2MW2	Total/NA	Water	9056A	

Metals

Prep Batch: 277264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	7470A	
310-180616-2	NC2MW3	Total/NA	Water	7470A	
310-180616-3	NC2MW4	Total/NA	Water	7470A	
310-180616-4	NC2MW5	Total/NA	Water	7470A	
310-180616-5	NC2MW6	Total/NA	Water	7470A	
310-180616-6	NC2MW7	Total/NA	Water	7470A	
310-180616-7	NC2MW8	Total/NA	Water	7470A	
310-180616-8	MW13	Total/NA	Water	7470A	
310-180616-9	DUP1	Total/NA	Water	7470A	
MB 310-277264/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-277264/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 277317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	3010A	
310-180616-2	NC2MW3	Total/NA	Water	3010A	
310-180616-3	NC2MW4	Total/NA	Water	3010A	
310-180616-4	NC2MW5	Total/NA	Water	3010A	
310-180616-5	NC2MW6	Total/NA	Water	3010A	
310-180616-6	NC2MW7	Total/NA	Water	3010A	
310-180616-7	NC2MW8	Total/NA	Water	3010A	
310-180616-8	MW13	Total/NA	Water	3010A	
310-180616-9	DUP1	Total/NA	Water	3010A	
MB 310-277317/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-277317/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-180616-5 DU	NC2MW6	Total/NA	Water	3010A	

Analysis Batch: 277453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	6020A	277317
310-180616-2	NC2MW3	Total/NA	Water	6020A	277317
310-180616-3	NC2MW4	Total/NA	Water	6020A	277317
310-180616-4	NC2MW5	Total/NA	Water	6020A	277317

Eurofins TestAmerica, Cedar Falls

QC Association Summary

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

Job ID: 310-180616-1

Metals (Continued)

Analysis Batch: 277453 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-5	NC2MW6	Total/NA	Water	6020A	277317
310-180616-6	NC2MW7	Total/NA	Water	6020A	277317
310-180616-7	NC2MW8	Total/NA	Water	6020A	277317
310-180616-8	MW13	Total/NA	Water	6020A	277317
310-180616-9	DUP1	Total/NA	Water	6020A	277317
MB 310-277317/1-A	Method Blank	Total/NA	Water	6020A	277317
LCS 310-277317/2-A	Lab Control Sample	Total/NA	Water	6020A	277317
310-180616-5 DU	NC2MW6	Total/NA	Water	6020A	277317

Analysis Batch: 277570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	7470A	277264
310-180616-2	NC2MW3	Total/NA	Water	7470A	277264
310-180616-3	NC2MW4	Total/NA	Water	7470A	277264
310-180616-4	NC2MW5	Total/NA	Water	7470A	277264
310-180616-5	NC2MW6	Total/NA	Water	7470A	277264
310-180616-6	NC2MW7	Total/NA	Water	7470A	277264
310-180616-7	NC2MW8	Total/NA	Water	7470A	277264
310-180616-8	MW13	Total/NA	Water	7470A	277264
310-180616-9	DUP1	Total/NA	Water	7470A	277264
MB 310-277264/1-A	Method Blank	Total/NA	Water	7470A	277264
LCS 310-277264/2-A	Lab Control Sample	Total/NA	Water	7470A	277264

General Chemistry

Analysis Batch: 277413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	SM 2540C	
310-180616-2	NC2MW3	Total/NA	Water	SM 2540C	
MB 310-277413/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-277413/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 277517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-3	NC2MW4	Total/NA	Water	SM 2540C	
310-180616-4	NC2MW5	Total/NA	Water	SM 2540C	
310-180616-5	NC2MW6	Total/NA	Water	SM 2540C	
310-180616-6	NC2MW7	Total/NA	Water	SM 2540C	
310-180616-7	NC2MW8	Total/NA	Water	SM 2540C	
310-180616-8	MW13	Total/NA	Water	SM 2540C	
310-180616-9	DUP1	Total/NA	Water	SM 2540C	
MB 310-277517/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-277517/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-180616-3 DU	NC2MW4	Total/NA	Water	SM 2540C	

Lab Chronicle

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

Job ID: 310-180616-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-180616-1

Date Collected: 04/27/20 16:05

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 16:38	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 18:56	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:44	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277413	04/30/20 16:27	SAS	TAL CF

Client Sample ID: NC2MW3

Lab Sample ID: 310-180616-2

Date Collected: 04/27/20 13:41

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 17:25	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 18:58	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:46	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277413	04/30/20 16:27	SAS	TAL CF

Client Sample ID: NC2MW4

Lab Sample ID: 310-180616-3

Date Collected: 04/27/20 11:05

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 17:40	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:01	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:48	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Client Sample ID: NC2MW5

Lab Sample ID: 310-180616-4

Date Collected: 04/27/20 11:43

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 17:56	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:04	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:50	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Lab Chronicle

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

Job ID: 310-180616-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-180616-5

Date Collected: 04/27/20 12:13

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 18:11	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:06	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:52	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Client Sample ID: NC2MW7

Lab Sample ID: 310-180616-6

Date Collected: 04/27/20 17:33

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 18:27	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:19	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:54	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Client Sample ID: NC2MW8

Lab Sample ID: 310-180616-7

Date Collected: 04/27/20 15:02

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 18:42	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:22	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:57	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-180616-8

Date Collected: 04/27/20 10:12

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 18:58	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:24	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 14:59	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Lab Chronicle

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

Job ID: 310-180616-1

Client Sample ID: DUP1

Lab Sample ID: 310-180616-9

Date Collected: 04/27/20 00:10

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	277881	05/04/20 19:45	SAD	TAL CF
Total/NA	Prep	3010A			277317	04/30/20 08:17	HED	TAL CF
Total/NA	Analysis	6020A		1	277453	04/30/20 19:27	SAD	TAL CF
Total/NA	Prep	7470A			277264	04/29/20 16:09	HIS	TAL CF
Total/NA	Analysis	7470A		1	277570	05/01/20 15:01	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	277517	05/01/20 12:41	SAS	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, 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 Unit 2 CCR

Job ID: 310-180616-1

Laboratory: Eurofins TestAmerica, 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
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Georgia	State	IA100001 (OR)	09-29-20
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20
Oregon	NELAP	IA100001	09-29-20
USDA	US Federal Programs	P330-19-00003	01-02-22

Method Summary

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

Job ID: 310-180616-1

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
3010A	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 TestAmerica, 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</u> <small>CITY</small> <u>NE</u> <small>STATE</small>	Project: <u>NE City Station</u>	
Receipt Information		
Date/Time Received: <u>06/29/20</u> <small>DATE</small> <u>0940</u> <small>TIME</small>	Received By: <u>ATL</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>6</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input 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>LR 2700</u>	Correction Factor (°C): <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.7</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		

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Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Oroha Public Power</u>		
City/State: <u>Oroha</u> <small>CITY</small>	<u>NB</u> <small>STATE</small>	Project: <u>NE City Station</u>
Receipt Information		
Date/Time Received: <u>01/21/20</u> <small>DATE</small>	<u>0906</u> <small>TIME</small>	Received By: <u>DL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>2</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input 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>DR Gunn C</u>	Correction Factor (°C): <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>3.1</u>	Corrected Temp (°C): <u>3.2</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		

Chain of Custody Record

Client Information		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:			
Client Contact: Kyle Uhing Phone: (531) 226-2515		Kyle K. Uhing Phone: (531) 226-2515		Hayes, Shawn M				Page:			
Company: Omaha Public Power District Address: 444 South 16th Street Mall 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 PO #: WO #: Email: kkuhing@oppd.com		E-Mail: shawn.hayes@testamericainc.com		E-Mail: shawn.hayes@testamericainc.com		Job #:		Job #:			
Due Date Requested:		TAT Requested (days):		PO #:		WO #:		TestAmerica Project #:			
Project Name: Nebraska City Station Unit 2 CCR / Landfill		TestAmerica Project #: 31007559		SSOW#:		Site: Nebraska City Station Unit 2		Special Instructions/Note:			
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=on-site, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested		Total Number of Containers	Special Instructions/Note:	
							Preservation Code:	Method of Shipment:			
NC2MW2	4/27/20	16:05	G	W	N	X	D	N	4	CCR Appendix III and IV Constituents	
NC2MW3	4/27/20	13:41	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
NC2MW4	4/27/20	11:05	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
NC2MW5	4/27/20	11:43	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
NC2MW6	4/27/20	12:13	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
NC2MW7	4/27/20	17:33	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
NC2MW8	4/27/20	15:02	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
MW13	4/27/20	10:12	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
DUP1	4/27/20	---	G	W	N	X	X	X	4	CCR Appendix III and IV Constituents	
<p>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)</p> <p>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/QC Requirements:</p>											
Relinquished by: <i>[Signature]</i>		Date/Time: 4/28/20 12:05		Company: Eurofins		Received by: <i>[Signature]</i>		Date/Time: 4-28-2020 1225		Company: Eurofins	
Relinquished by: <i>[Signature]</i>		Date/Time: 4-28-2020 1700		Company: Eurofins		Received by: <i>[Signature]</i>		Date/Time: 4/28/20 0940		Company: Eurofins	
Relinquished by: <i>[Signature]</i>		Date/Time:		Company:		Received by: <i>[Signature]</i>		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

1
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Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container		Preservative	
			pH	Temp	Added (mls)	Lot #
NC2MW2	310-180616-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW2	310-180616-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW2	310-180616-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW13	310-180616-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW13	310-180616-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW13	310-180616-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-180616-1

Login Number: 180616

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Miller, Drew E

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	

ANALYTICAL REPORT

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

Laboratory Job ID: 310-180616-2

Client Project/Site: Nebraska City 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:
6/2/2020 10:34:22 AM*

Shawn Hayes, Senior Project Manager
(319)229-8211
shawn.hayes@testamericainc.com

LINKS

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results through
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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

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

Job ID: 310-180616-2

Job ID: 310-180616-2

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-180616-2

Comments

No additional comments.

Receipt

The samples were received on 4/29/2020 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.7° C and 3.2° C.

RAD

Method PrecSep_0: Radium 228 Prep Batch 160-469977:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: NC2MW4 (310-180616-3), NC2MW7 (310-180616-6), MW13 (310-180616-8) and DUP1 (310-180616-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision. Sample 310-180616-3 have a cloudy appearance. Samples 310-180616-6, 310-180616-8 and 310-180616-9 have a slight yellow discoloration.

Method PrecSep-21: Radium 226 Prep Batch 160-469975:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: NC2MW4 (310-180616-3), NC2MW7 (310-180616-6), MW13 (310-180616-8) and DUP1 (310-180616-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision. Sample 310-180616-3 have a cloudy appearance. Samples 310-180616-6, 310-180616-8 and 310-180616-9 have a slight yellow discoloration.

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/Landfill

Job ID: 310-180616-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-180616-1	NC2MW2	Water	04/27/20 16:05	04/29/20 09:40	
310-180616-2	NC2MW3	Water	04/27/20 13:41	04/29/20 09:40	
310-180616-3	NC2MW4	Water	04/27/20 11:05	04/29/20 09:40	
310-180616-4	NC2MW5	Water	04/27/20 11:43	04/29/20 09:40	
310-180616-5	NC2MW6	Water	04/27/20 12:13	04/29/20 09:40	
310-180616-6	NC2MW7	Water	04/27/20 17:33	04/29/20 09:40	
310-180616-7	NC2MW8	Water	04/27/20 15:02	04/29/20 09:40	
310-180616-8	MW13	Water	04/27/20 10:12	04/29/20 09:40	
310-180616-9	DUP1	Water	04/27/20 00:10	04/29/20 09:40	

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-180616-1

Date Collected: 04/27/20 16:05

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.137	U	0.0998	0.101	1.00	0.144	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.851		0.341	0.350	1.00	0.483	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	80.4		40 - 110					05/11/20 07:10	05/26/20 11:46	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	0.987		0.355	0.364	5.00	0.483	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW3

Lab Sample ID: 310-180616-2

Date Collected: 04/27/20 13:41

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.106	0.107	1.00	0.126	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.332	U	0.236	0.238	1.00	0.368	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	91.2		40 - 110					05/11/20 07:10	05/26/20 11:46	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	0.552		0.259	0.261	5.00	0.368	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-180616-3

Date Collected: 04/27/20 11:05

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.218		0.118	0.120	1.00	0.146	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.525		0.317	0.320	1.00	0.481	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	86.7		40 - 110					05/11/20 07:10	05/26/20 11:46	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	0.743		0.338	0.342	5.00	0.481	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW5

Lab Sample ID: 310-180616-4

Date Collected: 04/27/20 11:43

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0218	U	0.0434	0.0435	1.00	0.112	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0408	U	0.217	0.217	1.00	0.398	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	92.7		40 - 110					05/11/20 07:10	05/26/20 11:46	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	-0.0625	U	0.221	0.221	5.00	0.398	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-180616-5

Date Collected: 04/27/20 12:13

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0933		0.0676	0.0682	1.00	0.0903	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0618	U	0.203	0.203	1.00	0.353	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	92.3		40 - 110					05/11/20 07:10	05/26/20 11:46	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	0.155	U	0.214	0.214	5.00	0.353	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-180616-6

Date Collected: 04/27/20 17:33

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.315		0.157	0.159	1.00	0.201	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.407	U	0.291	0.293	1.00	0.454	pCi/L	05/11/20 07:10	05/26/20 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		40 - 110					05/11/20 07:10	05/26/20 11:46	1
Y Carrier	96.8		40 - 110					05/11/20 07:10	05/26/20 11:46	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	0.722		0.331	0.333	5.00	0.454	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: NC2MW8

Lab Sample ID: 310-180616-7

Date Collected: 04/27/20 15:02

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.299		0.107	0.110	1.00	0.101	pCi/L	05/11/20 06:30	06/02/20 04:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/11/20 06:30	06/02/20 04:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289	U	0.231	0.233	1.00	0.367	pCi/L	05/11/20 07:10	05/26/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/11/20 07:10	05/26/20 11:47	1
Y Carrier	93.1		40 - 110					05/11/20 07:10	05/26/20 11:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.587		0.255	0.258	5.00	0.367	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: MW13

Lab Sample ID: 310-180616-8

Date Collected: 04/27/20 10:12

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0854	U	0.102	0.102	1.00	0.167	pCi/L	05/11/20 06:30	06/02/20 04:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					05/11/20 06:30	06/02/20 04:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.178	U	0.230	0.230	1.00	0.447	pCi/L	05/11/20 07:10	05/26/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					05/11/20 07:10	05/26/20 11:47	1
Y Carrier	95.0		40 - 110					05/11/20 07:10	05/26/20 11:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0922	U	0.252	0.252	5.00	0.447	pCi/L		06/02/20 08:54	1

Client Sample Results

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

Job ID: 310-180616-2

Client Sample ID: DUP1

Lab Sample ID: 310-180616-9

Date Collected: 04/27/20 00:10

Matrix: Water

Date Received: 04/29/20 09:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.317		0.143	0.145	1.00	0.166	pCi/L	05/11/20 06:30	06/02/20 04:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					05/11/20 06:30	06/02/20 04:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.429	U	0.281	0.284	1.00	0.431	pCi/L	05/11/20 07:10	05/26/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					05/11/20 07:10	05/26/20 11:47	1
Y Carrier	94.2		40 - 110					05/11/20 07:10	05/26/20 11:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.747		0.315	0.319	5.00	0.431	pCi/L		06/02/20 08:54	1

Definitions/Glossary

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

Job ID: 310-180616-2

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
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Sample Results

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

Job ID: 310-180616-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-469975/23-A
Matrix: Water
Analysis Batch: 471668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469975

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.01029	U	0.0744	0.0744	1.00	0.152	pCi/L	05/11/20 06:30	06/02/20 06:22	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	91.3		40 - 110					05/11/20 06:30	06/02/20 06:22	1

Lab Sample ID: LCS 160-469975/1-A
Matrix: Water
Analysis Batch: 471668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 469975

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	9.662		1.03	1.00	0.121	pCi/L	85	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	94.3		40 - 110					05/11/20 06:30	06/02/20 06:22

Lab Sample ID: LCSD 160-469975/2-A
Matrix: Water
Analysis Batch: 471668

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 469975

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	11.3	9.454		1.02	1.00	0.124	pCi/L	83	75 - 125	0.10	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	87.0		40 - 110					05/11/20 07:10	05/26/20 11:49	1	

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-469977/23-A
Matrix: Water
Analysis Batch: 471275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469977

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.07159	U	0.209	0.209	1.00	0.384	pCi/L	05/11/20 07:10	05/26/20 11:49	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	91.3		40 - 110					05/11/20 07:10	05/26/20 11:49	1
Y Carrier	96.8		40 - 110		05/11/20 07:10	05/26/20 11:49	1			

QC Sample Results

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

Job ID: 310-180616-2

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

Lab Sample ID: LCS 160-469977/1-A

Matrix: Water

Analysis Batch: 471273

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469977

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	8.81	8.061		0.949	1.00	0.365	pCi/L	92	75 - 125	
Carrier	%Yield	LCS Qualifier	Limits							
Ba Carrier	94.3		40 - 110							
Y Carrier	91.2		40 - 110							

Lab Sample ID: LCSD 160-469977/2-A

Matrix: Water

Analysis Batch: 471273

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469977

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	8.81	7.920		0.976	1.00	0.425	pCi/L	90	75 - 125	0.07	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	87.0		40 - 110								
Y Carrier	83.0		40 - 110								

QC Association Summary

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

Job ID: 310-180616-2

Rad

Prep Batch: 469975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	PrecSep-21	
310-180616-2	NC2MW3	Total/NA	Water	PrecSep-21	
310-180616-3	NC2MW4	Total/NA	Water	PrecSep-21	
310-180616-4	NC2MW5	Total/NA	Water	PrecSep-21	
310-180616-5	NC2MW6	Total/NA	Water	PrecSep-21	
310-180616-6	NC2MW7	Total/NA	Water	PrecSep-21	
310-180616-7	NC2MW8	Total/NA	Water	PrecSep-21	
310-180616-8	MW13	Total/NA	Water	PrecSep-21	
310-180616-9	DUP1	Total/NA	Water	PrecSep-21	
MB 160-469975/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-469975/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-469975/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 469977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-180616-1	NC2MW2	Total/NA	Water	PrecSep_0	
310-180616-2	NC2MW3	Total/NA	Water	PrecSep_0	
310-180616-3	NC2MW4	Total/NA	Water	PrecSep_0	
310-180616-4	NC2MW5	Total/NA	Water	PrecSep_0	
310-180616-5	NC2MW6	Total/NA	Water	PrecSep_0	
310-180616-6	NC2MW7	Total/NA	Water	PrecSep_0	
310-180616-7	NC2MW8	Total/NA	Water	PrecSep_0	
310-180616-8	MW13	Total/NA	Water	PrecSep_0	
310-180616-9	DUP1	Total/NA	Water	PrecSep_0	
MB 160-469977/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-469977/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-469977/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 310-180616-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-180616-1

Date Collected: 04/27/20 16:05

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: NC2MW3

Lab Sample ID: 310-180616-2

Date Collected: 04/27/20 13:41

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: NC2MW4

Lab Sample ID: 310-180616-3

Date Collected: 04/27/20 11:05

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: NC2MW5

Lab Sample ID: 310-180616-4

Date Collected: 04/27/20 11:43

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Lab Chronicle

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

Job ID: 310-180616-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-180616-5

Date Collected: 04/27/20 12:13

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: NC2MW7

Lab Sample ID: 310-180616-6

Date Collected: 04/27/20 17:33

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:46	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: NC2MW8

Lab Sample ID: 310-180616-7

Date Collected: 04/27/20 15:02

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:33	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:47	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Client Sample ID: MW13

Lab Sample ID: 310-180616-8

Date Collected: 04/27/20 10:12

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:34	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:47	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Lab Chronicle

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

Job ID: 310-180616-2

Client Sample ID: DUP1

Lab Sample ID: 310-180616-9

Date Collected: 04/27/20 00:10

Matrix: Water

Date Received: 04/29/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			469975	05/11/20 06:30	RBR	TAL SL
Total/NA	Analysis	9315		1	471668	06/02/20 04:34	KLS	TAL SL
Total/NA	Prep	PrecSep_0			469977	05/11/20 07:10	RBR	TAL SL
Total/NA	Analysis	9320		1	471273	05/26/20 11:47	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	471673	06/02/20 08:54	SMP	TAL SL

Laboratory References:

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



Accreditation/Certification Summary

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

Job ID: 310-180616-2

Laboratory: Eurofins TestAmerica, 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
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Georgia	State	IA100001 (OR)	09-29-20
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20
Oregon	NELAP	IA100001	09-29-20
USDA	US Federal Programs	P330-19-00003	01-02-22

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20

Eurofins TestAmerica, Cedar Falls

Accreditation/Certification Summary

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

Job ID: 310-180616-2

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

- 1
- 2
- 3
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Method Summary

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

Job ID: 310-180616-2

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

Protocol References:

None = None

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

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

Laboratory References:

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





Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power</u>		
City/State: <u>Omaha</u> <small>CITY</small> <u>NE</u> <small>STATE</small>	Project: <u>NE City Station</u>	
Receipt Information		
Date/Time Received: <u>06/29/20</u> <small>DATE</small> <u>0940</u> <small>TIME</small>	Received By: <u>ATL</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>6</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input 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>LR 2700</u>	Correction Factor (°C): <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.7</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		

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Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Oroha Public Power</u>		
City/State: <u>Oroha</u> <small>CITY</small> <u>NB</u> <small>STATE</small>	Project: <u>NE City Station</u>	
Receipt Information		
Date/Time Received: <u>01/21/20</u> <small>DATE</small> <u>0906</u> <small>TIME</small>	Received By: <u>DL</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>2</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input 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>DR Gunn C</u>	Correction Factor (°C): <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>3.1</u>	Corrected Temp (°C): <u>3.2</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		

Chain of Custody Record

Client Information		Sampler: Kyle K. Uhing		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):		COC No:	
Client Contact: Kyle Uhing		Phone: (531) 226-2515		E-Mail: shawn.hayes@testamericainc.com		Page:		Job #:	
Company: Omaha Public Power District		Address: 444 South 16th Street Mall 9E/EP1		City: Omaha		State, Zip: NE, 68102-2247		Phone: (531) 226-2515	
PO #:		WO #:		TestAmerica Project #:		SSOW#:		Project Name: Nebraska City Station Unit 2 CCR / Landfill	
Site: Nebraska City Station Unit 2		Due Date Requested:		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=volatile, A=air)	
NC2MW2	4/27/20	16:05	G	W	N	D	N	2540C TDS, 9056A Chloride, Fluoride, Sulfate	24
NC2MW3	4/27/20	13:41	G	W	N	D	N	Total 602A CCR Appendix III and IV, 7470A Mercury	4
NC2MW4	4/27/20	11:05	G	W	N	D	N	9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228	4
NC2MW5	4/27/20	11:43	G	W	N	D	N		4
NC2MW6	4/27/20	12:13	G	W	N	D	N		4
NC2MW7	4/27/20	17:33	G	W	N	D	N		4
NC2MW8	4/27/20	15:02	G	W	N	D	N		4
MW13	4/27/20	10:12	G	W	N	D	N		4
DUP1	4/27/20	---	G	W	N	D	N		4
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)									
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/QC Requirements:									
Empty Kit Relinquished by:		Date/Time: 4/28/20 12:05		Company: Eurofins		Received by: [Signature]		Date/Time: 4/28/20 1225	
Relinquished by:		Date/Time: 4/28/20 17:00		Company: Eurofins		Received by: [Signature]		Date/Time: 4/28/20 0940	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					
Δ Yes Δ No									



Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container		Preservative	
			pH	Temp	Added (mls)	Lot #
NC2MW2	310-180616-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW2	310-180616-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW2	310-180616-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW3	310-180616-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW4	310-180616-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW5	310-180616-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW6	310-180616-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW7	310-180616-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
NC2MW8	310-180616-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW13	310-180616-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW13	310-180616-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW13	310-180616-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP1	310-180616-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-180616-2

Login Number: 180616

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Miller, Drew E

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	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-180616-2

Login Number: 180616

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/30/20 07:00 PM

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

Tracer/Carrier Summary

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

Job ID: 310-180616-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	
310-180616-1	NC2MW2	81.0	
310-180616-2	NC2MW3	87.0	
310-180616-3	NC2MW4	93.7	
310-180616-4	NC2MW5	79.5	
310-180616-5	NC2MW6	93.7	
310-180616-6	NC2MW7	92.8	
310-180616-7	NC2MW8	91.0	
310-180616-8	MW13	91.9	
310-180616-9	DUP1	95.2	
LCS 160-469975/1-A	Lab Control Sample	94.3	
LCSD 160-469975/2-A	Lab Control Sample Dup	87.0	
MB 160-469975/23-A	Method Blank	91.3	
Tracer/Carrier Legend			
Ba Carrier = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
310-180616-1	NC2MW2	81.0	80.4
310-180616-2	NC2MW3	87.0	91.2
310-180616-3	NC2MW4	93.7	86.7
310-180616-4	NC2MW5	79.5	92.7
310-180616-5	NC2MW6	93.7	92.3
310-180616-6	NC2MW7	92.8	96.8
310-180616-7	NC2MW8	91.0	93.1
310-180616-8	MW13	91.9	95.0
310-180616-9	DUP1	95.2	94.2
LCS 160-469977/1-A	Lab Control Sample	94.3	91.2
LCSD 160-469977/2-A	Lab Control Sample Dup	87.0	83.0
MB 160-469977/23-A	Method Blank	91.3	96.8
Tracer/Carrier Legend			
Ba Carrier = Ba Carrier			
Y Carrier = Y Carrier			

ANALYTICAL REPORT

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

Laboratory Job ID: 310-186372-1
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:
7/23/2020 6:02:19 PM

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

LINKS

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results through
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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

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

Job ID: 310-186372-1

Job ID: 310-186372-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-186372-1

Comments

No additional comments.

Receipt

The samples were received on 7/16/2020 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.3° C, 0.5° C, 1.5° C and 1.8° 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.

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Sample Summary

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

Job ID: 310-186372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-186372-1	NC2MW2	Water	07/14/20 16:34	07/16/20 10:10	
310-186372-2	NC2MW3	Water	07/14/20 15:00	07/16/20 10:10	
310-186372-3	NC2MW4	Water	07/14/20 09:46	07/16/20 10:10	
310-186372-4	NC2MW5	Water	07/14/20 12:10	07/16/20 10:10	
310-186372-5	NC2MW6	Water	07/14/20 13:51	07/16/20 10:10	
310-186372-6	NC2MW7	Water	07/15/20 11:08	07/16/20 10:10	
310-186372-7	NC2MW8	Water	07/14/20 15:45	07/16/20 10:10	
310-186372-8	MW13	Water	07/14/20 09:09	07/16/20 10:10	
310-186372-9	DUP1	Water	07/15/20 00:00	07/16/20 10:10	

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Detection Summary

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

Job ID: 310-186372-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-186372-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.93		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	319		5.00	3.55	mg/L	5		9056A	Total/NA
Antimony	0.00268		0.00100	0.000510	mg/L	1		6020A	Total/NA
Arsenic	0.000989	J	0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.152		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.291		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.000306		0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	261		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000202	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000908		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0468		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0163		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1070		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW3

Lab Sample ID: 310-186372-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.86	J	5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	407		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00685		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.171		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.401		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	204		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00274		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000595		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0317		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0112		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	842		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW4

Lab Sample ID: 310-186372-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.38	J	5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	59.9		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00104	J	0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.311		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.113		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.000119		0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	129		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000591		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.00181		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0311		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00173	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Selenium	0.00129	J	0.00500	0.00100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	454		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW5

Lab Sample ID: 310-186372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.02		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	324		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00279		0.00200	0.000880	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-186372-1

Client Sample ID: NC2MW5 (Continued)

Lab Sample ID: 310-186372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0536		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	4.26		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	216		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000123	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000871		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0194		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0114		0.00200	0.00110	mg/L	1		6020A	Total/NA
Selenium	0.00551		0.00500	0.00100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1020		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW6

Lab Sample ID: 310-186372-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.83		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.232	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	135		5.00	3.55	mg/L	5		9056A	Total/NA
Barium	0.118		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	2.60		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.0000680	J	0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	122		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000122	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000482	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0309		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0133		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	526		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW7

Lab Sample ID: 310-186372-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.83		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0381		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.515		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.161		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	121		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000233	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0580		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00170	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	340		150	130	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW8

Lab Sample ID: 310-186372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.3		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	6.24		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0195		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.523		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.0838	J	0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	127		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00178		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000201	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0306		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00285		0.00200	0.00110	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-186372-1

Client Sample ID: NC2MW8 (Continued)

Lab Sample ID: 310-186372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	448		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13

Lab Sample ID: 310-186372-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.22		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.267	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	299		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0118		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.182		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.134		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	103		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000549		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000250	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0277		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00130	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	566		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP1

Lab Sample ID: 310-186372-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.34		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.325	J	0.500	0.230	mg/L	5		9056A	Total/NA
Arsenic	0.0397		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.530		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.151		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	124		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000233	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0587		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00166	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	350		150	130	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-186372-1

Date Collected: 07/14/20 16:34

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.93		5.00	2.00	mg/L			07/20/20 22:46	5
Fluoride	<0.230		0.500	0.230	mg/L			07/20/20 22:46	5
Sulfate	319		5.00	3.55	mg/L			07/20/20 22:46	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00268		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:06	1
Arsenic	0.000989	J	0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:06	1
Barium	0.152		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:06	1
Boron	0.291		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:06	1
Cadmium	0.000306		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:06	1
Calcium	261		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:06	1
Cobalt	0.000202	J	0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:06	1
Lead	0.000908		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:06	1
Lithium	0.0468		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:06	1
Molybdenum	0.0163		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:06	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1070		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW3

Lab Sample ID: 310-186372-2

Date Collected: 07/14/20 15:00

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.86	J	5.00	2.00	mg/L			07/20/20 23:02	5
Fluoride	<0.230		0.500	0.230	mg/L			07/20/20 23:02	5
Sulfate	407		5.00	3.55	mg/L			07/20/20 23:02	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:09	1
Arsenic	0.00685		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:09	1
Barium	0.171		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:09	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:09	1
Boron	0.401		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:09	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:09	1
Calcium	204		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:09	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:09	1
Cobalt	0.00274		0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:09	1
Lead	0.000595		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:09	1
Lithium	0.0317		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:09	1
Molybdenum	0.0112		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:09	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:09	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	842		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-186372-3

Date Collected: 07/14/20 09:46

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.38	J	5.00	2.00	mg/L			07/20/20 23:17	5
Fluoride	<0.230		0.500	0.230	mg/L			07/20/20 23:17	5
Sulfate	59.9		5.00	3.55	mg/L			07/20/20 23:17	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:11	1
Arsenic	0.00104	J	0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:11	1
Barium	0.311		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:11	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:11	1
Boron	0.113		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:11	1
Cadmium	0.000119		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:11	1
Calcium	129		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:11	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:11	1
Cobalt	0.000591		0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:11	1
Lead	0.00181		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:11	1
Lithium	0.0311		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:11	1
Molybdenum	0.00173	J	0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:11	1
Selenium	0.00129	J	0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:11	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	454		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW5

Lab Sample ID: 310-186372-4

Date Collected: 07/14/20 12:10

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.02		5.00	2.00	mg/L			07/20/20 23:33	5
Fluoride	<0.230		0.500	0.230	mg/L			07/20/20 23:33	5
Sulfate	324		5.00	3.55	mg/L			07/20/20 23:33	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:14	1
Arsenic	0.00279		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:14	1
Barium	0.0536		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:14	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:14	1
Boron	4.26		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:14	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:14	1
Calcium	216		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:14	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:14	1
Cobalt	0.000123	J	0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:14	1
Lead	0.000871		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:14	1
Lithium	0.0194		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:14	1
Molybdenum	0.0114		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:14	1
Selenium	0.00551		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:14	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1020		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-186372-5

Date Collected: 07/14/20 13:51

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.83		5.00	2.00	mg/L			07/20/20 23:49	5
Fluoride	0.232	J	0.500	0.230	mg/L			07/20/20 23:49	5
Sulfate	135		5.00	3.55	mg/L			07/20/20 23:49	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:17	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:17	1
Barium	0.118		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:17	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:17	1
Boron	2.60		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:17	1
Cadmium	0.0000680	J	0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:17	1
Calcium	122		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:17	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:17	1
Cobalt	0.000122	J	0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:17	1
Lead	0.000482	J	0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:17	1
Lithium	0.0309		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:17	1
Molybdenum	0.0133		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:17	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:17	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	526		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-186372-6

Date Collected: 07/15/20 11:08

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.83		5.00	2.00	mg/L			07/21/20 00:06	5
Fluoride	<0.230		0.500	0.230	mg/L			07/21/20 00:06	5
Sulfate	<3.55		5.00	3.55	mg/L			07/21/20 00:06	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:27	1
Arsenic	0.0381		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:27	1
Barium	0.515		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:27	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:27	1
Boron	0.161		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:27	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:27	1
Calcium	121		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:27	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:27	1
Cobalt	0.000233	J	0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:27	1
Lead	<0.000110		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:27	1
Lithium	0.0580		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:27	1
Molybdenum	0.00170	J	0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:27	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:27	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		150	130	mg/L			07/20/20 14:05	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: NC2MW8

Lab Sample ID: 310-186372-7

Date Collected: 07/14/20 15:45

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.3		5.00	2.00	mg/L			07/20/20 12:31	5
Fluoride	<0.230		0.500	0.230	mg/L			07/20/20 12:31	5
Sulfate	6.24		5.00	3.55	mg/L			07/20/20 12:31	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:30	1
Arsenic	0.0195		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:30	1
Barium	0.523		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:30	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:30	1
Boron	0.0838	J	0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:30	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:30	1
Calcium	127		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:30	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:30	1
Cobalt	0.00178		0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:30	1
Lead	0.000201	J	0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:30	1
Lithium	0.0306		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:30	1
Molybdenum	0.00285		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:30	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:30	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	448		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: MW13

Lab Sample ID: 310-186372-8

Date Collected: 07/14/20 09:09

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.22		5.00	2.00	mg/L			07/20/20 13:18	5
Fluoride	0.267	J	0.500	0.230	mg/L			07/20/20 13:18	5
Sulfate	299		5.00	3.55	mg/L			07/20/20 13:18	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:33	1
Arsenic	0.0118		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:33	1
Barium	0.182		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:33	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:33	1
Boron	0.134		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:33	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:33	1
Calcium	103		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:33	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:33	1
Cobalt	0.000549		0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:33	1
Lead	0.000250	J	0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:33	1
Lithium	0.0277		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:33	1
Molybdenum	0.00130	J	0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:33	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:33	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	566		30.0	26.0	mg/L			07/16/20 15:38	1

Client Sample Results

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

Job ID: 310-186372-1

Client Sample ID: DUP1

Lab Sample ID: 310-186372-9

Date Collected: 07/15/20 00:00

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.34		5.00	2.00	mg/L			07/20/20 13:33	5
Fluoride	0.325	J	0.500	0.230	mg/L			07/20/20 13:33	5
Sulfate	<3.55		5.00	3.55	mg/L			07/20/20 13:33	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 21:35	1
Arsenic	0.0397		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 21:35	1
Barium	0.530		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 21:35	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 21:35	1
Boron	0.151		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 21:35	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 21:35	1
Calcium	124		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 21:35	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 21:35	1
Cobalt	0.000233	J	0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 21:35	1
Lead	<0.000110		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 21:35	1
Lithium	0.0587		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 21:35	1
Molybdenum	0.00166	J	0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 21:35	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 21:35	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 21:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/17/20 09:54	07/17/20 15:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	350		150	130	mg/L			07/20/20 14:05	1

Definitions/Glossary

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

Job ID: 310-186372-1

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

QC Sample Results

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

Job ID: 310-186372-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-285938/3
Matrix: Water
Analysis Batch: 285938

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.400		1.00	0.400	mg/L			07/20/20 17:18	1
Fluoride	<0.0460		0.100	0.0460	mg/L			07/20/20 17:18	1
Sulfate	<0.710		1.00	0.710	mg/L			07/20/20 17:18	1

Lab Sample ID: LCS 310-285938/4
Matrix: Water
Analysis Batch: 285938

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	9.725		mg/L		97	90 - 110
Fluoride	2.00	1.976		mg/L		99	90 - 110
Sulfate	10.0	10.02		mg/L		100	90 - 110

Lab Sample ID: MB 310-285943/36
Matrix: Water
Analysis Batch: 285943

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.400		1.00	0.400	mg/L			07/21/20 03:52	1
Fluoride	<0.0460		0.100	0.0460	mg/L			07/21/20 03:52	1
Sulfate	<0.710		1.00	0.710	mg/L			07/21/20 03:52	1

Lab Sample ID: LCS 310-285943/4
Matrix: Water
Analysis Batch: 285943

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	9.631		mg/L		96	90 - 110
Fluoride	2.00	1.975		mg/L		99	90 - 110
Sulfate	10.0	9.822		mg/L		98	90 - 110

Lab Sample ID: 310-186372-7 MS
Matrix: Water
Analysis Batch: 285943

Client Sample ID: NC2MW8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.3		25.0	32.30		mg/L		88	80 - 120
Fluoride	<0.230		5.00	5.128		mg/L		103	80 - 120
Sulfate	6.24		25.0	29.53		mg/L		93	80 - 120

Lab Sample ID: 310-186372-7 MSD
Matrix: Water
Analysis Batch: 285943

Client Sample ID: NC2MW8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.3		25.0	32.34		mg/L		88	80 - 120	0	15
Fluoride	<0.230		5.00	5.206		mg/L		104	80 - 120	2	15
Sulfate	6.24		25.0	29.65		mg/L		94	80 - 120	0	15

QC Sample Results

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

Job ID: 310-186372-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-285500/1-A
Matrix: Water
Analysis Batch: 285879

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 285500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		07/17/20 08:00	07/20/20 20:42	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		07/17/20 08:00	07/20/20 20:42	1
Barium	<0.000280		0.00200	0.000280	mg/L		07/17/20 08:00	07/20/20 20:42	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		07/17/20 08:00	07/20/20 20:42	1
Boron	<0.0800		0.100	0.0800	mg/L		07/17/20 08:00	07/20/20 20:42	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		07/17/20 08:00	07/20/20 20:42	1
Calcium	<0.190		0.500	0.190	mg/L		07/17/20 08:00	07/20/20 20:42	1
Chromium	<0.00110		0.00500	0.00110	mg/L		07/17/20 08:00	07/20/20 20:42	1
Cobalt	<0.0000910		0.000500	0.0000910	mg/L		07/17/20 08:00	07/20/20 20:42	1
Lead	<0.000110		0.000500	0.000110	mg/L		07/17/20 08:00	07/20/20 20:42	1
Lithium	<0.00250		0.0100	0.00250	mg/L		07/17/20 08:00	07/20/20 20:42	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		07/17/20 08:00	07/20/20 20:42	1
Selenium	<0.00100		0.00500	0.00100	mg/L		07/17/20 08:00	07/20/20 20:42	1
Thallium	<0.000260		0.00100	0.000260	mg/L		07/17/20 08:00	07/20/20 20:42	1

Lab Sample ID: LCS 310-285500/2-A
Matrix: Water
Analysis Batch: 285879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 285500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Beryllium	0.0400	0.03348		mg/L		84	80 - 120
Boron	1.76	1.453		mg/L		83	80 - 120
Cadmium	0.0400	0.03286		mg/L		82	80 - 120
Calcium	4.00	3.304		mg/L		83	80 - 120
Chromium	0.0800	0.06490		mg/L		81	80 - 120
Lead	0.0400	0.03372		mg/L		84	80 - 120
Lithium	0.200	0.1596		mg/L		80	80 - 120
Thallium	0.0320	0.02573		mg/L		80	80 - 120

Lab Sample ID: LCS 310-285500/2-A
Matrix: Water
Analysis Batch: 286180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 285500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0400	0.03899		mg/L		97	80 - 120
Arsenic	0.0800	0.07633		mg/L		95	80 - 120
Barium	0.0800	0.08854		mg/L		111	80 - 120
Cobalt	0.0400	0.04509		mg/L		113	80 - 120
Molybdenum	0.0800	0.08342		mg/L		104	80 - 120
Selenium	0.0800	0.07654		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-285473/1-A
Matrix: Water
Analysis Batch: 285668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 285473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		07/16/20 14:05	07/17/20 14:32	1

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QC Sample Results

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

Job ID: 310-186372-1

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

Lab Sample ID: LCS 310-285473/2-A
 Matrix: Water
 Analysis Batch: 285668

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 285473
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00167	0.001602		mg/L		96	80 - 120

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

Lab Sample ID: MB 310-285503/1
 Matrix: Water
 Analysis Batch: 285503

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		30.0	26.0	mg/L			07/16/20 15:38	1

Lab Sample ID: LCS 310-285503/2
 Matrix: Water
 Analysis Batch: 285503

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	1000	936.0		mg/L		94	90 - 110

Lab Sample ID: 310-186372-2 DU
 Matrix: Water
 Analysis Batch: 285503

Client Sample ID: NC2MW3
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	842		926.0		mg/L		10	24

Lab Sample ID: MB 310-285820/1
 Matrix: Water
 Analysis Batch: 285820

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		30.0	26.0	mg/L			07/20/20 14:05	1

Lab Sample ID: LCS 310-285820/2
 Matrix: Water
 Analysis Batch: 285820

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	1000	990.0		mg/L		99	90 - 110

QC Association Summary

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

Job ID: 310-186372-1

HPLC/IC

Analysis Batch: 285938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	9056A	
310-186372-2	NC2MW3	Total/NA	Water	9056A	
310-186372-3	NC2MW4	Total/NA	Water	9056A	
310-186372-4	NC2MW5	Total/NA	Water	9056A	
310-186372-5	NC2MW6	Total/NA	Water	9056A	
310-186372-6	NC2MW7	Total/NA	Water	9056A	
MB 310-285938/3	Method Blank	Total/NA	Water	9056A	
LCS 310-285938/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 285943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-7	NC2MW8	Total/NA	Water	9056A	
310-186372-8	MW13	Total/NA	Water	9056A	
310-186372-9	DUP1	Total/NA	Water	9056A	
MB 310-285943/36	Method Blank	Total/NA	Water	9056A	
LCS 310-285943/4	Lab Control Sample	Total/NA	Water	9056A	
310-186372-7 MS	NC2MW8	Total/NA	Water	9056A	
310-186372-7 MSD	NC2MW8	Total/NA	Water	9056A	

Metals

Prep Batch: 285473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	7470A	
310-186372-2	NC2MW3	Total/NA	Water	7470A	
310-186372-3	NC2MW4	Total/NA	Water	7470A	
310-186372-4	NC2MW5	Total/NA	Water	7470A	
310-186372-5	NC2MW6	Total/NA	Water	7470A	
310-186372-6	NC2MW7	Total/NA	Water	7470A	
310-186372-7	NC2MW8	Total/NA	Water	7470A	
310-186372-8	MW13	Total/NA	Water	7470A	
310-186372-9	DUP1	Total/NA	Water	7470A	
MB 310-285473/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-285473/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 285500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	3010A	
310-186372-2	NC2MW3	Total/NA	Water	3010A	
310-186372-3	NC2MW4	Total/NA	Water	3010A	
310-186372-4	NC2MW5	Total/NA	Water	3010A	
310-186372-5	NC2MW6	Total/NA	Water	3010A	
310-186372-6	NC2MW7	Total/NA	Water	3010A	
310-186372-7	NC2MW8	Total/NA	Water	3010A	
310-186372-8	MW13	Total/NA	Water	3010A	
310-186372-9	DUP1	Total/NA	Water	3010A	
MB 310-285500/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-285500/2-A	Lab Control Sample	Total/NA	Water	3010A	

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QC Association Summary

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

Job ID: 310-186372-1

Metals

Analysis Batch: 285668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	7470A	285473
310-186372-2	NC2MW3	Total/NA	Water	7470A	285473
310-186372-3	NC2MW4	Total/NA	Water	7470A	285473
310-186372-4	NC2MW5	Total/NA	Water	7470A	285473
310-186372-5	NC2MW6	Total/NA	Water	7470A	285473
310-186372-6	NC2MW7	Total/NA	Water	7470A	285473
310-186372-7	NC2MW8	Total/NA	Water	7470A	285473
310-186372-8	MW13	Total/NA	Water	7470A	285473
310-186372-9	DUP1	Total/NA	Water	7470A	285473
MB 310-285473/1-A	Method Blank	Total/NA	Water	7470A	285473
LCS 310-285473/2-A	Lab Control Sample	Total/NA	Water	7470A	285473

Analysis Batch: 285879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	6020A	285500
310-186372-2	NC2MW3	Total/NA	Water	6020A	285500
310-186372-3	NC2MW4	Total/NA	Water	6020A	285500
310-186372-4	NC2MW5	Total/NA	Water	6020A	285500
310-186372-5	NC2MW6	Total/NA	Water	6020A	285500
310-186372-6	NC2MW7	Total/NA	Water	6020A	285500
310-186372-7	NC2MW8	Total/NA	Water	6020A	285500
310-186372-8	MW13	Total/NA	Water	6020A	285500
310-186372-9	DUP1	Total/NA	Water	6020A	285500
MB 310-285500/1-A	Method Blank	Total/NA	Water	6020A	285500
LCS 310-285500/2-A	Lab Control Sample	Total/NA	Water	6020A	285500

Analysis Batch: 286180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-285500/2-A	Lab Control Sample	Total/NA	Water	6020A	285500

General Chemistry

Analysis Batch: 285503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	SM 2540C	
310-186372-2	NC2MW3	Total/NA	Water	SM 2540C	
310-186372-3	NC2MW4	Total/NA	Water	SM 2540C	
310-186372-4	NC2MW5	Total/NA	Water	SM 2540C	
310-186372-5	NC2MW6	Total/NA	Water	SM 2540C	
310-186372-7	NC2MW8	Total/NA	Water	SM 2540C	
310-186372-8	MW13	Total/NA	Water	SM 2540C	
MB 310-285503/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-285503/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-186372-2 DU	NC2MW3	Total/NA	Water	SM 2540C	

Analysis Batch: 285820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-6	NC2MW7	Total/NA	Water	SM 2540C	
310-186372-9	DUP1	Total/NA	Water	SM 2540C	
MB 310-285820/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-285820/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Cedar Falls

Lab Chronicle

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

Job ID: 310-186372-1

Client Sample ID: NC2MW2

Date Collected: 07/14/20 16:34

Date Received: 07/16/20 10:10

Lab Sample ID: 310-186372-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/20/20 22:46	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:06	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:07	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Client Sample ID: NC2MW3

Date Collected: 07/14/20 15:00

Date Received: 07/16/20 10:10

Lab Sample ID: 310-186372-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/20/20 23:02	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:09	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:09	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Client Sample ID: NC2MW4

Date Collected: 07/14/20 09:46

Date Received: 07/16/20 10:10

Lab Sample ID: 310-186372-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/20/20 23:17	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:11	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:11	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Client Sample ID: NC2MW5

Date Collected: 07/14/20 12:10

Date Received: 07/16/20 10:10

Lab Sample ID: 310-186372-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/20/20 23:33	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:14	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:13	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Lab Chronicle

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

Job ID: 310-186372-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-186372-5

Date Collected: 07/14/20 13:51

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/20/20 23:49	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:17	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:16	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Client Sample ID: NC2MW7

Lab Sample ID: 310-186372-6

Date Collected: 07/15/20 11:08

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285938	07/21/20 00:06	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:27	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:18	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285820	07/20/20 14:05	LBB	TAL CF

Client Sample ID: NC2MW8

Lab Sample ID: 310-186372-7

Date Collected: 07/14/20 15:45

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285943	07/20/20 12:31	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:30	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:20	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-186372-8

Date Collected: 07/14/20 09:09

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	285943	07/20/20 13:18	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:33	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:26	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285503	07/16/20 15:38	LBB	TAL CF

Lab Chronicle

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

Job ID: 310-186372-1

Client Sample ID: DUP1

Lab Sample ID: 310-186372-9

Date Collected: 07/15/20 00:00

Matrix: Water

Date Received: 07/16/20 10:10

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Analysis	9056A		5	285943	07/20/20 13:33	ACJ	TAL CF
Total/NA	Prep	3010A			285500	07/17/20 08:00	HED	TAL CF
Total/NA	Analysis	6020A		1	285879	07/20/20 21:35	SAD	TAL CF
Total/NA	Prep	7470A			285473	07/17/20 09:54	HIS	TAL CF
Total/NA	Analysis	7470A		1	285668	07/17/20 15:28	HIS	TAL CF
Total/NA	Analysis	SM 2540C		1	285820	07/20/20 14:05	LBB	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, 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 Unit 2 CCR

Job ID: 310-186372-1

Laboratory: Eurofins TestAmerica, 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
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Georgia	State	IA100001 (OR)	09-29-20
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20
Oregon	NELAP	IA100001	09-29-20
USDA	US Federal Programs	P330-19-00003	01-02-22

Method Summary

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

Job ID: 310-186372-1

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
3010A	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 TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Environment Testing
TestAmerica



310-186372 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>OPDD</u>			
City/State: <u>Omaha</u>	CITY	STATE: <u>NE</u>	Project:
Receipt Information			
Date/Time Received: <u>7/14/20</u>	DATE	<u>1010</u>	TIME
Received By: <u>Am</u>			
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.			
Uncorrected Temp (°C): <u>0.2</u>	Corrected Temp (°C): <u>0.3</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			

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: OPPD			
City/State:	CITY Omaha	STATE NE	Project:
Receipt Information			
Date/Time Received:	DATE 7/16/20	TIME 1010	Received By: AM
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 # 2 of 4	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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:	M	Correction Factor (°C):	+0.1
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	1.7	Corrected Temp (°C):	1.8
* 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			
MW13			

Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>OPPD</u>		
City/State: <u>Amaha</u> <u>DE</u>	Project:	
Receipt Information		
Date/Time Received: DATE <u>7/14/20</u> TIME <u>10:10</u>	Received By: <u>AM</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>4</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>1.4</u>	Corrected Temp (°C): <u>1.5</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		

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>UPPD</u>			
City/State: <u>Omaha</u> <small>CITY</small>	<u>NE</u> <small>STATE</small>	Project:	
Receipt Information			
Date/Time Received: <u>7/16/20</u> <small>DATE</small>	<u>1010</u> <small>TIME</small>	Received By: <u>AM</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.4</u>	Corrected Temp (°C): <u>0.5</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			

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Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-186372-1

Login Number: 186372

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Miller, Drew E

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	



ANALYTICAL REPORT

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

Laboratory Job ID: 310-186372-2
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:
8/14/2020 3:00:15 PM*

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



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Case Narrative

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

Job ID: 310-186372-2

Job ID: 310-186372-2

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-186372-2

Comments

No additional comments.

Receipt

The samples were received on 7/16/2020 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.3° C, 0.5° C, 1.5° C and 1.8° C.

RAD

Method 9320: Radium-228 prep batch 160-476790:

The following sample did not meet the requested limit (RL) due to the reduced sample volume and low carrier recovery attributed to the presence of matrix interferences: NC2MW4 (310-186372-3)

Method PrecSep_0: Radium 228 Prep Batch 160-476790:

Sample 310-186372-3 was reduced due to a cloudy appearance: NC2MW4 (310-186372-3).

Method PrecSep-21: Radium 226 Prep Batch 160-476788:

Sample 310-186372-3 was reduced due to a cloudy appearance NC2MW4 (310-186372-3).

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: 310-186372-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-186372-1	NC2MW2	Water	07/14/20 16:34	07/16/20 10:10	
310-186372-2	NC2MW3	Water	07/14/20 15:00	07/16/20 10:10	
310-186372-3	NC2MW4	Water	07/14/20 09:46	07/16/20 10:10	
310-186372-4	NC2MW5	Water	07/14/20 12:10	07/16/20 10:10	
310-186372-5	NC2MW6	Water	07/14/20 13:51	07/16/20 10:10	
310-186372-6	NC2MW7	Water	07/15/20 11:08	07/16/20 10:10	
310-186372-7	NC2MW8	Water	07/14/20 15:45	07/16/20 10:10	
310-186372-8	MW13	Water	07/14/20 09:09	07/16/20 10:10	
310-186372-9	DUP1	Water	07/15/20 00:00	07/16/20 10:10	

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-186372-1

Date Collected: 07/14/20 16:34

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.321		0.191	0.193	1.00	0.232	pCi/L	07/20/20 17:41	08/12/20 19:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					07/20/20 17:41	08/12/20 19:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.674		0.316	0.322	1.00	0.473	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	90.5		40 - 110					07/20/20 17:56	08/12/20 11:25	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	0.995		0.369	0.375	5.00	0.473	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW3

Lab Sample ID: 310-186372-2

Date Collected: 07/14/20 15:00

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.292		0.183	0.185	1.00	0.220	pCi/L	07/20/20 17:41	08/12/20 19:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					07/20/20 17:41	08/12/20 19:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.593		0.281	0.286	1.00	0.413	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	91.6		40 - 110					07/20/20 17:56	08/12/20 11:25	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	0.885		0.335	0.341	5.00	0.413	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-186372-3

Date Collected: 07/14/20 09:46

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.281	U	0.446	0.447	1.00	0.780	pCi/L	07/20/20 17:41	08/12/20 19:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	49.6		40 - 110					07/20/20 17:41	08/12/20 19:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.91	G	0.986	1.00	1.00	1.47	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	49.6		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	90.5		40 - 110					07/20/20 17:56	08/12/20 11:25	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	2.19		1.08	1.10	5.00	1.47	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW5

Lab Sample ID: 310-186372-4

Date Collected: 07/14/20 12:10

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.153	0.154	1.00	0.228	pCi/L	07/20/20 17:41	08/12/20 19:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					07/20/20 17:41	08/12/20 19:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0736	U	0.262	0.262	1.00	0.475	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	90.5		40 - 110					07/20/20 17:56	08/12/20 11:25	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	0.0869	U	0.303	0.304	5.00	0.475	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-186372-5

Date Collected: 07/14/20 13:51

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.281		0.194	0.195	1.00	0.266	pCi/L	07/20/20 17:41	08/12/20 19:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/20/20 17:41	08/12/20 19:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.589		0.267	0.272	1.00	0.391	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	93.8		40 - 110					07/20/20 17:56	08/12/20 11:25	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	0.870		0.330	0.335	5.00	0.391	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-186372-6

Date Collected: 07/15/20 11:08

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.305		0.188	0.190	1.00	0.240	pCi/L	07/20/20 17:41	08/12/20 19:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/20/20 17:41	08/12/20 19:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.499		0.237	0.241	1.00	0.348	pCi/L	07/20/20 17:56	08/12/20 11:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/20/20 17:56	08/12/20 11:25	1
Y Carrier	99.4		40 - 110					07/20/20 17:56	08/12/20 11:25	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	0.804		0.303	0.307	5.00	0.348	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: NC2MW8

Lab Sample ID: 310-186372-7

Date Collected: 07/14/20 15:45

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.248	U	0.188	0.190	1.00	0.267	pCi/L	07/20/20 17:41	08/12/20 19:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.4		40 - 110					07/20/20 17:41	08/12/20 19:54	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		0.211	0.214	1.00	0.320	pCi/L	07/20/20 17:56	08/12/20 11:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.4		40 - 110					07/20/20 17:56	08/12/20 11:26	1
Y Carrier	97.9		40 - 110					07/20/20 17:56	08/12/20 11:26	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	0.598		0.283	0.286	5.00	0.320	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: MW13

Lab Sample ID: 310-186372-8

Date Collected: 07/14/20 09:09

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.267		0.176	0.177	1.00	0.229	pCi/L	07/20/20 17:41	08/13/20 09:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					07/20/20 17:41	08/13/20 09:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.272	U	0.272	0.273	1.00	0.443	pCi/L	07/20/20 17:56	08/12/20 11:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					07/20/20 17:56	08/12/20 11:26	1
Y Carrier	90.1		40 - 110					07/20/20 17:56	08/12/20 11:26	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	0.539		0.324	0.325	5.00	0.443	pCi/L		08/14/20 09:44	1

Client Sample Results

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

Job ID: 310-186372-2

Client Sample ID: DUP1

Lab Sample ID: 310-186372-9

Date Collected: 07/15/20 00:00

Matrix: Water

Date Received: 07/16/20 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.358		0.177	0.180	1.00	0.200	pCi/L	07/20/20 17:41	08/13/20 09:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.5		40 - 110					07/20/20 17:41	08/13/20 09:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.473		0.254	0.257	1.00	0.381	pCi/L	07/20/20 17:56	08/12/20 11:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.5		40 - 110					07/20/20 17:56	08/12/20 11:26	1
Y Carrier	94.6		40 - 110					07/20/20 17:56	08/12/20 11:26	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	0.831		0.310	0.314	5.00	0.381	pCi/L		08/14/20 09:44	1

Definitions/Glossary

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

Job ID: 310-186372-2

Qualifiers

Rad

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

Glossary

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

QC Sample Results

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

Job ID: 310-186372-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-476788/16-A
Matrix: Water
Analysis Batch: 479320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476788

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.006624	U	0.0917	0.0917	1.00	0.196	pCi/L	07/20/20 17:41	08/13/20 09:14	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	89.6		40 - 110		07/20/20 17:41	08/13/20 09:14	1			

Lab Sample ID: LCS 160-476788/1-A
Matrix: Water
Analysis Batch: 479224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476788

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	10.16		1.29	1.00	0.339	pCi/L	90	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	95.5		40 - 110						

Lab Sample ID: LCSD 160-476788/2-A
Matrix: Water
Analysis Batch: 479224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476788

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	11.3	10.25		1.27	1.00	0.259	pCi/L	90	75 - 125	0.04	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	101		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-476790/16-A
Matrix: Water
Analysis Batch: 479303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476790

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1783	U	0.222	0.223	1.00	0.368	pCi/L	07/20/20 17:56	08/12/20 11:32	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	89.6		40 - 110		07/20/20 17:56	08/12/20 11:32	1			
Y Carrier	97.6		40 - 110		07/20/20 17:56	08/12/20 11:32	1			

QC Sample Results

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

Job ID: 310-186372-2

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

Lab Sample ID: LCS 160-476790/1-A
Matrix: Water
Analysis Batch: 479307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476790

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	10.2	9.108		1.07	1.00	0.444	pCi/L	89	75 - 125	
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	95.5		40 - 110							
Y Carrier	90.1		40 - 110							

Lab Sample ID: LCSD 160-476790/2-A
Matrix: Water
Analysis Batch: 479307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476790

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	10.2	8.989		1.03	1.00	0.363	pCi/L	88	75 - 125	0.06	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	101		40 - 110								
Y Carrier	93.1		40 - 110								

QC Association Summary

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

Job ID: 310-186372-2

Rad

Prep Batch: 476788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	PrecSep-21	
310-186372-2	NC2MW3	Total/NA	Water	PrecSep-21	
310-186372-3	NC2MW4	Total/NA	Water	PrecSep-21	
310-186372-4	NC2MW5	Total/NA	Water	PrecSep-21	
310-186372-5	NC2MW6	Total/NA	Water	PrecSep-21	
310-186372-6	NC2MW7	Total/NA	Water	PrecSep-21	
310-186372-7	NC2MW8	Total/NA	Water	PrecSep-21	
310-186372-8	MW13	Total/NA	Water	PrecSep-21	
310-186372-9	DUP1	Total/NA	Water	PrecSep-21	
MB 160-476788/16-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-476788/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-476788/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 476790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-186372-1	NC2MW2	Total/NA	Water	PrecSep_0	
310-186372-2	NC2MW3	Total/NA	Water	PrecSep_0	
310-186372-3	NC2MW4	Total/NA	Water	PrecSep_0	
310-186372-4	NC2MW5	Total/NA	Water	PrecSep_0	
310-186372-5	NC2MW6	Total/NA	Water	PrecSep_0	
310-186372-6	NC2MW7	Total/NA	Water	PrecSep_0	
310-186372-7	NC2MW8	Total/NA	Water	PrecSep_0	
310-186372-8	MW13	Total/NA	Water	PrecSep_0	
310-186372-9	DUP1	Total/NA	Water	PrecSep_0	
MB 160-476790/16-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-476790/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-476790/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 310-186372-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-186372-1

Date Collected: 07/14/20 16:34

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: NC2MW3

Lab Sample ID: 310-186372-2

Date Collected: 07/14/20 15:00

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: NC2MW4

Lab Sample ID: 310-186372-3

Date Collected: 07/14/20 09:46

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: NC2MW5

Lab Sample ID: 310-186372-4

Date Collected: 07/14/20 12:10

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Lab Chronicle

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

Job ID: 310-186372-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-186372-5

Date Collected: 07/14/20 13:51

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:54	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: NC2MW7

Lab Sample ID: 310-186372-6

Date Collected: 07/15/20 11:08

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:54	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: NC2MW8

Lab Sample ID: 310-186372-7

Date Collected: 07/14/20 15:45

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479224	08/12/20 19:54	SCB	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:26	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Client Sample ID: MW13

Lab Sample ID: 310-186372-8

Date Collected: 07/14/20 09:09

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479320	08/13/20 09:12	CMM	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:26	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Lab Chronicle

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

Job ID: 310-186372-2

Client Sample ID: DUP1

Lab Sample ID: 310-186372-9

Date Collected: 07/15/20 00:00

Matrix: Water

Date Received: 07/16/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			476788	07/20/20 17:41	MNH	TAL SL
Total/NA	Analysis	9315		1	479320	08/13/20 09:13	CMM	TAL SL
Total/NA	Prep	PrecSep_0			476790	07/20/20 17:56	MNH	TAL SL
Total/NA	Analysis	9320		1	479307	08/12/20 11:26	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	479513	08/14/20 09:44	SMP	TAL SL

Laboratory References:

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



Accreditation/Certification Summary

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

Job ID: 310-186372-2

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	07-01-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20



Method Summary

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

Job ID: 310-186372-2

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

Protocol References:

None = None

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

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

Laboratory References:

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





Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>OPDD</u>			
City/State: <u>Omaha</u>	STATE: <u>NE</u>	Project:	
Receipt Information			
Date/Time Received: DATE <u>7/14/20</u> TIME <u>1010</u>	Received By: <u>Am</u>		
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.			
Uncorrected Temp (°C): <u>0.2</u>	Corrected Temp (°C): <u>0.3</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			



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: OPPD			
City/State:	CITY Omaha	STATE NE	Project:
Receipt Information			
Date/Time Received:	DATE 7/16/20	TIME 1010	Received By: AM
Delivery Type:	<input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 # 2 of 4	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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:	M	Correction Factor (°C):	+0.1
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	1.7	Corrected Temp (°C):	1.8
* 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			
MW13			

Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>OPPD</u>		
City/State: <u>Amaha</u> <u>DE</u>	Project:	
Receipt Information		
Date/Time Received: DATE <u>7/14/20</u> TIME <u>10:10</u>	Received By: <u>AM</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>4</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature		
Uncorrected Temp (°C): <u>1.4</u>	Corrected Temp (°C): <u>1.5</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		

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>OPPD</u>			
City/State: <u>Omaha</u> <small>CITY</small>	<u>NE</u> <small>STATE</small>	Project:	
Receipt Information			
Date/Time Received: <u>7/16/20</u> <small>DATE</small>	<u>1010</u> <small>TIME</small>	Received By: <u>AM</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.4</u>	Corrected Temp (°C): <u>0.5</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			

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Chain of Custody Record

Client Information		Sampler: Kyle K. Uhing		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Kyle Uhing		Phone: (531) 226-2515		E-Mail: shawn.hayes@testamericainc.com		COC No:	
Company: Omaha Public Power District		Address: 444 South 16th Street Mall 9E/EP1		City: Omaha		State, Zip: NE, 68102-2247	
Phone: (531) 226-2515		PO #:		WO #:		TestAmerica Project #: 31007559	
Email: kkuhing@oppd.com		Project Name: Nebraska City Station Unit 2 CCR		Site: Nebraska City Station Unit 2		SSOW#:	
Due Date Requested:		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=BIOTISSUE, A=air)	Preservation Code:	Special Instructions/Note:
NC2MW2	7/14/20	16:34	G	W			CCR Appendix III and IV Constituents
NC2MW3	7/14/20	15:00	G	W			CCR Appendix III and IV Constituents
NC2MW4	7/14/20	9:46	G	W			CCR Appendix III and IV Constituents
NC2MW5	7/14/20	12:10	G	W			CCR Appendix III and IV Constituents
NC2MW6	7/14/20	13:51	G	W			CCR Appendix III and IV Constituents
NC2MW7	7/15/20	11:08	G	W			CCR Appendix III and IV Constituents
NC2MW8	7/14/20	15:45	G	W			CCR Appendix III and IV Constituents
MW13	7/14/20	9:09	G	W			CCR Appendix III and IV Constituents
DUP1	7/15/20	--	G	W			CCR Appendix III and IV Constituents
Total Number of Containers		4		4		4	
Special Instructions/Note:		Total 602A CCR Appendix III and IV, 7470A Mercury		2540C TDS, 9056A Chloride, Fluoride, Sulfate		9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228	
Analysis Requested		2540C TDS, 9056A Chloride, Fluoride, Sulfate		9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228		Total 602A CCR Appendix III and IV, 7470A Mercury	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For	
Special Instructions/QC Requirements:		Time:		Date:		Method of Shipment:	
Relinquished by: Kyle K. Uhing		Date/Time: 7/15/2020 15:30		Company: OPPD		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: 7/15/2020 17:00		Company: Guro		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: 7/15/2020 10:10		Company: [Signature]		Received by: [Signature]	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-186372-2

Login Number: 186372

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Miller, Drew E

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: 310-186372-2

Login Number: 186372

List Number: 2

Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis

List Creation: 07/17/20 12:52 PM

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

Tracer/Carrier Summary

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

Job ID: 310-186372-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
310-186372-1	NC2MW2	92.9	
310-186372-2	NC2MW3	88.7	
310-186372-3	NC2MW4	49.6	
310-186372-4	NC2MW5	87.2	
310-186372-5	NC2MW6	101	
310-186372-6	NC2MW7	100	
310-186372-7	NC2MW8	96.4	
310-186372-8	MW13	79.8	
310-186372-9	DUP1	95.5	
LCS 160-476788/1-A	Lab Control Sample	95.5	
LCSD 160-476788/2-A	Lab Control Sample Dup	101	
MB 160-476788/16-A	Method Blank	89.6	

Tracer/Carrier Legend
 Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-186372-1	NC2MW2	92.9	90.5
310-186372-2	NC2MW3	88.7	91.6
310-186372-3	NC2MW4	49.6	90.5
310-186372-4	NC2MW5	87.2	90.5
310-186372-5	NC2MW6	101	93.8
310-186372-6	NC2MW7	100	99.4
310-186372-7	NC2MW8	96.4	97.9
310-186372-8	MW13	79.8	90.1
310-186372-9	DUP1	95.5	94.6
LCS 160-476790/1-A	Lab Control Sample	95.5	90.1
LCSD 160-476790/2-A	Lab Control Sample Dup	101	93.1
MB 160-476790/16-A	Method Blank	89.6	97.6

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

ANALYTICAL REPORT

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

Laboratory Job ID: 310-192461-1

Client Project/Site: Nebraska City 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:
10/15/2020 2:17:33 PM*

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

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

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



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Case Narrative

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

Job ID: 310-192461-1

Job ID: 310-192461-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-192461-1

Comments

No additional comments.

Receipt

The samples were received on 10/8/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.6° C, 0.9° C, 1.0° C, 1.0° C and 1.2° 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.

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Sample Summary

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

Job ID: 310-192461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-192461-1	NC2MW2	Water	10/05/20 17:49	10/08/20 09:30	
310-192461-2	NC2MW3	Water	10/05/20 16:16	10/08/20 09:30	
310-192461-3	NC2MW5	Water	10/05/20 13:34	10/08/20 09:30	
310-192461-4	NC2MW6	Water	10/05/20 15:13	10/08/20 09:30	
310-192461-5	NC2MW7	Water	10/05/20 18:45	10/08/20 09:30	
310-192461-6	NC2MW8	Water	10/05/20 17:06	10/08/20 09:30	
310-192461-7	DUP1	Water	10/05/20 00:00	10/08/20 09:30	



Detection Summary

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

Job ID: 310-192461-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-192461-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.67		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	324		5.00	3.55	mg/L	5		9056A	Total/NA
Antimony	0.00381		0.00100	0.000510	mg/L	1		6020A	Total/NA
Arsenic	0.00117	J	0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.170		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.289		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.000186		0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	268		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000208	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000797		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0523		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0177		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1050		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW3

Lab Sample ID: 310-192461-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.71		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.535		0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	156		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00735		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.191		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.213		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	159		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000647		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000163	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0399		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00487		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	644		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW5

Lab Sample ID: 310-192461-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.6		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	339		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00243		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.0588		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	4.27		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.0000990	J	0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	221		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000236	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000379	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0200		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0212		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1040		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW6

Lab Sample ID: 310-192461-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.57		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.329	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	147		5.00	3.55	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-192461-1

Client Sample ID: NC2MW6 (Continued)

Lab Sample ID: 310-192461-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000889	J	0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.132		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	3.03		0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.0000810	J	0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	126		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000438	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000929		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0362		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.0144		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	404		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW7

Lab Sample ID: 310-192461-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.12		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.322	J	0.500	0.230	mg/L	5		9056A	Total/NA
Arsenic	0.0435		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.585		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.220		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	122		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000233	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0641		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00122	J	0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	396		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: NC2MW8

Lab Sample ID: 310-192461-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.0		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.331	J	0.500	0.230	mg/L	5		9056A	Total/NA
Sulfate	5.50		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0322		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.579		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.115		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	116		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.00176		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000486	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0325		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00220		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	512		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP1

Lab Sample ID: 310-192461-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.03		5.00	2.00	mg/L	5		9056A	Total/NA
Fluoride	0.319	J	0.500	0.230	mg/L	5		9056A	Total/NA
Arsenic	0.0413		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.554		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.170		0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	115		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000228	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lithium	0.0609		0.0100	0.00250	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

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

Job ID: 310-192461-1

Client Sample ID: DUP1 (Continued)

Lab Sample ID: 310-192461-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	504		30.0	26.0	mg/L	1		SM 2540C	Total/NA

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This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-192461-1

Date Collected: 10/05/20 17:49

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.67		5.00	2.00	mg/L			10/09/20 21:42	5
Fluoride	<0.230		0.500	0.230	mg/L			10/09/20 21:42	5
Sulfate	324		5.00	3.55	mg/L			10/09/20 21:42	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00381		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 20:35	1
Arsenic	0.00117	J	0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 20:35	1
Barium	0.170		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 20:35	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 20:35	1
Boron	0.289		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 20:35	1
Cadmium	0.000186		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 20:35	1
Calcium	268		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 20:35	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 20:35	1
Cobalt	0.000208	J	0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 20:35	1
Lead	0.000797		0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 20:35	1
Lithium	0.0523		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 20:35	1
Molybdenum	0.0177		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 20:35	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 20:35	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 20:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1050		30.0	26.0	mg/L			10/08/20 14:50	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW3

Lab Sample ID: 310-192461-2

Date Collected: 10/05/20 16:16

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.71		5.00	2.00	mg/L			10/09/20 22:31	5
Fluoride	0.535		0.500	0.230	mg/L			10/09/20 22:31	5
Sulfate	156		5.00	3.55	mg/L			10/09/20 22:31	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 20:56	1
Arsenic	0.00735		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 20:56	1
Barium	0.191		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 20:56	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 20:56	1
Boron	0.213		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 20:56	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 20:56	1
Calcium	159		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 20:56	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 20:56	1
Cobalt	0.000647		0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 20:56	1
Lead	0.000163	J	0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 20:56	1
Lithium	0.0399		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 20:56	1
Molybdenum	0.00487		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 20:56	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 20:56	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 20:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	644		30.0	26.0	mg/L			10/08/20 14:50	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW5

Lab Sample ID: 310-192461-3

Date Collected: 10/05/20 13:34

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.6		5.00	2.00	mg/L			10/09/20 22:47	5
Fluoride	<0.230		0.500	0.230	mg/L			10/09/20 22:47	5
Sulfate	339		5.00	3.55	mg/L			10/09/20 22:47	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 20:58	1
Arsenic	0.00243		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 20:58	1
Barium	0.0588		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 20:58	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 20:58	1
Boron	4.27		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 20:58	1
Cadmium	0.0000990	J	0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 20:58	1
Calcium	221		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 20:58	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 20:58	1
Cobalt	0.000236	J	0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 20:58	1
Lead	0.000379	J	0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 20:58	1
Lithium	0.0200		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 20:58	1
Molybdenum	0.0212		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 20:58	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 20:58	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 20:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1040		30.0	26.0	mg/L			10/08/20 14:50	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW6

Lab Sample ID: 310-192461-4

Date Collected: 10/05/20 15:13

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.57		5.00	2.00	mg/L			10/09/20 23:03	5
Fluoride	0.329	J	0.500	0.230	mg/L			10/09/20 23:03	5
Sulfate	147		5.00	3.55	mg/L			10/09/20 23:03	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 21:01	1
Arsenic	0.000889	J	0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 21:01	1
Barium	0.132		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 21:01	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 21:01	1
Boron	3.03		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 21:01	1
Cadmium	0.0000810	J	0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 21:01	1
Calcium	126		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 21:01	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 21:01	1
Cobalt	0.000438	J	0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 21:01	1
Lead	0.000929		0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 21:01	1
Lithium	0.0362		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 21:01	1
Molybdenum	0.0144		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 21:01	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 21:01	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 21:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	404		30.0	26.0	mg/L			10/08/20 14:50	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-192461-5

Date Collected: 10/05/20 18:45

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.12		5.00	2.00	mg/L			10/09/20 23:20	5
Fluoride	0.322	J	0.500	0.230	mg/L			10/09/20 23:20	5
Sulfate	<3.55		5.00	3.55	mg/L			10/09/20 23:20	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 21:03	1
Arsenic	0.0435		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 21:03	1
Barium	0.585		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 21:03	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 21:03	1
Boron	0.220		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 21:03	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 21:03	1
Calcium	122		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 21:03	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 21:03	1
Cobalt	0.000233	J	0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 21:03	1
Lead	<0.000110		0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 21:03	1
Lithium	0.0641		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 21:03	1
Molybdenum	0.00122	J	0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 21:03	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 21:03	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 21:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	396		30.0	26.0	mg/L			10/08/20 14:50	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: NC2MW8

Lab Sample ID: 310-192461-6

Date Collected: 10/05/20 17:06

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.0		5.00	2.00	mg/L			10/10/20 00:09	5
Fluoride	0.331	J	0.500	0.230	mg/L			10/10/20 00:09	5
Sulfate	5.50		5.00	3.55	mg/L			10/10/20 00:09	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 21:06	1
Arsenic	0.0322		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 21:06	1
Barium	0.579		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 21:06	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 21:06	1
Boron	0.115		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 21:06	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 21:06	1
Calcium	116		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 21:06	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 21:06	1
Cobalt	0.00176		0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 21:06	1
Lead	0.000486	J	0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 21:06	1
Lithium	0.0325		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 21:06	1
Molybdenum	0.00220		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 21:06	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 21:06	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 21:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	512		30.0	26.0	mg/L			10/09/20 15:34	1

Client Sample Results

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

Job ID: 310-192461-1

Client Sample ID: DUP1

Lab Sample ID: 310-192461-7

Date Collected: 10/05/20 00:00

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.03		5.00	2.00	mg/L			10/10/20 00:25	5
Fluoride	0.319	J	0.500	0.230	mg/L			10/10/20 00:25	5
Sulfate	<3.55		5.00	3.55	mg/L			10/10/20 00:25	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 21:08	1
Arsenic	0.0413		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 21:08	1
Barium	0.554		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 21:08	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 21:08	1
Boron	0.170		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 21:08	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 21:08	1
Calcium	115		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 21:08	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 21:08	1
Cobalt	0.000228	J	0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 21:08	1
Lead	<0.000110		0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 21:08	1
Lithium	0.0609		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 21:08	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 21:08	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 21:08	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 21:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	504		30.0	26.0	mg/L			10/09/20 15:34	1

Definitions/Glossary

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

Job ID: 310-192461-1

Qualifiers

HPLC/IC

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

Metals

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

Glossary

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

QC Sample Results

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

Job ID: 310-192461-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-295120/3
Matrix: Water
Analysis Batch: 295120

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.400		1.00	0.400	mg/L			10/09/20 21:10	1
Fluoride	<0.0460		0.100	0.0460	mg/L			10/09/20 21:10	1
Sulfate	<0.710		1.00	0.710	mg/L			10/09/20 21:10	1

Lab Sample ID: LCS 310-295120/4
Matrix: Water
Analysis Batch: 295120

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	9.857		mg/L		99	90 - 110
Fluoride	2.00	2.060		mg/L		103	90 - 110
Sulfate	10.0	10.27		mg/L		103	90 - 110

Lab Sample ID: 310-192461-1 MS
Matrix: Water
Analysis Batch: 295120

Client Sample ID: NC2MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7.67		25.0	31.01		mg/L		93	80 - 120
Fluoride	<0.230		5.00	5.407		mg/L		108	80 - 120
Sulfate	324		25.0	341.6	4	mg/L		71	80 - 120

Lab Sample ID: 310-192461-1 MSD
Matrix: Water
Analysis Batch: 295120

Client Sample ID: NC2MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7.67		25.0	30.84		mg/L		93	80 - 120	1	15
Fluoride	<0.230		5.00	5.389		mg/L		108	80 - 120	0	15
Sulfate	324		25.0	339.0	4	mg/L		61	80 - 120	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-294789/1-A
Matrix: Water
Analysis Batch: 295528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 294789

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:55	10/14/20 20:27	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		10/09/20 08:55	10/14/20 20:27	1
Barium	<0.000280		0.00200	0.000280	mg/L		10/09/20 08:55	10/14/20 20:27	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:55	10/14/20 20:27	1
Boron	<0.0800		0.100	0.0800	mg/L		10/09/20 08:55	10/14/20 20:27	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:55	10/14/20 20:27	1
Calcium	<0.190		0.500	0.190	mg/L		10/09/20 08:55	10/14/20 20:27	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:55	10/14/20 20:27	1
Cobalt	<0.0000910		0.000500	0.0000910	mg/L		10/09/20 08:55	10/14/20 20:27	1
Lead	<0.000110		0.000500	0.000110	mg/L		10/09/20 08:55	10/14/20 20:27	1
Lithium	<0.00250		0.0100	0.00250	mg/L		10/09/20 08:55	10/14/20 20:27	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		10/09/20 08:55	10/14/20 20:27	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

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

Job ID: 310-192461-1

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

Lab Sample ID: MB 310-294789/1-A
Matrix: Water
Analysis Batch: 295528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 294789

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:55	10/14/20 20:27	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:55	10/14/20 20:27	1

Lab Sample ID: LCS 310-294789/2-A
Matrix: Water
Analysis Batch: 295528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 294789

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.200	0.2096		mg/L		105	80 - 120
Arsenic	0.200	0.2107		mg/L		105	80 - 120
Barium	0.100	0.1076		mg/L		108	80 - 120
Beryllium	0.100	0.1073		mg/L		107	80 - 120
Boron	0.200	0.2046		mg/L		102	80 - 120
Cadmium	0.100	0.1058		mg/L		106	80 - 120
Calcium	2.00	1.857		mg/L		93	80 - 120
Chromium	0.100	0.1012		mg/L		101	80 - 120
Cobalt	0.100	0.1061		mg/L		106	80 - 120
Lead	0.200	0.2203		mg/L		110	80 - 120
Lithium	0.200	0.2116		mg/L		106	80 - 120
Molybdenum	0.200	0.2122		mg/L		106	80 - 120
Selenium	0.400	0.4202		mg/L		105	80 - 120

Lab Sample ID: LCS 310-294789/2-A ^10
Matrix: Water
Analysis Batch: 295528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 294789

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.200	0.2290		mg/L		115	80 - 120

Lab Sample ID: 310-192461-1 MS
Matrix: Water
Analysis Batch: 295528

Client Sample ID: NC2MW2
Prep Type: Total/NA
Prep Batch: 294789

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.00381		0.200	0.2206		mg/L		108	75 - 125
Arsenic	0.00117	J	0.200	0.2170		mg/L		108	75 - 125
Barium	0.170		0.100	0.2729		mg/L		103	75 - 125
Beryllium	<0.000270		0.100	0.1084		mg/L		108	75 - 125
Boron	0.289		0.200	0.4893		mg/L		100	75 - 125
Cadmium	0.000186		0.100	0.1059		mg/L		106	75 - 125
Calcium	268		2.00	263.0	4	mg/L		-252	75 - 125
Chromium	<0.00110		0.100	0.1017		mg/L		102	75 - 125
Cobalt	0.000208	J	0.100	0.1018		mg/L		102	75 - 125
Lead	0.000797		0.200	0.2110		mg/L		105	75 - 125
Lithium	0.0523		0.200	0.2566		mg/L		102	75 - 125
Molybdenum	0.0177		0.200	0.2283		mg/L		105	75 - 125
Selenium	<0.00100		0.400	0.4207		mg/L		105	75 - 125
Thallium	<0.000260		0.200	0.1932	E	mg/L		97	75 - 125

QC Sample Results

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

Job ID: 310-192461-1

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

Lab Sample ID: 310-192461-1 MSD
 Matrix: Water
 Analysis Batch: 295528

Client Sample ID: NC2MW2
 Prep Type: Total/NA
 Prep Batch: 294789

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	0.00381		0.200	0.2223		mg/L		109	75 - 125	1	20
Arsenic	0.00117	J	0.200	0.2199		mg/L		109	75 - 125	1	20
Barium	0.170		0.100	0.2716		mg/L		102	75 - 125	0	20
Beryllium	<0.000270		0.100	0.1088		mg/L		109	75 - 125	0	20
Boron	0.289		0.200	0.4992		mg/L		105	75 - 125	2	20
Cadmium	0.000186		0.100	0.1067		mg/L		107	75 - 125	1	20
Calcium	268		2.00	263.5	4	mg/L		-225	75 - 125	0	20
Chromium	<0.00110		0.100	0.1024		mg/L		102	75 - 125	1	20
Cobalt	0.000208	J	0.100	0.1024		mg/L		102	75 - 125	1	20
Lead	0.000797		0.200	0.2080		mg/L		104	75 - 125	1	20
Lithium	0.0523		0.200	0.2601		mg/L		104	75 - 125	1	20
Molybdenum	0.0177		0.200	0.2301		mg/L		106	75 - 125	1	20
Selenium	<0.00100		0.400	0.4184		mg/L		105	75 - 125	1	20
Thallium	<0.000260		0.200	0.1954	E	mg/L		98	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-294818/1-A
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:39	1

Lab Sample ID: LCS 310-294818/2-A
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00167	0.001740		mg/L		104	80 - 120

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

Lab Sample ID: MB 310-294729/1
 Matrix: Water
 Analysis Batch: 294729

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		30.0	26.0	mg/L			10/08/20 14:50	1

Lab Sample ID: LCS 310-294729/2
 Matrix: Water
 Analysis Batch: 294729

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Total Dissolved Solids	1000	978.0		mg/L		98	90 - 110

QC Sample Results

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

Job ID: 310-192461-1

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

Lab Sample ID: MB 310-294902/1
Matrix: Water
Analysis Batch: 294902

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		30.0	26.0	mg/L			10/09/20 15:34	1

Lab Sample ID: LCS 310-294902/2
Matrix: Water
Analysis Batch: 294902

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	992.0		mg/L		99	90 - 110



QC Association Summary

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

Job ID: 310-192461-1

HPLC/IC

Analysis Batch: 295120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	9056A	
310-192461-2	NC2MW3	Total/NA	Water	9056A	
310-192461-3	NC2MW5	Total/NA	Water	9056A	
310-192461-4	NC2MW6	Total/NA	Water	9056A	
310-192461-5	NC2MW7	Total/NA	Water	9056A	
310-192461-6	NC2MW8	Total/NA	Water	9056A	
310-192461-7	DUP1	Total/NA	Water	9056A	
MB 310-295120/3	Method Blank	Total/NA	Water	9056A	
LCS 310-295120/4	Lab Control Sample	Total/NA	Water	9056A	
310-192461-1 MS	NC2MW2	Total/NA	Water	9056A	
310-192461-1 MSD	NC2MW2	Total/NA	Water	9056A	

Metals

Prep Batch: 294789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	3010A	
310-192461-2	NC2MW3	Total/NA	Water	3010A	
310-192461-3	NC2MW5	Total/NA	Water	3010A	
310-192461-4	NC2MW6	Total/NA	Water	3010A	
310-192461-5	NC2MW7	Total/NA	Water	3010A	
310-192461-6	NC2MW8	Total/NA	Water	3010A	
310-192461-7	DUP1	Total/NA	Water	3010A	
MB 310-294789/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-294789/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCS 310-294789/2-A ^10	Lab Control Sample	Total/NA	Water	3010A	
310-192461-1 MS	NC2MW2	Total/NA	Water	3010A	
310-192461-1 MSD	NC2MW2	Total/NA	Water	3010A	

Prep Batch: 294818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	7470A	
310-192461-2	NC2MW3	Total/NA	Water	7470A	
310-192461-3	NC2MW5	Total/NA	Water	7470A	
310-192461-4	NC2MW6	Total/NA	Water	7470A	
310-192461-5	NC2MW7	Total/NA	Water	7470A	
310-192461-6	NC2MW8	Total/NA	Water	7470A	
310-192461-7	DUP1	Total/NA	Water	7470A	
MB 310-294818/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-294818/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 295090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	7470A	294818
310-192461-2	NC2MW3	Total/NA	Water	7470A	294818
310-192461-3	NC2MW5	Total/NA	Water	7470A	294818
310-192461-4	NC2MW6	Total/NA	Water	7470A	294818
310-192461-5	NC2MW7	Total/NA	Water	7470A	294818
310-192461-6	NC2MW8	Total/NA	Water	7470A	294818
310-192461-7	DUP1	Total/NA	Water	7470A	294818
MB 310-294818/1-A	Method Blank	Total/NA	Water	7470A	294818

QC Association Summary

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

Job ID: 310-192461-1

Metals (Continued)

Analysis Batch: 295090 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-294818/2-A	Lab Control Sample	Total/NA	Water	7470A	294818

Analysis Batch: 295528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	6020A	294789
310-192461-2	NC2MW3	Total/NA	Water	6020A	294789
310-192461-3	NC2MW5	Total/NA	Water	6020A	294789
310-192461-4	NC2MW6	Total/NA	Water	6020A	294789
310-192461-5	NC2MW7	Total/NA	Water	6020A	294789
310-192461-6	NC2MW8	Total/NA	Water	6020A	294789
310-192461-7	DUP1	Total/NA	Water	6020A	294789
MB 310-294789/1-A	Method Blank	Total/NA	Water	6020A	294789
LCS 310-294789/2-A	Lab Control Sample	Total/NA	Water	6020A	294789
LCS 310-294789/2-A ^10	Lab Control Sample	Total/NA	Water	6020A	294789
310-192461-1 MS	NC2MW2	Total/NA	Water	6020A	294789
310-192461-1 MSD	NC2MW2	Total/NA	Water	6020A	294789

General Chemistry

Analysis Batch: 294729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	SM 2540C	
310-192461-2	NC2MW3	Total/NA	Water	SM 2540C	
310-192461-3	NC2MW5	Total/NA	Water	SM 2540C	
310-192461-4	NC2MW6	Total/NA	Water	SM 2540C	
310-192461-5	NC2MW7	Total/NA	Water	SM 2540C	
MB 310-294729/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-294729/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 294902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-6	NC2MW8	Total/NA	Water	SM 2540C	
310-192461-7	DUP1	Total/NA	Water	SM 2540C	
MB 310-294902/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-294902/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

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

Job ID: 310-192461-1

Client Sample ID: NC2MW2

Lab Sample ID: 310-192461-1

Date Collected: 10/05/20 17:49

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/09/20 21:42	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 20:35	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 14:56	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294729	10/08/20 14:50	SAS	TAL CF

Client Sample ID: NC2MW3

Lab Sample ID: 310-192461-2

Date Collected: 10/05/20 16:16

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/09/20 22:31	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 20:56	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 14:58	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294729	10/08/20 14:50	SAS	TAL CF

Client Sample ID: NC2MW5

Lab Sample ID: 310-192461-3

Date Collected: 10/05/20 13:34

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/09/20 22:47	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 20:58	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 15:00	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294729	10/08/20 14:50	SAS	TAL CF

Client Sample ID: NC2MW6

Lab Sample ID: 310-192461-4

Date Collected: 10/05/20 15:13

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/09/20 23:03	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 21:01	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 15:02	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294729	10/08/20 14:50	SAS	TAL CF

Lab Chronicle

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

Job ID: 310-192461-1

Client Sample ID: NC2MW7

Lab Sample ID: 310-192461-5

Date Collected: 10/05/20 18:45

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/09/20 23:20	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 21:03	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 15:04	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294729	10/08/20 14:50	SAS	TAL CF

Client Sample ID: NC2MW8

Lab Sample ID: 310-192461-6

Date Collected: 10/05/20 17:06

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/10/20 00:09	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 21:06	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 15:06	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294902	10/09/20 15:34	SAS	TAL CF

Client Sample ID: DUP1

Lab Sample ID: 310-192461-7

Date Collected: 10/05/20 00:00

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295120	10/10/20 00:25	ACJ	TAL CF
Total/NA	Prep	3010A			294789	10/09/20 08:55	HED	TAL CF
Total/NA	Analysis	6020A		1	295528	10/14/20 21:08	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 15:09	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294902	10/09/20 15:34	SAS	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, 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 Unit 2 CCR/Landfill

Job ID: 310-192461-1

Laboratory: Eurofins TestAmerica, 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
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-21
Georgia	State	IA100001 (OR)	09-29-21
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20 *
Oregon	NELAP	IA100001	09-29-21
USDA	US Federal Programs	P330-19-00003	01-02-22

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

Method Summary

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

Job ID: 310-192461-1

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
3010A	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 TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





310-192461 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: <u>NE city station unit 2 COR/Landfill</u>
Receipt Information			
Date/Time Received:	DATE <u>10/8/20</u>	TIME <u>0930</u>	Received By: <u>HGD/LB</u>
Delivery Type:	<input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
• Temp Blank Temperature - if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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 District</u>			
City/State: <u>Omaha</u>	CITY	STATE <u>NE</u>	Project: <u>NE city station unit 2 COC/Landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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			





Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY	STATE	Project: <u>NE city station unit 2 CCR/landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.6</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			





Environment Testing
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY	STATE <u>NE</u>	Project: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</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>1.2</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 District</u>			
City/State: <u>Omaha</u>	CITY	STATE <u>NE</u>	Project: <u>NE city station unit ZCCR/landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.9</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			



Client Information Sampler: Kyle K. Uhing Phone: (531) 226-2515 Client Contact: Kyle Uhing Company: Omaha Public Power District		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Carrier Tracking No(s):		COC No: Page: Job #:			
Address: 444 South 16th Street Mall 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 Email: kkuhing@oppd.com		Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: 31007559 SSO#:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify) Other:			
Project Name: Nebraska City Station Unit 2 CCR / Landfill Site: Nebraska City Station Unit 2		Analysis Requested Total 6020A CCR Appendix III and IV, 7470A Mercury 9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228 2540C TDS, 9056A Chloride, Fluoride, Sulfate		Total Number of Containers			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wash/oil, AT=ATISSA, A=AK)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
NC2MW2	10/5/20	17:49	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW3	10/5/20	6:16	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW4	10/5/20	11:02	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW5	10/5/20	15:34	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW6	10/5/20	15:13	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW7	10/5/20	16:45	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW8	10/5/20	17:06	G	W	N	X	CCR Appendix III and IV Constituents
MW13	10/5/20	9:52	G	W	N	X	CCR Appendix III and IV Constituents
NC2MW9			G	W	N	X	CCR Appendix III and IV Constituents
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/QC Requirements:							
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>John Uning</i>		Date/Time: 10/1/2020 9:52		Company: <i>OPD</i>		Received by: <i>[Signature]</i> Date/Time: 10/7/2020 09:52 Company: <i>OPD</i>	
Relinquished by: <i>[Signature]</i>		Date/Time: 10/1/2020 17:00		Company: <i>OPD</i>		Reported by: <i>[Signature]</i> Date/Time: 10/8/20 09:20 Company: <i>OPD</i>	
Relinquished by: <i>[Signature]</i>		Date/Time:		Company:		Received by: <i>[Signature]</i> Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-192461-1

Login Number: 192461

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Bovy, Lorraine L

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	NC2MW4 and MW13 are on different job.
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	

ANALYTICAL REPORT

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

Laboratory Job ID: 310-192461-2

Client Project/Site: Nebraska City 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:
11/18/2020 10:43:36 AM*

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

LINKS

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results through
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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

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

Job ID: 310-192461-2

Job ID: 310-192461-2

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-192461-2

Comments

No additional comments.

Receipt

The samples were received on 10/8/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.6° C, 0.9° C, 1.0° C, 1.0° C and 1.2° C.

RAD

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

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Sample Summary

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

Job ID: 310-192461-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-192461-1	NC2MW2	Water	10/05/20 17:49	10/08/20 09:30	
310-192461-2	NC2MW3	Water	10/05/20 16:16	10/08/20 09:30	
310-192461-3	NC2MW5	Water	10/05/20 13:34	10/08/20 09:30	
310-192461-4	NC2MW6	Water	10/05/20 15:13	10/08/20 09:30	
310-192461-5	NC2MW7	Water	10/05/20 18:45	10/08/20 09:30	
310-192461-6	NC2MW8	Water	10/05/20 17:06	10/08/20 09:30	
310-192461-7	DUP1	Water	10/05/20 00:00	10/08/20 09:30	

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-192461-1

Date Collected: 10/05/20 17:49

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.137	U	0.250	0.250	1.00	0.545	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.1		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.20		0.447	0.461	1.00	0.611	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.1		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	77.0		40 - 110					10/15/20 09:50	11/12/20 12:08	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	1.06		0.512	0.524	5.00	0.611	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW3

Lab Sample ID: 310-192461-2

Date Collected: 10/05/20 16:16

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.384	U	0.343	0.345	1.00	0.528	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.9		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.936		0.446	0.454	1.00	0.643	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.9		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	78.5		40 - 110					10/15/20 09:50	11/12/20 12:08	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	1.32		0.563	0.570	5.00	0.643	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW5

Lab Sample ID: 310-192461-3

Date Collected: 10/05/20 13:34

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0317	U	0.167	0.167	1.00	0.370	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.4		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.348	0.349	1.00	0.575	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.4		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	69.2		40 - 110					10/15/20 09:50	11/12/20 12:08	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	0.255	U	0.386	0.387	5.00	0.575	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW6

Lab Sample ID: 310-192461-4

Date Collected: 10/05/20 15:13

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236	U	0.276	0.277	1.00	0.451	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.1		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.08		0.388	0.401	1.00	0.533	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.1		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	79.3		40 - 110					10/15/20 09:50	11/12/20 12:08	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	1.31		0.476	0.487	5.00	0.533	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-192461-5

Date Collected: 10/05/20 18:45

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172	U	0.238	0.238	1.00	0.400	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.538	U	0.354	0.358	1.00	0.547	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	76.6		40 - 110					10/15/20 09:50	11/12/20 12:08	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	0.710		0.427	0.430	5.00	0.547	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: NC2MW8

Lab Sample ID: 310-192461-6

Date Collected: 10/05/20 17:06

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.323	U	0.320	0.321	1.00	0.507	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.8		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.915		0.442	0.450	1.00	0.644	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.8		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	69.2		40 - 110					10/15/20 09:50	11/12/20 12:08	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	1.24		0.546	0.553	5.00	0.644	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192461-2

Client Sample ID: DUP1

Lab Sample ID: 310-192461-7

Date Collected: 10/05/20 00:00

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.216	U	0.257	0.258	1.00	0.422	pCi/L	10/15/20 09:02	11/12/20 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.7		40 - 110					10/15/20 09:02	11/12/20 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.735		0.350	0.357	1.00	0.505	pCi/L	10/15/20 09:50	11/12/20 12:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.7		40 - 110					10/15/20 09:50	11/12/20 12:08	1
Y Carrier	78.1		40 - 110					10/15/20 09:50	11/12/20 12:08	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	0.951		0.434	0.440	5.00	0.505	pCi/L		11/18/20 00:38	1

Definitions/Glossary

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

Job ID: 310-192461-2

Qualifiers

Rad

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

Glossary

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

QC Sample Results

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

Job ID: 310-192461-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-485734/24-A
Matrix: Water
Analysis Batch: 488962

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485734

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1697	U	0.237	0.238	1.00	0.401	pCi/L	10/15/20 09:02	11/12/20 21:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	74.8		40 - 110		10/15/20 09:02	11/12/20 21:21	1			

Lab Sample ID: LCS 160-485734/1-A
Matrix: Water
Analysis Batch: 488988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485734

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	11.56		1.47	1.00	0.305	pCi/L	102	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	83.6		40 - 110						

Lab Sample ID: LCSD 160-485734/2-A
Matrix: Water
Analysis Batch: 488989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 485734

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	11.3	10.21		1.35	1.00	0.351	pCi/L	90	75 - 125	0.48	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	83.6		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-485742/24-A
Matrix: Water
Analysis Batch: 488987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485742

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.9626		0.405	0.414	1.00	0.576	pCi/L	10/15/20 09:50	11/12/20 12:23	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	74.8		40 - 110		10/15/20 09:50	11/12/20 12:23	1			
Y Carrier	77.8		40 - 110		10/15/20 09:50	11/12/20 12:23	1			

QC Sample Results

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

Job ID: 310-192461-2

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

Lab Sample ID: LCS 160-485742/1-A

Matrix: Water

Analysis Batch: 488989

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 485742

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	7.66	8.312		1.04	1.00	0.462	pCi/L	108	75 - 125
LCS LCS									
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	83.6		40 - 110						
Y Carrier	81.9		40 - 110						

Lab Sample ID: LCSD 160-485742/2-A

Matrix: Water

Analysis Batch: 488989

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 485742

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER
											Limit
Radium-228	7.66	7.943		1.02	1.00	0.523	pCi/L	104	75 - 125	0.18	1
LCSD LCSD											
Carrier	%Yield	Qualifier	Limits								
Ba Carrier	83.6		40 - 110								
Y Carrier	81.1		40 - 110								

QC Association Summary

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

Job ID: 310-192461-2

Rad

Prep Batch: 485734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	PrecSep-21	
310-192461-2	NC2MW3	Total/NA	Water	PrecSep-21	
310-192461-3	NC2MW5	Total/NA	Water	PrecSep-21	
310-192461-4	NC2MW6	Total/NA	Water	PrecSep-21	
310-192461-5	NC2MW7	Total/NA	Water	PrecSep-21	
310-192461-6	NC2MW8	Total/NA	Water	PrecSep-21	
310-192461-7	DUP1	Total/NA	Water	PrecSep-21	
MB 160-485734/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485734/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-485734/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 485742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192461-1	NC2MW2	Total/NA	Water	PrecSep_0	
310-192461-2	NC2MW3	Total/NA	Water	PrecSep_0	
310-192461-3	NC2MW5	Total/NA	Water	PrecSep_0	
310-192461-4	NC2MW6	Total/NA	Water	PrecSep_0	
310-192461-5	NC2MW7	Total/NA	Water	PrecSep_0	
310-192461-6	NC2MW8	Total/NA	Water	PrecSep_0	
310-192461-7	DUP1	Total/NA	Water	PrecSep_0	
MB 160-485742/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485742/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-485742/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 310-192461-2

Client Sample ID: NC2MW2

Lab Sample ID: 310-192461-1

Date Collected: 10/05/20 17:49

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: NC2MW3

Lab Sample ID: 310-192461-2

Date Collected: 10/05/20 16:16

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: NC2MW5

Lab Sample ID: 310-192461-3

Date Collected: 10/05/20 13:34

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: NC2MW6

Lab Sample ID: 310-192461-4

Date Collected: 10/05/20 15:13

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Lab Chronicle

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

Job ID: 310-192461-2

Client Sample ID: NC2MW7

Lab Sample ID: 310-192461-5

Date Collected: 10/05/20 18:45

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: NC2MW8

Lab Sample ID: 310-192461-6

Date Collected: 10/05/20 17:06

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: DUP1

Lab Sample ID: 310-192461-7

Date Collected: 10/05/20 00:00

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488989	11/12/20 19:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488989	11/12/20 12:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 310-192461-2

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Method Summary

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

Job ID: 310-192461-2

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

Protocol References:

None = None

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

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

Laboratory References:

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





Environment Testing
TestAmerica



310-192461 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: <u>NE city station unit 2 COR/Landfill</u>
Receipt Information			
Date/Time Received:	DATE <u>10/8/20</u>	TIME <u>0930</u>	Received By: <u>HGD/LB</u>
Delivery Type:	<input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
• Temp Blank Temperature - if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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 District</u>			
City/State: <small>CITY</small> <u>Omaha</u>	<small>STATE</small> <u>NE</u>	Project: <u>NE city station unit 2 CCR/Landfill</u>	
Receipt Information			
Date/Time Received: <small>DATE</small> <u>10/8/20</u>	<small>TIME</small> <u>0930</u>	Received By: <u>HED/LB</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" 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>M</u>		Correction Factor (°C): <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.9</u>		Corrected Temp (°C): <u>1.0</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
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY <u>Omaha</u>	STATE <u>NE</u>	Project: <u>NE city station unit 2 CCR/landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE <u>10/8/20</u>	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.6</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			





Environment Testing
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY	STATE <u>NE</u>	Project: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</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>1.2</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 District</u>			
City/State: <u>Omaha</u>	CITY	STATE <u>NE</u>	Project: <u>NE city station unit ZCCR/landfill</u>
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
* Temp Blank Temperature - if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.9</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			



Client Information Sampler: Kyle K. Uhing Client Contact: Kyle Uhing Phone: (531) 226-2515 Company: Omaha Public Power District		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com		Carrier Tracking No(s): Job #:		COC No: Page: Job #:	
Address: 444 South 16th Street Mall 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 PO #: (531) 226-2515 Email: kkuhing@oppd.com		Due Date Requested: TAT Requested (days): Project Name: Nebraska City Station Unit 2 CCR / Landfill SSOW#:		Analysis Requested Total 6020A CCR Appendix III and IV, 7470A Mercury 9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228 2540C TDS, 9056A Chloride, Fluoride, Sulfate		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Matrix (W=water, S=solid, O=wash/oil, AT=OTHER, A=AK)		Sample Type (C=Comp, G=grab)		Sample Time		Sample Date	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers		Special Instructions/Note:	
NC2MW2	G	W	10/5/20	17:49	N	X	CCR Appendix III and IV Constituents
NC2MW3	G	W	10/5/20	6:16	N	X	CCR Appendix III and IV Constituents
NC2MW4	G	W	10/5/20	11:02	N	X	CCR Appendix III and IV Constituents
NC2MW5	G	W	10/5/20	15:34	N	X	CCR Appendix III and IV Constituents
NC2MW6	G	W	10/5/20	15:13	N	X	CCR Appendix III and IV Constituents
NC2MW7	G	W	10/5/20	16:45	N	X	CCR Appendix III and IV Constituents
NC2MW8	G	W	10/5/20	17:06	N	X	CCR Appendix III and IV Constituents
MW13	G	W	10/5/20	9:52	N	X	CCR Appendix III 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		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/QC Requirements:		Cooler Temperature(s) °C and Other Remarks:	
Empty Kit Relinquished by:		Date:		Method of Shipment:		Company:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Company:	



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-192461-2

Login Number: 192461

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Bovy, Lorraine L

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	NC2MW4 and MW13 are on different job.
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: 310-192461-2

Login Number: 192461

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/09/20 08:09 PM

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



Tracer/Carrier Summary

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

Job ID: 310-192461-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
310-192461-1	NC2MW2	65.1	
310-192461-2	NC2MW3	58.9	
310-192461-3	NC2MW5	70.4	
310-192461-4	NC2MW6	77.1	
310-192461-5	NC2MW7	79.2	
310-192461-6	NC2MW8	69.8	
310-192461-7	DUP1	77.7	
LCS 160-485734/1-A	Lab Control Sample	83.6	
LCSD 160-485734/2-A	Lab Control Sample Dup	83.6	
MB 160-485734/24-A	Method Blank	74.8	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-192461-1	NC2MW2	65.1	77.0
310-192461-2	NC2MW3	58.9	78.5
310-192461-3	NC2MW5	70.4	69.2
310-192461-4	NC2MW6	77.1	79.3
310-192461-5	NC2MW7	79.2	76.6
310-192461-6	NC2MW8	69.8	69.2
310-192461-7	DUP1	77.7	78.1
LCS 160-485742/1-A	Lab Control Sample	83.6	81.9
LCSD 160-485742/2-A	Lab Control Sample Dup	83.6	81.1
MB 160-485742/24-A	Method Blank	74.8	77.8
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

ANALYTICAL REPORT

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

Laboratory Job ID: 310-192466-1

Client Project/Site: Nebraska City Unit 1/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:
10/14/2020 11:18:31 AM

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

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

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



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Case Narrative

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

Job ID: 310-192466-1

Job ID: 310-192466-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-192466-1

Comments

No additional comments.

Receipt

The samples were received on 10/8/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.6° C, 0.9° C, 1.0° C, 1.0° C and 1.2° 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.

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Sample Summary

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

Job ID: 310-192466-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-192466-1	NC2MW4	Water	10/05/20 11:02	10/08/20 09:30	
310-192466-2	MW13	Water	10/05/20 09:52	10/08/20 09:30	

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Detection Summary

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

Job ID: 310-192466-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-192466-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.60		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	46.1		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.00348		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.447		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.0996	J	0.100	0.0800	mg/L	1		6020A	Total/NA
Cadmium	0.0000970	J	0.000100	0.0000490	mg/L	1		6020A	Total/NA
Calcium	154		0.500	0.190	mg/L	1		6020A	Total/NA
Chromium	0.00164	J	0.00500	0.00110	mg/L	1		6020A	Total/NA
Cobalt	0.00122		0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.00243		0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0349		0.0100	0.00250	mg/L	1		6020A	Total/NA
Molybdenum	0.00272		0.00200	0.00110	mg/L	1		6020A	Total/NA
Total Dissolved Solids	608		30.0	26.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13

Lab Sample ID: 310-192466-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.8		5.00	2.00	mg/L	5		9056A	Total/NA
Sulfate	46.2		5.00	3.55	mg/L	5		9056A	Total/NA
Arsenic	0.0188		0.00200	0.000880	mg/L	1		6020A	Total/NA
Barium	0.225		0.00200	0.000280	mg/L	1		6020A	Total/NA
Boron	0.0955	J	0.100	0.0800	mg/L	1		6020A	Total/NA
Calcium	118		0.500	0.190	mg/L	1		6020A	Total/NA
Cobalt	0.000384	J	0.000500	0.0000910	mg/L	1		6020A	Total/NA
Lead	0.000178	J	0.000500	0.000110	mg/L	1		6020A	Total/NA
Lithium	0.0322		0.0100	0.00250	mg/L	1		6020A	Total/NA
Total Dissolved Solids	508		30.0	26.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

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

Job ID: 310-192466-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-192466-1

Date Collected: 10/05/20 11:02

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.60		5.00	2.00	mg/L			10/13/20 02:14	5
Fluoride	<0.230		0.500	0.230	mg/L			10/13/20 02:14	5
Sulfate	46.1		5.00	3.55	mg/L			10/13/20 02:14	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:50	10/12/20 19:08	1
Arsenic	0.00348		0.00200	0.000880	mg/L		10/09/20 08:50	10/12/20 19:08	1
Barium	0.447		0.00200	0.000280	mg/L		10/09/20 08:50	10/12/20 19:08	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:50	10/12/20 19:08	1
Boron	0.0996	J	0.100	0.0800	mg/L		10/09/20 08:50	10/12/20 19:08	1
Cadmium	0.0000970	J	0.000100	0.0000490	mg/L		10/09/20 08:50	10/12/20 19:08	1
Calcium	154		0.500	0.190	mg/L		10/09/20 08:50	10/12/20 19:08	1
Chromium	0.00164	J	0.00500	0.00110	mg/L		10/09/20 08:50	10/12/20 19:08	1
Cobalt	0.00122		0.000500	0.0000910	mg/L		10/09/20 08:50	10/12/20 19:08	1
Lead	0.00243		0.000500	0.000110	mg/L		10/09/20 08:50	10/12/20 19:08	1
Lithium	0.0349		0.0100	0.00250	mg/L		10/09/20 08:50	10/13/20 14:26	1
Molybdenum	0.00272		0.00200	0.00110	mg/L		10/09/20 08:50	10/12/20 19:08	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:50	10/12/20 19:08	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:50	10/12/20 19:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	608		30.0	26.0	mg/L			10/09/20 15:34	1

Client Sample Results

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

Job ID: 310-192466-1

Client Sample ID: MW13

Lab Sample ID: 310-192466-2

Date Collected: 10/05/20 09:52

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.8		5.00	2.00	mg/L			10/13/20 02:31	5
Fluoride	<0.230		0.500	0.230	mg/L			10/13/20 02:31	5
Sulfate	46.2		5.00	3.55	mg/L			10/13/20 02:31	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:50	10/12/20 19:11	1
Arsenic	0.0188		0.00200	0.000880	mg/L		10/09/20 08:50	10/12/20 19:11	1
Barium	0.225		0.00200	0.000280	mg/L		10/09/20 08:50	10/12/20 19:11	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:50	10/12/20 19:11	1
Boron	0.0955	J	0.100	0.0800	mg/L		10/09/20 08:50	10/12/20 19:11	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:50	10/12/20 19:11	1
Calcium	118		0.500	0.190	mg/L		10/09/20 08:50	10/12/20 19:11	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:50	10/12/20 19:11	1
Cobalt	0.000384	J	0.000500	0.0000910	mg/L		10/09/20 08:50	10/12/20 19:11	1
Lead	0.000178	J	0.000500	0.000110	mg/L		10/09/20 08:50	10/12/20 19:11	1
Lithium	0.0322		0.0100	0.00250	mg/L		10/09/20 08:50	10/13/20 14:36	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		10/09/20 08:50	10/12/20 19:11	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:50	10/12/20 19:11	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:50	10/12/20 19:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	508		30.0	26.0	mg/L			10/09/20 15:34	1

Definitions/Glossary

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

Job ID: 310-192466-1

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

QC Sample Results

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

Job ID: 310-192466-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-295217/3
Matrix: Water
Analysis Batch: 295217

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.400		1.00	0.400	mg/L			10/12/20 21:19	1
Fluoride	<0.0460		0.100	0.0460	mg/L			10/12/20 21:19	1
Sulfate	<0.710		1.00	0.710	mg/L			10/12/20 21:19	1

Lab Sample ID: LCS 310-295217/4
Matrix: Water
Analysis Batch: 295217

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	9.852		mg/L		99	90 - 110
Fluoride	2.00	1.988		mg/L		99	90 - 110
Sulfate	10.0	10.39		mg/L		104	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-294788/1-A
Matrix: Water
Analysis Batch: 295198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 294788

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000510		0.00100	0.000510	mg/L		10/09/20 08:50	10/12/20 17:38	1
Arsenic	<0.000880		0.00200	0.000880	mg/L		10/09/20 08:50	10/12/20 17:38	1
Barium	<0.000280		0.00200	0.000280	mg/L		10/09/20 08:50	10/12/20 17:38	1
Beryllium	<0.000270		0.00100	0.000270	mg/L		10/09/20 08:50	10/12/20 17:38	1
Boron	<0.0800		0.100	0.0800	mg/L		10/09/20 08:50	10/12/20 17:38	1
Cadmium	<0.0000490		0.000100	0.0000490	mg/L		10/09/20 08:50	10/12/20 17:38	1
Calcium	<0.190		0.500	0.190	mg/L		10/09/20 08:50	10/12/20 17:38	1
Chromium	<0.00110		0.00500	0.00110	mg/L		10/09/20 08:50	10/12/20 17:38	1
Cobalt	<0.0000910		0.000500	0.0000910	mg/L		10/09/20 08:50	10/12/20 17:38	1
Lead	<0.000110		0.000500	0.000110	mg/L		10/09/20 08:50	10/12/20 17:38	1
Lithium	<0.00250		0.0100	0.00250	mg/L		10/09/20 08:50	10/12/20 17:38	1
Molybdenum	<0.00110		0.00200	0.00110	mg/L		10/09/20 08:50	10/12/20 17:38	1
Selenium	<0.00100		0.00500	0.00100	mg/L		10/09/20 08:50	10/12/20 17:38	1
Thallium	<0.000260		0.00100	0.000260	mg/L		10/09/20 08:50	10/12/20 17:38	1

Lab Sample ID: LCS 310-294788/2-A
Matrix: Water
Analysis Batch: 295198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 294788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.200	0.2118		mg/L		106	80 - 120
Arsenic	0.200	0.2222		mg/L		111	80 - 120
Barium	0.100	0.1171		mg/L		117	80 - 120
Beryllium	0.100	0.1094		mg/L		109	80 - 120
Boron	0.200	0.2030		mg/L		101	80 - 120
Cadmium	0.100	0.1085		mg/L		108	80 - 120
Calcium	2.00	2.145		mg/L		107	80 - 120
Chromium	0.100	0.1090		mg/L		109	80 - 120
Cobalt	0.100	0.1120		mg/L		112	80 - 120

Eurofins TestAmerica, Cedar Falls

QC Sample Results

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

Job ID: 310-192466-1

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

Lab Sample ID: LCS 310-294788/2-A
 Matrix: Water
 Analysis Batch: 295198

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 294788

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Lead	0.200	0.2259		mg/L		113	80 - 120
Lithium	0.200	0.2061		mg/L		103	80 - 120
Molybdenum	0.200	0.2139		mg/L		107	80 - 120
Selenium	0.400	0.4465		mg/L		112	80 - 120

Lab Sample ID: LCS 310-294788/2-A ^10
 Matrix: Water
 Analysis Batch: 295198

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 294788

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Thallium	0.200	0.1831		mg/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-294818/1-A
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000100		0.000200	0.000100	mg/L		10/09/20 10:14	10/09/20 14:39	1

Lab Sample ID: LCS 310-294818/2-A
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Mercury	0.00167	0.001740		mg/L		104	80 - 120

Lab Sample ID: 310-192466-1 MS
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: NC2MW4
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Mercury	<0.000100		0.00167	0.001776		mg/L		107	80 - 120

Lab Sample ID: 310-192466-1 MSD
 Matrix: Water
 Analysis Batch: 295090

Client Sample ID: NC2MW4
 Prep Type: Total/NA
 Prep Batch: 294818

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD
	Result	Qualifier		Result	Qualifier					3	Limit
Mercury	<0.000100		0.00167	0.001721		mg/L		103	80 - 120	3	20

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

Lab Sample ID: MB 310-294902/1
 Matrix: Water
 Analysis Batch: 294902

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		30.0	26.0	mg/L			10/09/20 15:34	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

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

Job ID: 310-192466-1

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

Lab Sample ID: LCS 310-294902/2
Matrix: Water
Analysis Batch: 294902

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	992.0		mg/L		99	90 - 110

Lab Sample ID: 310-192466-2 DU
Matrix: Water
Analysis Batch: 294902

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	508		510.0		mg/L		0.4	24

- 1
- 2
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QC Association Summary

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

Job ID: 310-192466-1

HPLC/IC

Analysis Batch: 295217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	9056A	
310-192466-2	MW13	Total/NA	Water	9056A	
MB 310-295217/3	Method Blank	Total/NA	Water	9056A	
LCS 310-295217/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 294788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	3010A	
310-192466-2	MW13	Total/NA	Water	3010A	
MB 310-294788/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-294788/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCS 310-294788/2-A ^10	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 294818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	7470A	
310-192466-2	MW13	Total/NA	Water	7470A	
MB 310-294818/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-294818/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-192466-1 MS	NC2MW4	Total/NA	Water	7470A	
310-192466-1 MSD	NC2MW4	Total/NA	Water	7470A	

Analysis Batch: 295090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	7470A	294818
310-192466-2	MW13	Total/NA	Water	7470A	294818
MB 310-294818/1-A	Method Blank	Total/NA	Water	7470A	294818
LCS 310-294818/2-A	Lab Control Sample	Total/NA	Water	7470A	294818
310-192466-1 MS	NC2MW4	Total/NA	Water	7470A	294818
310-192466-1 MSD	NC2MW4	Total/NA	Water	7470A	294818

Analysis Batch: 295198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	6020A	294788
310-192466-2	MW13	Total/NA	Water	6020A	294788
MB 310-294788/1-A	Method Blank	Total/NA	Water	6020A	294788
LCS 310-294788/2-A	Lab Control Sample	Total/NA	Water	6020A	294788
LCS 310-294788/2-A ^10	Lab Control Sample	Total/NA	Water	6020A	294788

Analysis Batch: 295353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	6020A	294788
310-192466-2	MW13	Total/NA	Water	6020A	294788

General Chemistry

Analysis Batch: 294902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	SM 2540C	
310-192466-2	MW13	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Cedar Falls

QC Association Summary

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

Job ID: 310-192466-1

General Chemistry (Continued)

Analysis Batch: 294902 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-294902/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-294902/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-192466-2 DU	MW13	Total/NA	Water	SM 2540C	

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Lab Chronicle

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

Job ID: 310-192466-1

Client Sample ID: NC2MW4

Lab Sample ID: 310-192466-1

Date Collected: 10/05/20 11:02

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295217	10/13/20 02:14	ACJ	TAL CF
Total/NA	Prep	3010A			294788	10/09/20 08:50	HED	TAL CF
Total/NA	Analysis	6020A		1	295198	10/12/20 19:08	SAD	TAL CF
Total/NA	Prep	3010A			294788	10/09/20 08:50	HED	TAL CF
Total/NA	Analysis	6020A		1	295353	10/13/20 14:26	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 14:43	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294902	10/09/20 15:34	SAS	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-192466-2

Date Collected: 10/05/20 09:52

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	295217	10/13/20 02:31	ACJ	TAL CF
Total/NA	Prep	3010A			294788	10/09/20 08:50	HED	TAL CF
Total/NA	Analysis	6020A		1	295198	10/12/20 19:11	SAD	TAL CF
Total/NA	Prep	3010A			294788	10/09/20 08:50	HED	TAL CF
Total/NA	Analysis	6020A		1	295353	10/13/20 14:36	SAD	TAL CF
Total/NA	Prep	7470A			294818	10/09/20 10:14	ACJ	TAL CF
Total/NA	Analysis	7470A		1	295090	10/09/20 14:54	ACJ	TAL CF
Total/NA	Analysis	SM 2540C		1	294902	10/09/20 15:34	SAS	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, 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 Unit 1/Unit 2 CCR/Landfill

Job ID: 310-192466-1

Laboratory: Eurofins TestAmerica, 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
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-21
Georgia	State	IA100001 (OR)	09-29-21
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20 *
Oregon	NELAP	IA100001	09-29-21
USDA	US Federal Programs	P330-19-00003	01-02-22

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

Method Summary

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

Job ID: 310-192466-1

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
3010A	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 TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
TestAmerica



310-192466 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: <u>NE city station unit 2 CCP/landfill</u>
Receipt Information			
Date/Time Received:	DATE <u>10/8/20</u>	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type:	<input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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>For samples NC2 MW4 + MW13 reported to Unit 1 + 2</u>			

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14



Environment Testing
TestAmerica

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: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information			
Date/Time Received:	DATE <u>10/8/20</u>	TIME <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No <u>HED 10/8/20</u>	
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>M</u>	Correction Factor (°C): <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.			
Uncorrected Temp (°C):	<u>0.9</u>	Corrected Temp (°C): <u>1.0</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 District</u>		
City/State: <u>Omaha</u> <small>CITY</small>	<u>NE</u> <small>STATE</small>	Project: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information		
Date/Time Received: <u>10/8/20</u> <small>DATE</small>	<u>0930</u> <small>TIME</small>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>5</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>	
<small>* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature</small>		
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.6</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
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State:	<small>CITY</small> <u>Omaha</u>	<small>STATE</small> <u>NE</u>	Project: <u>NE city station UNIT 2 CCR/Landfill</u>
Receipt Information			
Date/Time Received:	<small>DATE</small> <u>10/8/20</u>	<small>TIME</small> <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
<small>* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.</small>			
Uncorrected Temp (°C): <u>1.1</u>	Corrected Temp (°C): <u>1.2</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
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY	STATE	Project: <u>NE city station unit ZCCR/landfill</u>
		<u>NE</u>	
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME	Received By: <u>HED/LB</u>
		<u>0930</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.9</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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Chain of Custody Record

Client Information Client Contact: Kyle Uhing Phone: (402) 226-2515 E-Mail: shawn.hayes@testamericainc.com		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com		Center Tracking No(s): COC No: Page: Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: SSON#:		Address: 444 South 16th Street Mall 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 Email: kkuhing@oppd.com Project Name: Nebraska City Station Unit 1 CCR / Landfill Site: Nebraska City Station Unit 1		Analysis Requested Total 602A CCR Appendix III and IV, 7470A Mercury 9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228 2540C TDS, 9056A Chloride, Fluoride, Sulfate	
Sample Identification		Field Filtered Sample (Yes or No)		Total Number of Containers	
Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=Water, S=Solid, O=Organic, A=As) Preservation Code	NC1MW2 NC1MW3 NC1MW4 NC2MW4 NC1MW9 MW11 MW13 MW14 MW15	10/6/20 10/6/20 10/6/20 10/5/20 10/6/20 10/6/20 10/5/20 10/6/20	14:23 16:08 14:57 11:58 16:50 13:36 9:58 12:12	G G G G G G G G	W W W W W W W W
Special Instructions/Note: CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents		X X X X X X X X		X X X X X X X X	
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)					
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/QC Requirements:					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date/Time: 10/7/2020 9:52 Date/Time: 10/7/2020 17:00 Date/Time:		Company: [Signature] Company: [Signature] Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-192466-1

Login Number: 192466

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Bovy, Lorraine L

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 NC2MW4 and MW13 on this job for Unit 1 and 2
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	

ANALYTICAL REPORT

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

Laboratory Job ID: 310-192466-2

Client Project/Site: Nebraska City Unit 1/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:
11/18/2020 10:51:46 AM*

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

LINKS

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results through
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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

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

Job ID: 310-192466-2

Job ID: 310-192466-2

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-192466-2

Comments

No additional comments.

Receipt

The samples were received on 10/8/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.6° C, 0.9° C, 1.0° C, 1.0° C and 1.2° C.

RAD

Method 9320: 9320 Prep Batch 160-485742

The following sample did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences: NC2MW4 (310-192466-1)

Method 9320: 9320 Prep Batch 160-485742

The following sample exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: NC2MW4 (310-192466-1).

Method PrecSep_0: Radium 228 Prep Batch 160-485742:

The following samples were prepared at a reduced aliquot due to brown discoloration and a cloudy appearance: NC2MW4 (310-192466-1).

Method PrecSep-21: Radium 226 Prep Batch 160-485734:

The following samples were prepared at a reduced aliquot due to brown discoloration and a cloudy appearance: NC2MW4 (310-192466-1).

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 Unit 1/Unit 2 CCR/Landfill

Job ID: 310-192466-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-192466-1	NC2MW4	Water	10/05/20 11:02	10/08/20 09:30	
310-192466-2	MW13	Water	10/05/20 09:52	10/08/20 09:30	

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Client Sample Results

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

Job ID: 310-192466-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-192466-1

Date Collected: 10/05/20 11:02

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.933		0.585	0.591	1.00	0.778	pCi/L	10/15/20 09:02	11/12/20 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.7		40 - 110					10/15/20 09:02	11/12/20 19:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-1.86	U G	0.464	0.494	1.00	1.24	pCi/L	10/15/20 09:50	11/12/20 12:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.7		40 - 110					10/15/20 09:50	11/12/20 12:22	1
Y Carrier	77.8		40 - 110					10/15/20 09:50	11/12/20 12:22	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	-0.927	U	0.747	0.770	5.00	1.24	pCi/L		11/18/20 00:38	1

Client Sample Results

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

Job ID: 310-192466-2

Client Sample ID: MW13

Lab Sample ID: 310-192466-2

Date Collected: 10/05/20 09:52

Matrix: Water

Date Received: 10/08/20 09:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.314		0.223	0.225	1.00	0.307	pCi/L	10/15/20 09:02	11/12/20 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		40 - 110					10/15/20 09:02	11/12/20 19:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.558		0.354	0.357	1.00	0.546	pCi/L	10/15/20 09:50	11/12/20 12:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		40 - 110					10/15/20 09:50	11/12/20 12:23	1
Y Carrier	77.4		40 - 110					10/15/20 09:50	11/12/20 12:23	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	0.872		0.418	0.422	5.00	0.546	pCi/L		11/18/20 00:38	1

Definitions/Glossary

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

Job ID: 310-192466-2

Qualifiers

Rad

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

Glossary

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

QC Sample Results

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

Job ID: 310-192466-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-485734/24-A
Matrix: Water
Analysis Batch: 488962

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485734

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1697	U	0.237	0.238	1.00	0.401	pCi/L	10/15/20 09:02	11/12/20 21:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	74.8		40 - 110		10/15/20 09:02	11/12/20 21:21	1			

Lab Sample ID: LCS 160-485734/1-A
Matrix: Water
Analysis Batch: 488988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485734

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	11.56		1.47	1.00	0.305	pCi/L	102	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	83.6		40 - 110						

Lab Sample ID: LCSD 160-485734/2-A
Matrix: Water
Analysis Batch: 488989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 485734

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	11.3	10.21		1.35	1.00	0.351	pCi/L	90	75 - 125	0.48	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	83.6		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-485742/24-A
Matrix: Water
Analysis Batch: 488987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485742

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.9626		0.405	0.414	1.00	0.576	pCi/L	10/15/20 09:50	11/12/20 12:23	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	74.8		40 - 110		10/15/20 09:50	11/12/20 12:23	1			
Y Carrier	77.8		40 - 110		10/15/20 09:50	11/12/20 12:23	1			

QC Sample Results

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

Job ID: 310-192466-2

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

Lab Sample ID: LCS 160-485742/1-A
Matrix: Water
Analysis Batch: 488989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485742

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	7.66	8.312		1.04	1.00	0.462	pCi/L	108	75 - 125		
LCS LCS											
Carrier	%Yield	Qualifier	Limits								
Ba Carrier	83.6		40 - 110								
Y Carrier	81.9		40 - 110								

Lab Sample ID: LCSD 160-485742/2-A
Matrix: Water
Analysis Batch: 488989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 485742

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER	Limit
Radium-228	7.66	7.943		1.02	1.00	0.523	pCi/L	104	75 - 125	0.18	1	
LCSD LCSD												
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	83.6		40 - 110									
Y Carrier	81.1		40 - 110									

QC Association Summary

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

Job ID: 310-192466-2

Rad

Prep Batch: 485734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	PrecSep-21	
310-192466-2	MW13	Total/NA	Water	PrecSep-21	
MB 160-485734/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485734/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-485734/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 485742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192466-1	NC2MW4	Total/NA	Water	PrecSep_0	
310-192466-2	MW13	Total/NA	Water	PrecSep_0	
MB 160-485742/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485742/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-485742/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 310-192466-2

Client Sample ID: NC2MW4

Lab Sample ID: 310-192466-1

Date Collected: 10/05/20 11:02

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488962	11/12/20 19:40	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488987	11/12/20 12:22	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Client Sample ID: MW13

Lab Sample ID: 310-192466-2

Date Collected: 10/05/20 09:52

Matrix: Water

Date Received: 10/08/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			485734	10/15/20 09:02	AVB	TAL SL
Total/NA	Analysis	9315		1	488962	11/12/20 19:40	FLC	TAL SL
Total/NA	Prep	PrecSep_0			485742	10/15/20 09:50	AVB	TAL SL
Total/NA	Analysis	9320		1	488987	11/12/20 12:23	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	489417	11/18/20 00:38	SCB	TAL SL

Laboratory References:

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



Accreditation/Certification Summary

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

Job ID: 310-192466-2

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Method Summary

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

Job ID: 310-192466-2

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

Protocol References:

None = None

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

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

Laboratory References:

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





Environment Testing
TestAmerica



310-192466 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State:	<small>CITY</small> <u>Omaha</u>	<small>STATE</small> <u>NE</u>	Project: <u>NE city station unit 2 CCP/landfill</u>
Receipt Information			
Date/Time Received:	<small>DATE</small> <u>10/8/20</u>	<small>TIME</small> <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type:	<input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
<small>Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature</small>			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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			
<u>For samples NC2 MW4 + MW13 reported to Unit 1 + 2</u>			

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State:	<small>CITY</small> <u>Omaha</u>	<small>STATE</small> <u>NE</u>	Project: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information			
Date/Time Received:	<small>DATE</small> <u>10/8/20</u>	<small>TIME</small> <u>0930</u>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>2</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No <u>HED 10/8/20</u>	
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>M</u>	Correction Factor (°C): <u>+0.1</u>		
<small>* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.</small>			
Uncorrected Temp (°C): <u>0.9</u>	Corrected Temp (°C): <u>1.0</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			

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Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power District</u>		
City/State: <u>Omaha</u> <small>CITY</small>	<u>NE</u> <small>STATE</small>	Project: <u>NE city station unit 2 CCR/Landfill</u>
Receipt Information		
Date/Time Received: <u>10/8/20</u> <small>DATE</small>	<u>0930</u> <small>TIME</small>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>3</u> of <u>5</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>	
<small>* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature</small>		
Uncorrected Temp (°C): <u>0.5</u>	Corrected Temp (°C): <u>0.6</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
TestAmerica

Place COC scanning label
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Cooler/Sample Receipt and Temperature Log Form

Client Information		
Client: <u>Omaha Public Power District</u>		
City/State: <u>Omaha</u> <small>CITY</small>	<u>NE</u> <small>STATE</small>	Project: <u>NE city station UNIT 2 CCR/Landfill</u>
Receipt Information		
Date/Time Received: <u>10/8/20</u> <small>DATE</small>	<u>0930</u> <small>TIME</small>	Received By: <u>HED/LB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>	
<small>* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.</small>		
Uncorrected Temp (°C): <u>1.1</u>	Corrected Temp (°C): <u>1.2</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		

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Environment Testing
TestAmerica

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha</u>	CITY	STATE	Project: <u>NE city station unit ZCCR/landfill</u>
		<u>NE</u>	
Receipt Information			
Date/Time Received: <u>10/8/20</u>	DATE	TIME	Received By: <u>HED/LB</u>
		<u>0930</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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>5</u> of <u>5</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>M</u>	Correction Factor (°C): <u>+0.1</u>		
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.9</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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Chain of Custody Record

Client Information Client Contact: Kyle Uhing Phone: (531) 226-2515 E-Mail: shawn.hayes@testamericainc.com		Lab PM: Hayes, Shawn M Carrier Tracking No(s):		COC No: Page: Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: 31007559 SOW#:		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Address: 444 South 16th Street Mall 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 Phone: (531) 226-2515 Email: kkuhing@oppd.com Project Name: Nebraska City Station Unit 2 CCR / Landfill Site: Nebraska City Station Unit 2		Field Filtered Sample (Yes or No)		Total Number of Containers	
Sample Identification		Sample Date		Sample Time	
Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=metal, A=air)		Preservation Code	
NC2MW2	G	10/5/20	W	N	4
NC2MW3	G	10/5/20	W	N	4
NC2MW4	G	10/5/20	W	N	4
NC2MW5	G	10/5/20	W	N	4
NC2MW6	G	10/5/20	W	N	4
NC2MW7	G	10/5/20	W	N	4
NC2MW8	G	10/5/20	W	N	4
MW13	G	10/5/20	W	N	4
Special Instructions/Note: CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents CCR Appendix III and IV Constituents		Total 6020A CCR Appendix III and IV, 7470A Mercury 2540C TDS, 9056A Chloride, Fluoride, Sulfate		Total 9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228	
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)					
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/QC Requirements:					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by:		Date/Time: 10/7/2020 9:52		Company: GILRO	
Relinquished by:		Date/Time: 10/8/20 0920		Company: GILRO	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Client Information		Sampler: Kyle K. Uhing		Lab PM: Hayes, Shawn M		Center Tracking No(s):		COC No:	
Client Contact: Kyle Uhing		Phone: (402) 226-2515		E-Mail: shawn.hayes@testamericainc.com		Page:		Job #:	
Company: Omaha Public Power District		Address: 444 South 16th Street Mall 9E/EP1		City: Omaha		State, Zip: NE, 68102-2247		Phone: (531) 226-2515	
Email: kkuhing@oppd.com		Project Name: Nebraska City Station Unit 1 CCR / Landfill		Site: Nebraska City Station Unit 1		TestAmerica Project #: 31007558		SSOW#:	
Due Date Requested:		TAT Requested (days):		Field Filtered Sample (Yes or No)		Total Number of Containers		Special Instructions/Note:	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=organic, A=air)		Preservation Codes:	
NC1MW2		10/6/20 14:23		G		W		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4.5 Z - other (specify)	
NC1MW3		10/6/20 16:08		G		W		CCR Appendix III and IV Constituents	
NC1MW4		10/6/20 14:57		G		W		CCR Appendix III and IV Constituents	
NC2MW4		10/5/20 11:58		G		W		CCR Appendix III and IV Constituents	
NC1MW9		10/6/20 16:50		G		W		CCR Appendix III and IV Constituents	
MW11		10/6/20 13:36		G		W		CCR Appendix III and IV Constituents	
MW13		10/5/20 9:52		G		W		CCR Appendix III and IV Constituents	
MW14		10/5/20 12:12		G		W		CCR Appendix III and IV Constituents	
MW15		10/6/20 -		G		W		CCR Appendix III 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		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Months	
Deliverable Requested: 1, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date:		Method of Shipment:			
Relinquished by: [Signature]		Date/Time: 10/7/2020 9:52		Company: [Signature]		Date/Time: 10-7-2020 0952		Company: [Signature]	
Relinquished by: [Signature]		Date/Time: 10-7-2020 1700		Company: [Signature]		Date/Time: 10-8-20 0930		Company: [Signature]	
Relinquished by: [Signature]		Date/Time:		Company:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-192466-2

Login Number: 192466

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Bovy, Lorraine L

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 NC2MW4 and MW13 on this job for Unit 1 and 2
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-192466-2

Login Number: 192466

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/09/20 08:09 PM

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



Tracer/Carrier Summary

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

Job ID: 310-192466-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
310-192466-1	NC2MW4	67.7	
310-192466-2	MW13	83.9	
LCS 160-485734/1-A	Lab Control Sample	83.6	
LCSD 160-485734/2-A	Lab Control Sample Dup	83.6	
MB 160-485734/24-A	Method Blank	74.8	

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-192466-1	NC2MW4	67.7	77.8
310-192466-2	MW13	83.9	77.4
LCS 160-485742/1-A	Lab Control Sample	83.6	81.9
LCSD 160-485742/2-A	Lab Control Sample Dup	83.6	81.1
MB 160-485742/24-A	Method Blank	74.8	77.8

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



Appendix C

July 2020 & October 2020
Statistical Memos



Technical Memorandum

Date: Tuesday, September 15, 2020

To: Omaha Public Power District (OPPD)

From: HDR Engineering, Inc.

Subject: Summary of Statistical Analysis and Evaluation for Assessment Monitoring
Nebraska City Station NC2 Ash Disposal Area
NDEE Title 132 & Federal CCR Groundwater Monitoring Network

Site Information

Omaha Public Power District (OPPD) operates a two-unit (Unit 1 and Unit 2) fossil fuel-fired generating plant at the Nebraska City Station (Station), southeast of Nebraska City, Nebraska. The Station has two existing coal combustion residual (CCR) landfills for fossil fuel combustion ash disposal: the NC1 Ash Disposal Area and the NC2 Ash Disposal Area. Both NC1 and NC2 Ash Disposal Areas are subject to the Environmental Protection Agency's (EPA) final CCR Rule [40 Code of Federal Regulations (CFR) 257] and Nebraska Department of Environment and Energy's (NDEE) Title 132 Chapter 7 (Groundwater Monitoring and Remedial Action) regulations for fossil fuel combustion ash disposal areas. This memorandum provides a discussion and evaluation of the NC2 Ash Disposal Area assessment monitoring sampling event conducted in July 2020.

Groundwater Monitoring Program Summary

During the fall 2019 sampling event, calcium was detected above the background threshold value (BTV) in monitoring location NC2MW-2. On January 8, 2020, a verification sampling event was completed by OPPD personnel as part of an alternate source demonstration (ASD) within the 90-day requirement of Title 132 Chapter 7, Section 004.03C. Pursuant to Title 132 Chapter 7, Section 005.02, the results of the verification sampling event triggered an assessment monitoring program due to confirmed calcium detections above the BTV in NC2MW-2. Additional site investigation into the calcium detection at NC2MW-2 was conducted in February 2020, and an unsuccessful ASD Report was completed on April 17, 2020, in accordance with the Federal CCR Rule.

Pursuant to Title 132 Chapter 7, Section 005.02, assessment monitoring was initiated and the first of two initial rounds of sampling, including the full list of Appendix IV (assessment monitoring) constituents, was obtained during the April 27, 2020 sampling event. Results of the initial assessment monitoring sampling event were used to calculate BTVs and to establish groundwater protection standards (GWPS) for the Appendix IV constituents. Sampling results used to update BTVs were obtained during monitoring events performed between March 2016 and April 2020 from background monitoring wells (NC2MW-4, NC2MW-5, and MW-13). BTVs for the NC2 Ash Disposal Area are updated every two years or during a monitoring program transition, in accordance with



Chapter 21 of the Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities – Unified Guidance (dated March 2009). Pursuant to the NDEE Title Chapter 7 Section 005.04C, BTVs for both Appendix III (detection monitoring) and Appendix IV (assessment monitoring) constituents and GWPS for Appendix IV (assessment monitoring) constituents were established and reported in the Title 132: Semi-Annual Groundwater Monitoring Report (dated July 17, 2020).

The second round of assessment monitoring sampling, consisting of Appendix III (detection monitoring) constituents and previously detected Appendix IV (assessment monitoring) constituents, was required to be conducted within 90 days of the initial assessment monitoring sampling event, pursuant to Title 132 Chapter 7, Section 005.04B. The second assessment monitoring sampling event was conducted on July 14-15, 2020. Results of the second round of assessment monitoring data were used to evaluate for detections of Appendix III and IV constituents above the BTV, and to evaluate for detections of Appendix IV constituents statistically above the GWPS. Results of the statistical evaluation is discussed as part of this memorandum.

Assessment Monitoring Statistical Evaluation

The statistical analysis of groundwater data was performed in accordance with the methods described in the Groundwater Monitoring Statistical Certification for the Nebraska City Station – NC2 Combustion Ash Landfill (dated July 31, 2018), and the facility’s most recent Sampling and Analysis Plan (SAP) as permitted under NDEE Title 132 (dated March 2019).

Downgradient sampling results from the July 2020 assessment monitoring sampling event were used to evaluate for statistically significant increases (SSIs) over background for Appendix III (detection monitoring) and Appendix IV (assessment monitoring) constituents. Results of the analysis indicated one (1) SSI for an Appendix III constituent (i.e. calcium at NC2MW-2) above the calculated BTV. Calcium has previously been determined to be an SSI at monitoring location NC2MW-2, which led to the transition of the NC2 Ash Disposal Area into the assessment monitoring program. Nine (9) of the Appendix IV (assessment monitoring) well-constituent pairs were identified as SSIs (see **Table C1**).

Table C1. Summary of Initial Assessment Monitoring Detections (July 2020)

Constituent	Well ID: NC2MW-2		NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8	
	BTV (UPL):	Unit	Assessment Monitoring Results – July 2020				
Appendix III (Detection Monitoring) Constituents							
Boron	4.63	mg/L	0.291	0.401	2.60	0.161	0.0838J
Calcium	237	mg/L	261	204	122	121	127
Chloride	36.6	mg/L	7.93	3.86J	7.83	9.83	10.3
Fluoride	1.28	mg/L	<0.230	<0.230	0.232J	<0.230	<0.230
pH	6.48 – 7.92	SU	6.67	6.80	6.93	6.81	7.04
Sulfate	611	mg/L	319	407	135	<3.55	6.24
TDS	1,390	mg/L	1,070	842	526	340	448
Appendix IV (Assessment Monitoring) Constituents							
Antimony	0.00110	mg/L	0.00268	<0.000510	<0.000510	<0.000510	<0.000510
Arsenic	0.0111	mg/L	0.000989J	0.00685	<0.000880	0.0381	0.0195



Table C1. Summary of Initial Assessment Monitoring Detections (July 2020)

Well ID: NC2MW-2		NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8		
Constituent	BTV (UPL):	Unit	Assessment Monitoring Results – July 2020				
Appendix IV (Assessment Monitoring) Constituents							
Barium	0.390	mg/L	0.152	0.171	0.118	<u>0.515</u>	<u>0.523</u>
Beryllium	0.00100	mg/L	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium	0.000138	mg/L	<u>0.000306</u>	<0.0000490	0.0000680J	<0.0000490	<0.0000490
Chromium	0.00500	mg/L	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Cobalt	0.00236	mg/L	0.000202J	<u>0.00274</u>	0.000122J	0.000233J	0.00178
Fluoride	1.28	mg/L	<0.230	<0.230	0.232J	<0.230	<0.230
Lead	0.00320	mg/L	0.000908	0.000595	0.000482J	<0.000110	0.000201J
Lithium	0.0423	mg/L	<u>0.0468</u>	0.0317	0.0309	<u>0.0580</u>	0.0306
Mercury	0.000200	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Molybdenum	0.0339	mg/L	0.0163	0.0112	0.0133	0.00170J	0.00285
Radium 226+228	1.97	pCi/L	0.995	0.885	0.870	0.804	0.598
Selenium	0.0238	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Thallium	0.00100	mg/L	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260

Bold and underlined concentration indicates an SSI over background.

“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.

Sampling results for the July 2020 sampling event were also used to evaluate for statistically significant levels (SSLs) over GWPS, as provided in **Table 2**. SSLs are identified using 95 percent confidence intervals constructed for each constituent-well pair and compared to the GWPS. If the lower confidence limit (LCL) for a constituent exceeds the GWPS at the 95 percent confidence level, an SSL is identified. Two (2) Appendix IV constituents, arsenic and lithium, were identified as SSLs in NC2MW-7.



Table C2. Summary of Evaluation for SSLs over GWPS (July 2020)

Constituent	Well ID:		NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8
	GWPS ^[1]	Unit	Lower Confidence Levels – Assessment Monitoring Results – July 2020				
Antimony	0.006	mg/L	0.003031	0.001	0.001	0.001	0.001
Arsenic	0.0111 ^[2]	mg/L	0.002	0.004757	0.002	0.0388	0.00168
Barium	2.0	mg/L	0.1044	0.2155	0.09887	0.5379	0.191
Beryllium	0.004	mg/L	0.001	0.001	0.001	0.001	0.001
Cadmium	0.005	mg/L	0.000306	0.0001	0.0001	0.0001	0.0001
Chromium	0.1	mg/L	0.005	0.005	0.005	0.005	0.005
Cobalt	0.006	mg/L	0.000277	0.00051	0.0005	0.0004018	0.001687
Fluoride	4.0	mg/L	0.371	0.5	0.5	0.429	0.5
Lead	0.015	mg/L	0.0006375	0.0005	0.0005	0.0005	0.0005
Lithium	0.0423 ^[2]	mg/L	0.0313	0.0333	0.0321	0.05714	0.0292
Mercury	0.002	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002
Molybdenum	0.1	mg/L	0.009802	0.00298	0.01959	0.00185	0.002646
Radium 226+228	5.0	pCi/L	0.5873	0.6052	0.4705	0.7788	0.5304
Selenium	0.05	mg/L	0.00165	0.005	0.005	0.005	0.005
Thallium	0.002	mg/L	0.001	0.001	0.001	0.001	0.001

Bold and underlined concentration indicates an SSL over the GWPS.

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

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

Key Upcoming Activities

When an SSL over the GWPS is detected for an Appendix IV constituent, OPPD is required to characterize the extent of the release and initiate an Assessment of Corrective Measures (ACM) within 90 days of identifying SSLs in accordance with the Federal CCR Rule §257.95(g) and Title 132 Chapter 7, Section 005.07. Within the same 90 days, OPPD can also conduct an ASD to attempt to demonstrate that a source other than the CCR unit caused the contamination, or that the increase is due to natural variation in groundwater quality, in accordance with §257.95(g). This memorandum serves as the notification of SSLs and will be placed in the operating record. The next semiannual sampling event will occur in October 2020 and will be analyzed for Appendix III and Appendix IV constituents.

Technical Memorandum

Date: Friday, January 29, 2021

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 (OPPD) operates a two-unit (Unit 1 and Unit 2) fossil fuel-fired generating plant at the Nebraska City Station (Station), southeast of Nebraska City, Nebraska. The Station has two existing coal combustion residual (CCR) landfills for fossil fuel combustion ash disposal; the NC1 Ash Disposal Area and the NC2 Ash Disposal Area. Both NC1 and NC2 Ash Disposal Areas are subject to the Environmental Protection Agency's (EPA) final CCR Rule and Nebraska Department of Environment and Energy's (NDEE) Title 132 Chapter 7 (Groundwater Monitoring and Remedial Action) 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 an existing CCR landfill permitted under the NDEE Title 132 regulations for 40.7 acres. Cell 1 was constructed in 2008/2009 with a composite liner and leachate collection system. The NC2 Ash Disposal Area Cells 2 and 3 base liner and West Leachate Pond base liner were completed January 23, 2018. Cell 2 and 3 base liners were constructed with 24 inches of re-compacted clay overlain by a 60-mil high-density polyethylene geomembrane and geotextile fabric layer.

Groundwater sampling was completed as part of an assessment monitoring program for the NC2 Ash Disposal Area in October 2020 (as specified in 40 CFR §257.95(d) and NDEE Title 132 Chapter 7 Section 005.06). The statistical analysis of groundwater data was performed in accordance with the methods described in the *Groundwater Monitoring Statistical Certification* for the Nebraska City Station Unit 2 – NC2 Ash Landfill, amended July 2018, and the facility's most recent Sampling and Analysis Plan (SAP) (dated January 4, 2019; revised March 1, 2019) as permitted under Title 132. Sampling results used to update background threshold values (BTVs) were obtained during monitoring events performed between March 2016 and April 2020. Downgradient sampling results from the October 2020 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 over background for the Appendix III (Detection Monitoring) constituents and Appendix IV (Assessment Monitoring) constituents are provided in **Table C1**. The calculated lower confidence levels (LCLs) and the evaluation for SSLs over the GWPS for the Appendix IV (Assessment Monitoring) constituents are provided in **Table C2**. Seven SSIs were identified during the fall 2020 sampling event: antimony, calcium, cadmium, and lithium in NC2MW-2; arsenic, barium, and lithium in NC2MW-7; and arsenic and barium in NC2MW-8. Three SSLs were identified during the fall 2020 sampling event: arsenic and lithium in NC2MW-7; and arsenic in NC2MW-8. Arsenic in NC2MW-8 is a newly identified SSL.



Table C1. Summary of Assessment Monitoring Detections (October 2020)

		Well ID:	NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8
Constituent	BTV (UPL):	Unit	Assessment Monitoring Results – October 2020				
Appendix III (Detection Monitoring) Constituents							
Boron	4.63	mg/L	0.289	0.213	3.03	0.220	0.115
Calcium	237	mg/L	268	159	126	122	116
Chloride	36.6	mg/L	7.67	7.71	8.57	9.12	10.0
Fluoride	1.28	mg/L	<0.230	0.535	0.329J	0.322J	0.331J
pH	6.48 – 7.92	SU	6.7	6.76	6.89	7.21	7.02
Sulfate	611	mg/L	324	156	147	<3.55	5.50
TDS	1,390	mg/L	1,050	644	404	396	512
Appendix IV (Assessment Monitoring) Constituents							
Antimony	0.00110	mg/L	0.00381	<0.000510	<0.000510	<0.000510	<0.000510
Arsenic	0.0111	mg/L	0.00117J	0.00735	0.000889J	0.0435	0.0322
Barium	0.390	mg/L	0.170	0.191	0.132	0.585	0.579
Beryllium	0.00100	mg/L	<0.000270	<0.000270	<0.000270	<0.000270	<0.000270
Cadmium	0.000138	mg/L	0.000186	<0.0000490	0.0000810J	<0.0000490	<0.0000490
Chromium	0.00500	mg/L	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Cobalt	0.00236	mg/L	0.000208J	0.000647	0.000438J	0.000233J	0.00176
Radium 226+228	1.97	pCi/L	1.06	1.32	1.31	0.710	1.24
Fluoride	1.28	mg/L	<0.230	0.535	0.329J	0.322J	0.331J
Lead	0.00320	mg/L	0.000797	0.000163J	0.000929	<0.000110	0.000486J
Lithium	0.0423	mg/L	0.0523	0.0399	0.0362	0.0641	0.0325
Mercury	0.000200	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Molybdenum	0.0339	mg/L	0.0177	0.00487	0.0144	0.00122J	0.00220
Selenium	0.0238	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Thallium	0.00100	mg/L	<0.000260	<0.000260	<0.000260	<0.000260	<0.000260

Bold and underlined concentration indicates an SSI over background.

“J” data qualifier indicates that value is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.



Table C2. Summary of Evaluation for SSLs over GWPS (October 2020)

Constituent	Well ID:		NC2MW-2	NC2MW-3	NC2MW-6	NC2MW-7	NC2MW-8
	GWPS ^[1]	Unit	Lower Confidence Levels – Assessment Monitoring Results – October 2020				
Antimony	0.006	mg/L	0.003079	0.001	0.001	0.001	0.001
Arsenic	0.0111 ^[2]	mg/L	0.002	0.004893	0.002	<u>0.0388</u>	<u>0.01217</u>
Barium	2.0	mg/L	0.1073	0.2135	0.1005	0.5407	0.5403
Beryllium	0.004	mg/L	0.001	0.001	0.001	0.001	0.001
Cadmium	0.005	mg/L	0.00022	0.0001	0.0001	0.0001	0.0001
Chromium	0.1	mg/L	0.005	0.005	0.005	0.005	0.005
Cobalt	0.006	mg/L	0.0005	0.00051	0.0005	0.0005	0.001698
Fluoride	4.0	mg/L	0.5	0.5	0.5	0.5	0.5
Lead	0.015	mg/L	0.0006471	0.0005	0.0005	0.0005	0.0005
Lithium	0.0423 ^[2]	mg/L	0.02583	0.02449	0.02998	<u>0.05748</u>	0.02963
Mercury	0.002	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002
Molybdenum	0.1	mg/L	0.008604	0.003494	0.0159	0.002	0.002561
Radium 226+228	5.0	pCi/L	0.6325	0.06577	0.5213	0.7707	0.5875
Selenium	0.05	mg/L	0.05	0.05	0.05	0.05	0.05
Thallium	0.002	mg/L	0.001	0.001	0.001	0.001	0.001

Bold and underlined concentration indicates an SSL over the GWPS.

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

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