WCI Austin Landfill, LLC.

2025 Coal Combustion Residuals Annual Monitoring Report

SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota 55912
Permit SW-514-001

January 29, 2026

2025 Coal Combustion Residuals Annual Monitoring Report

SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota 55912
Permit SW-514-001

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Table of Contents

1 Introduction 1
1.1 Scope of Work 1
2 Site Background 1
2.1 Site Location and Description 1
3 Monitoring Network Systems and Sampling Schedule 2
4 Groundwater Sampling Methodology 3
5 Groundwater Monitoring Results 4
5.1 Groundwater Elevation Data 4
5.2 Groundwater Analytical Data 4
6 Statistical Evaluation Data 5
6.1 Statistically Significant Increase Determination 6
7 Groundwater Protection Standards 7
8 Report Summary and Conclusions 7
9 Recommendations 8

Figures

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Water Table Contour Map - April 8, 2025
Figure 4 – Potentiometric Surface Contour Map Deep Zone - April 8, 2025
Figure 5 – Water Table Contour Map - July 1, 2025
Figure 6 – Potentiometric Surface Contour Map Deep Zone - July 1, 2025

Inset Tables

Table A – Comparison of 2025 Confirmed COC Concentrations to BTVs

Tables

Table 1 – Groundwater Elevations
Table 2 – Groundwater Analytical Data – Appendix III
Table 3 – Groundwater Analytical Data – Appendix IV
Table 4 – Well Stablization Data
Table 5 – Background Threshold Values
Table 6 – Groundwater Protection Standards
Table 7 – Groundwater Analytical Data vs Groundwater Protection Standards – Appendix IV

Appendices

Appendix A – Field Data Sheets
Appendix B – Laboratory Analytical Reports
Appendix C – Statistical Evaluation Data

Acronyms

BTV	Background Threshold Value
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
COC	Chemical of Concern
Eurofins TA	Eurofins TestAmerica, Inc.
GES	Groundwater & Environmental Services, Inc.
GPS	Groundwater Protection Standards
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
MPCA	Minnesota Pollution Control Agency
NGVD	National Geodetic Vertical Datum
ORP	Oxidation-Reduction Potential
pci/L	picoCuries per liter
QA/QC	Quality Assurance/Quality Control
Report	2025 Coal Combustion Residuals Annual Monitoring Report
SSI	Statistically Significant Increase
US EPA	United States Environmental Protection Agency
USL	Upper Simultaneous Limit

1 Introduction

The *2025 Combustion Coal Residuals Annual Monitoring Report* (Report) was prepared to summarize the results of the 2025 groundwater monitoring events and associated analysis for Appendix III (detection monitoring) and Appendix IV (assessment monitoring), per 40 Code of Federal Regulations (CFR) §§ 257.90 – 257.98, at the SKB Lansing Landfill. The SKB Lansing Landfill operates under Minnesota Pollution Control Agency (MPCA) Site Permit Number SW-514-001. The SKB Lansing Landfill is located at 52563 243rd Street in Austin, Mower County, Minnesota (**Figure 1**).

Two groundwater sampling events were conducted at the SKB Lansing Landfill in the spring and summer of 2025. Groundwater samples were analyzed for parameters included in Appendix III (detection monitoring) and Appendix IV (assessment monitoring). Analytical results from the groundwater monitoring events were compared and evaluated to Background Threshold Values (BTVs) and Groundwater Protection Standards (GPS) established for the SKB Lansing Landfill.

1.1 Scope of Work

The following scope of work was conducted for the 2025 CCR groundwater monitoring events:

- Conduct 2 gauging and sampling events of the site's monitoring wells and piezometers.
- Measure static water elevations for each monitoring well to the nearest 0.01 feet from surveyed reference point.
- Record the volume of water removed from each monitoring well (in gallons) and total well volumes removed before sampling.
- Record field parameter stabilization results from each monitoring well.
- Conduct a statistical evaluation of groundwater sampling analytical data using ProUCL 5.0.00 (Singh, 2013) to determine BTVs for each analyte.
- Select tolerance or prediction interval procedure for future statistical analysis of groundwater monitoring data.
- Prepare a Coal Combustion Residuals (CCR) Annual Monitoring Report summarizing the groundwater sampling and statistical evaluation.

2 Site Background

2.1 Site Location and Description

The site is located within a 115-acre parcel of land in Section 21, Township 103 North, Range 18 West, Lansing Township, Mower County, Minnesota. With reference to roadways, the facility is located west of State Highway 218 along Lansing Township Road T-378 (243rd Street). The facility entrance is off Lansing Township Road T-378 (243rd Street). The facility location is depicted in **Figure 1** and the existing site conditions are presented in **Figure 2**.

Located in the Cedar River watershed, the site has rolling topography ranging in elevation from 1,218 feet above the National Geodetic Vertical Datum of 1929 (NGVD 29) in the southwest corner to 1,314 feet above NGVD 29 in the central portion of the site. Storm water flows either to natural depressions scattered about the site or to storm water retention areas in the south and southwest parts of the property. Storm water ultimately goes to a judicial ditch. The nearest open water body is the Cedar River, located approximately three miles east of the site.

3 Monitoring Network Systems and Sampling Schedule

The CCR sampling groundwater monitoring network at the SKB Lansing Landfill was designed based on the analysis of local and regional hydrologic conditions. Currently, the groundwater monitoring network system consists of eight monitoring wells (**Figure 2**). Two monitoring wells are used to monitor the shallow till layer. Six monitoring well locations are used to monitor a deeper water-bearing unit beneath the site. Groundwater elevations are also collected from an additional 19 groundwater elevation gauging locations and 7 piezometers. The monitoring wells, groundwater elevation gauging locations, and piezometers used as data collection points have been divided into two groups for the purpose of this report:

<u>Gauging and Sampling (8 Monitoring Wells)</u>

- Upgradient Monitoring Points: The upgradient monitoring points consist of monitoring wells located upgradient of the compliance boundary and include MW-1 and MW-1RD.
- Downgradient Monitoring Points: The downgradient monitoring points consist of monitoring wells located downgradient of the compliance boundary and include MW-2R, MW-2RD, MW-3, MW-3R, MW-3RD, and MW-4.

<u>Gauging Only (19 Elevation Gauging Locations and 7 Piezometers)</u>

- Downgradient Elevation Gauging Locations: The downgradient gauging locations consist of monitoring wells located downgradient of the compliance boundary and include MW-5S, MW-5D, MW-6S, MW-7S, MW-7D, MW-8S, and MW-8D.
- Piezometer Locations: The piezometer locations consist of shallow monitoring points used exclusively for the collection of groundwater elevations across the site. These locations include PIEZ-1, PIEZ-2, PIEZ-3, PIEZ-4, PIEZ-5, P-10, and P-11.
- Upgradient/Sidegradient Elevation Gauging Locations: Upgradient/sidegradient gauging locations consist of monitoring wells east of the compliance boundary and include wells located at the former Austin or Vonco IV Landfill (MW-1A, MW-2A, MW-3A, MW-4A, MW-101A, MW-102A, MW-103A, MW-104A, MW-105A, MW-106A, MW-107A, and MW-108A).

For the CCR evaluation, two groundwater monitoring events were conducted in 2025 on the following dates:

- April 8-9, 2025
- July 1-2, 2025

4 Groundwater Sampling Methodology

During the SKB Lansing Landfill CCR sampling events, static groundwater elevations were measured to the nearest 0.01 feet in each monitoring well with a water interface probe prior to groundwater sample collection. Using a location-dedicated, pneumatic low-flow bladder pump, each well was purged and field stabilization parameters including Temperature, pH, Specific Conductance, Turbidity, Dissolved Oxygen, and Oxidation-Reduction Potential (ORP) were recorded.

Groundwater samples were placed in laboratory-prepared containers and labeled with the following information:

- Unique sample number
- Site name
- Name of sampler
- Time and date

Immediately following collection, samples were placed on ice in a field cooler and shipped with a chain of custody form to a Eurofins Test America, Inc. (Eurofins TA) of Cedar Falls, Iowa.

Groundwater samples obtained during the 2025 sampling events were analyzed for parameters specified in Appendix III (spring and summer) and Appendix IV (spring [full analyte list] and summer [analytes detected in spring event]) per 40 CFR §§ 257.93 – 257.95 and are noted below:

<u>Appendix III</u>
General Chemistry

- Chloride (USEPA Method 9056A)
- Fluoride (USPEA Method 9056A)
- Sulfate as SO4 (USEPA Method 9056A)
- pH (USEPA Method 4500 H+ B)
- Total Dissolved Solids (USEPA Method 2540C)

Metals

- Boron
- Calcium

<u>Appendix IV</u>

General Chemistry

- Fluoride (USEPA Method 300.0)

Metals

- Antimony
- Arsenic
- Barium
- Beryllium

- Cadmium
- Chromium
- Cobalt
- Lead
- Lithium
- Mercury
- Molybdenum
- Radium 226
- Radium 228
- Selenium
- Thallium

The above metals were analyzed by USEPA Methods 6020B, and 7470A. Radium was analyzed by USEPA Methods 9315 and 9320.

Quality assurance/quality control (QA/QC) samples including duplicate, field, and equipment samples were collected during each sampling event.

5 Groundwater Monitoring Results

5.1 Groundwater Elevation Data

Groundwater elevations recorded during the monitoring events are presented in **Table 1**. Groundwater contours maps were generated for the April 8 and July 1, 2025 gauging events. Based on the shallow well groundwater elevation data, water table contours indicate that the shallow groundwater flows to the southwest (**Figures 3** and **5**). Based on the deeper well groundwater elevation data, potentiometric surface contours indicate a southwest flow direction in the lower aquifer (**Figures 4** and **6**). The groundwater flow directions are consistent with historically recorded flow directions.

5.2 Groundwater Analytical Data

Groundwater analytical results for the CCR monitoring events are presented in **Table 2** and **Table 3**. QA/QC duplicate samples were collected for precision evaluation but were not included in the tables. A summary of the stabilization parameter tests performed for each well prior to sampling are provided in **Table 4** and copies of field sampling data sheets are in **Appendix A**. Laboratory analytical reports are included in **Appendix B**.

The calculated BTVs for the SKB Lansing Landfill are provided in **Table 5**. Comparing the 2025 sampling results to the BTVs are summarized below.

<u>Appendix III Analytes - Result Summary of BTV Exceedances</u>

Comparing 2025 spring and fall sampling groundwater analytical results for Appendix III analytes to the BTVs, one BTV exceedance was reported at monitoring well MW-3 for Boron in Summer

2025 (**Table 2**). One BTV exceedance was reported at monitoring well MW-2R for Boron during the 2025 spring and summer sampling events.

Appendix IV Analytes - Result Summary of BTV Exceedances

Arsenic (BTV = 0.0049 mg/L)

- Upgradient monitoring well
  - MW-1 (0.0081 mg/L) (4/8/2025) – BTV exceedance.

Chromium (BTV = 0.004 mg/L)

- Upgradient monitoring well
  - MW-1 (0.013 mg/L) (4/8/2025) – BTV exceedance.

Lead (BTV = 0.046 mg/L)

- Upgradient monitoring well
  - MW-1 (0.010 mg/L) (4/8/2025) – BTV exceedance.

Lithium (BTV = 0.046 mg/L)

- Upgradient monitoring well
  - MW-1 (0.14 mg/L) (4/8/2025) – BTV exceedance.

Molybdenum (BTV = 0.0133 mg/L)

- Upgradient monitoring well
  - MW-1 (0.017 mg/L) (4/8/2025) – BTV exceedance.

A BTV exceedance was also reported for Fluoride for all monitoring wells during both the spring and summer sampling events due to the laboratory reporting limit. The laboratory reporting limit for Fluoride was 1 mg/L, while the BTV is 0.352 mg/L. GES will continue to discuss with the laboratory potential options to lower reporting limits, as needed.

6 Statistical Evaluation Data

This groundwater statistical evaluation for landfill monitoring is conducted in accordance with § 257.93(f)(3). Specifically, current concentrations were compared to the interwell upper simultaneous limits (USLs) in order to determine if a potential statistically significant increase (SSI) exists at downgradient wells.

The background dataset was determined for each well using analytical results ranging from spring 2017 through 2025.

Statistical evaluation of the CCR groundwater monitoring data determined background concentrations and included:

1) Establishing final background datasets for each chemical of concern (COC) including outlier testing.

2) Deriving statistical, upper bound estimates of the background population for each COC using the final background datasets.

To establish final background datasets for each COC, descriptive statistics, outlier analysis and comparative statistical analysis were performed on the background datasets confirmed the data in the background dataset for a given COC as representative of the 'true' background population. Descriptive statistics include the number of samples, the number of detections, the detection frequency, the maximum and minimum detected concentrations, the mean, and the standard deviation of the background data, all of which provide a preliminary examination of data.

Outlier analyses identified potential outliers not representative of the true background population. Including real outliers in a dataset can potentially lead to Type I or Type II errors (USEPA, 2009). A Type I error is defined as false positive relative to the initial hypothesis. A Type II error is defined as a false negative relative to the initial hypothesis. Rosner's Outlier Test was performed on background datasets containing four (4) detected values or more (USEPA, 2009). Based on an alpha of 0.05, statistically significant outliers were removed from the background dataset in order to improve the power of the prediction limit (USEPA, 2009). The resulting background dataset for each well and COC is tabulated in **Attachment C**.

For the final background datasets after outlier analyses, summary statistics calculated the number of samples, number of detections, detection frequency, maximum and minimum detected concentrations, mean concentration, and the standard deviation. The final datasets calculations of the underlying distributions employing Shapiro-Wilks (e.g., normal, lognormal, gamma) using ProUCL 5.0.00 (Singh, 2013) before statistical limits were estimated allowed determination of the appropriate estimates that best describe the background datasets.

The following statistical limits for potential use as a background level (BTVs) were calculated using ProUCL 5.0.00 (Singh, 2013) for each COC when five or more detections were present:

- 95% upper simultaneous limit (USL)

The 95% USL was selected as the proposed BTVs as:

1) Many of the background datasets contain limited sample sizes and, therefore, are unlikely to represent the full range of natural ambient concentrations in the vicinity of the site.

2) This statistic should result in lower Type I error rates (i.e., false positives) and can be used to compare many observations.

If there were no detected results, the highest detection limit was proposed as the BTV. The calculated BTVs are included in **Table 5**. The statistical evaluation data is included in **Appendix C**.

6.1 Statistically Significant Increase Determination

The detected concentrations for the 2025 sampling events with the respective USL are listed below. Compliance is determined by comparing the current concentration to the calculated USL.

The following SSI were identified:

Inset Table A - Comparison of 2025 Confirmed COC Concentrations to BTVs

Monitoring Well	Analyte	1st Half 2025 Concentration (mg/L) (unless noted)	BTV Concentration (mg/L) (unless noted)	2nd Half 2025 Concentration (mg/L) (unless noted)	USL Notes
MW-2R	Boron	**4.0**	0.94	**3.9**	Exceedance Confirmed
MW-3	Boron	0.64	0.94	**1.0**	Not an SSI
MW-1	Arsenic	**0.0081**	0.0049	< 0.002	Not an SSI
MW-1	Chromium	**0.013**	0.004	< 0.005	Not an SSI
MW-1	Lead	**0.01**	0.00737	< 0.0005	Not an SSI
MW-1	Lithium	**0.14**	0.046	0.011	Not an SSI
MW-4	Molybdenum	**0.017**	0.0133	< 0.002	Not an SSI

mg/L = milligrams per Liter
Bolded concentration exceeds the respective BTV.

7 Groundwater Protection Standards

Per 40 CFR §§ 257.95(d)(2), GPS were established for each Appendix IV constituent detected in the groundwater. GPS were established using United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) for detected Appendix IV constituents. For constituents for which the background level is higher than the MCL, the background value will be the GPS. GPS values are shown in **Table 6**.

Comparing 2025 spring and fall sampling groundwater analytical results for Appendix IV analytes to the GPS, no GPS exceedances are indicated (**Table 7**).

8 Report Summary and Conclusions

Per 40 CFR §§ 40.257.93 – 257.95, two monitoring events (spring and fall) were conducted in 2025 at the SKB Lansing Landfill. Groundwater samples were collected from the monitoring network's eight monitoring wells (MW-1, MW-1RD, MW-2R, MW-2RD, MW-3, MW-3R, MW-3RD, and MW-4) and analyzed for parameters specified in Appendix III and Appendix IV.

Historical groundwater data were statistically tested following the concepts outlined in this report to form a background data set. Interwell USLs were developed for Appendix III and Appendix IV in eight monitoring wells. Upper and lower threshold values were developed for pH using USL

and box plot statistics. The resulting USLs were compared to the current concentrations for each COC and well pair.

The following analytes were calculated above BTVs in 2025:

Appendix III Analytes

- A Boron concentration was detected above the BTV at downgradient monitoring well MW-2R during the spring 2025 event. Subsequent confirmation sampling at MW-2R during the fall 2025 event determined this exceedance is considered statistically significant.

- A Boron concentration was detected above the BTV at downgradient monitoring well MW-3 during the summer 2025 sampling event. Subsequent confirmation sampling at MW-3 during spring 2026 sampling event will determine if this exceedance is considered statistically significant.

Appendix IV Analytes

- An Arsenic concentration was detected above the BTV at upgradient monitoring well MW-1 during the spring 2025 sampling event. Subsequent confirmation sampling at MW-1 during the fall 2025 event determined this exceedance is not considered statistically significant

- A Chromium concentration was detected above the BTV at upgradient monitoring well MW-1 during the spring 2025 sampling event. Subsequent confirmation sampling at MW-1 during the fall 2025 event determined this exceedance is not considered statistically significant

- A Lead concentration was detected above the BTV at upgradient monitoring well MW-1 during the spring 2025 sampling event. Subsequent confirmation sampling at MW-1 during the fall 2025 event determined this exceedance is not considered statistically significant

- A Lithium concentration was detected above the BTV at upgradient monitoring well MW-1 during the spring 2025 sampling event. Subsequent confirmation sampling at MW-1 during the fall 2025 event determined this exceedance is not considered statistically significant

- A Molybdenum concentration was detected above the BTV at upgradient monitoring well MW-1 during the spring 2025 sampling event. Subsequent confirmation sampling at MW-1 during the fall 2025 event determined this exceedance is not considered statistically significant.

Groundwater concentrations from the 2025 monitoring events were compared to established GPS values. No analytes were reported above the GPS in 2025.

9 Recommendations

CCR groundwater monitoring events will be conducted in 2026 by the following schedule:

Spring 2026

Conduct a groundwater monitoring event of the site's monitoring well network and analyze groundwater samples for constituents listed in Appendix III and Appendix IV (full list).

Late Summer/Early Fall 2026

Conduct a groundwater monitoring event of the site's monitoring well network and analyzed samples for constituents listed in Appendix III and Appendix IV (only analytes detected in spring 2026 event).

An evaluation of groundwater analytical results after each monitoring event will be completed to determine if a significant increase over BTVs for one or more constituents sampled in Appendix III and Appendix IV has occurred at any monitoring well. The evaluation will be performed using a tolerance or prediction interval procedure (40 CFR §§ 257.93(f)(3)). The level of each constituent in the monitoring well will be compared to an established BTV generated as the USL. Any single constituent that exceeds the BTV is considered to be an exceedance. Confirmation sampling will determine whether the BTV exceedance is statistically significant. Additionally, groundwater concentrations of constituents listed in Appendix IV will be compared to the established GPS values.

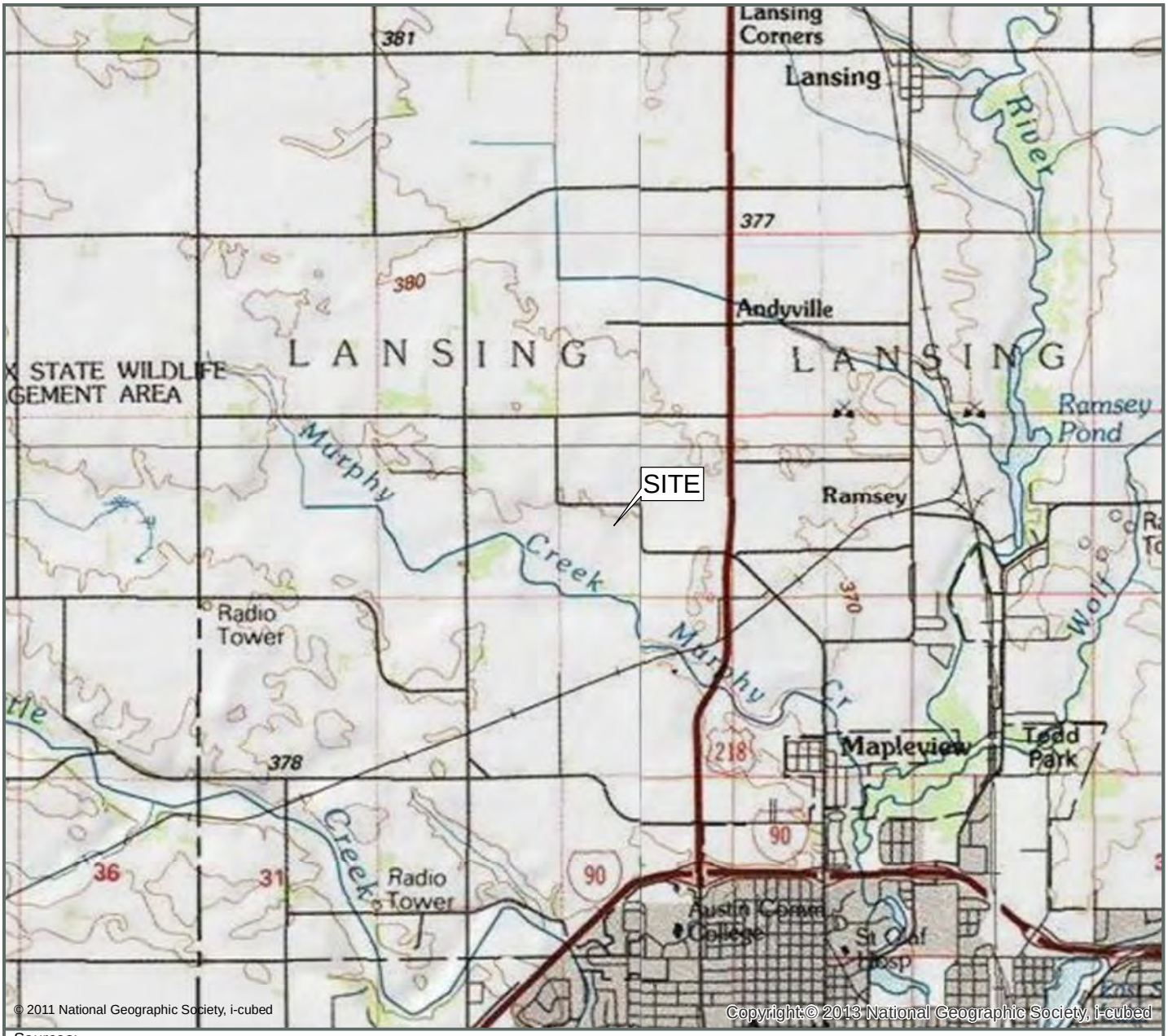
A 2026 Annual Monitoring Report will be prepared and include sampling results from the 2026 CCR groundwater monitoring events and an evaluation of the analytical results as they pertained to BTV and GPS values.

References

Singh and Singh, 2013. *ProUCL Version 5.0.00 Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations,* United States Environmental Protection Agency

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

Figures



Sources:
USGS 7.5 Minute Series
Topographic Quadrangle, 1984
Austen West, Minnesota
Contour Interval = 10'

Site Location Map

WCI Austin Landfill, LLC
SKB Lansing Facility
52563 243rd Street
Austin, Minnesota

Drawn **R.S.**
Designed **N.S.**
Approved **N.S.**

Date **05/30/25**
Figure **1**

N

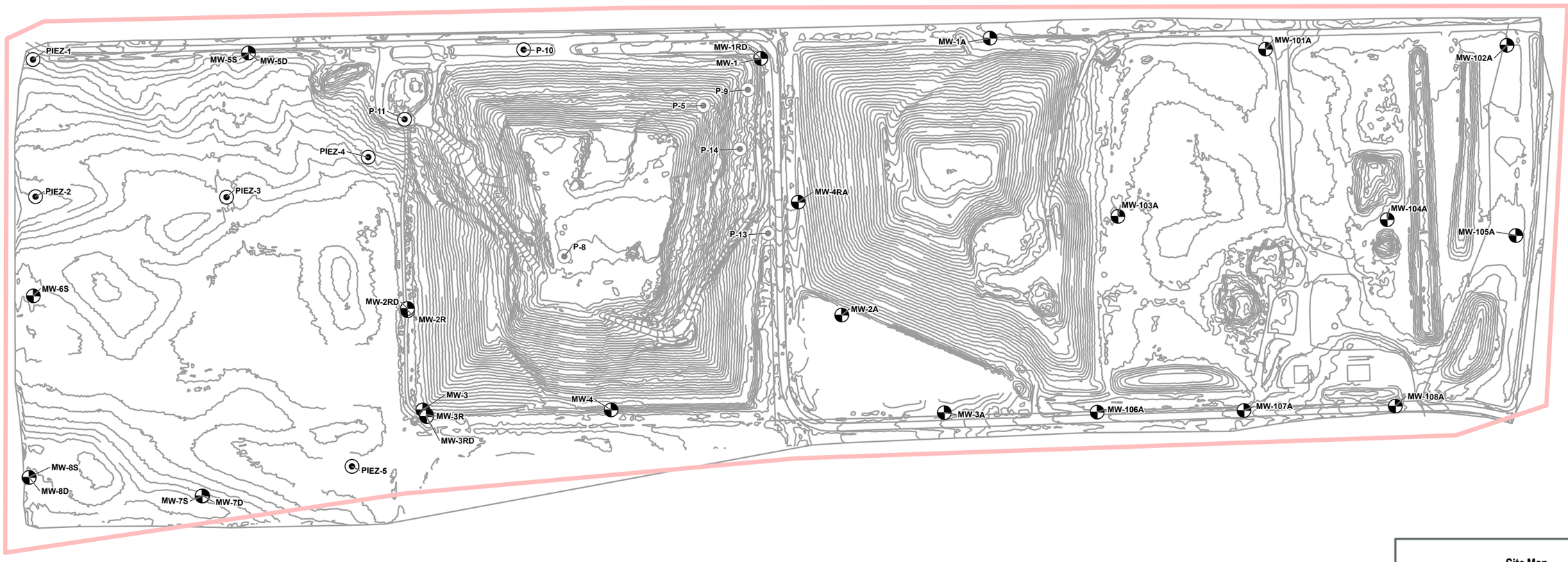
Scale In Feet (Approximate)
0 4,100

Groundwater & Environmental Services, Inc.

N:\Blacksburg\Projects\SKB Environmental\Lansing Facility\GIS\Lansing_SLM.mxd - Scale 1:55,064 - 5/30/2025 2:23:24 PM - rschwiderson - NAD 1983 StatePlane Minnesota North FIPS 2201 Feet

Legend

- Monitoring Well
- Piezometer
- Removed Piezometer



Site Map

WCI Austin Landfill, LLC
SKB Lansing Facility
52563 243rd Street
Austin, Minnesota

Drawn **R.S.**
Designed **N.S.**
Approved **NS**

Date **1/11/26**
Figure **2**

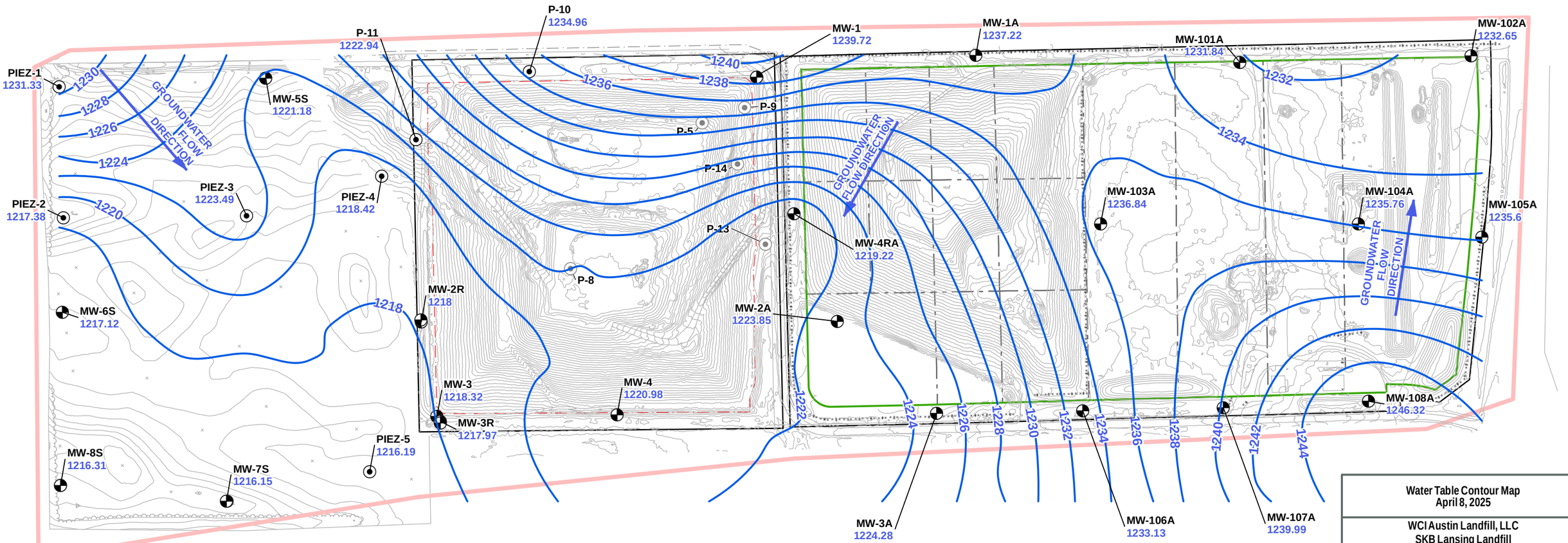
Scale In Feet (Approximate)
0 500

Groundwater & Environmental Services, Inc.

N:\Blacksburg\Projects\SKB Environmental\Lansing Facility\GIS\Lansing_GWE.aprx - 1 inch equals 500-feet - 1/11/2026 7:24 PM - rschwiderson - WGS 1984 Web Mercator Auxiliary Sphere - Layout -SM_2025

Legend

- Monitoring Well
- Piezometer
- Removed Piezometer
- Property Boundary
- Fence
- Phase Boundary
- Approximate Limit of Waste
- Right of Way
- Compliance Boundary
- Approximate Flow Direction
- Groundwater Elevation Isocontour (ft MSL)



Note:
Wells gauged in the deep aquifer in the Lansing Landfill area were not included in groundwater contour analysis.

Water Table Contour Map
April 8, 2025

WCI Austin Landfill, LLC
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

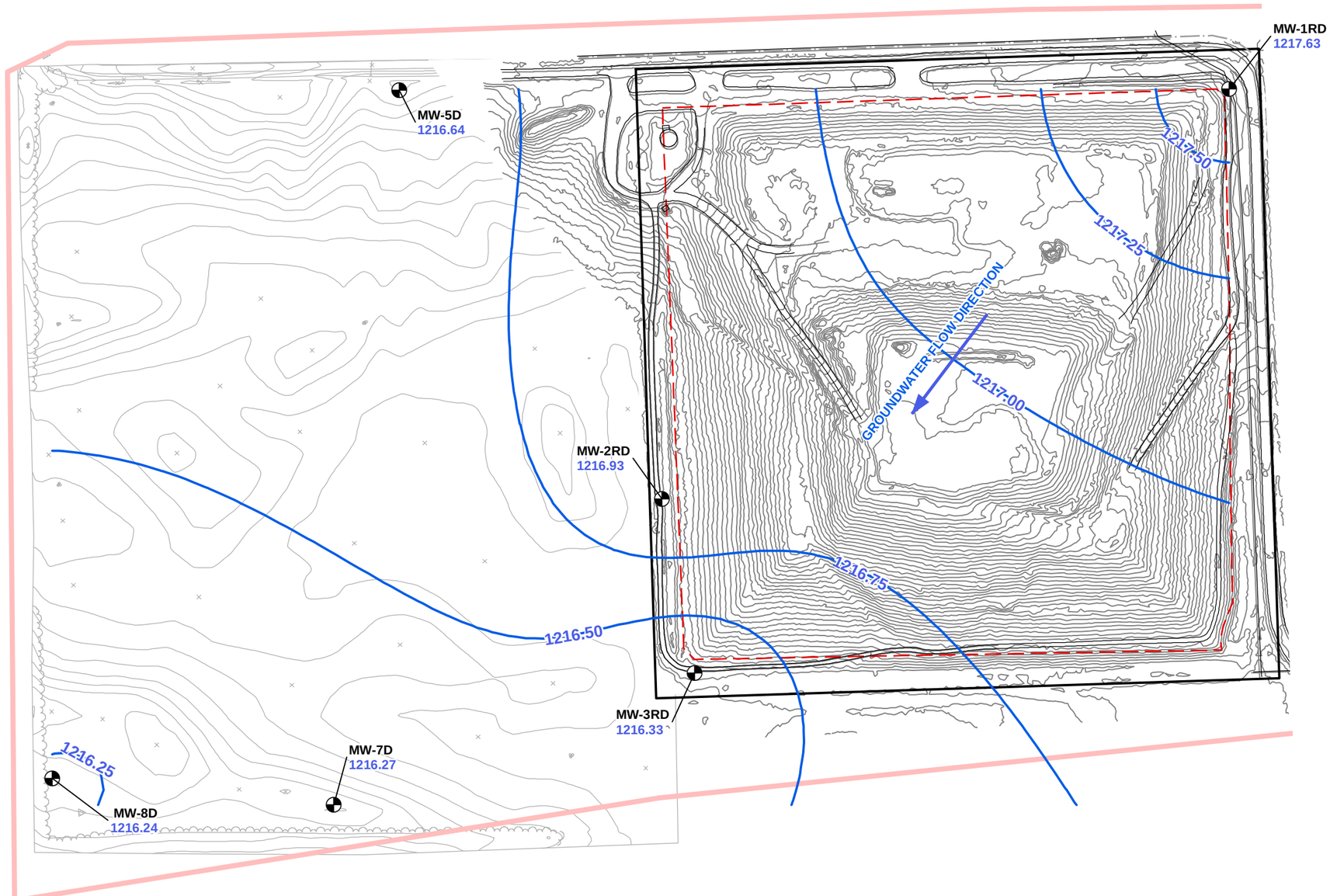
Drawn **R.S.**
Designed **N.S.**
Approved **N.S.**

Date **5/30/25**
Figure **3**

Scale In Feet (Approximate)
0 350

Groundwater & Environmental Services, Inc.

N:\Blacksburg\Projects\SKB Environmental\Lansing Facility\GIS\SKB_Combined_Austin_Landfills_WaterTable_CCR_GW_April2025.mxd - Scale 1:4,200 - 5/30/2025 3:49:14 PM - rschwiderson - NAD 1983 StatePlane Minnesota South FIPS 2203 Feet



LEGEND

- GROUNDWATER ELEVATION ISOCONTOUR (ft MSL)
- PROPERTY BOUNDARY
- RIGHT OF WAY
- APPROXIMATE LIMITS OF WASTE
- FENCE
- 1221.12 MEASURED GROUNDWATER ELEVATION (ft MSL)
- MONITORING WELL
- PIEZOMETER
- REMOVED PIEZOMETER

Potentiometric Surface Contour Map
Deep Zone - April 8, 2025

WCI Austin Landfill, LLC
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

Drawn **R.S.**
Designed **N.S.**
Approved **N.S.**

Date **5/30/25**
Figure **4**

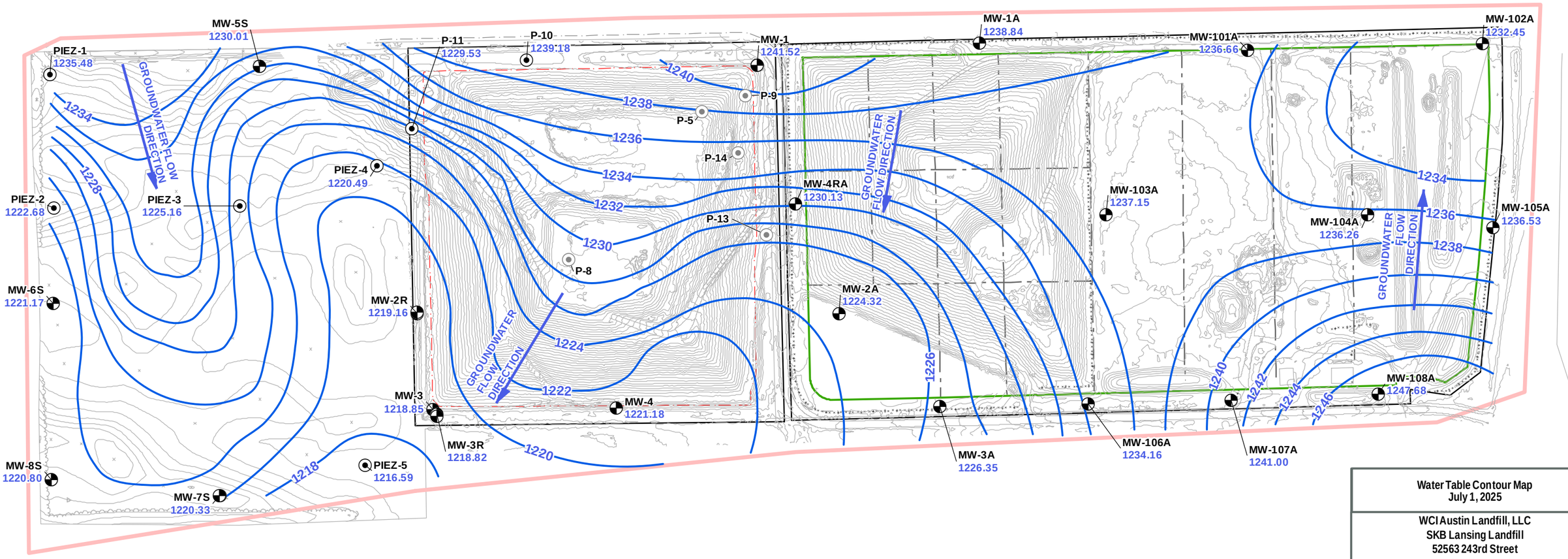
Scale In Feet (Approximate)
0 250

Groundwater & Environmental Services, Inc.

N:\Blacksburg\Projects\SKB Environmental\Lansing Facility\GIS\Lansing_GWE_Pot_Surface_April2025.mxd - Scale 1:3,000 - 5/30/2025 3:01:32 PM - rschwiderson - NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

Legend

- Monitoring Well
- Piezometer
- Removed Piezometer
- Property Boundary
- Fence
- Phase Boundary
- Approximate Limit of Waste
- Right of Way
- Compliance Boundary
- Approximate Flow Direction
- Groundwater Elevation Isocontour (ft MSL)



Note:
Wells gauged in the deep aquifer in the Lansing Landfill area were not included in groundwater contour analysis.

Water Table Contour Map
July 1, 2025

WCI Austin Landfill, LLC
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

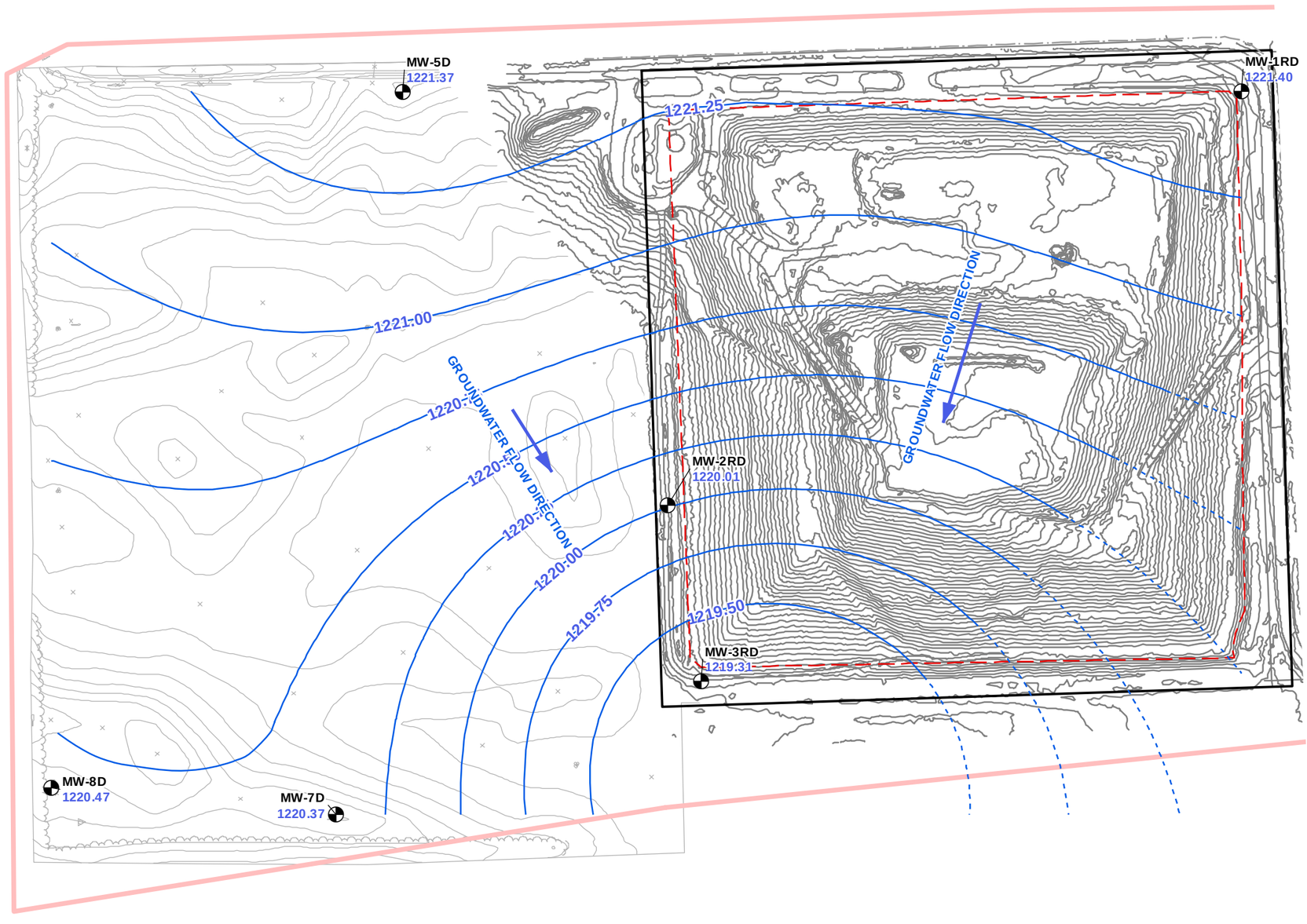
Drawn
R.S.
Designed
N.S.
Approved
N.S.

Date
9/18/25
Figure
5

Scale In Feet (Approximate)
0 350

Groundwater & Environmental Services, Inc.

N:\Blacksburg\Projects\SKB Environmental\Lansing Facility\GIS\SKB_Combined_Austin_Landfills_WaterTable_CCR_GW_July2025.mxd - Scale 1:4,200 - 9/18/2025 3:36:06 PM - rschwiderson - NAD 1983 StatePlane Minnesota South FIPS 2203 Feet



LEGEND

- PROPERTY BOUNDARY
- RIGHT OF WAY
- APPROXIMATE LIMITS OF WASTE
- FENCE
- 1221.12 MEASURED GROUNDWATER ELEVATION (ft MSL)
- MONITORING WELL
- PIEZOMETER
- REMOVED PIEZOMETER
- GROUNDWATER ELEVATION ISOCONTOUR (ft
- INFERRED GROUNDWATER ELEVATION ISOCONTOUR (ft MSL)

Potentiometric Surface Contour Map
Deep Zone - July 1, 2025

WCI Austin Landfill, LLC
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

Drawn **R.S.**
Designed **N.S.**
Approved **N.S.**

Date **9/18/25**
Figure **6**

N

Scale In Feet (Approximate)
0 250

Groundwater & Environmental Services, Inc.

Tables

2025 CCR Annual Monitoring Report
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

Table 1

Groundwater Elevations

Date	MW-1	MW-1RD	MW-2R	MW-2RD	MW-3	MW-3R	MW-3RD	MW-4
04/08/2025	1239.72	1217.63	1218.00	1216.93	1218.32	1217.97	1216.33	1220.98
07/01/2025	1241.52	1221.40	1219.16	1220.01	1218.85	1218.82	1219.31	1221.18

Date	MW-5D	MW-5S	MW-6S	MW-7D	MW-7S	MW-8D	MW-8S	MW-1A
04/08/2025	1216.64	1221.18	1217.12	1216.27	1216.15	1216.24	1216.31	1237.22
07/01/2025	1221.37	1230.01	1221.17	1220.37	1220.33	1220.47	1220.80	1238.84

Date	MW-2A	MW-3A	MW-4RA	MW-101A	MW-102A	MW-103A	MW-104A	MW-105A
04/08/2025	1223.85	1224.28	1219.22	1231.84	1232.65	1236.84	1235.76	1235.60
07/01/2025	1224.32	1226.35	1230.13	1236.66	1232.45	1237.15	1236.26	1236.53

Date	MW-106A	MW-107A	MW-108A	P-10	P-11	PIEZ-1	PIEZ-2	PIEZ-3
04/08/2025	1233.13	1239.99	1246.32	1234.96	1222.94	1231.33	1217.38	1223.49
07/01/2025	1234.16	1241.00	1247.68	1239.18	1229.53	1235.48	1222.68	1225.16

Date	PIEZ-4	PIEZ-5
04/08/2025	1218.42	1216.19
07/01/2025	1220.49	1216.59

Table 2

Groundwater Analytical Data
Appendix III

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-1	04/08/2025	Boron	0.25	0.94	mg/l	7440-42-8
MW-1	07/01/2025	Boron	0.15	0.94	mg/l	7440-42-8
MW-1	04/08/2025	Calcium	223	252	mg/l	7440-70-2
MW-1	07/01/2025	Calcium	136	252	mg/l	7440-70-2
MW-1	04/08/2025	Chloride	100	105	mg/l	16887-00-6
MW-1	07/01/2025	Chloride	22	105	mg/l	16887-00-6
MW-1	04/08/2025	pH	7.7	6.5 < 7.8	pH UNITS	PH
MW-1	07/01/2025	pH	7.0	6.5 < 7.8	pH UNITS	PH
MW-1	04/08/2025	Sulfate as SO4	86	529.8	mg/l	14808-79-8
MW-1	07/01/2025	Sulfate as SO4	110	529.8	mg/l	14808-79-8
MW-1	04/08/2025	Total Dissolved Solids	592	1,380	mg/l	TDS
MW-1	07/01/2025	Total Dissolved Solids	576	1,380	mg/l	TDS
MW-1RD	04/08/2025	Boron	< 0.10	0.94	mg/l	7440-42-8
MW-1RD	07/01/2025	Boron	< 0.10	0.94	mg/l	7440-42-8
MW-1RD	04/08/2025	Calcium	80.1	252	mg/l	7440-70-2
MW-1RD	07/01/2025	Calcium	81.3	252	mg/l	7440-70-2
MW-1RD	04/08/2025	Chloride	25	105	mg/l	16887-00-6
MW-1RD	07/01/2025	Chloride	26	105	mg/l	16887-00-6
MW-1RD	04/08/2025	pH	7.8	6.5 < 7.8	pH UNITS	PH
MW-1RD	07/01/2025	pH	7.4	6.5 < 7.8	pH UNITS	PH
MW-1RD	04/08/2025	Sulfate as SO4	52	529.8	mg/l	14808-79-8
MW-1RD	07/01/2025	Sulfate as SO4	53	529.8	mg/l	14808-79-8
MW-1RD	04/08/2025	Total Dissolved Solids	350	1,380	mg/l	TDS
MW-1RD	07/01/2025	Total Dissolved Solids	338	1,380	mg/l	TDS
MW-2R	**04/08/2025**	**Boron**	**4.0**	**0.94**	**mg/l**	**7440-42-8**
MW-2R	**07/01/2025**	**Boron**	**3.9**	**0.94**	**mg/l**	**7440-42-8**
MW-2R	04/08/2025	Calcium	191	252	mg/l	7440-70-2
MW-2R	07/01/2025	Calcium	192	252	mg/l	7440-70-2
MW-2R	04/08/2025	Chloride	75	105	mg/l	16887-00-6
MW-2R	07/01/2025	Chloride	76	105	mg/l	16887-00-6
MW-2R	04/08/2025	pH	7.4	6.5 < 7.8	pH UNITS	PH
MW-2R	07/01/2025	pH	6.8	6.5 < 7.8	pH UNITS	PH
MW-2R	04/08/2025	Sulfate as SO4	270	529.8	mg/l	14808-79-8
MW-2R	07/01/2025	Sulfate as SO4	300	529.8	mg/l	14808-79-8
MW-2R	04/08/2025	Total Dissolved Solids	1100	1,380	mg/l	TDS
MW-2R	07/01/2025	Total Dissolved Solids	1160	1,380	mg/l	TDS
MW-2RD	04/08/2025	Boron	0.13	0.94	mg/l	7440-42-8
MW-2RD	07/01/2025	Boron	0.14	0.94	mg/l	7440-42-8
MW-2RD	04/08/2025	Calcium	140	252	mg/l	7440-70-2
MW-2RD	07/01/2025	Calcium	135	252	mg/l	7440-70-2
MW-2RD	04/08/2025	Chloride	36	105	mg/l	16887-00-6
MW-2RD	07/01/2025	Chloride	36	105	mg/l	16887-00-6
MW-2RD	04/08/2025	pH	7.5	6.5 < 7.8	pH UNITS	PH
MW-2RD	07/01/2025	pH	7.0	6.5 < 7.8	pH UNITS	PH
MW-2RD	04/08/2025	Sulfate as SO4	72	529.8	mg/l	14808-79-8
MW-2RD	07/01/2025	Sulfate as SO4	71	529.8	mg/l	14808-79-8
MW-2RD	04/08/2025	Total Dissolved Solids	634	1,380	mg/l	TDS
MW-2RD	07/01/2025	Total Dissolved Solids	608	1,380	mg/l	TDS
MW-3	04/09/2025	Boron	0.64	0.94	mg/l	7440-42-8
MW-3	**07/02/2025**	**Boron**	**1.0**	**0.94**	**mg/l**	**7440-42-8**
MW-3	04/09/2025	Calcium	161	252	mg/l	7440-70-2
MW-3	07/02/2025	Calcium	164	252	mg/l	7440-70-2
MW-3	04/09/2025	Chloride	82	105	mg/l	16887-00-6
MW-3	07/02/2025	Chloride	62	105	mg/l	16887-00-6
MW-3	04/09/2025	pH	7.4	6.5 < 7.8	pH UNITS	PH
MW-3	07/02/2025	pH	6.7	6.5 < 7.8	pH UNITS	PH
MW-3	04/09/2025	Sulfate as SO4	51	529.8	mg/l	14808-79-8
MW-3	07/02/2025	Sulfate as SO4	40	529.8	mg/l	14808-79-8
MW-3	04/09/2025	Total Dissolved Solids	706	1,380	mg/l	TDS

Table 2

Groundwater Analytical Data
Appendix III

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-3	07/02/2025	Total Dissolved Solids	700	1,380	mg/l	TDS
MW-3R	04/09/2025	Boron	< 0.10	0.94	mg/l	7440-42-8
MW-3R	07/02/2025	Boron	0.14	0.94	mg/l	7440-42-8
MW-3R	04/09/2025	Calcium	228	252	mg/l	7440-70-2
MW-3R	07/02/2025	Calcium	214	252	mg/l	7440-70-2
MW-3R	04/09/2025	Chloride	32	105	mg/l	16887-00-6
MW-3R	07/02/2025	Chloride	37	105	mg/l	16887-00-6
MW-3R	04/09/2025	pH	7.1	6.5 < 7.8	pH UNITS	PH
MW-3R	07/02/2025	pH	6.7	6.5 < 7.8	pH UNITS	PH
MW-3R	04/09/2025	Sulfate as SO4	10	529.8	mg/l	14808-79-8
MW-3R	07/02/2025	Sulfate as SO4	19	529.8	mg/l	14808-79-8
MW-3R	04/09/2025	Total Dissolved Solids	896	1,380	mg/l	TDS
MW-3R	07/02/2025	Total Dissolved Solids	926	1,380	mg/l	TDS
MW-3RD	04/09/2025	Boron	< 0.10	0.94	mg/l	7440-42-8
MW-3RD	07/02/2025	Boron	< 0.10	0.94	mg/l	7440-42-8
MW-3RD	04/09/2025	Calcium	119	252	mg/l	7440-70-2
MW-3RD	07/02/2025	Calcium	126	252	mg/l	7440-70-2
MW-3RD	04/09/2025	Chloride	31	105	mg/l	16887-00-6
MW-3RD	07/02/2025	Chloride	33	105	mg/l	16887-00-6
MW-3RD	04/09/2025	pH	7.6	6.5 < 7.8	pH UNITS	PH
MW-3RD	07/02/2025	pH	7.2	6.5 < 7.8	pH UNITS	PH
MW-3RD	04/09/2025	Sulfate as SO4	76	529.8	mg/l	14808-79-8
MW-3RD	07/02/2025	Sulfate as SO4	82	529.8	mg/l	14808-79-8
MW-3RD	04/09/2025	Total Dissolved Solids	540	1,380	mg/l	TDS
MW-3RD	07/02/2025	Total Dissolved Solids	546	1,380	mg/l	TDS
MW-4	04/09/2025	Boron	0.34	0.94	mg/l	7440-42-8
MW-4	07/02/2025	Boron	0.53	0.94	mg/l	7440-42-8
MW-4	04/09/2025	Calcium	180	252	mg/l	7440-70-2
MW-4	07/02/2025	Calcium	151	252	mg/l	7440-70-2
MW-4	04/09/2025	Chloride	21	105	mg/l	16887-00-6
MW-4	07/02/2025	Chloride	13	105	mg/l	16887-00-6
MW-4	04/09/2025	pH	7.6	6.5 < 7.8	pH UNITS	PH
MW-4	07/02/2025	pH	7.0	6.5 < 7.8	pH UNITS	PH
MW-4	04/09/2025	Sulfate as SO4	200	529.8	mg/l	14808-79-8
MW-4	07/02/2025	Sulfate as SO4	140	529.8	mg/l	14808-79-8
MW-4	04/09/2025	Total Dissolved Solids	826	1,380	mg/l	TDS
MW-4	07/02/2025	Total Dissolved Solids	740	1,380	mg/l	TDS

Notes:
Bold = Indicates concentration above Background Threshold Value
Results in milligrams per liter (mg/l)

2025 CCR Annual Monitoring Report
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-1	04/08/2025	Antimony	0.0032	0.0200	mg/l	7440-36-0
MW-1	07/01/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-1	**04/08/2025**	**Arsenic**	**0.0081**	**0.0049**	**mg/l**	**7440-38-2**
MW-1	07/01/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-1	04/08/2025	Barium	0.18	0.71	mg/l	7440-39-3
MW-1	07/01/2025	Barium	0.12	0.71	mg/l	7440-39-3
MW-1	04/08/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-1	07/01/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-1	04/08/2025	Cadmium	0.00026	0.0005	mg/l	7440-43-9
MW-1	07/01/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-1	**04/08/2025**	**Chromium**	**0.013**	**0.0040**	**mg/l**	**7440-47-3**
MW-1	07/01/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-1	04/08/2025	Cobalt	0.0046	0.0056	mg/l	7440-48-4
MW-1	07/01/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-1	**04/08/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-1	**07/01/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-1	**04/08/2025**	**Lead**	**0.010**	**0.00737**	**mg/l**	**7439-92-1**
MW-1	07/01/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-1	**04/08/2025**	**Lithium**	**0.14**	**0.046**	**mg/l**	**7439-93-2**
MW-1	07/01/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-1	04/08/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-1	07/01/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-1	**04/08/2025**	**MOLYBDENUM**	**0.017**	**0.0133**	**mg/l**	**7439-98-7**
MW-1	07/01/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-1	04/08/2025	Radium (226)	< 0.388	0.985	pci/l	13982-63-3
MW-1	07/01/2025	Radium (226)	< 0.317	0.985	pci/l	13982-63-3
MW-1	04/08/2025	Radium 228	< 0.597	1.974	pci/l	15262-20-1
MW-1	07/01/2025	Radium 228	0.665	1.974	pci/l	15262-20-1
MW-1	04/08/2025	Radium-226/228	< 0.597	2.959	pci/l	425
MW-1	07/01/2025	Radium-226/228	0.617	2.959	pci/l	425
MW-1	04/08/2025	Selenium	0.0063	0.029	mg/l	7782-49-2
MW-1	07/01/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-1	04/08/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-1	07/01/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-1RD	04/08/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-1RD	07/01/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-1RD	04/08/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-1RD	07/01/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-1RD	04/08/2025	Barium	0.15	0.71	mg/l	7440-39-3
MW-1RD	07/01/2025	Barium	0.14	0.71	mg/l	7440-39-3
MW-1RD	04/08/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-1RD	07/01/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-1RD	04/08/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-1RD	07/01/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-1RD	04/08/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-1RD	07/01/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-1RD	04/08/2025	Cobalt	0.00072	0.0056	mg/l	7440-48-4
MW-1RD	07/01/2025	Cobalt	0.00061	0.0056	mg/l	7440-48-4
MW-1RD	**04/08/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-1RD	**07/01/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-1RD	04/08/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-1RD	07/01/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-1RD	04/08/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-1RD	07/01/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-1RD	04/08/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-1RD	07/01/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-1RD	04/08/2025	MOLYBDENUM	0.0037	0.0133	mg/l	7439-98-7
MW-1RD	07/01/2025	MOLYBDENUM	0.0031	0.0133	mg/l	7439-98-7
MW-1RD	04/08/2025	Radium (226)	< 0.362	0.985	pci/l	13982-63-3
MW-1RD	07/01/2025	Radium (226)	< 0.336	0.985	pci/l	13982-63-3
MW-1RD	04/08/2025	Radium 228	0.801	1.974	pci/l	15262-20-1
MW-1RD	07/01/2025	Radium 228	0.524	1.974	pci/l	15262-20-1
MW-1RD	04/08/2025	Radium-226/228	1.08	2.959	pci/l	425
MW-1RD	07/01/2025	Radium-226/228	0.780	2.959	pci/l	425
MW-1RD	04/08/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-1RD	07/01/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-1RD	04/08/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-1RD	07/01/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-2R	04/08/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-2R	07/01/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-2R	04/08/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-2R	07/01/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-2R	04/08/2025	Barium	0.18	0.71	mg/l	7440-39-3
MW-2R	07/01/2025	Barium	0.19	0.71	mg/l	7440-39-3
MW-2R	04/08/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-2R	07/01/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-2R	04/08/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-2R	07/01/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-2R	04/08/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-2R	07/01/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-2R	04/08/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-2R	07/01/2025	Cobalt	0.00078	0.0056	mg/l	7440-48-4
MW-2R	**04/08/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-2R	**07/01/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-2R	04/08/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-2R	07/01/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-2R	04/08/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-2R	07/01/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-2R	04/08/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-2R	07/01/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-2R	04/08/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-2R	07/01/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-2R	04/08/2025	Radium (226)	< 0.316	0.985	pci/l	13982-63-3
MW-2R	07/01/2025	Radium (226)	< 0.355	0.985	pci/l	13982-63-3
MW-2R	04/08/2025	Radium 228	< 0.691	1.974	pci/l	15262-20-1
MW-2R	07/01/2025	Radium 228	< 0.598	1.974	pci/l	15262-20-1
MW-2R	04/08/2025	Radium-226/228	< 0.691	2.959	pci/l	425
MW-2R	07/01/2025	Radium-226/228	< 0.598	2.959	pci/l	425
MW-2R	04/08/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-2R	07/01/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-2R	04/08/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-2R	07/01/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-2RD	04/08/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-2RD	07/01/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-2RD	04/08/2025	Arsenic	0.0023	0.0049	mg/l	7440-38-2
MW-2RD	07/01/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-2RD	04/08/2025	Barium	0.18	0.71	mg/l	7440-39-3
MW-2RD	07/01/2025	Barium	0.17	0.71	mg/l	7440-39-3
MW-2RD	04/08/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-2RD	07/01/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-2RD	04/08/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-2RD	07/01/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-2RD	04/08/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-2RD	07/01/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-2RD	04/08/2025	Cobalt	0.0028	0.0056	mg/l	7440-48-4
MW-2RD	07/01/2025	Cobalt	0.0023	0.0056	mg/l	7440-48-4
MW-2RD	**04/08/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-2RD	**07/01/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-2RD	04/08/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-2RD	07/01/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-2RD	04/08/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-2RD	07/01/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-2RD	04/08/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-2RD	07/01/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-2RD	04/08/2025	MOLYBDENUM	0.0026	0.0133	mg/l	7439-98-7
MW-2RD	07/01/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-2RD	04/08/2025	Radium (226)	0.508	0.985	pci/l	13982-63-3
MW-2RD	07/01/2025	Radium (226)	0.539	0.985	pci/l	13982-63-3
MW-2RD	04/08/2025	Radium 228	0.727	1.974	pci/l	15262-20-1
MW-2RD	07/01/2025	Radium 228	< 0.774	1.974	pci/l	15262-20-1
MW-2RD	04/08/2025	Radium-226/228	1.23	2.959	pci/l	425
MW-2RD	07/01/2025	Radium-226/228	< 0.774	2.959	pci/l	425
MW-2RD	04/08/2025	Selenium	0.024	0.029	mg/l	7782-49-2
MW-2RD	07/01/2025	Selenium	0.029	0.029	mg/l	7782-49-2
MW-2RD	04/08/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-2RD	07/01/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3	04/09/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3	07/02/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3	04/09/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-3	07/02/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-3	04/09/2025	Barium	0.14	0.71	mg/l	7440-39-3
MW-3	07/02/2025	Barium	0.18	0.71	mg/l	7440-39-3
MW-3	04/09/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-3	07/02/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-3	04/09/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3	07/02/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3	04/09/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3	07/02/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3	04/09/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-3	07/02/2025	Cobalt	0.0018	0.0056	mg/l	7440-48-4
MW-3	**04/09/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3	**07/02/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3	04/09/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3	07/02/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3	04/09/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-3	07/02/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-3	04/09/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3	07/02/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3	04/09/2025	MOLYBDENUM	0.0025	0.0133	mg/l	7439-98-7
MW-3	07/02/2025	MOLYBDENUM	0.0046	0.0133	mg/l	7439-98-7

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-3	04/09/2025	Radium (226)	< 0.340	0.985	pci/l	13982-63-3
MW-3	07/02/2025	Radium (226)	< 0.288	0.985	pci/l	13982-63-3
MW-3	04/09/2025	Radium 228	< 0.612	1.974	pci/l	15262-20-1
MW-3	07/02/2025	Radium 228	< 0.668	1.974	pci/l	15262-20-1
MW-3	04/09/2025	Radium-226/228	< 0.612	2.959	pci/l	425
MW-3	07/02/2025	Radium-226/228	< 0.668	2.959	pci/l	425
MW-3	04/09/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3	07/02/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3	04/09/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3	07/02/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3R	04/09/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3R	07/02/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3R	04/09/2025	Arsenic	0.0021	0.0049	mg/l	7440-38-2
MW-3R	07/02/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-3R	04/09/2025	Barium	0.57	0.71	mg/l	7440-39-3
MW-3R	07/02/2025	Barium	0.54	0.71	mg/l	7440-39-3
MW-3R	04/09/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-3R	07/02/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-3R	04/09/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3R	07/02/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3R	04/09/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3R	07/02/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3R	04/09/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-3R	07/02/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-3R	**04/09/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3R	**07/02/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3R	04/09/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3R	07/02/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3R	04/09/2025	Lithium	0.020	0.046	mg/l	7439-93-2
MW-3R	07/02/2025	Lithium	0.020	0.046	mg/l	7439-93-2
MW-3R	04/09/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3R	07/02/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3R	04/09/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-3R	07/02/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-3R	04/09/2025	Radium (226)	0.564	0.985	pci/l	13982-63-3
MW-3R	07/02/2025	Radium (226)	0.540	0.985	pci/l	13982-63-3
MW-3R	04/09/2025	Radium 228	1.05	1.974	pci/l	15262-20-1
MW-3R	07/02/2025	Radium 228	1.85	1.974	pci/l	15262-20-1
MW-3R	04/09/2025	Radium-226/228	1.61	2.959	pci/l	425
MW-3R	07/02/2025	Radium-226/228	2.39	2.959	pci/l	425
MW-3R	04/09/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3R	07/02/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3R	04/09/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3R	07/02/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3RD	04/09/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3RD	07/02/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-3RD	04/09/2025	Arsenic	0.0038	0.0049	mg/l	7440-38-2
MW-3RD	07/02/2025	Arsenic	0.0038	0.0049	mg/l	7440-38-2
MW-3RD	04/09/2025	Barium	0.19	0.71	mg/l	7440-39-3
MW-3RD	07/02/2025	Barium	0.19	0.71	mg/l	7440-39-3
MW-3RD	04/09/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-3RD	07/02/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-3RD	04/09/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3RD	07/02/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-3RD	04/09/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3RD	07/02/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-3RD	04/09/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-3RD	07/02/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-3RD	**04/09/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3RD	**07/02/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-3RD	04/09/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3RD	07/02/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-3RD	04/09/2025	Lithium	0.013	0.046	mg/l	7439-93-2
MW-3RD	07/02/2025	Lithium	0.013	0.046	mg/l	7439-93-2
MW-3RD	04/09/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3RD	07/02/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-3RD	04/09/2025	MOLYBDENUM	0.0036	0.0133	mg/l	7439-98-7
MW-3RD	07/02/2025	MOLYBDENUM	0.0037	0.0133	mg/l	7439-98-7
MW-3RD	04/09/2025	Radium (226)	0.412	0.985	pci/l	13982-63-3
MW-3RD	07/02/2025	Radium (226)	0.643	0.985	pci/l	13982-63-3
MW-3RD	04/09/2025	Radium 228	0.527	1.974	pci/l	15262-20-1
MW-3RD	07/02/2025	Radium 228	< 0.645	1.974	pci/l	15262-20-1
MW-3RD	04/09/2025	Radium-226/228	0.939	2.959	pci/l	425
MW-3RD	07/02/2025	Radium-226/228	0.992	2.959	pci/l	425
MW-3RD	04/09/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3RD	07/02/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-3RD	04/09/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-3RD	07/02/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-4	04/09/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-4	07/02/2025	Antimony	< 0.0020	0.0200	mg/l	7440-36-0
MW-4	04/09/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-4	07/02/2025	Arsenic	< 0.0020	0.0049	mg/l	7440-38-2
MW-4	04/09/2025	Barium	0.18	0.71	mg/l	7440-39-3
MW-4	07/02/2025	Barium	0.15	0.71	mg/l	7440-39-3
MW-4	04/09/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-4	07/02/2025	Beryllium	< 0.0010	0.0010	mg/l	7440-41-7
MW-4	04/09/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-4	07/02/2025	Cadmium	< 0.00020	0.0005	mg/l	7440-43-9
MW-4	04/09/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-4	07/02/2025	Chromium	< 0.0050	0.0040	mg/l	7440-47-3
MW-4	04/09/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-4	07/02/2025	Cobalt	< 0.00050	0.0056	mg/l	7440-48-4
MW-4	**04/09/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-4	**07/02/2025**	**Fluoride**	**< 1.0**	**0.352**	**mg/l**	**16984-48-8**
MW-4	04/09/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-4	07/02/2025	Lead	< 0.00050	0.00737	mg/l	7439-92-1
MW-4	04/09/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-4	07/02/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-4	04/09/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-4	07/02/2025	Mercury	< 0.00020	0.00030	mg/l	7439-97-6
MW-4	04/09/2025	MOLYBDENUM	0.0026	0.0133	mg/l	7439-98-7
MW-4	07/02/2025	MOLYBDENUM	< 0.0020	0.0133	mg/l	7439-98-7
MW-4	04/09/2025	Radium (226)	< 0.349	0.985	pci/l	13982-63-3
MW-4	07/02/2025	Radium (226)	< 0.296	0.985	pci/l	13982-63-3

Table 3

Groundwater Analytical Data
Appendix IV

Location	Date	Parameter	Result	Background Threshold Value (BTV)	Units	CAS #
MW-4	04/09/2025	Radium 228	0.663	1.974	pci/l	15262-20-1
MW-4	07/02/2025	Radium 228	< 0.596	1.974	pci/l	15262-20-1
MW-4	04/09/2025	Radium-226/228	0.817	2.959	pci/l	425
MW-4	07/02/2025	Radium-226/228	< 0.596	2.959	pci/l	425
MW-4	04/09/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-4	07/02/2025	Selenium	< 0.0050	0.029	mg/l	7782-49-2
MW-4	04/09/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0
MW-4	07/02/2025	Thallium	< 0.0010	0.001	mg/l	7440-28-0

Results in milligrams per liter (mg/l) or picocuries per liter (pci/l)
Bold = Indicates concentration above Background Threshold Value

2025 CCR Annual Monitoring Report
SKB Lansing Landfill
52563 243rd Street
Austin, Minnesota

Table 4

Well Stabilization Data

Well ID	Sample Date	Purge Rate (ml/min)	Purge Volume (gallons)	Field pH (pH)	Field Specific Conductivity (umhos/cm)	Field Temp (°C)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	ORP (mV)
MW-1	4/8/2025	1000	0.1	7.02	1160	6.16	7.21	3.6	119
MW-1	4/8/2025	1000	3	7.01	1160	5.74	7.80	3.4	136
MW-1	4/8/2025	1000	6	7.00	1070	5.35	8.96	8.0	158
MW-1	4/8/2025	1000	10	7.00	1060	5.32	8.93	8.9	159
MW-1	4/8/2025			6.99	1030	5.21	9.35	10.9	165
MW-1	7/1/2025	1000	0.1	7.44	1060	14.50	8.39	14.5	174
MW-1	7/1/2025	1000	4	7.06	1060	11.91	3.75	0.0	180
MW-1	7/1/2025	1000	8	7.05	1070	11.96	2.34	0.0	184
MW-1	7/1/2025	1000	11	7.06	1060	11.89	3.03	0.0	187
MW-1	7/1/2025			7.06	1060	11.80	3.01	0.0	187
MW-1RD	4/8/2025	1000	0.1	7.41	625	8.82	0.92	25.8	28
MW-1RD	4/8/2025	1000	10	7.33	636	8.57	0.00	0.7	12
MW-1RD	4/8/2025	1000	20	7.29	631	8.54	0.00	0.6	10
MW-1RD	4/8/2025	1000	23.5	7.31	630	8.53	0.00	0.7	11
MW-1RD	4/8/2025			7.31	629	8.50	0.00	0.6	10
MW-1RD	7/1/2025	1000	0.1	7.41	662	9.71	0.00	0.0	-27
MW-1RD	7/1/2025	1000	10	7.39	661	9.66	0.00	0.0	-38
MW-1RD	7/1/2025	1000	20	7.41	659	9.68	0.00	0.0	-41
MW-1RD	7/1/2025	1000	25.5	7.41	659	9.66	0.00	0.0	-43
MW-1RD	7/1/2025			7.39	658	9.69	0.00	0.0	-45
MW-2R	4/8/2025	1000	0.1	7.04	1630	7.66	13.20	115	209
MW-2R	4/8/2025	1000	1	6.81	1630	6.48	0.73	19.3	201
MW-2R	4/8/2025	1000	1.5	6.80	1630	6.39	0.00	10.0	207
MW-2R	4/8/2025	1000	2	6.80	1630	6.40	0.00	9.6	206
MW-2R	4/8/2025			6.80	1630	6.40	0.00	9.6	206
MW-2R	7/1/2025	1000	0.1	7.00	1660	12.43	4.16	3.1	24
MW-2R	7/1/2025	1000	0.5	7.00	1670	12.15	4.15	1.9	22
MW-2R	7/1/2025	1000	1	7.01	1670	12.12	3.98	2.1	21
MW-2R	7/1/2025	1000	2	7.01	1670	12.12	3.97	2.1	21
MW-2R	7/1/2025			7.01	1680	12.12	3.97	3.1	21
MW-2RD	4/8/2025	1000	0.1	6.88	996	9.31	0.00	9.5	122
MW-2RD	4/8/2025	1000	4	6.89	1040	9.39	0.00	3.4	94
MW-2RD	4/8/2025	1000	8	6.88	1060	9.43	0.00	1.8	72
MW-2RD	4/8/2025	1000	12.5	6.87	1070	9.42	0.00	2.0	63
MW-2RD	4/8/2025			6.87	1070	9.42	0.00	1.9	62
MW-2RD	7/1/2025	1000	0.1	7.33	814	10.51	2.91	75.7	167
MW-2RD	7/1/2025	1000	5	7.16	948	10.17	0.04	83.0	137
MW-2RD	7/1/2025	1000	10	7.12	1070	10.17	0.00	45.4	57
MW-2RD	7/1/2025	1000	14	7.12	110	10.14	0.00	27.1	24
MW-2RD	7/1/2025			7.11	1110	10.14	0.00	27.1	20
MW-3	4/9/2025	1000	0.1	6.87	1220	4.95	0.45	64.8	224
MW-3	4/9/2025	1000	2	6.80	1220	4.00	0.00	2.0	227
MW-3	4/9/2025	1000	4	6.77	1240	3.91	0.00	1.8	224
MW-3	4/9/2025	1000	6.5	6.76	1260	3.75	0.00	1.4	204
MW-3	4/9/2025			6.76	1260	3.76	0.00	1.8	200
MW-3	7/2/2025	1000	0.1	6.81	1280	10.50	1.42	0.1	-113
MW-3	7/2/2025	1000	2.5	6.80	1250	10.73	0.00	0.0	-38
MW-3	7/2/2025	1000	5	6.81	1250	10.74	0.00	0.0	-28

Table 4

Well Stabilization Data

Well ID	Sample Date	Purge Rate (ml/min)	Purge Volume (gallons)	Field pH (pH)	Field Specific Conductivity (umhos/cm)	Field Temp (^{o}C)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	ORP (mV)
MW-3	7/2/2025	1000	7	6.82	1250	10.74	0.00	0.0	-27
MW-3	7/2/2025			6.82	1250	10.74	0.00	0.0	-26
MW-3R	4/9/2025	1000	0.1	6.51	1610	8.32	4.10	91.9	-42
MW-3R	4/9/2025	1000	3	6.42	1590	8.27	4.90	9.4	-39
MW-3R	4/9/2025	1000	6	6.42	1560	8.32	4.11	27.0	-44
MW-3R	4/9/2025	1000	10	6.45	1550	8.35	4.47	26.5	-45
MW-3R	4/9/2025			6.35	1550	8.36	4.47	26.5	-46
MW-3R	7/2/2025	1000	0.1	7.04	1450	12.09	13.92	103	-55
MW-3R	7/2/2025	1000	3.5	6.76	1530	9.35	4.47	7.3	-94
MW-3R	7/2/2025	1000	7	6.71	1590	9.38	8.65	0.0	-114
MW-3R	7/2/2025	1000	10.5	6.70	1630	9.31	3.49	6.1	-116
MW-3R	7/2/2025			6.71	1620	9.38	2.71	7.3	-118
MW-3RD	4/9/2025	1000	0.1	6.77	911	8.68	5.40	49.8	-21
MW-3RD	4/9/2025	1000	6	7.05	913	8.62	6.51	25.1	-25
MW-3RD	4/9/2025	1000	12	7.09	916	8.71	0.00	8.6	-23
MW-3RD	4/9/2025	1000	18.5	7.11	916	8.77	0.00	7.7	-27
MW-3RD	4/9/2025			7.11	916	8.77	0.00	7.7	-27
MW-3RD	7/2/2025	1000	0.1	7.13	992	10.07	4.05	0.1	-98
MW-3RD	7/2/2025	1000	7	7.15	989	10.05	2.61	0.0	-100
MW-3RD	7/2/2025	1000	14	7.17	1010	10.06	3.15	0.0	-100
MW-3RD	7/2/2025	1000	20	7.16	1010	10.05	4.06	0.0	-100
MW-3RD	7/2/2025			7.16	990	10.05	2.85	0.0	-100
MW-4	4/9/2025	1000	0.1	7.17	1320	6.85	4.17	35.7	125
MW-4	4/9/2025	1000	2	7.06	1310	5.24	0.00	2.5	150
MW-4	4/9/2025	1000	4	7.05	1310	5.19	0.00	1.6	157
MW-4	4/9/2025	1000	6.5	7.06	1310	5.14	0.00	1.1	163
MW-4	4/9/2025			7.06	1300	5.13	0.00	1.3	164
MW-4	7/2/2025	1000	0.1	7.22	1200	12.84	2.16	0.0	111
MW-4	7/2/2025	1000	2.5	7.14	1260	12.81	0.00	0.0	103
MW-4	7/2/2025	1000	5	7.14	1260	12.85	0.00	0.0	100
MW-4	7/2/2025	1000	7	7.14	1260	12.85	0.00	0.0	99
MW-4	7/2/2025			7.13	1260	12.86	0.00	0.0	99

Notes:

ml/min	milliliters per minute
umhos/cm	micromhos per centimeter
^{o}C	degrees Celsius
mg/L	milligrams per Liter
NTU	Nephelometric Turbidity Units
ORP	oxidation-reduction potential
mV	millivolts

Table 5

Background Threshold Values

Appendix III to Part 257

Parameter	Background Threshold Value (BTV)	Units	CAS #
Boron	0.94	mg/l	7440-42-8
Calcium	252	mg/l	7440-70-2
Chloride	105	mg/l	16887-00-6
Fluoride	0.357	mg/l	15984-48-8
pH	lower 6.5 higher 7.8	pH UNITS	PH
Sulfate as SO4	529.8	mg/l	14808-79-8
Total Dissolved Solids	1380	mg/l	TDS

Appendix IV to Part 257

Parameter	Background Threshold Value (BTV)	Units	CAS #
Antimony	0.0200	mg/l	7440-36-0
Arsenic	0.0049	mg/l	7440-38-2
Barium	0.71	mg/l	7440-39-3
Beryllium	0.0010	mg/l	7440-41-7
Cadmium	0.0005	mg/l	7440-43-9
Chromium	0.0040	mg/l	7440-47-3
Cobalt	0.0056	mg/l	7440-48-4
Fluoride	0.352	mg/l	15984-48-8
Lead	0.00737	mg/l	7439-92-1
Lithium	0.046	mg/l	7439-93-2
Mercury	0.00030	mg/l	7439-97-6
Molybdenum	0.0133	mg/l	7439-98-7
Radium 226	0.985	pci/l	13982-63-3
Radium 228	1.974	pci/l	15262-20-1
Radium 226/228	2.959	pci/l	425
Selenium	0.029	mg/l	7782-49-2
Thallium	0.001	mg/l	7440-28-0

Results in milligrams per liter (mg/l) or picocuries per liter (pci/l)

Table 6

2025 Groundwater Protection Standards

Appendix IV to Part 257

Parameter	Background Threshold Value (BTV)	EPA Maximum Contaminate Level (MCL)	Groundwater Protection Standard (GPS)	Units	CAS #
Antimony	0.0200	0.006	0.006	mg/l	7440-36-0
Arsenic	0.0049	0.010	0.01	mg/l	7440-38-2
Barium	0.71	2	2	mg/l	7440-39-3
Beryllium	0.0010	0.004	0.004	mg/l	7440-41-7
Cadmium	0.0005	0.005	0.005	mg/l	7440-43-9
Chromium	0.0040	0.1	0.1	mg/l	7440-47-3
Cobalt	0.0056	0.006	0.00741	mg/l	7440-48-4
Fluoride	0.352	4	4	mg/l	15984-48-8
Lead	0.00737	0.015	0.015	mg/l	7439-92-1
Lithium	0.046	0.04	0.046	mg/l	7439-93-2
Mercury	0.00030	0.002	0.002	mg/l	7439-97-6
Molybdenum	0.0133	0.1	0.1	mg/l	7439-98-7
Radium 226	0.985	--	--	pci/l	13982-63-3
Radium 228	1.974	--	--	pci/l	15262-20-1
Radium 226/228	2.959	5	5	pci/l	EDF-206
Selenium	0.029	0.05	0.05	mg/l	7782-49-2
Thallium	0.001	0.002	0.002	mg/l	7440-28-0

Results in milligrams per liter (mg/l) or picocuries per liter (pci/l)

Table 7

**Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV**

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-1	04/08/2025	Antimony	0.0032	0.006	mg/l	7440-36-0
MW-1	07/01/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-1RD	04/08/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-1RD	07/01/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-2R	04/08/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-2R	07/01/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-2RD	04/08/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-2RD	07/01/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3	04/09/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3	07/02/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3R	04/09/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3R	07/02/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3RD	04/09/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-3RD	07/02/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-4	04/09/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-4	07/02/2025	Antimony	< 0.0020	0.006	mg/l	7440-36-0
MW-1	04/08/2025	Arsenic	0.0081	0.01	mg/l	7440-38-2
MW-1	07/01/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-1RD	04/08/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-1RD	07/01/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-2R	04/08/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-2R	07/01/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-2RD	04/08/2025	Arsenic	0.0023	0.01	mg/l	7440-38-2
MW-2RD	07/01/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-3	04/09/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-3	07/02/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-3R	04/09/2025	Arsenic	0.0021	0.01	mg/l	7440-38-2
MW-3R	07/02/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-3RD	04/09/2025	Arsenic	0.0038	0.01	mg/l	7440-38-2
MW-3RD	07/02/2025	Arsenic	0.0038	0.01	mg/l	7440-38-2
MW-4	04/09/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-4	07/02/2025	Arsenic	< 0.0020	0.01	mg/l	7440-38-2
MW-1	04/08/2025	Barium	0.18	2	mg/l	7440-39-3
MW-1	07/01/2025	Barium	0.12	2	mg/l	7440-39-3
MW-1RD	04/08/2025	Barium	0.15	2	mg/l	7440-39-3
MW-1RD	07/01/2025	Barium	0.14	2	mg/l	7440-39-3
MW-2R	04/08/2025	Barium	0.18	2	mg/l	7440-39-3
MW-2R	07/01/2025	Barium	0.19	2	mg/l	7440-39-3
MW-2RD	04/08/2025	Barium	0.18	2	mg/l	7440-39-3
MW-2RD	07/01/2025	Barium	0.17	2	mg/l	7440-39-3
MW-3	04/09/2025	Barium	0.14	2	mg/l	7440-39-3
MW-3	07/02/2025	Barium	0.18	2	mg/l	7440-39-3
MW-3R	04/09/2025	Barium	0.57	2	mg/l	7440-39-3
MW-3R	07/02/2025	Barium	0.54	2	mg/l	7440-39-3
MW-3RD	04/09/2025	Barium	0.19	2	mg/l	7440-39-3
MW-3RD	07/02/2025	Barium	0.19	2	mg/l	7440-39-3
MW-4	04/09/2025	Barium	0.18	2	mg/l	7440-39-3
MW-4	07/02/2025	Barium	0.15	2	mg/l	7440-39-3
MW-1	04/08/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-1	07/01/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-1RD	04/08/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-1RD	07/01/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7

Table 7

**Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV**

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-2R	04/08/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-2R	07/01/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-2RD	04/08/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-2RD	07/01/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3	04/09/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3	07/02/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3R	04/09/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3R	07/02/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3RD	04/09/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-3RD	07/02/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-4	04/09/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-4	07/02/2025	Beryllium	< 0.0010	0.004	mg/l	7440-41-7
MW-1	04/08/2025	Cadmium	0.00026	0.005	mg/l	7440-43-9
MW-1	07/01/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-1RD	04/08/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-1RD	07/01/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-2R	04/08/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-2R	07/01/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-2RD	04/08/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-2RD	07/01/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3	04/09/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3	07/02/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3R	04/09/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3R	07/02/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3RD	04/09/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-3RD	07/02/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-4	04/09/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-4	07/02/2025	Cadmium	< 0.00020	0.005	mg/l	7440-43-9
MW-1	04/08/2025	Chromium	0.013	0.1	mg/l	7440-47-3
MW-1	07/01/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-1RD	04/08/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-1RD	07/01/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-2R	04/08/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-2R	07/01/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-2RD	04/08/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-2RD	07/01/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3	04/09/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3	07/02/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3R	04/09/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3R	07/02/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3RD	04/09/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-3RD	07/02/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-4	04/09/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-4	07/02/2025	Chromium	< 0.0050	0.1	mg/l	7440-47-3
MW-1	04/08/2025	Cobalt	0.0046	0.00741	mg/l	7440-48-4
MW-1	07/01/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-1RD	04/08/2025	Cobalt	0.00072	0.00741	mg/l	7440-48-4
MW-1RD	07/01/2025	Cobalt	0.00061	0.00741	mg/l	7440-48-4
MW-2R	04/08/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-2R	07/01/2025	Cobalt	0.00078	0.00741	mg/l	7440-48-4
MW-2RD	04/08/2025	Cobalt	0.0028	0.00741	mg/l	7440-48-4
MW-2RD	07/01/2025	Cobalt	0.0023	0.00741	mg/l	7440-48-4
MW-3	04/09/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-3	07/02/2025	Cobalt	0.0018	0.00741	mg/l	7440-48-4

Table 7

**Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV**

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-3R	04/09/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-3R	07/02/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-3RD	04/09/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-3RD	07/02/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-4	04/09/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-4	07/02/2025	Cobalt	< 0.00050	0.00741	mg/l	7440-48-4
MW-1	04/08/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-1	07/01/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-1RD	04/08/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-1RD	07/01/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-2R	04/08/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-2R	07/01/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-2RD	04/08/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-2RD	07/01/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3	04/09/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3	07/02/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3R	04/09/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3R	07/02/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3RD	04/09/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-3RD	07/02/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-4	04/09/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-4	07/02/2025	Fluoride	< 1.0	4	mg/l	16984-48-8
MW-1	04/08/2025	Lead	0.010	0.015	mg/l	7439-92-1
MW-1	07/01/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-1RD	04/08/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-1RD	07/01/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-2R	04/08/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-2R	07/01/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-2RD	04/08/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-2RD	07/01/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3	04/09/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3	07/02/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3R	04/09/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3R	07/02/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3RD	04/09/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-3RD	07/02/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-4	04/09/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-4	07/02/2025	Lead	< 0.00050	0.015	mg/l	7439-92-1
MW-1	04/08/2025	Lithium	0.14	0.046	mg/l	7439-93-2
MW-1	07/01/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-1RD	04/08/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-1RD	07/01/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-2R	04/08/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-2R	07/01/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-2RD	04/08/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-2RD	07/01/2025	Lithium	0.011	0.046	mg/l	7439-93-2
MW-3	04/09/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-3	07/02/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-3R	04/09/2025	Lithium	0.020	0.046	mg/l	7439-93-2
MW-3R	07/02/2025	Lithium	0.020	0.046	mg/l	7439-93-2
MW-3RD	04/09/2025	Lithium	0.013	0.046	mg/l	7439-93-2
MW-3RD	07/02/2025	Lithium	0.013	0.046	mg/l	7439-93-2
MW-4	04/09/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2
MW-4	07/02/2025	Lithium	< 0.010	0.046	mg/l	7439-93-2

Table 7

**Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV**

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-1	04/08/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-1	07/01/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-1RD	04/08/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-1RD	07/01/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-2R	04/08/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-2R	07/01/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-2RD	04/08/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-2RD	07/01/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3	04/09/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3	07/02/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3R	04/09/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3R	07/02/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3RD	04/09/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-3RD	07/02/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-4	04/09/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-4	07/02/2025	Mercury	< 0.00020	0.002	mg/l	7439-97-6
MW-1	04/08/2025	MOLYBDENUM	0.017	0.1	mg/l	7439-98-7
MW-1	07/01/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-1RD	04/08/2025	MOLYBDENUM	0.0037	0.1	mg/l	7439-98-7
MW-1RD	07/01/2025	MOLYBDENUM	0.0031	0.1	mg/l	7439-98-7
MW-2R	04/08/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-2R	07/01/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-2RD	04/08/2025	MOLYBDENUM	0.0026	0.1	mg/l	7439-98-7
MW-2RD	07/01/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-3	04/09/2025	MOLYBDENUM	0.0025	0.1	mg/l	7439-98-7
MW-3	07/02/2025	MOLYBDENUM	0.0046	0.1	mg/l	7439-98-7
MW-3R	04/09/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-3R	07/02/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-3RD	04/09/2025	MOLYBDENUM	0.0036	0.1	mg/l	7439-98-7
MW-3RD	07/02/2025	MOLYBDENUM	0.0037	0.1	mg/l	7439-98-7
MW-4	04/09/2025	MOLYBDENUM	0.0026	0.1	mg/l	7439-98-7
MW-4	07/02/2025	MOLYBDENUM	< 0.0020	0.1	mg/l	7439-98-7
MW-1	04/08/2025	Radium (226)	< 0.388	--	pci/l	13982-63-3
MW-1	07/01/2025	Radium (226)	< 0.317	--	pci/l	13982-63-3
MW-1RD	04/08/2025	Radium (226)	< 0.362	--	pci/l	13982-63-3
MW-1RD	07/01/2025	Radium (226)	< 0.336	--	pci/l	13982-63-3
MW-2R	04/08/2025	Radium (226)	< 0.316	--	pci/l	13982-63-3
MW-2R	07/01/2025	Radium (226)	< 0.355	--	pci/l	13982-63-3
MW-2RD	04/08/2025	Radium (226)	0.508	--	pci/l	13982-63-3
MW-2RD	07/01/2025	Radium (226)	0.539	--	pci/l	13982-63-3
MW-3	04/09/2025	Radium (226)	< 0.340	--	pci/l	13982-63-3
MW-3	07/02/2025	Radium (226)	< 0.288	--	pci/l	13982-63-3
MW-3R	04/09/2025	Radium (226)	0.564	--	pci/l	13982-63-3
MW-3R	07/02/2025	Radium (226)	0.540	--	pci/l	13982-63-3
MW-3RD	04/09/2025	Radium (226)	0.412	--	pci/l	13982-63-3
MW-3RD	07/02/2025	Radium (226)	0.643	--	pci/l	13982-63-3
MW-4	04/09/2025	Radium (226)	< 0.349	--	pci/l	13982-63-3
MW-4	07/02/2025	Radium (226)	< 0.296	--	pci/l	13982-63-3
MW-1	04/08/2025	Radium 228	< 0.597	--	pci/l	15262-20-1
MW-1	07/01/2025	Radium 228	0.665	--	pci/l	15262-20-1
MW-1RD	04/08/2025	Radium 228	0.801	--	pci/l	15262-20-1
MW-1RD	07/01/2025	Radium 228	0.524	--	pci/l	15262-20-1

Table 7

**Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV**

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-2R	04/08/2025	Radium 228	< 0.691	--	pci/l	15262-20-1
MW-2R	07/01/2025	Radium 228	< 0.598	--	pci/l	15262-20-1
MW-2RD	04/08/2025	Radium 228	0.727	--	pci/l	15262-20-1
MW-2RD	07/01/2025	Radium 228	< 0.774	--	pci/l	15262-20-1
MW-3	04/09/2025	Radium 228	< 0.612	--	pci/l	15262-20-1
MW-3	07/02/2025	Radium 228	< 0.668	--	pci/l	15262-20-1
MW-3R	04/09/2025	Radium 228	1.05	--	pci/l	15262-20-1
MW-3R	07/02/2025	Radium 228	1.85	--	pci/l	15262-20-1
MW-3RD	04/09/2025	Radium 228	0.527	--	pci/l	15262-20-1
MW-3RD	07/02/2025	Radium 228	< 0.645	--	pci/l	15262-20-1
MW-4	04/09/2025	Radium 228	0.663	--	pci/l	15262-20-1
MW-4	07/02/2025	Radium 228	< 0.596	--	pci/l	15262-20-1
MW-1	04/08/2025	Radium-226/228	< 0.597	5	pci/l	425
MW-1	07/01/2025	Radium-226/228	0.617	5	pci/l	425
MW-1RD	04/08/2025	Radium-226/228	1.08	5	pci/l	425
MW-1RD	07/01/2025	Radium-226/228	0.780	5	pci/l	425
MW-2R	04/08/2025	Radium-226/228	< 0.691	5	pci/l	425
MW-2R	07/01/2025	Radium-226/228	< 0.598	5	pci/l	425
MW-2RD	04/08/2025	Radium-226/228	1.23	5	pci/l	425
MW-2RD	07/01/2025	Radium-226/228	< 0.774	5	pci/l	425
MW-3	04/09/2025	Radium-226/228	< 0.612	5	pci/l	425
MW-3	07/02/2025	Radium-226/228	< 0.668	5	pci/l	425
MW-3R	04/09/2025	Radium-226/228	1.61	5	pci/l	425
MW-3R	07/02/2025	Radium-226/228	2.39	5	pci/l	425
MW-3RD	04/09/2025	Radium-226/228	0.939	5	pci/l	425
MW-3RD	07/02/2025	Radium-226/228	0.992	5	pci/l	425
MW-4	04/09/2025	Radium-226/228	0.817	5	pci/l	425
MW-4	07/02/2025	Radium-226/228	< 0.596	5	pci/l	425
MW-1	04/08/2025	Selenium	0.0063	0.05	mg/l	7782-49-2
MW-1	07/01/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-1RD	04/08/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-1RD	07/01/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-2R	04/08/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-2R	07/01/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-2RD	04/08/2025	Selenium	0.024	0.05	mg/l	7782-49-2
MW-2RD	07/01/2025	Selenium	0.029	0.05	mg/l	7782-49-2
MW-3	04/09/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-3	07/02/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-3R	04/09/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-3R	07/02/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-3RD	04/09/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-3RD	07/02/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-4	04/09/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-4	07/02/2025	Selenium	< 0.0050	0.05	mg/l	7782-49-2
MW-1	04/08/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-1	07/01/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-1RD	04/08/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-1RD	07/01/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-2R	04/08/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-2R	07/01/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-2RD	04/08/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-2RD	07/01/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0

Table 7

Groundwater Analytical Data vs.
Groundwater Protection Standards - Appendix IV

Location	Date	Parameter	Result	Groundwater Protection Standard (GPS)	Units	CAS #
MW-3	04/09/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-3	07/02/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-3R	04/09/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-3R	07/02/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-3RD	04/09/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-3RD	07/02/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-4	04/09/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0
MW-4	07/02/2025	Thallium	< 0.0010	0.002	mg/l	7440-28-0

Results in milligrams per liter (mg/l) or picocuries per liter (pci/l)
-- - No Groundwater Protection Standard established.
Bold = Indicates concentration above Groundwater Protection Standard

Appendix A – Field Data Sheets

Groundwater Elevation Measurements
SKB Landfill (Lansing)

Site: SKB Lansing

Personnel: N. Schlegel

Well ID	Date	Time	Depth To Water:	Notes:
MW-101A	4/8/25	7:48	11.36'	
MW-102A		7:57	5.141	
MW-103A		7:51	5.57'	
MW-104A		7:45	4.40'	
MW-105A		7:59	6.34'	
MW-106A		8:08	9.29'	
MW-107A		8:06	4.31'	
MW-108A		8:03	7.98'	
MW-1A		9:59	8.97'	
MW-2A		11:27	5.87'	
MW-3A		9:13	12.13'	
MW-4RA		10:44	24.65'	
MW-1		13:40	5.12'	
MW-1RD		13:42	27.99'	
MW-2R		15:33	8.23'	N 43° 42.4568' W 93° 00.2895'
MW-2RD		15:34	9.44'	
MW-3		8:48	6.68'	
MW-3R		8:50	7.22'	
MW-3RD		8:51	8.68'	
MW-4		8:54	4.99'	
PIEZ-4		8:15	7.59'	
MW-5S		8:18	24.33'	
MW-5D		8:19	28.69'	
PIEZ-3		8:22	4.96'	
PIEZ-1		8:25	9.56'	
PIEZ-2		8:27	18.33'	
MW-6S		8:32	4.05'	
MW-8S		8:35	16.35'	
MW-9D		8:36	16.03'	
MW-7S		8:41	17.12'	
MW-7D		8:43	16.90'	
PIEZ-5		8:45	4.59'	
P-11		8:59	23.27'	
P-10	↓	14:59	20.55'	

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Austin)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 9:20

Initial Water Level (feet): 92.13'

Ground Water Elevation (ft, msl): 1,224.28'

Top of Casing (ft, msl) 1236.41

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-3A

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schulz

Casing Length (ft) 20.3

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.33

Total Volume Purged (gal): 4.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 12.15'

Date/Time Completed: 4/8/25 9:40

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
9:20	1000	0.1	6.77	7.34	981	1.0	2.62	216
9:25	1000	1.5	6.38	7.27	976	1.0	1.31	234
9:30	1000	3.0	6.17	7.19	976	0.6	0.22	240
9:35	1000	4.0	6.14	7.16	976	0.5	0.00	240

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-3A

Water Lever @ Sampling (ft): 12.15 Well Collection Sequence 1 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
9:40 4/9/25	VOCs: 100 Other: 1000	6.20	7.15	975	0.4	0.00	241

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 30°F, sunny, 0-5 mph south

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 623319

Date: 4/9/25 By: M. Schlafer Title: Staff Env. Scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Austin)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/9/25 10:00

Initial Water Level (feet): 8.97

Ground Water Elevation (ft, msl): 1,237.22'

Top of Casing (ft, msl) 1246.09

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-1A

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Sundquist

Casing Length (ft) 17.7

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.44

Total Volume Purged (gal): 4.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 8.90

Date/Time Completed: 4/9/25 10:20

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
10:00	1000	0.1	6.12	7.09	1,020	59.2	8.17	250
10:05	1000	1.5	5.46	6.94	980	8.6	6.82	254
10:10	1000	3.0	4.82	6.91	993	2.3	6.81	252
10:15	1000	4.5	5.12	6.86	1,000	14.3	0.52	111

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-1A

Water Lever @ Sampling (ft): 8.90 Well Collection Sequence 2 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
10:20 4/8/25	VOCs: 100 Other: 1000	5.37	6.84	999	6.0	0.77	26

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 30°F, Sunny, 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 623317

Date: 4/8/25 By: N. Schlagel Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Austin)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 10:45

Initial Water Level (feet): 24.65'

Ground Water Elevation (ft, msl): 1,219.22'

Top of Casing (ft, msl) 1243.87

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-4RA

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schlagel

Casing Length (ft) 31.7

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.15

Total Volume Purged (gal): 3.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 24.68'

Date/Time Completed: 4/8/25 11:05

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
10:45	1000	0.1	7.43	7.44	996	14.3	0.58	131
10:50	1000	1.0	7.98	7.43	992	7.0	0.00	128
10:55	1000	2.0	7.92	7.33	976	10.8	0.00	148
11:00	1000	3.5	7.92	7.31	975	7.4	0.00	149

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-4RA

Water Lever @ Sampling (ft): 24.68

Well Collection Sequence 3 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
11:04 4/9/25	VOCs: 100 Other: 1000	7.94	7.31	976	7.3	0.00	149

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 34°F, sunny, 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 705528

Date: 4/9/25 By: N. Schlagel Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Austin)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 11:30

Initial Water Level (feet): 5.87'

Ground Water Elevation (ft, msl): 1,223.85'

Top of Casing (ft, msl) 1229.72

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-2A

Duplicate Collected: Yes - DUP-1

Field Blank Collected: Yes - Field Blank

Equipment Blank Collected: NO

MS/MSD Collected: Yes - MS/MSD

Sampler(s): N. Schlegel

Casing Length (ft) 17.8

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.94

Total Volume Purged (gal): 6.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 5.90'

Date/Time Completed: 4/8/25 1150

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
11:30	1000	0.1	5.89	6.58	3,450	26.8	0.00	53
11:35	1000	2.0	4.61	6.54	3,450	3.1	0.00	52
11:40	1000	4.0	4.90	6.49	3,460	1.3	0.00	52
11:45	1000	6.0	5.08	6.49	3,430	0.7	0.00	51

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-2A

Water Lever @ Sampling (ft): 5.90

Well Collection Sequence 4 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: 1 Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
11:50 4/8/25	VOCs: 150 Other: 1000	5.12	6.49	3,430	2.3	0.00	51

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 38 °F, sunny, 0-5 mph S

Sampling Characteristics: Clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: Yes No (circle) # of Bottles Collected: 9

Well Closed and Locked: Yes No (circle)

Notes: _____

Minnesota Unique Well ID: 623319

Date: 4/8/25 By: N. Schlosser Title: Staff environmental scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 13:45

Initial Water Level (feet): 5.12'

Ground Water Elevation (ft, msl): 1,239.72

Top of Casing (ft, msl) 1244.84

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-1

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schlagel

Casing Length (ft) 25.6

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 3.34

Total Volume Purged (gal): 10.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 5.14'

Date/Time Completed: 4/8/25 14:20

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
13:45	1000	0.1	6.16	7.02	1,160	3.6	7.21	119
13:55	1000	3.0	5.74	7.01	1,166	3.4	7.80	136
14:05	1000	6.0	5.35	7.00	1,070	8.0	8.96	158
14:15	1000	10.0	5.32	7.00	1,060	8.9	8.93	159

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: 5.14' Sample Point ID: MW-1

Water Lever @ Sampling (ft): ~~14.70~~ Well Collection Sequence 5 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
14:20 4/8/25	VOCs: 100 Other: 1000	5.21	6.99	1,080	10.9	9.35	165

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 41°F, sunny, 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 664911

Date: 4/8/25 By: [illegible] Title: staff env scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 13:45 4/8/25

Initial Water Level (feet): 27.89'

Ground Water Elevation (ft, msl): ~~27.89'~~ 1,217.63'

Top of Casing (ft, msl) 1245.52

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-1RD

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M. Schlegel

Casing Length (ft) 75.5

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 7.76

Total Volume Purged (gal): 23.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 27.90'

Date/Time Completed: 4/8/25 14:35

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
13:45	1000	0.1	8.82	7.41	625	25.8	0.92	28
14:05	1000	10.0	8.57	7.33	636	0.7	0.00	12
14:25	1000	20.0	8.54	7.29	631	0.6	0.00	10
14:30	1000	23.5	8.53	7.31	630	0.7	0.00	11

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-1RD

Water Lever @ Sampling (ft): 27.90 Well Collection Sequence 6 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
14:35 4/8/25	VOCs: 100 Other: 1000	8.50	7.31	625	0.6	0.00	10

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 40°F, sunny, 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: ~~Yes~~ No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785087

Date: 4/8/25 By: M. Schlager Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 15:40

Initial Water Level (feet): 8.23'

Ground Water Elevation (ft, msl):

Top of Casing (ft, msl) 1226.23

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-2R

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): MSch/dyel

Casing Length (ft) 18.35

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.65

Total Volume Purged (gal): 2.00 (slow recharge)

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 16.5'

Date/Time Completed: 4/8/25 16:00

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
15:40	1000	0.1	7.66	7.04	1,630	115	13.20	209
15:45	1000	1.0	6.48	6.81	1,630	19.3	0.77	210
15:50	1000	1.5	6.39	6.80	1,630	10.0	0.00	207
15:55	1000	2.0	6.46	6.80	1,630	9.6	0.00	206

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-2R

Water Lever @ Sampling (ft): 16.50'

Well Collection Sequence 7 of 12

Parameters: Annual _____ Semiannual: _____

Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
16:00 4/8/25	VOCs: 1000 Other: 1000	6.40	6.90	1,630	9.6	0.00	206

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 48°F, Sunny 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785081

Date: 4/8/25 By: N. Schlagel Title: Staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/8/25 15:48

Initial Water Level (feet): 9.44'

Ground Water Elevation (ft, msl):

Top of Casing (ft, msl) 1226.37

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

Sample Location: MW-2RD

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M. Jain bgl

Casing Length (ft) 35

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 4.17

Total Volume Purged (gal): 12.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 9.45

Date/Time Completed: 4/8/25 16:15

PURGE DATA

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
15:45	1000	~~1000~~ 0.1	9.31	6.88	996	9.5	0.00	122
15:55	1000	~~1000~~ 4.0	9.39	6.99	1,040	3.4	0.00	94
16:05	1000	~~1000~~ 8.0	9.43	6.88	1,060	1.8	0.00	72
16:10	1000	~~1000~~ 12.5	9.42	6.87	1,070	2.0	0.00	63

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-2RD

Water Lever @ Sampling (ft): 9.48 Well Collection Sequence 8 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
4/8/24 16:15	VOCs: 100 Other: 1000	9.42	6.87	1,070	1.9	0.00	62

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 48°F, sunny, 0-5 mph S

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785085

Date: 4/8/24 By: N. Schlegel Title: Staff Env. Scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/9/28 8:00

Initial Water Level (feet): 6.68'

Ground Water Elevation (ft, msl): 1,218.32

Top of Casing (ft, msl) 1225

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

Sample Location: MW-3

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N Schaefer

Casing Length (ft) 19.7

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 2.12

Total Volume Purged (gal): 6.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 6.70'

Date/Time Completed: 4/9/28 8:35

PURGE DATA

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
8:00	1000	0.1	4.95	6.97	1,220	64.8	0.45	224
8:10	1000	2.0	4.00	6.90	1,220	2.0	0.00	227
8:20	1000	4.0	3.91	6.77	1,240	1.9	0.00	224
8:30	1000	6.5	3.75	6.76	1,260	1.4	0.00	204

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-3

Water Lever @ Sampling (ft): 6.70'

Well Collection Sequence 9 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
8:35 4/9/25	VOCs: 100 Other: 1000	3.76	6.76	1,260	1.8	0.00	200

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 36 °F, partly cloudy, 5-10 mph SE

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: Yes No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: Yes No (circle

Notes: _____

Minnesota Unique Well ID: 664913

Date: 4/9/25 By: N. Schlagel Title: Staff Env. Scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/9/25 9:00

Initial Water Level (feet): 7.22'

Ground Water Elevation (ft, msl): 1,217.97

Top of Casing (ft, msl) 1225.19

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-3R

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M. Schlagel

Casing Length (ft) 27.5

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 3.31

Total Volume Purged (gal): 10.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 7.24'

Date/Time Completed: 4/9/25 8:20

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
8:00	1000	0.1	8.32	6.51	1,610	91.5	4.10	~~-41~~ -42
8:05	1000	3.0	8.27	6.42	1,590	9.4	4.90	-39
8:10	1000	6.0	8.32	6.42	1,560	27.0	4.11	-44
8:15	1000	10.0	8.35	6.45	1,550	26.5	4.47	-48

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-3R

Water Lever @ Sampling (ft): 7.24

Well Collection Sequence 10 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
9:20 4/9/25	VOCs: 100 Other: 1000	8.36	6.55	1,550	265	4.47	-46

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 39 °F, partly cloudy, 5 - 10 mph SE

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785082

Date: 4/9/25 By: N Eichhorst Title: staff env scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/9/25 8:50

Initial Water Level (feet): 8.68'

Ground Water Elevation (ft, msl): 1,216.33'

Top of Casing (ft, msl) 1225.01

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-3RD

Duplicate Collected: Yes - DUP 2

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: Yes - MS/MSD 2

Sampler(s): N. Schadel

Casing Length (ft) 46.25

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 6.12

Total Volume Purged (gal): 18.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 8.70'

Date/Time Completed: 4/9/25 9:25

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
9:50	1000	0.1	8.69	6.77	911	49.8	5.40	-21
9:00	1000	6.0	8.62	7.05	913	25.1	6.51	-25
9:10	1000	12.0	8.71	7.09	916	8.6	0.00	-23
9:20	1000	18.5	8.77	7.11	916	7.7	0.00	-27

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-3RD

Water Lever @ Sampling (ft): 8.70'

Well Collection Sequence 11 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
9:25 4/9/25	VOCs: 100 Other: 1000	8.77	7.11	916	7.7	0.00	-27

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 38 °F, mostly clad, 5-10 mph SE

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 755084

Date: 4/9/25 By: N. Schlagel Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 4/9/25 10:10

Initial Water Level (feet): 4.99

Ground Water Elevation (ft, msl): 1,220.98

Top of Casing (ft, msl) 1225.97

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

Sample Location: MW-4

Duplicate Collected: No

Field Blank Collected: Yes - Field Blank 2

Equipment Blank Collected: Yes

MS/MSD Collected: No

Sampler(s): M. Schlegel

Casing Length (ft) 18.3

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 2.17

Total Volume Purged (gal): 6.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 5.00

Date/Time Completed: 4/9/25 10:45

PURGE DATA

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
10:10	1000	0.1	6.85	7.17	1,320	35.7	4.17	125
10:20	1000	2.0	5.24	7.06	1,310	2.5	0.00	150
10:30	1000	4.0	5.19	7.05	1,310	1.6	0.00	157
10:40	1000	6.5	5.14	7.06	1,310	1.1	0.00	163

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-4

Water Lever @ Sampling (ft): 5.00

Well Collection Sequence 12 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
10:45 4/9/25	VOCs: 100 Other: 1000	5.13	7.06	1,300	1.3	0.00	164

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 44°F, mostly cloud, 5 – 10 mph SE

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: Yes No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: Yes No (circle

Notes: _____

Minnesota Unique Well ID: 664914

Date: 4/9/25 By: N-Schlegel Title: Staff env. scientist

Company: Groundwater and Environmental Services, Inc.

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time)	4/8/25 7:30
End of day: (Date/Time)	4/9/25 15:00
YSI Model Number	U-5000
YSI Serial Number	U26730X
Sonde Model Number	U-52
Sonde Serial Number	U26731X

Sampling Event

Time:	Value:		
7:30	0	NTU std =	DI Water
	100	NTU std =	100
	14.09	uS std =	1409
	4.00	pH std =	4
	7.00	pH std =	7
↓	10.00	pH std =	10

Calibration Notes:

Spring Groundwater Sampling Checklist
SKB Landfill (Lansing)

Site: SKB Lansing
Personnel: N. Schlag, BJ

Well ID	Date	Duplicate	VOC	Dissolved Metals	Total Metals	NO_2+NO_3	eH	Appear., pH, TDS	Alk., Appear., Cl, pH, SO_4, SC, TDS, TSS	Collected / Initial
Well Set #1										~~AS~~
MW-1	4/9/25		X	X			X	X		NS
MW-3	4/9/25		X	X			X	X		NS
VOC Trip Blank			X							
Well Set #2										
MW-1RD	4/8/25		X	X		X		X	X	NS
MW-2R	4/8/25		X	X		X		X	X	NS
MW-2RD	4/8/25		X	X		X		X	X	NS
MW-3R	4/9/25		X	X		X		X	X	NS
MW-3RD	4/9/25	Yes	X	X		X		X	X	NS
MW-4	4/9/25		X	X		X		X	X	NS
VOC Trip Blank	-		X							
MW-1A	4/8/25		X	X		X	X	X	X	NS
MW-2A	4/8/25	Yes	X	X		X	X	X	X	NS
MW-3A	4/8/25		X	X		X	X	X	X	NS
MW-4RA	4/8/25		X	X		X	X	X	X	NS
									X	~~NS~~
										~~X~~

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: N/A

Date/Time Initiated: 4/9/25 11:45

Initial Water Level (feet): -

Ground Water Elevation (ft, msl): -

Top of Casing (ft, msl) -

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: Storage Tank (Leachate)

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schlagel

Casing Length (ft) N/A

Dedicated Equipment: Yes

Casing Diameter (inches): -

One Casing Volume (gal): -

Total Volume Purged (gal): -

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): -

Date/Time Completed: 4/9/25 11:45

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
11:45	-	-	14.03	7.83	8,690	67.9	0.98	93

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: N/A

Date/Time Initiated: 4/9/25 12:15

Initial Water Level (feet): –

Ground Water Elevation (ft, msl): –

Top of Casing (ft, msl) –

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: Sump A (Leachate)

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schlegel

Casing Length (ft) N/A

Dedicated Equipment: Yes

Casing Diameter (inches): –

One Casing Volume (gal): –

Total Volume Purged (gal): –

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): –

Date/Time Completed: 4/9/25 12:15

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
12:18	–	–	11.28	7.59	2,960	224	11.34	145

Groundwater Elevation Measurements
SKB Landfill (Lansing)

Site: SKB Lansing
Personnel: M. Schlagel

Well ID	Date	Time	Depth To Water:	Notes:
MW-101A	7/1/25	8:28	6.54'	unique well ID # 705520
MW-102A		8:31	5.39	" " 705521
MW-103A		8:23	5.26	" " 705522
MW-104A		8:18	3.90'	" " 705523
MW-105A		8:37	5.41'	" " 705524
MW-106A		8:49	8.26	" " 705525
MW-107A		8:46	3.30	" " 705526
MW-108A		8:43	6.62'	" " 705527
MW-1A		11:58	7.25'	
MW-2A		13:30	5.40'	
MW-3A		10:29	10.06'	
MW-4RA		12:34	13.74	
MW-1		14:57	3.52'	
MW-1RD		14:58	24.12'	
MW-2R		16:14	7.07'	
MW-2RD		16:15	6.36'	
MW-3		17:37	6.18'	
MW-3R		17:38	6.37'	
MW-3RD		17:39	5.70'	
MW-4		17:48	4.79'	
PIEZ-4		8:58	5.52'	
MW-3S		9:05	15.50'	
MW-3D		9:06	23.95'	
PIEZ-3		9:10	3.29'	
PIEZ-1		9:19	5.41'	
PIEZ-2		9:22	13.03'	
MW-6S		9:25	0.00'	
MW-8S		~~9:04~~ (8)	~~15.50'~~ (15)	Time - 9:30 DTW = 11.86'
MW-8D		~~9:06~~ (10)	~~23.95'~~ (24)	Time - 9:32 DTW - 11.90'
MW-7S		9:36	12.94'	
MW-7D		9:38	12.80'	
PIEZ-5		9:42	4.19'	
P-11		8:58	16.69'	
P-10	↓	10:02	16.33	

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/1/25 15:00

Initial Water Level (feet): 3.32'

Ground Water Elevation (ft, msl): 1,241.52'

Top of Casing (ft, msl) 1244.84

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-1

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Schlagel

Casing Length (ft) 25.6

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 3.63

Total Volume Purged (gal): 11.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 3.35

Date/Time Completed: 7/1/25 15:45

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
15:00	1000	0.1	14.50	7.44	1,060	14.5	8.35	174
15:15	1000	4.0	11.91	7.06	1,060	0.0	3.75	180
15:30	1000	8.0	11.96	7.05	1,070	0.0	2.34	184
15:40	1000	11.0	11.89	7.06	1,060	0.0	3.03	187

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-1

Water Lever @ Sampling (ft): 3.35' Well Collection Sequence 5 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/1/25 15:45	VOCs: 100 Other: 1000	11.80	7.06	1,060	0.0	3.01	187

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 82°F, sunny 5-10 mph NW

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 664911

Date: 7/1/25 By: M. Schlagel Title: Staff environ Scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/1/25 15:00

Initial Water Level (feet): 24.12'

Ground Water Elevation (ft, msl): 1,221.40'

Top of Casing (ft, msl) 1245.52

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-1RD

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): N. Sundgel

Casing Length (ft) 75.5

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 8.37

Total Volume Purged (gal): 25.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 24.14'

Date/Time Completed: 7/1/25 15:40

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
15:00	100	0.1	9.71	7.41	682	0.0	0.00	-27
15:20	1000	10.0	9.68	7.39	661	0.0	0.00	-38
15:30	1000	20.0	9.68	7.41	659	0.0	0.00	-41
15:35	1000	25.5	9.66	7.41	659	0.0	0.00	-43

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: MW-1RD

Water Lever @ Sampling (ft): 24.14'

Well Collection Sequence 6 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/1/25 15:40	VOCs: 100 Other: 1000	9.64	7.35	658	0.0	0.00	-46

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 82°F, sunny SW 5-10 mph

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: Yes No (circle)

# of Bottles Collected: 9/5

Well Closed and Locked: Yes No (circle)

Notes: _____

Minnesota Unique Well ID: 785097

Date: 7/1/25 By: N. Schlagel Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/1/25 16:40

Initial Water Level (feet): 6.36'

Ground Water Elevation (ft, msl): 1219.87

Top of Casing (ft, msl) 1226.23

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-2R

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M-Schlegel

Casing Length (ft) 18.35

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 1.95

Total Volume Purged (gal): 2.0 Slow recharge

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 15.15'

Date/Time Completed: 7/1/25 17:00

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
16:40	1000	0.5	12.43	7.00	1,680	3.1	4.16	24
16:45	1000	0.5	12.14	7.00	1,670	1.9	4.15	22
16:50	1000	1.0	12.12	7.01	1,670	2.1	3.98	21
16:55	1000	2.0	12.12	7.01	1,670	2.1	3.97	21

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-2R

Water Lever @ Sampling (ft): 15.15 Well Collection Sequence 8 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: 4 Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
12:00 7/11/25	VOCs: 100 Other: 100	12.12	7.01	1,680	3.1	7.97	21

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 82°F, sunny 5-10 mph NW

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: Yes No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: Yes No (circle

Notes: _____

Minnesota Unique Well ID: 785081

Date: 7/11/25 By: N. Schlagel Title: Staff Env. & Hydrol.

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/1/25 16:15

Initial Water Level (feet): 7.67'

Ground Water Elevation (ft, msl):

Top of Casing (ft, msl) 1226.37

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-2RD

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M. Schlagel

Casing Length (ft) 35

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 4.55

Total Volume Purged (gal): 14.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 7.18'

Date/Time Completed: 7/1/25 16:50

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
16:15	1000	0.4	10.51	7.37	814	75.7	2.91	167
16:28	1000	5.0	10.17	7.16	948	83.0	0.04	137
16:35	1000	10.0	10.17	7.12	1,070	45.4	0.00	57
16:45	1000	14.0	10.14	7.12	1,100	27.5	0.00	24

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Water Lever @ Sampling (ft): 7.10'

Sample Point ID: MW-2RD

Well Collection Sequence: 7 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/1/25 16:50	VOCs: 100 Other: 1000	10.14	7.11	1,110	27.1	0.46	20

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 82°F, sunny, 5-10 mph NW

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785083

Date: 7/1/25 By: N. Schlagel Title: Staff Env. Scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/2/25 7:20

Initial Water Level (feet): 6.15

Ground Water Elevation (ft, msl): 1,218.85'

Top of Casing (ft, msl) 1225

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

Sample Location: MW-3

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): K. Sell [illegible]

Casing Length (ft) 19.7

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 2.20

Total Volume Purged (gal): 7.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 6.17

Date/Time Completed: 7/2/25 8:05

PURGE DATA

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
7:30	1000	0.5	10.50	6.81	1,280	0.1	1.42	-115
7:40	1000	2.5	10.70	6.80	1,250	0.0	0.00	-38
7:50	1000	5.0	10.74	6.81	1,250	0.0	0.00	-28
8:00	1000	7.0	10.74	6.82	1,250	0.0	0.00	-27

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-3

Water Lever @ Sampling (ft): 6.17' Well Collection Sequence 10 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/2/25 0-08	VOCs: 100 Other: 1000	10.74	6.82	1,250	0.0	0.00	-26

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 76°F, mostly sunny, calm mph

Sampling Characteristics: Clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 664913

Date: 7/2/25 By: N. Schlagel Title: staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/2/25 7:30

Initial Water Level (feet): 6.57

Ground Water Elevation (ft, msl): 1,218.82'

Top of Casing (ft, msl) 1225.19

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

Sample Location: MW-3R

Duplicate Collected: No

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: No

Sampler(s): M. Schlegel

Casing Length (ft) 27.5

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 3.44

Total Volume Purged (gal): 10.5

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 6.40'

Date/Time Completed: 7/2/25 7:50

PURGE DATA

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
7:30	1000	0.1	12.09	7.04	1,450	103	13.92	-55
7:35	1000	3.5	9.35	6.76	1,530	7.3	4.47	-94
7:40	1000	7.0	9.38	6.71	1,590	0.0	3.68	-114
7:45	1000	10.5	9.31	6.70	1,630	6.1	3.49	-116

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-3R

Water Lever @ Sampling (ft): 6.40' Well Collection Sequence 9 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/2/25 7:30	VOCs: 100 Other: 1000	9.38	6.71	1,620	7.3	2.71	-118

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 75°F, mostly sunny, calm wind

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785082

Date: 7/2/25 By: M. Schlagel Title: staff env scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/2/25 8:00

Initial Water Level (feet): 5.70'

Ground Water Elevation (ft, msl): 1,219.31

Top of Casing (ft, msl) 1225.01

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-3RD

Duplicate Collected: Yes - DUP2

Field Blank Collected: No

Equipment Blank Collected: No

MS/MSD Collected: YES

Sampler(s): N. Schlagel

Casing Length (ft) 46.25

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 6.61

Total Volume Purged (gal): 20.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 5.72'

Date/Time Completed: 7/2/25 8:35

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
8:00	1000	0.1	10.07	7.13	992	0.1	4.05	-98
8:10	1000	7.0	10.05	7.15	989	0.0	2.61	-100
8:20	1000	14.0	10.06	7.17	1,010	0.0	3.15	-100
8:30	1000	20.0	10.05	7.16	1,010	0.0	4.06	-100

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-3RD

Water Lever @ Sampling (ft): 5.72 Well Collection Sequence 11 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/2/25 9:35	VOCs: 100 Other: 1000	10.05	7.16	990	0.00	~.85	-100

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 76 °F, sunny, 0-5 mph SW

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle)

Notes: _____

Minnesota Unique Well ID: 785084

Date: 7/2/25 By: N. Schlagel Title: Staff env. scientist

Company: Groundwater and Environmental Services, Inc.

FIELD INFORMATION LOG Part 1

Facility: SKB Landfill (Lansing)

Location: Austin, MN

Sample Matrix: Groundwater

PURGE INFORMATION

Method of Well Purge: Dedicated Bladder Pump

Date/Time Initiated: 7/2/25 9:40

Initial Water Level (feet): 4.79

Ground Water Elevation (ft, msl): 1,221.18

Top of Casing (ft, msl) 1225.97

PID (Background) 0.0 (PPM)

PID (Headspace) 0.0 (PPM)

PURGE DATA

Sample Location: MW-4

Duplicate Collected: No

Field Blank Collected: Yes

Equipment Blank Collected: Yes

MS/MSD Collected: No

Sampler(s): M. Schabel

Casing Length (ft) 18.3

Dedicated Equipment: Yes

Casing Diameter (inches): 2

One Casing Volume (gal): 2.20

Total Volume Purged (gal): 7.0

Purged Dry?: Yes (No) (circle)

Water Level After Purge (ft): 4.76'

Date/Time Completed: 7/2/25 10:05

Time	Purge Rate (mL/min)	Cumulative Volume (gal)	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Disolved Oxygen (mg/L)	ORP (mV)
9:40	1000	0.1	12.84	7.22	1,200	0.0	2.16	111
9:47	1000	2.5	12.91	7.14	1,260	0.0	0.00	103
9:53	1000	5.0	12.85	7.14	1,260	0.0	0.00	100
10:02	1000	7.0	12.85	7.14	1,260	0.0	0.00	99

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION: Sample Point ID: MW-4

Water Lever @ Sampling (ft): 4.76 Well Collection Sequence 12 of 12

Parameters: Annual _____ Semiannual: _____ Quarterly: X Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (uS - umhos/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	O_2 Reduction Potential (mV)
7/2/25 10:28	VOCs: 100 Other: 1000	17.86	7.13	1,260	0.0	0.00	99

YSI Serial Number: _____

YSI Sonde Serial Number: _____

GENERAL INFORMATION:

Weather Conditions @ sampling: 76 °F, sunny, 0-5 mph SW

Sampling Characteristics: clear

COMMENTS AND OBSERVATIONS:

Full Bottle Set Collected: (Yes) No (circle) # of Bottles Collected: 9/5

Well Closed and Locked: (Yes) No (circle

Notes: _____

Minnesota Unique Well ID: 664914

Date: 7/2/25 By: N-Schlagel Title: staff phys. scientist

Company: Groundwater and Environmental Services, Inc.

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 7/1/25 @ 9:30

End of day: (Date/Time) 7/2/25 @ 14:00

YSI Model Number: V-5000

YSI Serial Number: V59819X

Sonde Model Number: V-52

Sonde Serial Number: V94229X

Sampling Event

Time:	Value:		
7:36	0	NTU std =	DI Water
	100	NTU std =	100
	1409	uS std =	1409
	4.00	pH std =	4
	7.00	pH std =	7
↓	10.00	pH std =	10

Calibration Notes:

Appendix B – Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Miranda Gonzalez
Waste Connections, Inc.
13425 Courthouse Blvd
Rosemount, Minnesota 55068

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JOB DESCRIPTION

SKB Lansing CCR Monitoring
3535470
CCR Monitoring

JOB NUMBER

310-303878-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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

Authorization

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Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Client Sample Results 10
Definitions 32
QC Sample Results 33
QC Association 42
Chronicle 47
Certification Summary 52
Method Summary 53
Chain of Custody 54
Receipt Checklists 62
Tracer Carrier Summary 63

Job ID: 310-303878-1 Eurofins Cedar Falls

Job Narrative
310-303878-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/10/2025 1:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.4°C, 0.4°C, 0.6°C, 0.7°C, 1.1°C, 1.9°C and 2.6°C.

Receipt Exceptions
One or more containers for the following sample(s) was received empty: MW-3

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW-1 - CCR (310-303878-1), MW-1RD - CCR (310-303878-2), MW-2R - CCR (310-303878-3), MW-3 - CCR (310-303878-4), MW-3R - CCR (310-303878-5) and MW-3RD - CCR (310-303878-6). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW-4 - CCR (310-303878-7), MW-2RD - CCR (310-303878-8) and Dup-1 - CCR (310-303878-10). Elevated reporting limits (RLs) are provided.

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

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

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

Job ID: 310-303878-2 Eurofins Cedar Falls

Job Narrative
310-303878-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/10/2025 1:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.4°C, 0.4°C, 0.6°C, 0.7°C, 1.1°C, 1.9°C and 2.6°C.

Receipt Exceptions
One or more containers for the following sample(s) was received empty: MW-3

Gas Flow Proportional Counter
Method 9320_Ra228: Radium-228 batch 712640
The LCS recovered at (126%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (68-154%) per method requirements. The LCS passes, no further action is required (LCS 160-712640/2-A)

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

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

Sample Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-303878-1	MW-1 - CCR	Water	04/08/25 14:20	04/10/25 13:35
310-303878-2	MW-1RD - CCR	Water	04/08/25 14:35	04/10/25 13:35
310-303878-3	MW-2R - CCR	Water	04/08/25 16:00	04/10/25 13:35
310-303878-4	MW-3 - CCR	Water	04/09/25 08:35	04/10/25 13:35
310-303878-5	MW-3R - CCR	Water	04/09/25 08:20	04/10/25 13:35
310-303878-6	MW-3RD - CCR	Water	04/09/25 09:25	04/10/25 13:35
310-303878-7	MW-4 - CCR	Water	04/09/25 10:45	04/10/25 13:35
310-303878-8	MW-2RD - CCR	Water	04/08/25 16:15	04/10/25 13:35
310-303878-9	Field Blank 1 - CCR	Water	04/09/25 10:55	04/10/25 13:35
310-303878-10	Dup-1 - CCR	Water	04/09/25 00:00	04/10/25 13:35
310-303878-11	Equipment Blank - CCR	Water	04/09/25 11:00	04/10/25 13:35

Detection Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-1 - CCR — Lab Sample ID: 310-303878-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	100		5.0		mg/L	5		9056A	Total/NA
Sulfate	86		5.0		mg/L	5		9056A	Total/NA
Antimony	0.0032		0.0020		mg/L	1		6020B	Total/NA
Arsenic	0.0081		0.0020		mg/L	1		6020B	Total/NA
Barium	0.18		0.0020		mg/L	1		6020B	Total/NA
Boron	0.25		0.10		mg/L	1		6020B	Total/NA
Cadmium	0.00026		0.00020		mg/L	1		6020B	Total/NA
Calcium	223		0.50		mg/L	1		6020B	Total/NA
Chromium	0.013		0.0050		mg/L	1		6020B	Total/NA
Cobalt	0.0046		0.00050		mg/L	1		6020B	Total/NA
Lead	0.010		0.00050		mg/L	1		6020B	Total/NA
Lithium	0.14		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.017		0.0020		mg/L	1		6020B	Total/NA
Selenium	0.0063		0.0050		mg/L	1		6020B	Total/NA
Total Dissolved Solids	592		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.7	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-1RD - CCR — Lab Sample ID: 310-303878-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	25		5.0		mg/L	5		9056A	Total/NA
Sulfate	52		5.0		mg/L	5		9056A	Total/NA
Barium	0.15		0.0020		mg/L	1		6020B	Total/NA
Calcium	80.1		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.00072		0.00050		mg/L	1		6020B	Total/NA
Molybdenum	0.0037		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	350		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.8	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-2R - CCR — Lab Sample ID: 310-303878-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	75		5.0		mg/L	5		9056A	Total/NA
Sulfate	270		5.0		mg/L	5		9056A	Total/NA
Barium	0.18		0.0020		mg/L	1		6020B	Total/NA
Boron	4.0		0.10		mg/L	1		6020B	Total/NA
Calcium	191		0.50		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1100		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-3 - CCR — Lab Sample ID: 310-303878-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	82		5.0		mg/L	5		9056A	Total/NA
Sulfate	51		5.0		mg/L	5		9056A	Total/NA
Barium	0.14		0.0020		mg/L	1		6020B	Total/NA
Boron	0.64		0.10		mg/L	1		6020B	Total/NA
Calcium	161		0.50		mg/L	1		6020B	Total/NA
Molybdenum	0.0025		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	706		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3R - CCR — Lab Sample ID: 310-303878-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32		5.0		mg/L	5		9056A	Total/NA
Sulfate	10		5.0		mg/L	5		9056A	Total/NA
Arsenic	0.0021		0.0020		mg/L	1		6020B	Total/NA
Barium	0.57		0.0020		mg/L	1		6020B	Total/NA
Calcium	228		0.50		mg/L	1		6020B	Total/NA
Lithium	0.020		0.010		mg/L	1		6020B	Total/NA
Total Dissolved Solids	896		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-3RD - CCR — Lab Sample ID: 310-303878-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31		5.0		mg/L	5		9056A	Total/NA
Sulfate	76		5.0		mg/L	5		9056A	Total/NA
Arsenic	0.0038		0.0020		mg/L	1		6020B	Total/NA
Barium	0.19		0.0020		mg/L	1		6020B	Total/NA
Calcium	119		0.50		mg/L	1		6020B	Total/NA
Lithium	0.013		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.0036		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	540		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-4 - CCR — Lab Sample ID: 310-303878-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21		5.0		mg/L	5		9056A	Total/NA
Sulfate	200		5.0		mg/L	5		9056A	Total/NA
Barium	0.18		0.0020		mg/L	1		6020B	Total/NA
Boron	0.34		0.10		mg/L	1		6020B	Total/NA
Calcium	180		0.50		mg/L	1		6020B	Total/NA
Molybdenum	0.0026		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	826		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-2RD - CCR — Lab Sample ID: 310-303878-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36		5.0		mg/L	5		9056A	Total/NA
Sulfate	72		5.0		mg/L	5		9056A	Total/NA
Arsenic	0.0023		0.0020		mg/L	1		6020B	Total/NA
Barium	0.18		0.0020		mg/L	1		6020B	Total/NA
Boron	0.13		0.10		mg/L	1		6020B	Total/NA
Calcium	140		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.0028		0.00050		mg/L	1		6020B	Total/NA
Lithium	0.011		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.0026		0.0020		mg/L	1		6020B	Total/NA
Selenium	0.024		0.0050		mg/L	1		6020B	Total/NA
Total Dissolved Solids	634		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: Field Blank 1 - CCR — Lab Sample ID: 310-303878-9

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.3	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Dup-1 - CCR — Lab Sample ID: 310-303878-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31		5.0		mg/L	5		9056A	Total/NA
Sulfate	80		5.0		mg/L	5		9056A	Total/NA
Arsenic	0.0036		0.0020		mg/L	1		6020B	Total/NA
Barium	0.19		0.0020		mg/L	1		6020B	Total/NA
Calcium	118		0.50		mg/L	1		6020B	Total/NA
Lithium	0.013		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.0035		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	518		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Equipment Blank - CCR — Lab Sample ID: 310-303878-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1.4		0.50		mg/L	1		6020B	Total/NA
pH	6.7	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1 - CCR

Date Collected: 04/08/25 14:20
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-1

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		5.0		mg/L			04/17/25 14:41	5
Fluoride	<1.0		1.0		mg/L			04/17/25 14:41	5
Sulfate	**86**		5.0		mg/L			04/17/25 14:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0032**		0.0020		mg/L		04/15/25 09:15	04/16/25 16:09	1
Arsenic	**0.0081**		0.0020		mg/L		04/15/25 09:15	04/16/25 16:09	1
Barium	**0.18**		0.0020		mg/L		04/15/25 09:15	04/16/25 16:09	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/16/25 16:09	1
Boron	**0.25**		0.10		mg/L		04/15/25 09:15	04/17/25 14:00	1
Cadmium	**0.00026**		0.00020		mg/L		04/15/25 09:15	04/16/25 16:09	1
Calcium	**223**		0.50		mg/L		04/15/25 09:15	04/16/25 16:09	1
Chromium	**0.013**		0.0050		mg/L		04/15/25 09:15	04/16/25 16:09	1
Cobalt	**0.0046**		0.00050		mg/L		04/15/25 09:15	04/16/25 16:09	1
Lead	**0.010**		0.00050		mg/L		04/15/25 09:15	04/16/25 16:09	1
Lithium	**0.14**		0.010		mg/L		04/15/25 09:15	04/16/25 16:09	1
Molybdenum	**0.017**		0.0020		mg/L		04/15/25 09:15	04/16/25 16:09	1
Selenium	**0.0063**		0.0050		mg/L		04/15/25 09:15	04/16/25 16:09	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/16/25 16:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**592**		50.0		mg/L			04/10/25 20:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.7**	**HF**	1.0		SU			04/10/25 16:00	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.388	U	0.234	0.235	1.00	0.388	pCi/L	04/15/25 07:29	05/13/25 14:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.1*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:05*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.597	U	0.374	0.376	1.00	0.597	pCi/L	04/15/25 07:34	05/13/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*
Y Carrier	*75.5*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*

Client Sample Results

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-1 - CCR

Date Collected: 04/08/25 14:20
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-1

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.597	U	0.441	0.443	5.00	0.597	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-1RD - CCR

Date Collected: 04/08/25 14:35
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		5.0		mg/L			04/17/25 14:57	5
Fluoride	<1.0		1.0		mg/L			04/17/25 14:57	5
Sulfate	**52**		5.0		mg/L			04/17/25 14:57	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:12	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:12	1
Barium	**0.15**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:12	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:12	1
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/18/25 14:12	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/18/25 14:12	1
Calcium	**80.1**		0.50		mg/L		04/15/25 09:15	04/18/25 14:12	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:12	1
Cobalt	**0.00072**		0.00050		mg/L		04/15/25 09:15	04/18/25 14:12	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/18/25 14:12	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/18/25 14:12	1
Molybdenum	**0.0037**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:12	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:12	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**350**		50.0		mg/L			04/10/25 20:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.8**	**HF**	1.0		SU			04/10/25 16:08	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.362	U	0.239	0.240	1.00	0.362	pCi/L	04/15/25 07:29	05/13/25 14:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.9*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:05*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.801**		0.400	0.407	1.00	0.544	pCi/L	04/15/25 07:34	05/13/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.9*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*
Y Carrier	*75.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*

Client Sample ID: MW-1RD - CCR

Date Collected: 04/08/25 14:35
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-2

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.466	0.472	5.00	0.544	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-2R - CCR

Date Collected: 04/08/25 16:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75**		5.0		mg/L			04/17/25 15:12	5
Fluoride	<1.0		1.0		mg/L			04/17/25 15:12	5
Sulfate	**270**		5.0		mg/L			04/17/25 15:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:15	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:15	1
Barium	**0.18**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:15	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:15	1
Boron	**4.0**		0.10		mg/L		04/15/25 09:15	04/18/25 14:15	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/18/25 14:15	1
Calcium	**191**		0.50		mg/L		04/15/25 09:15	04/18/25 14:15	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:15	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/18/25 14:15	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/18/25 14:15	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/18/25 14:15	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:15	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:15	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		50.0		mg/L			04/10/25 20:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.4**	**HF**	1.0		SU			04/10/25 15:19	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.316	U	0.208	0.209	1.00	0.316	pCi/L	04/15/25 07:29	05/13/25 14:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.1*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.691	U	0.360	0.360	1.00	0.691	pCi/L	04/15/25 07:34	05/13/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*
Y Carrier	*74.0*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*

Client Sample Results

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-2R - CCR

Date Collected: 04/08/25 16:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-3

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.691	U	0.416	0.416	5.00	0.691	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-3 - CCR

Date Collected: 04/09/25 08:35
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**82**		5.0		mg/L			04/17/25 15:28	5
Fluoride	<1.0		1.0		mg/L			04/17/25 15:28	5
Sulfate	**51**		5.0		mg/L			04/17/25 15:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:24	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:24	1
Barium	**0.14**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:24	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:45	1
Boron	**0.64**		0.10		mg/L		04/15/25 09:15	04/21/25 11:45	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 11:45	1
Calcium	**161**		0.50		mg/L		04/15/25 09:15	04/18/25 14:24	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 11:45	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:45	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:45	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/21/25 11:45	1
Molybdenum	**0.0025**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:24	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:24	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**706**		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.4**	**HF**	1.0		SU			04/10/25 15:23	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.340	U	0.154	0.154	1.00	0.340	pCi/L	04/16/25 07:48	05/14/25 16:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*82.1*		*30 - 110*	*04/16/25 07:48*	*05/14/25 16:02*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.612	U	0.338	0.338	1.00	0.612	pCi/L	04/16/25 07:52	05/14/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*82.1*		*30 - 110*	*04/16/25 07:52*	*05/14/25 09:58*	*1*
Y Carrier	*81.1*		*30 - 110*	*04/16/25 07:52*	*05/14/25 09:58*	*1*

Client Sample Results

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3 - CCR

Date Collected: 04/09/25 08:35
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-4

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.612	U	0.371	0.371	5.00	0.612	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-3R - CCR

Date Collected: 04/09/25 08:20
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-5

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32**		5.0		mg/L			04/17/25 15:43	5
Fluoride	<1.0		1.0		mg/L			04/17/25 15:43	5
Sulfate	**10**		5.0		mg/L			04/17/25 15:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:26	1
Arsenic	**0.0021**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:26	1
Barium	**0.57**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:26	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:47	1
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/21/25 11:47	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 11:47	1
Calcium	**228**		0.50		mg/L		04/15/25 09:15	04/18/25 14:26	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 11:47	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:47	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:47	1
Lithium	**0.020**		0.010		mg/L		04/15/25 09:15	04/21/25 11:47	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:26	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:26	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:47	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**896**		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.1**	**HF**	1.0		SU			04/10/25 15:28	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.564**		0.328	0.332	1.00	0.408	pCi/L	04/15/25 07:29	05/13/25 14:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.1*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.05**		0.559	0.567	1.00	0.788	pCi/L	04/15/25 07:34	05/13/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*
Y Carrier	*75.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3R - CCR
Date Collected: 04/09/25 08:20
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-5
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.61		0.648	0.657	5.00	0.788	pCi/L		05/14/25 11:35	1

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3RD - CCR

Date Collected: 04/09/25 09:25
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31**		5.0		mg/L			04/17/25 15:59	5
Fluoride	<1.0		1.0		mg/L			04/17/25 15:59	5
Sulfate	**76**		5.0		mg/L			04/17/25 15:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:29	1
Arsenic	**0.0038**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:29	1
Barium	**0.19**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:29	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:50	1
Boron	<0.10	F1	0.10		mg/L		04/15/25 09:15	04/21/25 11:50	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 11:50	1
Calcium	**119**		0.50		mg/L		04/15/25 09:15	04/18/25 14:29	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 11:50	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:50	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:50	1
Lithium	**0.013**		0.010		mg/L		04/15/25 09:15	04/21/25 11:50	1
Molybdenum	**0.0036**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:29	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:29	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:50	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**540**		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.6**	**HF**	1.0		SU			04/10/25 15:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.412**		0.244	0.247	1.00	0.316	pCi/L	04/15/25 07:29	05/13/25 14:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*94.7*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.527**		0.323	0.327	1.00	0.462	pCi/L	04/15/25 07:34	05/13/25 09:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*94.7*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*
Y Carrier	*78.9*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:58*	*1*

Client Sample Results

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3RD - CCR

Date Collected: 04/09/25 09:25
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-6

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.939		0.405	0.410	5.00	0.462	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-4 - CCR

Date Collected: 04/09/25 10:45
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-7

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		5.0		mg/L			04/16/25 11:41	5
Fluoride	<1.0		1.0		mg/L			04/16/25 11:41	5
Sulfate	**200**		5.0		mg/L			04/16/25 11:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:38	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:38	1
Barium	**0.18**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:38	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:57	1
Boron	**0.34**		0.10		mg/L		04/15/25 09:15	04/21/25 11:57	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 11:57	1
Calcium	**180**		0.50		mg/L		04/15/25 09:15	04/18/25 14:38	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 11:57	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:57	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:57	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/21/25 11:57	1
Molybdenum	**0.0026**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:38	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:38	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:57	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**826**		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.6**	**HF**	1.0		SU			04/10/25 16:04	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.349	U	0.208	0.208	1.00	0.349	pCi/L	04/15/25 07:29	05/13/25 17:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*86.6*		*30 - 110*	*04/15/25 07:29*	*05/13/25 17:31*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.663**		0.401	0.406	1.00	0.582	pCi/L	04/15/25 07:34	05/13/25 09:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*86.6*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*
Y Carrier	*78.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-4 - CCR

Date Collected: 04/09/25 10:45
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-7

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.817		0.452	0.456	5.00	0.582	pCi/L		05/14/25 11:35	1

Client Sample ID: MW-2RD - CCR

Date Collected: 04/08/25 16:15
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		5.0		mg/L			04/16/25 12:20	5
Fluoride	<1.0		1.0		mg/L			04/16/25 12:20	5
Sulfate	**72**		5.0		mg/L			04/16/25 12:20	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:41	1
Arsenic	**0.0023**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:41	1
Barium	**0.18**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:41	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:59	1
Boron	**0.13**		0.10		mg/L		04/15/25 09:15	04/21/25 11:59	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 11:59	1
Calcium	**140**		0.50		mg/L		04/15/25 09:15	04/18/25 14:41	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 11:59	1
Cobalt	**0.0028**		0.00050		mg/L		04/15/25 09:15	04/21/25 11:59	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 11:59	1
Lithium	**0.011**		0.010		mg/L		04/15/25 09:15	04/21/25 11:59	1
Molybdenum	**0.0026**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:41	1
Selenium	**0.024**		0.0050		mg/L		04/15/25 09:15	04/18/25 14:41	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 11:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**634**		50.0		mg/L			04/10/25 20:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.5**	**HF**	1.0		SU			04/10/25 15:15	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.508**		0.246	0.250	1.00	0.285	pCi/L	04/15/25 07:29	05/13/25 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*92.2*		*30 - 110*	*04/15/25 07:29*	*05/13/25 17:32*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.727**		0.375	0.381	1.00	0.518	pCi/L	04/15/25 07:34	05/13/25 09:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*92.2*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*
Y Carrier	*80.0*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-2RD - CCR
Date Collected: 04/08/25 16:15
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-8
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.23		0.448	0.456	5.00	0.518	pCi/L		05/14/25 11:35	1

Client Sample ID: Field Blank 1 - CCR

Date Collected: 04/09/25 10:55
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-9

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			04/16/25 12:33	1
Fluoride	<0.20		0.20		mg/L			04/16/25 12:33	1
Sulfate	<1.0		1.0		mg/L			04/16/25 12:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:43	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:43	1
Barium	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:43	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:02	1
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/21/25 12:02	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 12:02	1
Calcium	<0.50		0.50		mg/L		04/15/25 09:15	04/18/25 14:43	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 12:02	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:02	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:02	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/21/25 12:02	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:43	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:43	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:02	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<50.0		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0		SU			04/10/25 15:32	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.293	U	0.182	0.182	1.00	0.293	pCi/L	04/15/25 07:29	05/13/25 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.6*		*30 - 110*	*04/15/25 07:29*	*05/13/25 17:32*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.636	U	0.310	0.311	1.00	0.636	pCi/L	04/15/25 07:34	05/13/25 09:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.6*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*
Y Carrier	*77.8*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: Field Blank 1 - CCR
Date Collected: 04/09/25 10:55
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-9
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.636	U	0.359	0.360	5.00	0.636	pCi/L		05/14/25 11:35	1

Client Sample ID: Dup-1 - CCR

Date Collected: 04/09/25 00:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-10

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31**		5.0		mg/L			04/16/25 12:46	5
Fluoride	<1.0		1.0		mg/L			04/16/25 12:46	5
Sulfate	**80**		5.0		mg/L			04/16/25 12:46	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:46	1
Arsenic	**0.0036**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:46	1
Barium	**0.19**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:46	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:11	1
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/21/25 12:11	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 12:11	1
Calcium	**118**		0.50		mg/L		04/15/25 09:15	04/18/25 14:46	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 12:11	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:11	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:11	1
Lithium	**0.013**		0.010		mg/L		04/15/25 09:15	04/21/25 12:11	1
Molybdenum	**0.0035**		0.0020		mg/L		04/15/25 09:15	04/18/25 14:46	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:46	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**518**		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.5**	**HF**	1.0		SU			04/10/25 15:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.459**		0.221	0.225	1.00	0.229	pCi/L	04/15/25 07:29	05/13/25 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.6*		*30 - 110*	*04/15/25 07:29*	*05/13/25 17:32*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.13**		0.454	0.465	1.00	0.592	pCi/L	04/15/25 07:34	05/13/25 09:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.6*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*
Y Carrier	*79.6*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*

Client Sample ID: Dup-1 - CCR

Date Collected: 04/09/25 00:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-10

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.59		0.505	0.517	5.00	0.592	pCi/L		05/14/25 11:35	1

Client Sample ID: Equipment Blank - CCR

Date Collected: 04/09/25 11:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-11

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			04/16/25 12:59	1
Fluoride	<0.20		0.20		mg/L			04/16/25 12:59	1
Sulfate	<1.0		1.0		mg/L			04/16/25 12:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:55	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:55	1
Barium	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:55	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:13	1
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/21/25 12:13	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/21/25 12:13	1
Calcium	**1.4**		0.50		mg/L		04/15/25 09:15	04/18/25 14:55	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/21/25 12:13	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:13	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/21/25 12:13	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/21/25 12:13	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:55	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:55	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/21/25 12:13	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<50.0		50.0		mg/L			04/11/25 15:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**6.7**	**HF**	1.0		SU			04/10/25 15:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.361	U	0.186	0.186	1.00	0.361	pCi/L	04/15/25 07:29	05/13/25 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*75.5*		*30 - 110*	*04/15/25 07:29*	*05/13/25 17:32*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.713	U	0.438	0.440	1.00	0.713	pCi/L	04/15/25 07:34	05/13/25 09:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*75.5*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*
Y Carrier	*77.0*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: Equipment Blank - CCR

Date Collected: 04/09/25 11:00
Date Received: 04/10/25 13:35

Lab Sample ID: 310-303878-11

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.713	U	0.476	0.478	5.00	0.713	pCi/L		05/14/25 11:35	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.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

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

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-452033/3
Matrix: Water
Analysis Batch: 452033

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			04/17/25 10:47	1
Fluoride	<0.20		0.20		mg/L			04/17/25 10:47	1
Sulfate	<1.0		1.0		mg/L			04/17/25 10:47	1

Lab Sample ID: LCS 310-452033/4
Matrix: Water
Analysis Batch: 452033

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	9.92		mg/L		99	90 - 110
Fluoride	2.00	2.10		mg/L		105	90 - 110
Sulfate	10.0	9.91		mg/L		99	90 - 110

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 452033

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	31		25.0	51.6		mg/L		83	80 - 120
Fluoride	<1.0		5.00	5.11		mg/L		102	80 - 120
Sulfate	76		25.0	97.4		mg/L		85	80 - 120

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 452033

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	31		25.0	52.5		mg/L		87	80 - 120	2	15
Fluoride	<1.0		5.00	5.35		mg/L		107	80 - 120	4	15
Sulfate	76		25.0	98.5		mg/L		90	80 - 120	1	15

Lab Sample ID: MB 310-452107/3
Matrix: Water
Analysis Batch: 452107

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			04/16/25 11:14	1
Fluoride	<0.20		0.20		mg/L			04/16/25 11:14	1
Sulfate	<1.0		1.0		mg/L			04/16/25 11:14	1

Lab Sample ID: LCS 310-452107/4
Matrix: Water
Analysis Batch: 452107

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	10.3		mg/L		103	90 - 110
Fluoride	2.00	2.06		mg/L		103	90 - 110
Sulfate	10.0	10.4		mg/L		104	90 - 110

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

Lab Sample ID: 310-303878-7 MS
Matrix: Water
Analysis Batch: 452107

Client Sample ID: MW-4 - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	21		25.0	42.9		mg/L		89	80 - 120
Fluoride	<1.0		5.00	5.13		mg/L		103	80 - 120
Sulfate	200		25.0	217	4	mg/L		75	80 - 120

Lab Sample ID: 310-303878-7 MSD
Matrix: Water
Analysis Batch: 452107

Client Sample ID: MW-4 - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	21		25.0	43.0		mg/L		89	80 - 120	0	15
Fluoride	<1.0		5.00	5.07		mg/L		101	80 - 120	1	15
Sulfate	200		25.0	221	4	mg/L		89	80 - 120	2	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-451587/1-A
Matrix: Water
Analysis Batch: 451847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/16/25 15:02	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/16/25 15:02	1
Barium	<0.0020		0.0020		mg/L		04/15/25 09:15	04/16/25 15:02	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/16/25 15:02	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/16/25 15:02	1
Calcium	<0.50		0.50		mg/L		04/15/25 09:15	04/16/25 15:02	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/16/25 15:02	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/16/25 15:02	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/16/25 15:02	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/16/25 15:02	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/16/25 15:02	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/16/25 15:02	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/16/25 15:02	1

Lab Sample ID: MB 310-451587/1-A
Matrix: Water
Analysis Batch: 452088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/18/25 12:08	1

Lab Sample ID: LCS 310-451587/2-A
Matrix: Water
Analysis Batch: 451847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.226		mg/L		113	80 - 120
Arsenic	0.200	0.212		mg/L		106	80 - 120
Barium	0.100	0.111		mg/L		111	80 - 120
Beryllium	0.100	0.103		mg/L		103	80 - 120

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

Lab Sample ID: LCS 310-451587/2-A
Matrix: Water
Analysis Batch: 451847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.100	0.106		mg/L		106	80 - 120
Calcium	2.00	1.88		mg/L		94	80 - 120
Chromium	0.100	0.104		mg/L		104	80 - 120
Cobalt	0.100	0.106		mg/L		106	80 - 120
Lead	0.200	0.219		mg/L		109	80 - 120
Lithium	0.200	0.217		mg/L		109	80 - 120
Molybdenum	0.200	0.201		mg/L		100	80 - 120
Selenium	0.400	0.414		mg/L		104	80 - 120
Thallium	0.100	0.0927		mg/L		93	80 - 120

Lab Sample ID: LCS 310-451587/2-A
Matrix: Water
Analysis Batch: 452088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.203		mg/L		101	80 - 120

Lab Sample ID: MB 310-451588/1-A
Matrix: Water
Analysis Batch: 452088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451588

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:07	1
Arsenic	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:07	1
Barium	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:07	1
Beryllium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:07	1
Cadmium	<0.00020		0.00020		mg/L		04/15/25 09:15	04/18/25 14:07	1
Calcium	<0.50		0.50		mg/L		04/15/25 09:15	04/18/25 14:07	1
Chromium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:07	1
Cobalt	<0.00050		0.00050		mg/L		04/15/25 09:15	04/18/25 14:07	1
Lead	<0.00050		0.00050		mg/L		04/15/25 09:15	04/18/25 14:07	1
Lithium	<0.010		0.010		mg/L		04/15/25 09:15	04/18/25 14:07	1
Molybdenum	<0.0020		0.0020		mg/L		04/15/25 09:15	04/18/25 14:07	1
Selenium	<0.0050		0.0050		mg/L		04/15/25 09:15	04/18/25 14:07	1
Thallium	<0.0010		0.0010		mg/L		04/15/25 09:15	04/18/25 14:07	1

Lab Sample ID: MB 310-451588/1-A
Matrix: Water
Analysis Batch: 452267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451588

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.10		0.10		mg/L		04/15/25 09:15	04/21/25 11:40	1

Lab Sample ID: LCS 310-451588/2-A
Matrix: Water
Analysis Batch: 452088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.217		mg/L		109	80 - 120
Arsenic	0.200	0.210		mg/L		105	80 - 120

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

Lab Sample ID: LCS 310-451588/2-A
Matrix: Water
Analysis Batch: 452088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.100	0.108		mg/L		108	80 - 120
Beryllium	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.100	0.105		mg/L		105	80 - 120
Calcium	2.00	1.88		mg/L		94	80 - 120
Chromium	0.100	0.105		mg/L		105	80 - 120
Cobalt	0.100	0.108		mg/L		108	80 - 120
Lead	0.200	0.211		mg/L		105	80 - 120
Lithium	0.200	0.213		mg/L		106	80 - 120
Molybdenum	0.200	0.206		mg/L		103	80 - 120
Selenium	0.400	0.394		mg/L		99	80 - 120
Thallium	0.100	0.0920		mg/L		92	80 - 120

Lab Sample ID: LCS 310-451588/2-A
Matrix: Water
Analysis Batch: 452267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.205		mg/L		103	80 - 120

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 452088

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0020		0.200	0.222		mg/L		111	75 - 125
Arsenic	0.0038		0.200	0.215		mg/L		106	75 - 125
Barium	0.19		0.100	0.301		mg/L		109	75 - 125
Calcium	119		2.00	122.5	4	mg/L		171	75 - 125
Molybdenum	0.0036		0.200	0.209		mg/L		103	75 - 125
Selenium	<0.0050		0.400	0.399		mg/L		100	75 - 125

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 452267

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	<0.0010		0.100	0.106		mg/L		106	75 - 125
Boron	<0.10	F1	0.200	0.255	F1	mg/L		128	75 - 125
Cadmium	<0.00020		0.100	0.107		mg/L		107	75 - 125
Chromium	<0.0050		0.100	0.106		mg/L		106	75 - 125
Cobalt	<0.00050		0.100	0.104		mg/L		104	75 - 125
Lead	<0.00050		0.200	0.215		mg/L		108	75 - 125
Lithium	0.013		0.200	0.226		mg/L		107	75 - 125
Thallium	<0.0010		0.100	0.0844		mg/L		84	75 - 125

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

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 452088

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0020		0.200	0.225		mg/L		113	75 - 125	1	20
Arsenic	0.0038		0.200	0.217		mg/L		107	75 - 125	1	20
Barium	0.19		0.100	0.304		mg/L		113	75 - 125	1	20
Calcium	119		2.00	122.7	4	mg/L		179	75 - 125	0	20
Molybdenum	0.0036		0.200	0.209		mg/L		103	75 - 125	0	20
Selenium	<0.0050		0.400	0.405		mg/L		101	75 - 125	2	20

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 452267

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451588

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	<0.0010		0.100	0.104		mg/L		104	75 - 125	2	20
Boron	<0.10	F1	0.200	0.259	F1	mg/L		129	75 - 125	1	20
Cadmium	<0.00020		0.100	0.106		mg/L		106	75 - 125	0	20
Chromium	<0.0050		0.100	0.104		mg/L		104	75 - 125	2	20
Cobalt	<0.00050		0.100	0.105		mg/L		105	75 - 125	0	20
Lead	<0.00050		0.200	0.216		mg/L		108	75 - 125	0	20
Lithium	0.013		0.200	0.224		mg/L		105	75 - 125	1	20
Thallium	<0.0010		0.100	0.0855		mg/L		85	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-451650/1-A
Matrix: Water
Analysis Batch: 451799

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/15/25 13:52	04/16/25 14:03	1

Lab Sample ID: LCS 310-451650/2-A
Matrix: Water
Analysis Batch: 451799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451650

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00167	0.00168		mg/L		101	80 - 120		

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 451799

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.00020		0.00167	0.00171		mg/L		103	80 - 120		

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 451799

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 451650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00167	0.00169		mg/L		102	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-451748/1-A
Matrix: Water
Analysis Batch: 451906

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		04/16/25 12:48	04/17/25 11:10	1

Lab Sample ID: LCS 310-451748/2-A
Matrix: Water
Analysis Batch: 451906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.00172		mg/L		103	80 - 120

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

Lab Sample ID: MB 310-451284/1
Matrix: Water
Analysis Batch: 451284

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	<50.0		50.0		mg/L			04/10/25 20:38	1

Lab Sample ID: LCS 310-451284/2
Matrix: Water
Analysis Batch: 451284

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	988.0		mg/L		99	88 - 110

Lab Sample ID: MB 310-451413/1
Matrix: Water
Analysis Batch: 451413

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	<50.0		50.0		mg/L			04/11/25 15:59	1

Lab Sample ID: LCS 310-451413/2
Matrix: Water
Analysis Batch: 451413

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	988.0		mg/L		99	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-451294/1
Matrix: Water
Analysis Batch: 451294

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	98 - 102

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-303878-6 DU
Matrix: Water
Analysis Batch: 451294

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.6	HF	7.6		SU		0.05	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-712400/1-A
Matrix: Water
Analysis Batch: 717329

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712400

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.453	U	0.234	0.234	1.00	0.453	pCi/L	04/15/25 07:29	05/13/25 14:04	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.1*		*30 - 110*	*04/15/25 07:29*	*05/13/25 14:04*	*1*

Lab Sample ID: LCS 160-712400/2-A
Matrix: Water
Analysis Batch: 717329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712400

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	8.608		1.19	1.00	0.358	pCi/L	90	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*91.2*		*30 - 110*

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 717329

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 712400

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	0.412		9.55	8.799		1.20	1.00	0.294	pCi/L	88	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Barium	*91.7*		*30 - 110*

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 717329

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 712400

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.412		9.58	8.813		1.20	1.00	0.423	pCi/L	88	60 - 140	0.01	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Barium	*89.6*		*30 - 110*

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

Lab Sample ID: MB 160-712639/1-A
Matrix: Water
Analysis Batch: 717539

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712639

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.284	U	0.178	0.178	1.00	0.284	pCi/L	04/16/25 07:48	05/14/25 15:55	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.2*		*30 - 110*	*04/16/25 07:48*	*05/14/25 15:55*	*1*

Lab Sample ID: LCS 160-712639/2-A
Matrix: Water
Analysis Batch: 717539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712639

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.535		1.26	1.00	0.325	pCi/L	100	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*88.6*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-712403/1-A
Matrix: Water
Analysis Batch: 717331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712403

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.656	U	0.374	0.374	1.00	0.656	pCi/L	04/15/25 07:34	05/13/25 09:57	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:57*	*1*
Y Carrier	*75.1*		*30 - 110*	*04/15/25 07:34*	*05/13/25 09:57*	*1*

Lab Sample ID: LCS 160-712403/2-A
Matrix: Water
Analysis Batch: 717331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712403

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.45	9.196		1.28	1.00	0.536	pCi/L	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*91.2*		*30 - 110*
Y Carrier	*78.1*		*30 - 110*

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

Lab Sample ID: 310-303878-6 MS
Matrix: Water
Analysis Batch: 717331

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 712403

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	0.527		9.42	11.42		1.53	1.00	0.655	pCi/L	116	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Barium	*91.7*		*30 - 110*
Y Carrier	*76.3*		*30 - 110*

Lab Sample ID: 310-303878-6 MSD
Matrix: Water
Analysis Batch: 717329

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 712403

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.527		9.45	11.18		1.49	1.00	0.589	pCi/L	113	60 - 140	0.08	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Barium	*89.6*		*30 - 110*
Y Carrier	*77.4*		*30 - 110*

Lab Sample ID: MB 160-712640/1-A
Matrix: Water
Analysis Batch: 717541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712640

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.533	U	0.319	0.319	1.00	0.533	pCi/L	04/16/25 07:52	05/14/25 09:55	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.2*		*30 - 110*	*04/16/25 07:52*	*05/14/25 09:55*	*1*
Y Carrier	*84.5*		*30 - 110*	*04/16/25 07:52*	*05/14/25 09:55*	*1*

Lab Sample ID: LCS 160-712640/2-A
Matrix: Water
Analysis Batch: 717541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712640

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	9.45	11.86		1.54	1.00	0.475	pCi/L	126	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*88.6*		*30 - 110*
Y Carrier	*82.2*		*30 - 110*

HPLC/IC

Analysis Batch: 452033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	9056A	
310-303878-2	MW-1RD - CCR	Total/NA	Water	9056A	
310-303878-3	MW-2R - CCR	Total/NA	Water	9056A	
310-303878-4	MW-3 - CCR	Total/NA	Water	9056A	
310-303878-5	MW-3R - CCR	Total/NA	Water	9056A	
310-303878-6	MW-3RD - CCR	Total/NA	Water	9056A	
MB 310-452033/3	Method Blank	Total/NA	Water	9056A	
LCS 310-452033/4	Lab Control Sample	Total/NA	Water	9056A	
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	9056A	
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	9056A	

Analysis Batch: 452107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-7	MW-4 - CCR	Total/NA	Water	9056A	
310-303878-8	MW-2RD - CCR	Total/NA	Water	9056A	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	9056A	
310-303878-10	Dup-1 - CCR	Total/NA	Water	9056A	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	9056A	
MB 310-452107/3	Method Blank	Total/NA	Water	9056A	
LCS 310-452107/4	Lab Control Sample	Total/NA	Water	9056A	
310-303878-7 MS	MW-4 - CCR	Total/NA	Water	9056A	
310-303878-7 MSD	MW-4 - CCR	Total/NA	Water	9056A	

Metals

Prep Batch: 451587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	3005A	
MB 310-451587/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-451587/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 451588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-2	MW-1RD - CCR	Total/NA	Water	3005A	
310-303878-3	MW-2R - CCR	Total/NA	Water	3005A	
310-303878-4	MW-3 - CCR	Total/NA	Water	3005A	
310-303878-5	MW-3R - CCR	Total/NA	Water	3005A	
310-303878-6	MW-3RD - CCR	Total/NA	Water	3005A	
310-303878-7	MW-4 - CCR	Total/NA	Water	3005A	
310-303878-8	MW-2RD - CCR	Total/NA	Water	3005A	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	3005A	
310-303878-10	Dup-1 - CCR	Total/NA	Water	3005A	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	3005A	
MB 310-451588/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-451588/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	3005A	
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	3005A	

Prep Batch: 451650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 451650 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-2	MW-1RD - CCR	Total/NA	Water	7470A	
310-303878-3	MW-2R - CCR	Total/NA	Water	7470A	
310-303878-4	MW-3 - CCR	Total/NA	Water	7470A	
310-303878-5	MW-3R - CCR	Total/NA	Water	7470A	
310-303878-6	MW-3RD - CCR	Total/NA	Water	7470A	
MB 310-451650/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-451650/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	7470A	
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	7470A	

Prep Batch: 451748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-7	MW-4 - CCR	Total/NA	Water	7470A	
310-303878-8	MW-2RD - CCR	Total/NA	Water	7470A	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	7470A	
310-303878-10	Dup-1 - CCR	Total/NA	Water	7470A	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	7470A	
MB 310-451748/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-451748/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 451799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	7470A	451650
310-303878-2	MW-1RD - CCR	Total/NA	Water	7470A	451650
310-303878-3	MW-2R - CCR	Total/NA	Water	7470A	451650
310-303878-4	MW-3 - CCR	Total/NA	Water	7470A	451650
310-303878-5	MW-3R - CCR	Total/NA	Water	7470A	451650
310-303878-6	MW-3RD - CCR	Total/NA	Water	7470A	451650
MB 310-451650/1-A	Method Blank	Total/NA	Water	7470A	451650
LCS 310-451650/2-A	Lab Control Sample	Total/NA	Water	7470A	451650
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	7470A	451650
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	7470A	451650

Analysis Batch: 451847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	6020B	451587
MB 310-451587/1-A	Method Blank	Total/NA	Water	6020B	451587
LCS 310-451587/2-A	Lab Control Sample	Total/NA	Water	6020B	451587

Analysis Batch: 451906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-7	MW-4 - CCR	Total/NA	Water	7470A	451748
310-303878-8	MW-2RD - CCR	Total/NA	Water	7470A	451748
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	7470A	451748
310-303878-10	Dup-1 - CCR	Total/NA	Water	7470A	451748
310-303878-11	Equipment Blank - CCR	Total/NA	Water	7470A	451748
MB 310-451748/1-A	Method Blank	Total/NA	Water	7470A	451748
LCS 310-451748/2-A	Lab Control Sample	Total/NA	Water	7470A	451748

Metals

Analysis Batch: 451983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	6020B	451587

Analysis Batch: 452088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-2	MW-1RD - CCR	Total/NA	Water	6020B	451588
310-303878-3	MW-2R - CCR	Total/NA	Water	6020B	451588
310-303878-4	MW-3 - CCR	Total/NA	Water	6020B	451588
310-303878-5	MW-3R - CCR	Total/NA	Water	6020B	451588
310-303878-6	MW-3RD - CCR	Total/NA	Water	6020B	451588
310-303878-7	MW-4 - CCR	Total/NA	Water	6020B	451588
310-303878-8	MW-2RD - CCR	Total/NA	Water	6020B	451588
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	6020B	451588
310-303878-10	Dup-1 - CCR	Total/NA	Water	6020B	451588
310-303878-11	Equipment Blank - CCR	Total/NA	Water	6020B	451588
MB 310-451587/1-A	Method Blank	Total/NA	Water	6020B	451587
MB 310-451588/1-A	Method Blank	Total/NA	Water	6020B	451588
LCS 310-451587/2-A	Lab Control Sample	Total/NA	Water	6020B	451587
LCS 310-451588/2-A	Lab Control Sample	Total/NA	Water	6020B	451588
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	6020B	451588
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	6020B	451588

Analysis Batch: 452267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-4	MW-3 - CCR	Total/NA	Water	6020B	451588
310-303878-5	MW-3R - CCR	Total/NA	Water	6020B	451588
310-303878-6	MW-3RD - CCR	Total/NA	Water	6020B	451588
310-303878-7	MW-4 - CCR	Total/NA	Water	6020B	451588
310-303878-8	MW-2RD - CCR	Total/NA	Water	6020B	451588
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	6020B	451588
310-303878-10	Dup-1 - CCR	Total/NA	Water	6020B	451588
310-303878-11	Equipment Blank - CCR	Total/NA	Water	6020B	451588
MB 310-451588/1-A	Method Blank	Total/NA	Water	6020B	451588
LCS 310-451588/2-A	Lab Control Sample	Total/NA	Water	6020B	451588
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	6020B	451588
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	6020B	451588

General Chemistry

Analysis Batch: 451284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	SM 2540C	
310-303878-2	MW-1RD - CCR	Total/NA	Water	SM 2540C	
310-303878-3	MW-2R - CCR	Total/NA	Water	SM 2540C	
310-303878-8	MW-2RD - CCR	Total/NA	Water	SM 2540C	
MB 310-451284/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-451284/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 451294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-2	MW-1RD - CCR	Total/NA	Water	SM 4500 H+ B	

General Chemistry (Continued)

Analysis Batch: 451294 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-3	MW-2R - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-4	MW-3 - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-5	MW-3R - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-6	MW-3RD - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-7	MW-4 - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-8	MW-2RD - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-10	Dup-1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	SM 4500 H+ B	
LCS 310-451294/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-303878-6 DU	MW-3RD - CCR	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 451413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-4	MW-3 - CCR	Total/NA	Water	SM 2540C	
310-303878-5	MW-3R - CCR	Total/NA	Water	SM 2540C	
310-303878-6	MW-3RD - CCR	Total/NA	Water	SM 2540C	
310-303878-7	MW-4 - CCR	Total/NA	Water	SM 2540C	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	SM 2540C	
310-303878-10	Dup-1 - CCR	Total/NA	Water	SM 2540C	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	SM 2540C	
MB 310-451413/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-451413/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 712400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	PrecSep-21	
310-303878-2	MW-1RD - CCR	Total/NA	Water	PrecSep-21	
310-303878-3	MW-2R - CCR	Total/NA	Water	PrecSep-21	
310-303878-5	MW-3R - CCR	Total/NA	Water	PrecSep-21	
310-303878-6	MW-3RD - CCR	Total/NA	Water	PrecSep-21	
310-303878-7	MW-4 - CCR	Total/NA	Water	PrecSep-21	
310-303878-8	MW-2RD - CCR	Total/NA	Water	PrecSep-21	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	PrecSep-21	
310-303878-10	Dup-1 - CCR	Total/NA	Water	PrecSep-21	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	PrecSep-21	
MB 160-712400/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-712400/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	PrecSep-21	
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	PrecSep-21	

Prep Batch: 712403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-1	MW-1 - CCR	Total/NA	Water	PrecSep_0	
310-303878-2	MW-1RD - CCR	Total/NA	Water	PrecSep_0	
310-303878-3	MW-2R - CCR	Total/NA	Water	PrecSep_0	
310-303878-5	MW-3R - CCR	Total/NA	Water	PrecSep_0	
310-303878-6	MW-3RD - CCR	Total/NA	Water	PrecSep_0	
310-303878-7	MW-4 - CCR	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 712403 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-8	MW-2RD - CCR	Total/NA	Water	PrecSep_0	
310-303878-9	Field Blank 1 - CCR	Total/NA	Water	PrecSep_0	
310-303878-10	Dup-1 - CCR	Total/NA	Water	PrecSep_0	
310-303878-11	Equipment Blank - CCR	Total/NA	Water	PrecSep_0	
MB 160-712403/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-712403/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-303878-6 MS	MW-3RD - CCR	Total/NA	Water	PrecSep_0	
310-303878-6 MSD	MW-3RD - CCR	Total/NA	Water	PrecSep_0	

Prep Batch: 712639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-4	MW-3 - CCR	Total/NA	Water	PrecSep-21	
MB 160-712639/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-712639/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 712640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-303878-4	MW-3 - CCR	Total/NA	Water	PrecSep_0	
MB 160-712640/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-712640/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-1 - CCR

Lab Sample ID: 310-303878-1

Date Collected: 04/08/25 14:20
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 14:41
Total/NA	Prep	3005A			451587	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	451847	NFT2	EET CF	04/16/25 16:09
Total/NA	Prep	3005A			451587	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	451983	NFT2	EET CF	04/17/25 14:00
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:17
Total/NA	Analysis	SM 2540C		1	451284	XJ7V	EET CF	04/10/25 20:38
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 16:00
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 14:05
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717331	SWS	EET SL	05/13/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-1RD - CCR

Lab Sample ID: 310-303878-2

Date Collected: 04/08/25 14:35
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 14:57
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:12
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:20
Total/NA	Analysis	SM 2540C		1	451284	XJ7V	EET CF	04/10/25 20:38
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 16:08
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 14:05
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717331	SWS	EET SL	05/13/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-2R - CCR

Lab Sample ID: 310-303878-3

Date Collected: 04/08/25 16:00
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 15:12
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:15
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:22
Total/NA	Analysis	SM 2540C		1	451284	XJ7V	EET CF	04/10/25 20:38

Client Sample ID: MW-2R - CCR
Lab Sample ID: 310-303878-3

Date Collected: 04/08/25 16:00
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:19
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 14:06
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717331	SWS	EET SL	05/13/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-3 - CCR
Lab Sample ID: 310-303878-4

Date Collected: 04/09/25 08:35
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 15:28
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:24
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 11:45
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:24
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:23
Total/NA	Prep	PrecSep-21			712639	OGC	EET SL	04/16/25 07:48
Total/NA	Analysis	9315		1	717542	FLC	EET SL	05/14/25 16:02
Total/NA	Prep	PrecSep_0			712640	OGC	EET SL	04/16/25 07:52
Total/NA	Analysis	9320		1	717541	SWS	EET SL	05/14/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-3R - CCR
Lab Sample ID: 310-303878-5

Date Collected: 04/09/25 08:20
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 15:43
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:26
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 11:47
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:26
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:28
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 14:06

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-3R - CCR

Lab Sample ID: 310-303878-5

Date Collected: 04/09/25 08:20
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717331	SWS	EET SL	05/13/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-3RD - CCR

Lab Sample ID: 310-303878-6

Date Collected: 04/09/25 09:25
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452033	WZC8	EET CF	04/17/25 15:59
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:29
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 11:50
Total/NA	Prep	7470A			451650	F5MW	EET CF	04/15/25 13:52
Total/NA	Analysis	7470A		1	451799	F5MW	EET CF	04/16/25 14:11
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:51
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 14:06
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717331	SWS	EET SL	05/13/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: MW-4 - CCR

Lab Sample ID: 310-303878-7

Date Collected: 04/09/25 10:45
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452107	WZC8	EET CF	04/16/25 11:41
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:38
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 11:57
Total/NA	Prep	7470A			451748	F5MW	EET CF	04/16/25 12:48
Total/NA	Analysis	7470A		1	451906	F5MW	EET CF	04/17/25 11:21
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 16:04
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 17:31
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717329	SWS	EET SL	05/13/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: MW-2RD - CCR

Lab Sample ID: 310-303878-8
Matrix: Water
Date Collected: 04/08/25 16:15
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452107	WZC8	EET CF	04/16/25 12:20
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:41
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 11:59
Total/NA	Prep	7470A			451748	F5MW	EET CF	04/16/25 12:48
Total/NA	Analysis	7470A		1	451906	F5MW	EET CF	04/17/25 11:23
Total/NA	Analysis	SM 2540C		1	451284	XJ7V	EET CF	04/10/25 20:38
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:15
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 17:32
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717329	SWS	EET SL	05/13/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: Field Blank 1 - CCR

Lab Sample ID: 310-303878-9
Matrix: Water
Date Collected: 04/09/25 10:55
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	452107	WZC8	EET CF	04/16/25 12:33
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:43
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 12:02
Total/NA	Prep	7470A			451748	F5MW	EET CF	04/16/25 12:48
Total/NA	Analysis	7470A		1	451906	F5MW	EET CF	04/17/25 11:25
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:32
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 17:32
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717329	SWS	EET SL	05/13/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: Dup-1 - CCR

Lab Sample ID: 310-303878-10
Matrix: Water
Date Collected: 04/09/25 00:00
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	452107	WZC8	EET CF	04/16/25 12:46
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:46

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Client Sample ID: Dup-1 - CCR

Lab Sample ID: 310-303878-10

Date Collected: 04/09/25 00:00
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 12:11
Total/NA	Prep	7470A			451748	F5MW	EET CF	04/16/25 12:48
Total/NA	Analysis	7470A		1	451906	F5MW	EET CF	04/17/25 11:32
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:46
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 17:32
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717329	SWS	EET SL	05/13/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Client Sample ID: Equipment Blank - CCR

Lab Sample ID: 310-303878-11

Date Collected: 04/09/25 11:00
Matrix: Water
Date Received: 04/10/25 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	452107	WZC8	EET CF	04/16/25 12:59
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452088	NFT2	EET CF	04/18/25 14:55
Total/NA	Prep	3005A			451588	QTZ5	EET CF	04/15/25 09:15
Total/NA	Analysis	6020B		1	452267	NFT2	EET CF	04/21/25 12:13
Total/NA	Prep	7470A			451748	F5MW	EET CF	04/16/25 12:48
Total/NA	Analysis	7470A		1	451906	F5MW	EET CF	04/17/25 11:34
Total/NA	Analysis	SM 2540C		1	451413	MDU9	EET CF	04/11/25 15:59
Total/NA	Analysis	SM 4500 H+ B		1	451294	HE7K	EET CF	04/10/25 15:36
Total/NA	Prep	PrecSep-21			712400	OGC	EET SL	04/15/25 07:29
Total/NA	Analysis	9315		1	717329	SWS	EET SL	05/13/25 17:32
Total/NA	Prep	PrecSep_0			712403	OGC	EET SL	04/15/25 07:34
Total/NA	Analysis	9320		1	717329	SWS	EET SL	05/13/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	717550	CAH	EET SL	05/14/25 11:35

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	019-999-319	12-31-25

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	05-14-25
West Virginia DEP	State	381	10-31-25

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

Method Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

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

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

Laboratory References:

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

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

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310-303878 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received. DATE 4.10.25 TIME 1335 | Received By CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 7

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

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

Trip Blank Present? ☐ Yes ☑ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.7 | Corrected Temp (°C): 0.7

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 7

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

Sample Custody Seals Present? ☐ Yes ☑ No *If yes* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☑ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.4 | Corrected Temp (°C): 0.4

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) *received in Cooler?*	☑ Yes	☐ No	*If yes:* Cooler ID:
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 3 of 7
Cooler Custody Seals Present?	☑ Yes	☐ No	*If yes:* Cooler custody seals intact? ☑ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☑ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☑ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID. R | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.4 | Corrected Temp (°C): 6.4

• ***Sample Container Temperature***

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

One 1 L Plastic HNO_3 received empty for MW-3-CCR

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID:
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 4 of 7
Cooler Custody Seals Present?	☑ Yes	☐ No	*If yes:* Cooler custody seals intact? ☑ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☑ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☑ No	*If yes.* Which VOA samples are in cooler? ↓

Temperature Record

Coolant. ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 2.6 | Corrected Temp (°C). 2.6

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 5 of 7

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

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

Trip Blank Present? ☐ Yes ☑ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.6 | Corrected Temp (°C) 0.6

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID:
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 6 of 7
Cooler Custody Seals Present?	☑ Yes	☐ No	*If yes:* Cooler custody seals intact? ☑ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☑ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☐ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

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

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

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C).		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Groundwater & Environmental Services

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.10.25 | TIME 1335 | Received By: CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 7 of 7

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

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

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

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: B | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• **Sample Container Temperature**

Container(s) used:	CONTAINER 1	CONTAINER 2
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Eurofins Minneapolis

Chain of Custody Record

eurofins

Client Information	Sampler: N-Jon Nagel	Lab PM: Bindert, Zach T	Carrier Tracking No(s):	COC No: 310-68661-19671 1
Client Contact: Mr. Nicholas Schlagel	Phone: 651-792-6065	E-Mail: Zach.Bindert@Eurofinset.com	State of Origin: MN	Page: Page 1 of 2
Company: Groundwater & Environmental Services Inc	PWSID: 1066642			Job #:
Address: 1301 Corporate Center Drive Suite 150	Due Date Requested:			
City: Eagan	TAT Requested (days): Standard TAT			
State, Zip: MN, 55121-1562	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: NSchlagel@gesonline.com	WO #: ~~1666642~~			
Project Name: SKB Lansing CCR Monitoring	Project #: ~~34013984~~ 3535470			
Site: Minnesota	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226 - Radium 226	Ra226Ra228_GFPC - Local Method	9320_Ra228 - Radium 228	9056A_ORGFM_28D - Chloride, Fluoride, Sulfate	Total Metals - 6020B - (Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Li,Mo,Se,Tl) 7470A - Mercury	2540C_Calcd - TDS SM4500_H+ - pH	Total Number of containers	Special Instructions/Note:
Preservation Code:							D	D	D	N	D	N		
MW-1 - CCR	4/8/25	14:20	6	Water			X	X	X	X	X	X	5	
MW-1RD - CCR	4/8/25	14:35	6	Water			X	X	X	X	X	X	5	
MW-2R - CCR	4/8/25	16:00	6	Water			X	X	X	X	X	X	5	
MW-3 - CCR	4/9/25	8:35	6	Water			X	X	X	X	X	X	5	
MW-3R - CCR	4/9/25	8:20	6	Water			X	X	X	X	X	X	5	
MW-3RD - CCR	4/9/25	9:25	6	Water			X	X	X	X	X	X	5	
MW-4 - CCR	4/9/25	16:45	6	Water			X	X	X	X	X	X	5	
MW-2RD - CCR	4/8/25	16:15	6	Water			X	X	X	X	X	X	5	
Field Blank 1 - CCR	4/9/25	10:55	6	Water			X	X	X	X	X	X	5	
Duplicate 1 - CCR	4/9/25	-	6	Water			X	X	X	X	X	X	5	
Equipment Blank - CCR	4/9/25	11:00	6	Water			X	X	X	X	X	X	5	

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		4/9/25 1500	ES		4-9-25 1700	
2		4/10/25 1100		CGC	4.10.25 1335	Eurofins
3		Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks:

Ver 01/16/2019

Page 61 of 63

5/15/2025

Login Sample Receipt Checklist

Client: Waste Connections, Inc.

Job Number: 310-303878-1
SDG Number: 3535470

Login Number: 303878
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Tracer/Carrier Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-303878-1
SDG: 3535470

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
310-303878-1	MW-1 - CCR	80.1
310-303878-2	MW-1RD - CCR	89.9
310-303878-3	MW-2R - CCR	84.1
310-303878-4	MW-3 - CCR	82.1
310-303878-5	MW-3R - CCR	88.1
310-303878-6	MW-3RD - CCR	94.7
310-303878-6 MS	MW-3RD - CCR	91.7
310-303878-6 MSD	MW-3RD - CCR	89.6
310-303878-7	MW-4 - CCR	86.6
310-303878-8	MW-2RD - CCR	92.2
310-303878-9	Field Blank 1 - CCR	87.6
310-303878-10	Dup-1 - CCR	89.6
310-303878-11	Equipment Blank - CCR	75.5
LCS 160-712400/2-A	Lab Control Sample	91.2
LCS 160-712639/2-A	Lab Control Sample	88.6
MB 160-712400/1-A	Method Blank	89.1
MB 160-712639/1-A	Method Blank	90.2

Tracer/Carrier Legend

Ba = Barium

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
310-303878-1	MW-1 - CCR	80.1	75.5
310-303878-2	MW-1RD - CCR	89.9	75.1
310-303878-3	MW-2R - CCR	84.1	74.0
310-303878-4	MW-3 - CCR	82.1	81.1
310-303878-5	MW-3R - CCR	88.1	75.1
310-303878-6	MW-3RD - CCR	94.7	78.9
310-303878-6 MS	MW-3RD - CCR	91.7	76.3
310-303878-6 MSD	MW-3RD - CCR	89.6	77.4
310-303878-7	MW-4 - CCR	86.6	78.1
310-303878-8	MW-2RD - CCR	92.2	80.0
310-303878-9	Field Blank 1 - CCR	87.6	77.8
310-303878-10	Dup-1 - CCR	89.6	79.6
310-303878-11	Equipment Blank - CCR	75.5	77.0
LCS 160-712403/2-A	Lab Control Sample	91.2	78.1
LCS 160-712640/2-A	Lab Control Sample	88.6	82.2
MB 160-712403/1-A	Method Blank	89.1	75.1
MB 160-712640/1-A	Method Blank	90.2	84.5

Tracer/Carrier Legend

Ba = Barium
Y = Y Carrier

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ANALYTICAL REPORT

PREPARED FOR

Attn: Miranda Gonzalez
Waste Connections, Inc.
13425 Courthouse Blvd
Rosemount, Minnesota 55068

Generated 8/4/2025 3:33:29 PM

JOB DESCRIPTION

SKB Lansing CCR Monitoring
CCR Monitoring

JOB NUMBER

310-310191-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

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8/4/2025 3:33:29 PM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Client Sample Results 10
Definitions 32
QC Sample Results 33
QC Association 40
Chronicle 44
Certification Summary 49
Method Summary 50
Chain of Custody 51
Receipt Checklists 57
Tracer Carrier Summary 58

Job ID: 310-310191-1 Eurofins Cedar Falls

Job Narrative
310-310191-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 7/3/2025 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.8°C, 1.1°C, 1.5°C, 1.8°C and 2.8°C.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW-1 - CCR (310-310191-1), MW-1RD - CCR (310-310191-2), MW-2R - CCR (310-310191-3), MW-3 - CCR (310-310191-4), MW-3R - CCR (310-310191-5), MW-3RD - CCR (310-310191-6), MW-4 - CCR (310-310191-7), MW-2RD - CCR (310-310191-8) and Dup-1 - CCR (310-310191-10). Elevated reporting limits (RLs) are provided.

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

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

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

Job ID: 310-310191-2 Eurofins Cedar Falls

Job Narrative
310-310191-2

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 7/3/2025 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.8°C, 1.1°C, 1.5°C, 1.8°C and 2.8°C.

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

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

Sample Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-310191-1	MW-1 - CCR	Water	07/01/25 15:45	07/03/25 14:15
310-310191-2	MW-1RD - CCR	Water	07/01/25 15:40	07/03/25 14:15
310-310191-3	MW-2R - CCR	Water	07/01/25 17:00	07/03/25 14:15
310-310191-4	MW-3 - CCR	Water	07/02/25 08:05	07/03/25 14:15
310-310191-5	MW-3R - CCR	Water	07/02/25 07:50	07/03/25 14:15
310-310191-6	MW-3RD - CCR	Water	07/02/25 08:35	07/03/25 14:15
310-310191-7	MW-4 - CCR	Water	07/02/25 10:05	07/03/25 14:15
310-310191-8	MW-2RD - CCR	Water	07/01/25 11:50	07/03/25 14:15
310-310191-9	Field Blank 1 - CCR	Water	07/02/25 11:30	07/03/25 14:15
310-310191-10	Dup-1 - CCR	Water	07/02/25 00:00	07/03/25 14:15
310-310191-11	Equipment Blank - CCR	Water	07/02/25 11:40	07/03/25 14:15

Detection Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-1 - CCR — Lab Sample ID: 310-310191-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22		5.0		mg/L	5		9056A	Total/NA
Sulfate	110		5.0		mg/L	5		9056A	Total/NA
Barium	0.12		0.0020		mg/L	1		6020B	Total/NA
Boron	0.15		0.10		mg/L	1		6020B	Total/NA
Calcium	136		0.50		mg/L	1		6020B	Total/NA
Lithium	0.011		0.010		mg/L	1		6020B	Total/NA
Total Dissolved Solids	576		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-1RD - CCR — Lab Sample ID: 310-310191-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		5.0		mg/L	5		9056A	Total/NA
Sulfate	53		5.0		mg/L	5		9056A	Total/NA
Barium	0.14		0.0020		mg/L	1		6020B	Total/NA
Calcium	81.3		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.00061		0.00050		mg/L	1		6020B	Total/NA
Molybdenum	0.0031		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	338		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-2R - CCR — Lab Sample ID: 310-310191-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	76		5.0		mg/L	5		9056A	Total/NA
Sulfate	300		5.0		mg/L	5		9056A	Total/NA
Barium	0.19		0.0020		mg/L	1		6020B	Total/NA
Boron	3.9		0.10		mg/L	1		6020B	Total/NA
Calcium	192		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.00078		0.00050		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1160		50.0		mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-3 - CCR — Lab Sample ID: 310-310191-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	62		5.0		mg/L	5		9056A	Total/NA
Sulfate	40		5.0		mg/L	5		9056A	Total/NA
Barium	0.18		0.0020		mg/L	1		6020B	Total/NA
Boron	1.0		0.10		mg/L	1		6020B	Total/NA
Calcium	164		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.0018		0.00050		mg/L	1		6020B	Total/NA
Molybdenum	0.0046		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	700		50.0		mg/L	1		SM 2540C	Total/NA
pH	6.7	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-3R - CCR — Lab Sample ID: 310-310191-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	37		5.0		mg/L	5		9056A	Total/NA
Sulfate	19		5.0		mg/L	5		9056A	Total/NA
Barium	0.54		0.0020		mg/L	1		6020B	Total/NA
Boron	0.14		0.10		mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3R - CCR (Continued) — Lab Sample ID: 310-310191-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	214		0.50		mg/L	1		6020B	Total/NA
Lithium	0.020		0.010		mg/L	1		6020B	Total/NA
Total Dissolved Solids	926		50.0		mg/L	1		SM 2540C	Total/NA
pH	6.7	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-3RD - CCR — Lab Sample ID: 310-310191-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	33		5.0		mg/L	5		9056A	Total/NA
Sulfate	82		5.0		mg/L	5		9056A	Total/NA
Arsenic	0.0038		0.0020		mg/L	1		6020B	Total/NA
Barium	0.19		0.0020		mg/L	1		6020B	Total/NA
Calcium	126		0.50		mg/L	1		6020B	Total/NA
Lithium	0.013		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.0037		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	546		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-4 - CCR — Lab Sample ID: 310-310191-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0		mg/L	5		9056A	Total/NA
Sulfate	140		5.0		mg/L	5		9056A	Total/NA
Barium	0.15		0.0020		mg/L	1		6020B	Total/NA
Boron	0.53		0.10		mg/L	1		6020B	Total/NA
Calcium	151		0.50		mg/L	1		6020B	Total/NA
Total Dissolved Solids	740		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-2RD - CCR — Lab Sample ID: 310-310191-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36		5.0		mg/L	5		9056A	Total/NA
Sulfate	71		5.0		mg/L	5		9056A	Total/NA
Barium	0.17		0.0020		mg/L	1		6020B	Total/NA
Boron	0.14		0.10		mg/L	1		6020B	Total/NA
Calcium	135		0.50		mg/L	1		6020B	Total/NA
Cobalt	0.0023		0.00050		mg/L	1		6020B	Total/NA
Lithium	0.011		0.010		mg/L	1		6020B	Total/NA
Selenium	0.029		0.0050		mg/L	1		6020B	Total/NA
Total Dissolved Solids	608		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Field Blank 1 - CCR — Lab Sample ID: 310-310191-9

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.7	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Dup-1 - CCR — Lab Sample ID: 310-310191-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		5.0		mg/L	5		9056A	Total/NA
Sulfate	83		5.0		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Dup-1 - CCR (Continued)
Lab Sample ID: 310-310191-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0038		0.0020		mg/L	1		6020B	Total/NA
Barium	0.19		0.0020		mg/L	1		6020B	Total/NA
Calcium	120		0.50		mg/L	1		6020B	Total/NA
Lithium	0.015		0.010		mg/L	1		6020B	Total/NA
Molybdenum	0.0034		0.0020		mg/L	1		6020B	Total/NA
Total Dissolved Solids	542		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Equipment Blank - CCR
Lab Sample ID: 310-310191-11

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.6	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1 - CCR

Date Collected: 07/01/25 15:45
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-1

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		5.0		mg/L			07/08/25 13:52	5
Fluoride	<1.0		1.0		mg/L			07/08/25 13:52	5
Sulfate	**110**		5.0		mg/L			07/08/25 13:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:52	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:52	1
Barium	**0.12**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:52	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:53	1
Boron	**0.15**		0.10		mg/L		07/09/25 08:40	07/15/25 13:53	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 19:52	1
Calcium	**136**		0.50		mg/L		07/09/25 08:40	07/15/25 13:53	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:52	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:52	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:52	1
Lithium	**0.011**		0.010		mg/L		07/09/25 08:40	07/15/25 13:53	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:52	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:52	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 11:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**576**		50.0		mg/L			07/03/25 15:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.0**	**HF**	1.0		SU			07/03/25 15:55	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.317	U	0.141	0.141	1.00	0.317	pCi/L	07/09/25 07:54	08/01/25 19:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.4*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:49*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.665**		0.404	0.408	1.00	0.587	pCi/L	07/09/25 07:59	08/01/25 11:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:59*	*1*
Y Carrier	*74.8*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:59*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-1 - CCR
Date Collected: 07/01/25 15:45
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-1
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.617		0.428	0.432	5.00	0.587	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-1RD - CCR

Date Collected: 07/01/25 15:40
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26**		5.0		mg/L			07/08/25 14:04	5
Fluoride	<1.0		1.0		mg/L			07/08/25 14:04	5
Sulfate	**53**		5.0		mg/L			07/08/25 14:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:55	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:55	1
Barium	**0.14**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:55	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:56	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 13:56	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 19:55	1
Calcium	**81.3**		0.50		mg/L		07/09/25 08:40	07/15/25 13:56	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:55	1
Cobalt	**0.00061**		0.00050		mg/L		07/09/25 08:40	07/09/25 19:55	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:55	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 13:56	1
Molybdenum	**0.0031**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:55	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:55	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**338**		50.0		mg/L			07/03/25 15:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.4**	**HF**	1.0		SU			07/03/25 15:56	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.336	U	0.222	0.223	1.00	0.336	pCi/L	07/09/25 07:54	08/01/25 19:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.4*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:49*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.524**		0.351	0.355	1.00	0.522	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*83.0*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-1RD - CCR
Date Collected: 07/01/25 15:40
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-2
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.780		0.415	0.419	5.00	0.522	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-2R - CCR

Date Collected: 07/01/25 17:00
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76**		5.0		mg/L			07/08/25 14:16	5
Fluoride	<1.0		1.0		mg/L			07/08/25 14:16	5
Sulfate	**300**		5.0		mg/L			07/08/25 14:16	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:57	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:57	1
Barium	**0.19**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:57	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:59	1
Boron	**3.9**		0.10		mg/L		07/09/25 08:40	07/15/25 13:59	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 19:57	1
Calcium	**192**		0.50		mg/L		07/09/25 08:40	07/15/25 13:59	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:57	1
Cobalt	**0.00078**		0.00050		mg/L		07/09/25 08:40	07/09/25 19:57	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:57	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 13:59	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:57	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:57	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1160**		50.0		mg/L			07/03/25 15:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**6.8**	**HF**	1.0		SU			07/03/25 16:05	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.355	U	0.233	0.234	1.00	0.355	pCi/L	07/09/25 07:54	08/01/25 19:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.2*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:49*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.598	U	0.360	0.361	1.00	0.598	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.2*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*77.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-2R - CCR
Date Collected: 07/01/25 17:00
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-3
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.598	U	0.429	0.430	5.00	0.598	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-3 - CCR

Date Collected: 07/02/25 08:05
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62**		5.0		mg/L			07/08/25 14:28	5
Fluoride	<1.0		1.0		mg/L			07/08/25 14:28	5
Sulfate	**40**		5.0		mg/L			07/08/25 14:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:00	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:00	1
Barium	**0.18**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:00	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:06	1
Boron	**1.0**		0.10		mg/L		07/09/25 08:40	07/15/25 14:06	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:00	1
Calcium	**164**		0.50		mg/L		07/09/25 08:40	07/15/25 14:06	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:00	1
Cobalt	**0.0018**		0.00050		mg/L		07/09/25 08:40	07/09/25 20:00	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:00	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 14:06	1
Molybdenum	**0.0046**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:00	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:00	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:06	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**700**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**6.7**	**HF**	1.0		SU			07/03/25 16:00	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.288	U	0.170	0.170	1.00	0.288	pCi/L	07/09/25 07:54	08/01/25 19:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*93.7*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:50*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.668	U	0.409	0.411	1.00	0.668	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*93.7*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*75.9*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3 - CCR
Date Collected: 07/02/25 08:05
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-4
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.668	U	0.443	0.445	5.00	0.668	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-3R - CCR

Date Collected: 07/02/25 07:50
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-5

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37**		5.0		mg/L			07/08/25 14:40	5
Fluoride	<1.0		1.0		mg/L			07/08/25 14:40	5
Sulfate	**19**		5.0		mg/L			07/08/25 14:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:02	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:02	1
Barium	**0.54**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:02	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:25	1
Boron	**0.14**		0.10		mg/L		07/09/25 08:40	07/15/25 14:25	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:02	1
Calcium	**214**		0.50		mg/L		07/09/25 08:40	07/15/25 14:25	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:02	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:02	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:02	1
Lithium	**0.020**		0.010		mg/L		07/09/25 08:40	07/15/25 14:25	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:02	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:02	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 12:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**926**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**6.7**	**HF**	1.0		SU			07/03/25 16:08	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.540**		0.274	0.278	1.00	0.327	pCi/L	07/09/25 07:54	08/01/25 19:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*79.6*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:50*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.85**		0.587	0.611	1.00	0.704	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*79.6*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*79.3*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client Sample Results

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3R - CCR

Date Collected: 07/02/25 07:50
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-5

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.39		0.648	0.671	5.00	0.704	pCi/L		08/04/25 15:18	1

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3RD - CCR

Date Collected: 07/02/25 08:35
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33**		5.0		mg/L			07/08/25 14:52	5
Fluoride	<1.0		1.0		mg/L			07/08/25 14:52	5
Sulfate	**82**		5.0		mg/L			07/08/25 14:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:37	1
Arsenic	**0.0038**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:37	1
Barium	**0.19**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:37	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:46	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 13:46	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 19:37	1
Calcium	**126**		0.50		mg/L		07/09/25 08:40	07/15/25 13:46	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:37	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:37	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:37	1
Lithium	**0.013**		0.010		mg/L		07/09/25 08:40	07/15/25 13:46	1
Molybdenum	**0.0037**		0.0020		mg/L		07/09/25 08:40	07/09/25 19:37	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:37	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**546**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0		SU			07/03/25 15:47	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.643**		0.315	0.320	1.00	0.408	pCi/L	07/09/25 07:54	08/01/25 19:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.2*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:50*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.645	U	0.393	0.395	1.00	0.645	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.2*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*82.6*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3RD - CCR
Date Collected: 07/02/25 08:35
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-6
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.992		0.504	0.508	5.00	0.645	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-4 - CCR

Date Collected: 07/02/25 10:05
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-7

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13**		5.0		mg/L			07/08/25 15:53	5
Fluoride	<1.0		1.0		mg/L			07/08/25 15:53	5
Sulfate	**140**		5.0		mg/L			07/08/25 15:53	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:05	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:05	1
Barium	**0.15**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:05	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:27	1
Boron	**0.53**		0.10		mg/L		07/09/25 08:40	07/15/25 14:27	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:05	1
Calcium	**151**		0.50		mg/L		07/09/25 08:40	07/15/25 14:27	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:05	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:05	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:05	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 14:27	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:05	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:05	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:27	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 12:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**740**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.0**	**HF**	1.0		SU			07/03/25 15:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.296	U	0.178	0.179	1.00	0.296	pCi/L	07/09/25 07:54	08/01/25 19:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.6*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.596	U	0.334	0.334	1.00	0.596	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.6*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*82.2*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-4 - CCR
Date Collected: 07/02/25 10:05
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-7
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.596	U	0.378	0.379	5.00	0.596	pCi/L		08/04/25 15:18	1

Client Sample ID: MW-2RD - CCR

Date Collected: 07/01/25 11:50
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		5.0		mg/L			07/08/25 16:05	5
Fluoride	<1.0		1.0		mg/L			07/08/25 16:05	5
Sulfate	**71**		5.0		mg/L			07/08/25 16:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:08	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:08	1
Barium	**0.17**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:08	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:30	1
Boron	**0.14**		0.10		mg/L		07/09/25 08:40	07/15/25 14:30	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:08	1
Calcium	**135**		0.50		mg/L		07/09/25 08:40	07/15/25 14:30	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:08	1
Cobalt	**0.0023**		0.00050		mg/L		07/09/25 08:40	07/09/25 20:08	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:08	1
Lithium	**0.011**		0.010		mg/L		07/09/25 08:40	07/15/25 14:30	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:08	1
Selenium	**0.029**		0.0050		mg/L		07/09/25 08:40	07/09/25 20:08	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:30	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 11:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**608**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.0**	**HF**	1.0		SU			07/03/25 15:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.539**		0.316	0.320	1.00	0.406	pCi/L	07/09/25 07:54	08/01/25 19:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.4*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.774	U	0.403	0.403	1.00	0.774	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*78.9*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-2RD - CCR
Date Collected: 07/01/25 11:50
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-8
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.774	U	0.512	0.515	5.00	0.774	pCi/L		08/04/25 15:18	1

Client Sample ID: Field Blank 1 - CCR

Lab Sample ID: 310-310191-9

Date Collected: 07/02/25 11:30

Matrix: Water

Date Received: 07/03/25 14:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			07/08/25 16:17	1
Fluoride	<0.20		0.20		mg/L			07/08/25 16:17	1
Sulfate	<1.0		1.0		mg/L			07/08/25 16:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:10	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:10	1
Barium	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:10	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:32	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 14:32	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:10	1
Calcium	<0.50		0.50		mg/L		07/09/25 08:40	07/15/25 14:32	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:10	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:10	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:10	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 14:32	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:10	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:10	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:32	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 11:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<50.0		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**5.7**	**HF**	1.0		SU			07/03/25 15:54	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.280	U	0.144	0.144	1.00	0.280	pCi/L	07/09/25 07:54	08/01/25 19:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*92.7*		*30 - 110*	*07/09/25 07:54*	*08/01/25 19:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.650	U	0.413	0.415	1.00	0.650	pCi/L	07/09/25 07:59	08/01/25 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*92.7*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*
Y Carrier	*86.7*		*30 - 110*	*07/09/25 07:59*	*08/01/25 12:00*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: Field Blank 1 - CCR

Date Collected: 07/02/25 11:30
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-9

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.650	U	0.437	0.439	5.00	0.650	pCi/L		08/04/25 15:18	1

Client Sample ID: Dup-1 - CCR

Date Collected: 07/02/25 00:00
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-10

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34**		5.0		mg/L			07/08/25 16:29	5
Fluoride	<1.0		1.0		mg/L			07/08/25 16:29	5
Sulfate	**83**		5.0		mg/L			07/08/25 16:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:13	1
Arsenic	**0.0038**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:13	1
Barium	**0.19**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:13	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:35	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 14:35	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:13	1
Calcium	**120**		0.50		mg/L		07/09/25 08:40	07/15/25 14:35	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:13	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:13	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:13	1
Lithium	**0.015**		0.010		mg/L		07/09/25 08:40	07/15/25 14:35	1
Molybdenum	**0.0034**		0.0020		mg/L		07/09/25 08:40	07/09/25 20:13	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:13	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 11:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**542**		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.1**	**HF**	1.0		SU			07/03/25 15:58	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.782**		0.284	0.293	1.00	0.281	pCi/L	07/09/25 07:54	08/01/25 22:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.7*		*30 - 110*	*07/09/25 07:54*	*08/01/25 22:20*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.492	U	0.314	0.316	1.00	0.492	pCi/L	07/09/25 07:59	08/01/25 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.7*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:53*	*1*
Y Carrier	*91.6*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: Dup-1 - CCR

Date Collected: 07/02/25 00:00
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-10

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.423	0.431	5.00	0.492	pCi/L		08/04/25 15:18	1

Client Sample ID: Equipment Blank - CCR

Lab Sample ID: 310-310191-11

Date Collected: 07/02/25 11:40

Matrix: Water

Date Received: 07/03/25 14:15

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			07/08/25 16:41	1
Fluoride	<0.20		0.20		mg/L			07/08/25 16:41	1
Sulfate	<1.0		1.0		mg/L			07/08/25 16:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:20	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:20	1
Barium	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:20	1
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:37	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 14:37	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 20:20	1
Calcium	<0.50		0.50		mg/L		07/09/25 08:40	07/15/25 14:37	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:20	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:20	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 20:20	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 14:37	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 20:20	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 20:20	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 14:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 11:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<50.0		50.0		mg/L			07/07/25 16:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**5.6**	**HF**	1.0		SU			07/03/25 15:50	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.290	U	0.156	0.156	1.00	0.290	pCi/L	07/09/25 07:54	08/01/25 22:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.2*		*30 - 110*	*07/09/25 07:54*	*08/01/25 22:20*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.472	U	0.309	0.311	1.00	0.472	pCi/L	07/09/25 07:59	08/01/25 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.2*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:53*	*1*
Y Carrier	*86.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:53*	*1*

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: Equipment Blank - CCR

Date Collected: 07/02/25 11:40
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-11

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.472	U	0.346	0.348	5.00	0.472	pCi/L		08/04/25 15:18	1

Definitions/Glossary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

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

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-459911/3
Matrix: Water
Analysis Batch: 459911

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			07/08/25 13:28	1
Fluoride	<0.20		0.20		mg/L			07/08/25 13:28	1
Sulfate	<1.0		1.0		mg/L			07/08/25 13:28	1

Lab Sample ID: LCS 310-459911/4
Matrix: Water
Analysis Batch: 459911

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	9.58		mg/L		96	90 - 110
Fluoride	2.00	2.01		mg/L		100	90 - 110
Sulfate	10.0	9.77		mg/L		98	90 - 110

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 459911

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	33		25.0	56.1		mg/L		91	80 - 120
Fluoride	<1.0		5.00	5.35		mg/L		107	80 - 120
Sulfate	82		25.0	105		mg/L		93	80 - 120

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 459911

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	33		25.0	55.5		mg/L		88	80 - 120	1	15
Fluoride	<1.0		5.00	5.28		mg/L		106	80 - 120	1	15
Sulfate	82		25.0	104		mg/L		89	80 - 120	1	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-459861/1-A
Matrix: Water
Analysis Batch: 460047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459861

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:32	1
Arsenic	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:32	1
Barium	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:32	1
Cadmium	<0.00020		0.00020		mg/L		07/09/25 08:40	07/09/25 19:32	1
Chromium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:32	1
Cobalt	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:32	1
Lead	<0.00050		0.00050		mg/L		07/09/25 08:40	07/09/25 19:32	1
Molybdenum	<0.0020		0.0020		mg/L		07/09/25 08:40	07/09/25 19:32	1
Selenium	<0.0050		0.0050		mg/L		07/09/25 08:40	07/09/25 19:32	1

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

Lab Sample ID: MB 310-459861/1-A
Matrix: Water
Analysis Batch: 460580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459861

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:41	1
Boron	<0.10		0.10		mg/L		07/09/25 08:40	07/15/25 13:41	1
Calcium	<0.50		0.50		mg/L		07/09/25 08:40	07/15/25 13:41	1
Lithium	<0.010		0.010		mg/L		07/09/25 08:40	07/15/25 13:41	1
Thallium	<0.0010		0.0010		mg/L		07/09/25 08:40	07/15/25 13:41	1

Lab Sample ID: LCS 310-459861/2-A
Matrix: Water
Analysis Batch: 460047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.212		mg/L		106	80 - 120
Arsenic	0.200	0.185		mg/L		92	80 - 120
Barium	0.100	0.0941		mg/L		94	80 - 120
Cadmium	0.100	0.0916		mg/L		92	80 - 120
Chromium	0.100	0.0903		mg/L		90	80 - 120
Cobalt	0.100	0.0898		mg/L		90	80 - 120
Lead	0.200	0.181		mg/L		91	80 - 120
Molybdenum	0.200	0.189		mg/L		95	80 - 120
Selenium	0.400	0.351		mg/L		88	80 - 120

Lab Sample ID: LCS 310-459861/2-A
Matrix: Water
Analysis Batch: 460580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.100	0.0920		mg/L		92	80 - 120
Boron	0.200	0.229		mg/L		114	80 - 120
Calcium	2.00	1.72		mg/L		86	80 - 120
Lithium	0.200	0.186		mg/L		93	80 - 120
Thallium	0.100	0.0861		mg/L		86	80 - 120

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 460047

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0020		0.200	0.200		mg/L		100	75 - 125
Arsenic	0.0038		0.200	0.180		mg/L		88	75 - 125
Barium	0.19		0.100	0.272		mg/L		85	75 - 125
Cadmium	<0.00020		0.100	0.0887		mg/L		89	75 - 125
Chromium	<0.0050		0.100	0.0841		mg/L		84	75 - 125
Cobalt	<0.00050		0.100	0.0811		mg/L		81	75 - 125
Lead	<0.00050		0.200	0.170		mg/L		85	75 - 125
Molybdenum	0.0037		0.200	0.179		mg/L		88	75 - 125
Selenium	<0.0050		0.400	0.341		mg/L		85	75 - 125

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

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 460580

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	<0.0010		0.100	0.0913		mg/L		91	75 - 125
Boron	<0.10		0.200	0.224		mg/L		112	75 - 125
Calcium	126		2.00	126.2	4	mg/L		-7	75 - 125
Lithium	0.013		0.200	0.192		mg/L		89	75 - 125
Thallium	<0.0010		0.100	0.0829		mg/L		83	75 - 125

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 460047

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0020		0.200	0.214		mg/L		107	75 - 125	7	20
Arsenic	0.0038		0.200	0.189		mg/L		93	75 - 125	5	20
Barium	0.19		0.100	0.274		mg/L		87	75 - 125	1	20
Cadmium	<0.00020		0.100	0.0936		mg/L		94	75 - 125	5	20
Calcium	129	^+	2.00	130.0	4	mg/L		53	75 - 125	0	20
Chromium	<0.0050		0.100	0.0885		mg/L		89	75 - 125	5	20
Cobalt	<0.00050		0.100	0.0854		mg/L		85	75 - 125	5	20
Lead	<0.00050		0.200	0.181		mg/L		90	75 - 125	6	20
Molybdenum	0.0037		0.200	0.190		mg/L		93	75 - 125	6	20
Selenium	<0.0050		0.400	0.354		mg/L		88	75 - 125	4	20

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 460580

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	<0.0010		0.100	0.0944		mg/L		94	75 - 125	3	20
Boron	<0.10		0.200	0.239		mg/L		120	75 - 125	6	20
Lithium	0.013		0.200	0.200		mg/L		94	75 - 125	4	20
Thallium	<0.0010		0.100	0.0809		mg/L		81	75 - 125	2	20

Lab Sample ID: 310-310191-11 DU
Matrix: Water
Analysis Batch: 460047

Client Sample ID: Equipment Blank - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0020		<0.0020		mg/L		NC	20
Arsenic	<0.0020		<0.0020		mg/L		NC	20
Barium	<0.0020		<0.0020		mg/L		NC	20
Cadmium	<0.00020		<0.00020		mg/L		NC	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.00050		<0.00050		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Molybdenum	<0.0020		<0.0020		mg/L		NC	20
Selenium	<0.0050		<0.0050		mg/L		NC	20

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

Lab Sample ID: 310-310191-11 DU
Matrix: Water
Analysis Batch: 460580

Client Sample ID: Equipment Blank - CCR
Prep Type: Total/NA
Prep Batch: 459861

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Boron	<0.10		<0.10		mg/L		NC	20
Calcium	<0.50		<0.50		mg/L		NC	20
Lithium	<0.010		<0.010		mg/L		NC	20
Thallium	<0.0010		<0.0010		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-460084/1-A
Matrix: Water
Analysis Batch: 460399

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460084

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/11/25 11:36	07/14/25 11:18	1

Lab Sample ID: LCS 310-460084/2-A
Matrix: Water
Analysis Batch: 460399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460084

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.00167		mg/L		100	80 - 120

Lab Sample ID: MB 310-460402/1-A
Matrix: Water
Analysis Batch: 460532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		07/14/25 14:57	07/15/25 10:49	1

Lab Sample ID: LCS 310-460402/2-A
Matrix: Water
Analysis Batch: 460532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460402

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.00148		mg/L		89	80 - 120

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 460532

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 460402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00167	0.00152		mg/L		91	80 - 120

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 460532

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 460402

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00167	0.00150		mg/L		90	80 - 120	1	20

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

Lab Sample ID: MB 310-459609/1
Matrix: Water
Analysis Batch: 459609

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	<50.0		50.0		mg/L			07/03/25 15:34	1

Lab Sample ID: LCS 310-459609/2
Matrix: Water
Analysis Batch: 459609

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	89 - 110

Lab Sample ID: MB 310-459729/1
Matrix: Water
Analysis Batch: 459729

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	<50.0		50.0		mg/L			07/07/25 16:06	1

Lab Sample ID: LCS 310-459729/2
Matrix: Water
Analysis Batch: 459729

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	970.0		mg/L		97	89 - 110

Lab Sample ID: 310-310191-4 DU
Matrix: Water
Analysis Batch: 459729

Client Sample ID: MW-3 - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	700		694.0		mg/L		0.9	13

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-459607/1
Matrix: Water
Analysis Batch: 459607

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

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

Lab Sample ID: 310-310191-3 DU
Matrix: Water
Analysis Batch: 459607

Client Sample ID: MW-2R - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.8	HF	6.8		SU		0.9	20

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-310191-6 DU
Matrix: Water
Analysis Batch: 459607

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.2	HF	7.1		SU		0.8	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-726348/1-A
Matrix: Water
Analysis Batch: 730101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 726348

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.366	U	0.165	0.165	1.00	0.366	pCi/L	07/09/25 07:54	08/01/25 17:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*86.9*		*30 - 110*	*07/09/25 07:54*	*08/01/25 17:53*	*1*

Lab Sample ID: LCS 160-726348/2-A
Matrix: Water
Analysis Batch: 730101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 726348

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	10.73		1.39	1.00	0.339	pCi/L	112	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*86.9*		*30 - 110*

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 730099

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 726348

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	0.643		9.54	8.497		1.17	1.00	0.322	pCi/L	82	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Barium	*82.6*		*30 - 110*

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 730099

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 726348

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.643		9.55	9.402		1.26	1.00	0.334	pCi/L	92	60 - 140	0.37	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Barium	*84.6*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-726349/1-A
Matrix: Water
Analysis Batch: 730088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 726349

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5756		0.379	0.383	1.00	0.566	pCi/L	07/09/25 07:59	08/01/25 11:58	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*86.9*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:58*	*1*
Y Carrier	*83.4*		*30 - 110*	*07/09/25 07:59*	*08/01/25 11:58*	*1*

Lab Sample ID: LCS 160-726349/2-A
Matrix: Water
Analysis Batch: 730088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 726349

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.20	9.589		1.32	1.00	0.499	pCi/L	104	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*86.9*		*30 - 110*
Y Carrier	*83.7*		*30 - 110*

Lab Sample ID: 310-310191-6 MS
Matrix: Water
Analysis Batch: 730088

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 726349

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	<0.645	U	9.17	10.26		1.43	1.00	0.590	pCi/L	108	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Barium	*82.6*		*30 - 110*
Y Carrier	*81.1*		*30 - 110*

Lab Sample ID: 310-310191-6 MSD
Matrix: Water
Analysis Batch: 730088

Client Sample ID: MW-3RD - CCR
Prep Type: Total/NA
Prep Batch: 726349

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	<0.645	U	9.18	10.75		1.45	1.00	0.650	pCi/L	113	60 - 140	0.17	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Barium	*84.6*		*30 - 110*
Y Carrier	*87.9*		*30 - 110*

HPLC/IC

Analysis Batch: 459911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	9056A	
310-310191-2	MW-1RD - CCR	Total/NA	Water	9056A	
310-310191-3	MW-2R - CCR	Total/NA	Water	9056A	
310-310191-4	MW-3 - CCR	Total/NA	Water	9056A	
310-310191-5	MW-3R - CCR	Total/NA	Water	9056A	
310-310191-6	MW-3RD - CCR	Total/NA	Water	9056A	
310-310191-7	MW-4 - CCR	Total/NA	Water	9056A	
310-310191-8	MW-2RD - CCR	Total/NA	Water	9056A	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	9056A	
310-310191-10	Dup-1 - CCR	Total/NA	Water	9056A	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	9056A	
MB 310-459911/3	Method Blank	Total/NA	Water	9056A	
LCS 310-459911/4	Lab Control Sample	Total/NA	Water	9056A	
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	9056A	
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	9056A	

Metals

Prep Batch: 459861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	3005A	
310-310191-2	MW-1RD - CCR	Total/NA	Water	3005A	
310-310191-3	MW-2R - CCR	Total/NA	Water	3005A	
310-310191-4	MW-3 - CCR	Total/NA	Water	3005A	
310-310191-5	MW-3R - CCR	Total/NA	Water	3005A	
310-310191-6	MW-3RD - CCR	Total/NA	Water	3005A	
310-310191-7	MW-4 - CCR	Total/NA	Water	3005A	
310-310191-8	MW-2RD - CCR	Total/NA	Water	3005A	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	3005A	
310-310191-10	Dup-1 - CCR	Total/NA	Water	3005A	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	3005A	
MB 310-459861/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-459861/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	3005A	
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	3005A	
310-310191-11 DU	Equipment Blank - CCR	Total/NA	Water	3005A	

Analysis Batch: 460047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	6020B	459861
310-310191-2	MW-1RD - CCR	Total/NA	Water	6020B	459861
310-310191-3	MW-2R - CCR	Total/NA	Water	6020B	459861
310-310191-4	MW-3 - CCR	Total/NA	Water	6020B	459861
310-310191-5	MW-3R - CCR	Total/NA	Water	6020B	459861
310-310191-6	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-7	MW-4 - CCR	Total/NA	Water	6020B	459861
310-310191-8	MW-2RD - CCR	Total/NA	Water	6020B	459861
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	6020B	459861
310-310191-10	Dup-1 - CCR	Total/NA	Water	6020B	459861
310-310191-11	Equipment Blank - CCR	Total/NA	Water	6020B	459861
MB 310-459861/1-A	Method Blank	Total/NA	Water	6020B	459861

Metals (Continued)

Analysis Batch: 460047 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-459861/2-A	Lab Control Sample	Total/NA	Water	6020B	459861
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-11 DU	Equipment Blank - CCR	Total/NA	Water	6020B	459861

Prep Batch: 460084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	7470A	
310-310191-2	MW-1RD - CCR	Total/NA	Water	7470A	
310-310191-3	MW-2R - CCR	Total/NA	Water	7470A	
310-310191-4	MW-3 - CCR	Total/NA	Water	7470A	
310-310191-5	MW-3R - CCR	Total/NA	Water	7470A	
310-310191-7	MW-4 - CCR	Total/NA	Water	7470A	
MB 310-460084/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-460084/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 460399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	7470A	460084
310-310191-2	MW-1RD - CCR	Total/NA	Water	7470A	460084
310-310191-3	MW-2R - CCR	Total/NA	Water	7470A	460084
310-310191-4	MW-3 - CCR	Total/NA	Water	7470A	460084
310-310191-5	MW-3R - CCR	Total/NA	Water	7470A	460084
310-310191-7	MW-4 - CCR	Total/NA	Water	7470A	460084
MB 310-460084/1-A	Method Blank	Total/NA	Water	7470A	460084
LCS 310-460084/2-A	Lab Control Sample	Total/NA	Water	7470A	460084

Prep Batch: 460402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-6	MW-3RD - CCR	Total/NA	Water	7470A	
310-310191-8	MW-2RD - CCR	Total/NA	Water	7470A	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	7470A	
310-310191-10	Dup-1 - CCR	Total/NA	Water	7470A	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	7470A	
MB 310-460402/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-460402/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	7470A	
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	7470A	

Analysis Batch: 460532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-6	MW-3RD - CCR	Total/NA	Water	7470A	460402
310-310191-8	MW-2RD - CCR	Total/NA	Water	7470A	460402
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	7470A	460402
310-310191-10	Dup-1 - CCR	Total/NA	Water	7470A	460402
310-310191-11	Equipment Blank - CCR	Total/NA	Water	7470A	460402
MB 310-460402/1-A	Method Blank	Total/NA	Water	7470A	460402
LCS 310-460402/2-A	Lab Control Sample	Total/NA	Water	7470A	460402
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	7470A	460402
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	7470A	460402

Metals

Analysis Batch: 460580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	6020B	459861
310-310191-2	MW-1RD - CCR	Total/NA	Water	6020B	459861
310-310191-3	MW-2R - CCR	Total/NA	Water	6020B	459861
310-310191-4	MW-3 - CCR	Total/NA	Water	6020B	459861
310-310191-5	MW-3R - CCR	Total/NA	Water	6020B	459861
310-310191-6	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-7	MW-4 - CCR	Total/NA	Water	6020B	459861
310-310191-8	MW-2RD - CCR	Total/NA	Water	6020B	459861
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	6020B	459861
310-310191-10	Dup-1 - CCR	Total/NA	Water	6020B	459861
310-310191-11	Equipment Blank - CCR	Total/NA	Water	6020B	459861
MB 310-459861/1-A	Method Blank	Total/NA	Water	6020B	459861
LCS 310-459861/2-A	Lab Control Sample	Total/NA	Water	6020B	459861
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	6020B	459861
310-310191-11 DU	Equipment Blank - CCR	Total/NA	Water	6020B	459861

General Chemistry

Analysis Batch: 459607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-2	MW-1RD - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-3	MW-2R - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-4	MW-3 - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-5	MW-3R - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-6	MW-3RD - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-7	MW-4 - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-8	MW-2RD - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-10	Dup-1 - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	SM 4500 H+ B	
LCS 310-459607/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-310191-3 DU	MW-2R - CCR	Total/NA	Water	SM 4500 H+ B	
310-310191-6 DU	MW-3RD - CCR	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 459609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	SM 2540C	
310-310191-2	MW-1RD - CCR	Total/NA	Water	SM 2540C	
310-310191-3	MW-2R - CCR	Total/NA	Water	SM 2540C	
MB 310-459609/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-459609/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 459729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-4	MW-3 - CCR	Total/NA	Water	SM 2540C	
310-310191-5	MW-3R - CCR	Total/NA	Water	SM 2540C	
310-310191-6	MW-3RD - CCR	Total/NA	Water	SM 2540C	
310-310191-7	MW-4 - CCR	Total/NA	Water	SM 2540C	
310-310191-8	MW-2RD - CCR	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 459729 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	SM 2540C	
310-310191-10	Dup-1 - CCR	Total/NA	Water	SM 2540C	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	SM 2540C	
MB 310-459729/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-459729/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-310191-4 DU	MW-3 - CCR	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 726348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	PrecSep-21	
310-310191-2	MW-1RD - CCR	Total/NA	Water	PrecSep-21	
310-310191-3	MW-2R - CCR	Total/NA	Water	PrecSep-21	
310-310191-4	MW-3 - CCR	Total/NA	Water	PrecSep-21	
310-310191-5	MW-3R - CCR	Total/NA	Water	PrecSep-21	
310-310191-6	MW-3RD - CCR	Total/NA	Water	PrecSep-21	
310-310191-7	MW-4 - CCR	Total/NA	Water	PrecSep-21	
310-310191-8	MW-2RD - CCR	Total/NA	Water	PrecSep-21	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	PrecSep-21	
310-310191-10	Dup-1 - CCR	Total/NA	Water	PrecSep-21	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	PrecSep-21	
MB 160-726348/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-726348/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	PrecSep-21	
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	PrecSep-21	

Prep Batch: 726349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-310191-1	MW-1 - CCR	Total/NA	Water	PrecSep_0	
310-310191-2	MW-1RD - CCR	Total/NA	Water	PrecSep_0	
310-310191-3	MW-2R - CCR	Total/NA	Water	PrecSep_0	
310-310191-4	MW-3 - CCR	Total/NA	Water	PrecSep_0	
310-310191-5	MW-3R - CCR	Total/NA	Water	PrecSep_0	
310-310191-6	MW-3RD - CCR	Total/NA	Water	PrecSep_0	
310-310191-7	MW-4 - CCR	Total/NA	Water	PrecSep_0	
310-310191-8	MW-2RD - CCR	Total/NA	Water	PrecSep_0	
310-310191-9	Field Blank 1 - CCR	Total/NA	Water	PrecSep_0	
310-310191-10	Dup-1 - CCR	Total/NA	Water	PrecSep_0	
310-310191-11	Equipment Blank - CCR	Total/NA	Water	PrecSep_0	
MB 160-726349/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-726349/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-310191-6 MS	MW-3RD - CCR	Total/NA	Water	PrecSep_0	
310-310191-6 MSD	MW-3RD - CCR	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-1 - CCR

Lab Sample ID: 310-310191-1

Date Collected: 07/01/25 15:45

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 13:52
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 19:52
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 13:53
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 11:52
Total/NA	Analysis	SM 2540C		1	459609	ENB7	EET CF	07/03/25 15:34
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:55
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730101	SWS	EET SL	08/01/25 19:49
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 11:59
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-1RD - CCR

Lab Sample ID: 310-310191-2

Date Collected: 07/01/25 15:40

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 14:04
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 19:55
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 13:56
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 11:54
Total/NA	Analysis	SM 2540C		1	459609	ENB7	EET CF	07/03/25 15:34
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:56
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730101	SWS	EET SL	08/01/25 19:49
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-2R - CCR

Lab Sample ID: 310-310191-3

Date Collected: 07/01/25 17:00

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 14:16
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 19:57

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-2R - CCR

Lab Sample ID: 310-310191-3

Date Collected: 07/01/25 17:00

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 13:59
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 11:56
Total/NA	Analysis	SM 2540C		1	459609	ENB7	EET CF	07/03/25 15:34
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 16:05
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730101	SWS	EET SL	08/01/25 19:49
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-3 - CCR

Lab Sample ID: 310-310191-4

Date Collected: 07/02/25 08:05

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 14:28
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:00
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:06
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 11:58
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 16:00
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:50
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-3R - CCR

Lab Sample ID: 310-310191-5

Date Collected: 07/02/25 07:50

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 14:40
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:02
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:25
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 12:01

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-3R - CCR
Date Collected: 07/02/25 07:50
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 16:08
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:50
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-3RD - CCR
Date Collected: 07/02/25 08:35
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 14:52
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 19:37
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 13:46
Total/NA	Prep	7470A			460402	QTZ5	EET CF	07/14/25 14:57
Total/NA	Analysis	7470A		1	460532	F5MW	EET CF	07/15/25 10:53
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:47
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:50
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-4 - CCR
Date Collected: 07/02/25 10:05
Date Received: 07/03/25 14:15

Lab Sample ID: 310-310191-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 15:53
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:05
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:27
Total/NA	Prep	7470A			460084	F5MW	EET CF	07/11/25 11:36
Total/NA	Analysis	7470A		1	460399	QTZ5	EET CF	07/14/25 12:03
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:51
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:51

Lab Chronicle

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Client Sample ID: MW-4 - CCR

Lab Sample ID: 310-310191-7

Date Collected: 07/02/25 10:05

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: MW-2RD - CCR

Lab Sample ID: 310-310191-8

Date Collected: 07/01/25 11:50

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 16:05
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:08
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:30
Total/NA	Prep	7470A			460402	QTZ5	EET CF	07/14/25 14:57
Total/NA	Analysis	7470A		1	460532	F5MW	EET CF	07/15/25 11:00
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:53
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:51
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: Field Blank 1 - CCR

Lab Sample ID: 310-310191-9

Date Collected: 07/02/25 11:30

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	459911	QTZ5	EET CF	07/08/25 16:17
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:10
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:32
Total/NA	Prep	7470A			460402	QTZ5	EET CF	07/14/25 14:57
Total/NA	Analysis	7470A		1	460532	F5MW	EET CF	07/15/25 11:06
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:54
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 19:51
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730088	SWS	EET SL	08/01/25 12:00
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: Dup-1 - CCR

Lab Sample ID: 310-310191-10

Date Collected: 07/02/25 00:00

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	459911	QTZ5	EET CF	07/08/25 16:29
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:13
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:35
Total/NA	Prep	7470A			460402	QTZ5	EET CF	07/14/25 14:57
Total/NA	Analysis	7470A		1	460532	F5MW	EET CF	07/15/25 11:08
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:58
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 22:20
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730099	SWS	EET SL	08/01/25 11:53
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Client Sample ID: Equipment Blank - CCR

Lab Sample ID: 310-310191-11

Date Collected: 07/02/25 11:40

Matrix: Water

Date Received: 07/03/25 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	459911	QTZ5	EET CF	07/08/25 16:41
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460047	NFT2	EET CF	07/09/25 20:20
Total/NA	Prep	3005A			459861	WK2X	EET CF	07/09/25 08:40
Total/NA	Analysis	6020B		1	460580	NFT2	EET CF	07/15/25 14:37
Total/NA	Prep	7470A			460402	QTZ5	EET CF	07/14/25 14:57
Total/NA	Analysis	7470A		1	460532	F5MW	EET CF	07/15/25 11:10
Total/NA	Analysis	SM 2540C		1	459729	ENB7	EET CF	07/07/25 16:06
Total/NA	Analysis	SM 4500 H+ B		1	459607	T5AC	EET CF	07/03/25 15:50
Total/NA	Prep	PrecSep-21			726348	JTR	EET SL	07/09/25 07:54
Total/NA	Analysis	9315		1	730099	SWS	EET SL	08/01/25 22:20
Total/NA	Prep	PrecSep_0			726349	JTR	EET SL	07/09/25 07:59
Total/NA	Analysis	9320		1	730099	SWS	EET SL	08/01/25 11:53
Total/NA	Analysis	Ra226_Ra228		1	730461	EMH	EET SL	08/04/25 15:18

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Waste Connections, Inc.
Job ID: 310-310191-1
Project/Site: SKB Lansing CCR Monitoring

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	019-999-319	12-31-25

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25 *
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-25 *
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-25 *
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-25 *
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25 *
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

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

Method Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

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

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

Laboratory References:

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

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

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310-310191 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: GES

City/State: CITY Eagan | STATE MN | Project:

Receipt Information

Date/Time Received: DATE 7/3/25 | TIME 1415 | Received By: BP

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

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID: BP
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 1 of 45
Cooler Custody Seals Present? No	☒ Yes	☐ No	*If yes* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes.* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: P | Correction Factor (°C): +0

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

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

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used.		
Uncorrected Temp (°C)		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: GES

City/State: CITY Eagan | STATE MN | Project:

Receipt Information

Date/Time Received: DATE 7/3/25 | TIME 1415 | Received By: BP

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes* Cooler ID. 5

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 2 of 4 BP

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

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

Trip Blank Present? ☐ Yes ☒ No *If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID: P | Correction Factor (°C): ± 0

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

Uncorrected Temp (°C): 1.4 | Corrected Temp (°C): 1

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C).		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: GFS

City/State: CITY Eagan | STATE MN | Project:

Receipt Information

Date/Time Received: DATE 7/3/25 | TIME 1415 | Received By: BP

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

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID.	5
Multiple Coolers?	☒ Yes	☐ No	*If yes* Cooler # 3 of 4	BP
Cooler Custody Seals Present? No	☒ Yes	☐ No	*If yes* Cooler custody seals intact?	☒ Yes ☐
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact?	☐ Yes ☐
Trip Blank Present?	☐ Yes	☒ No	*If yes* Which VOA samples are in cooler?	↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID: P | Correction Factor (°C): ±0

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

Uncorrected Temp (°C): 1.5 | Corrected Temp (°C): 1.5

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C).		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: GES

City/State: CITY Eagan | STATE MN | Project:

Receipt Information

Date/Time Received: DATE 7/3/25 | TIME 1415 | Received By: BP

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

Condition of Cooler/Containers

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

Multiple Coolers? ☒ Yes ☐ No *If yes* Cooler # 4 of 5 BP

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

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

Trip Blank Present? ☐ Yes ☒ No *If yes.* Which VOA samples are in cooler? ↓

Temperature Record

Coolant. ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID. P | Correction Factor (°C) ±0

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

Uncorrected Temp (°C): 2.6 | Corrected Temp (°C). 2.6

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used.		
Uncorrected Temp (°C).		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE. If yes, contact PM before proceeding If no, proceed with login

Additional Comments

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Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: ~~Waste Connections Inc~~ GFS

City/State: CITY | STATE | Project

Receipt Information

Date/Time Received: DATE 7.3.25 | TIME 1415 | Received By CGC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes* Cooler ID 5 BP

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 5 of 5

Cooler Custody Seals Present? ☑ Yes ☐ No *If yes* Cooler custody seals intact? ☑ Yes ☐ No

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

Trip Blank Present? ~~N/A~~ Yes ☑ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID: AA | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.8 | Corrected Temp (°C): 0.8

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used.		
Uncorrected Temp (°C):		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

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

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

Eurofins Minneapolis SC 213

eurofins | Environment esting America

Client Information	Sampler: N. Schlagel	Lab PM: Bindert, Zach T	Carrier Tracking No(s):	COC No: 310-68661-19671 1
Client Contact: Mr Nicholas Schlagel	Phone: 651-782-6065	E-Mail: Zach.Bindert@Eurofinset.com	State of Origin: MN	Page: Page 1 of 2
Company: Groundwater & Environmental Services Inc	PWSID:			Job #:
Address: 1301 Corporate Center Drive Suite 150	Due Date Requested:			
City: Eagan	TAT Requested (days): Standard TAT			
State, Zip: MN, 55121-1562	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: NSchlagel@gesonline.com	WO #:			
Project Name: SKB Lansing CCR Monitoring	Project #: 31013984			
Site: Minnesota	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226 - Radium 226	Ra226Ra228_GFPC - Local Method	9320_Ra228 - Radium 228	9056A_ORGFM_28D - Chloride, Fluoride, Sulfate	Total Metals - 6020B - (Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Li,Mo,Se,Tl) 7470A - Mercury	2540C_Calcd - TDS SM4500_H+ - pH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	D	N	D	N		
MW-1 - CCR	7/1/25	15:45	G	Water			X	X	X	X	X	X	5	
MW-1RD - CCR	7/1/25	15:40	G	Water			X	X	X	X	X	X	5	
MW-2R - CCR	7/1/25	17:00	G	Water			X	X	X	X	X	X	5	
MW-3 - CCR	7/2/25	8:05	G	Water			X	X	X	X	X	X	5	
MW-3R - CCR	7/2/25	7:50	G	Water			X	X	X	X	X	X	5	
MW-3RD - CCR	7/2/25	9:35	G	Water		Y	X	X	X	X	X	X	5	MS/MSD
MW-4 - CCR	7/2/25	10:05	G	Water			X	X	X	X	X	X	5	
MW-2RD - CCR	7/1/25	16:50	G	Water			X	X	X	X	X	X	5	
Field Blank 1 - CCR	7/2/25	11:30	G	Water			X	X	X	X	X	X	5	
Duplicate 1 - CCR	7/2/25	—	G	Water			X	X	X	X	X	X	5	
Equipment Blank - CCR	7/2/25	11:40	G	Water			X	X	X	X	X	X	5	

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

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

Deliverable Requested I II III, IV Other (specify)

Special Instructions/QC Requirements.

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	7/2/25	CES		7/2/25 1324	Eurofins
Relinquished by:	7/2/25	Eurofins	BP	7/3/25 1415	ERFNS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks.

Ver: 01/16/2019

8/4/2025

Login Sample Receipt Checklist

Client: Waste Connections, Inc.

Job Number: 310-310191-1

Login Number: 310191
List Number: 1
Creator: Hirsch, Preston

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Tracer/Carrier Summary

Client: Waste Connections, Inc.
Project/Site: SKB Lansing CCR Monitoring

Job ID: 310-310191-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)
310-310191-1	MW-1 - CCR	90.4
310-310191-2	MW-1RD - CCR	88.4
310-310191-3	MW-2R - CCR	87.2
310-310191-4	MW-3 - CCR	93.7
310-310191-5	MW-3R - CCR	79.6
310-310191-6	MW-3RD - CCR	89.2
310-310191-6 MS	MW-3RD - CCR	82.6
310-310191-6 MSD	MW-3RD - CCR	84.6
310-310191-7	MW-4 - CCR	80.6
310-310191-8	MW-2RD - CCR	90.4
310-310191-9	Field Blank 1 - CCR	92.7
310-310191-10	Dup-1 - CCR	90.7
310-310191-11	Equipment Blank - CCR	87.2
LCS 160-726348/2-A	Lab Control Sample	86.9
MB 160-726348/1-A	Method Blank	86.9

Tracer/Carrier Legend

Ba = Barium

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)	Y (30-110)
310-310191-1	MW-1 - CCR	90.4	74.8
310-310191-2	MW-1RD - CCR	88.4	83.0
310-310191-3	MW-2R - CCR	87.2	77.4
310-310191-4	MW-3 - CCR	93.7	75.9
310-310191-5	MW-3R - CCR	79.6	79.3
310-310191-6	MW-3RD - CCR	89.2	82.6
310-310191-6 MS	MW-3RD - CCR	82.6	81.1
310-310191-6 MSD	MW-3RD - CCR	84.6	87.9
310-310191-7	MW-4 - CCR	80.6	82.2
310-310191-8	MW-2RD - CCR	90.4	78.9
310-310191-9	Field Blank 1 - CCR	92.7	86.7
310-310191-10	Dup-1 - CCR	90.7	91.6
310-310191-11	Equipment Blank - CCR	87.2	86.4
LCS 160-726349/2-A	Lab Control Sample	86.9	83.7
MB 160-726349/1-A	Method Blank	86.9	83.4

Tracer/Carrier Legend

Ba = Barium
Y = Y Carrier

Appendix C – Statistical Evaluation Data

1				**Background Statistics for Data Sets with Non-Detects**								
2			**User Selected Options**									
3			Date/Time of Computation	ProUCL 5.2 12/9/2025 12:38:07 PM								
4			From File	Outlier 2 2025.xls								
5			Full Precision	OFF								
6			Confidence Coefficient	95%								
7			Coverage	95%								
8			Different or Future K Observations	1								
9			Number of Bootstrap Operations	2000								
10												
11	**Antimony**											
12												
13						**General Statistics**							
14					Total Number of Observations	118			Number of Missing Observations	11		
15					Number of Distinct Observations	3						
16					Number of Detects	1			Number of Non-Detects	117		
17					Number of Distinct Detects	1			Number of Distinct Non-Detects	2		
18					Minimum Detect	3.6000E-4			Minimum Non-Detect	0.001		
19					Maximum Detect	3.6000E-4			Maximum Non-Detect	0.002		
20					Variance Detected	N/A			Percent Non-Detects	99.15%		
21					Mean Detected	3.6000E-4			SD Detected	N/A		
22					Mean of Detected Logged Data	-7.929			SD of Detected Logged Data	N/A		
23												
24					**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**							
25					**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**							
26												
27					**The data set for variable Antimony was not processed!**							
28												
29												
30	**Arsenic**											
31												
32						**General Statistics**							
33					Total Number of Observations	112			Number of Missing Observations	1		
34					Number of Distinct Observations	28						
35					Number of Detects	66			Number of Non-Detects	46		
36					Number of Distinct Detects	28			Number of Distinct Non-Detects	2		
37					Minimum Detect	0.001			Minimum Non-Detect	0.001		
38					Maximum Detect	0.0049			Maximum Non-Detect	0.002		
39					Variance Detected	9.6427E-7			Percent Non-Detects	41.07%		
40					Mean Detected	0.00264			SD Detected	9.8197E-4		
41					Mean of Detected Logged Data	-6.008			SD of Detected Logged Data	0.384		
42												
43						**Critical Values for Background Threshold Values (BTVs)**							
44					Tolerance Factor K (For UTL)	1.906			d2max (for USL)	3.248		
45												
46						**Nonparametric Distribution Free Background Statistics**							
47						**Data do not follow a Discernible Distribution**							
48												
49						**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
50					Order of Statistic, r	110			95% UTL with95% Coverage	0.0044		
51					Approx, f used to compute achieved CC	1.93			Approximate Actual Confidence Coefficient achieved by UTL	0.923		
52					Approximate Sample Size needed to achieve specified CC	93			95% UPL	0.00424		

53					95% USL	0.0049					95% KM Chebyshev UPL	0.00669
54												
55	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
56	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
57	and consists of observations collected from clean unimpacted locations.											
58	The use of USL tends to provide a balance between false positives and false negatives provided the data											
59	represents a background data set and when many onsite observations need to be compared with the BTV.											
60												
61	**Barium**											
62												
63	**General Statistics**											
64					Total Number of Observations	117					Number of Distinct Observations	29
65					Minimum	0.063					First Quartile	0.16
66					Second Largest	0.6					Median	0.19
67					Maximum	0.64					Third Quartile	0.23
68					Mean	0.233					SD	0.135
69					Coefficient of Variation	0.58					Skewness	1.9
70					Mean of logged Data	-1.577					SD of logged Data	0.464
71												
72	**Critical Values for Background Threshold Values (BTVs)**											
73					Tolerance Factor K (For UTL)	1.9					d2max (for USL)	3.262
74												
75	**Nonparametric Distribution Free Background Statistics**											
76	**Data do not follow a Discernible Distribution**											
77												
78	**Nonparametric Upper Limits for Background Threshold Values**											
79					Order of Statistic, order	116					95% UTL with 95% Coverage	0.6
80					Approx, f used to compute achieved CC	2.018					Approximate Actual Confidence Coefficient achieved by UTL	0.936
81											Approximate Sample Size needed to achieve specified CC	93
82					95% Percentile Bootstrap UTL with 95% Coverage	0.6					95% BCA Bootstrap UTL with 95% Coverage	0.57
83					95% UPL	0.571					90% Percentile	0.544
84					90% Chebyshev UPL	0.64					95% Percentile	0.57
85					95% Chebyshev UPL	0.825					99% Percentile	0.6
86					95% USL	0.64						
87												
88	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
89	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
90	and consists of observations collected from clean unimpacted locations.											
91	The use of USL tends to provide a balance between false positives and false negatives provided the data											
92	represents a background data set and when many onsite observations need to be compared with the BTV.											
93												
94	**Beryllium**											
95												
96	**General Statistics**											
97					Total Number of Observations	123					Number of Missing Observations	0
98					Number of Distinct Observations	6						
99					Number of Detects	3					Number of Non-Detects	120
100					Number of Distinct Detects	3					Number of Distinct Non-Detects	3
101					Minimum Detect	4.1000E-5					Minimum Non-Detect	7.0000E-4
102					Maximum Detect	1.6000E-4					Maximum Non-Detect	0.002
103					Variance Detected	3.5770E-9					Percent Non-Detects	97.56%
104					Mean Detected	9.7000E-5					SD Detected	5.9808E-5

105				Mean of Detected Logged Data		-9.386				SD of Detected Logged Data		0.684
106												
107						**Warning: Data set has only 3 Detected Values.**							
108						**This is not enough to compute meaningful or reliable statistics and estimates.**						
109												
110												
111						**Critical Values for Background Threshold Values (BTVs)**							
112				Tolerance Factor K (For UTL)		1.893				d2max (for USL)		3.279
113												
114						**Normal GOF Test on Detects Only**							
115				Shapiro Wilk Test Statistic		0.99				**Shapiro Wilk GOF Test**		
116				1% Shapiro Wilk Critical Value		0.753				Detected Data appear Normal at 1% Significance Level		
117				Lilliefors Test Statistic		0.213				**Lilliefors GOF Test**		
118				1% Lilliefors Critical Value		0.429				Detected Data appear Normal at 1% Significance Level		
119						**Detected Data appear Normal at 1% Significance Level**							
120												
121						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**							
122				KM Mean		9.7000E-5				KM SD		4.8833E-5
123				95% UTL95% Coverage		1.8946E-4				95% KM UPL (t)		1.7827E-4
124				90% KM Percentile (z)		1.5958E-4				95% KM Percentile (z)		1.7732E-4
125				99% KM Percentile (z)		2.1060E-4				95% KM USL		2.5711E-4
126												
127						**DL/2 Substitution Background Statistics Assuming Normal Distribution**							
128				Mean		4.3854E-4				SD		1.7136E-4
129				95% UTL95% Coverage		7.6298E-4				95% UPL (t)		7.2371E-4
130				90% Percentile (z)		6.5815E-4				95% Percentile (z)		7.2040E-4
131				99% Percentile (z)		8.3718E-4				95% USL		0.001
132						**DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons**							
133						Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.						
134						Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers						
135						and consists of observations collected from clean unimpacted locations.						
136						The use of USL tends to provide a balance between false positives and false negatives provided the data						
137						represents a background data set and when many onsite observations need to be compared with the BTV.						
138												
139	**Cadmium**											
140												
141						**General Statistics**						
142				Total Number of Observations		103				Number of Missing Observations		3
143				Number of Distinct Observations		10						
144				Number of Detects		11				Number of Non-Detects		92
145				Number of Distinct Detects		8				Number of Distinct Non-Detects		3
146				Minimum Detect		1.3000E-4				Minimum Non-Detect		1.0000E-4
147				Maximum Detect		6.8000E-4				Maximum Non-Detect		5.0000E-4
148				Variance Detected		4.2956E-8				Percent Non-Detects		89.32%
149				Mean Detected		3.3182E-4				SD Detected		2.0726E-4
150				Mean of Detected Logged Data		-8.18				SD of Detected Logged Data		0.603
151												
152						**Critical Values for Background Threshold Values (BTVs)**							
153				Tolerance Factor K (For UTL)		1.919				d2max (for USL)		3.22
154												
155						**Normal GOF Test on Detects Only**							
156				Shapiro Wilk Test Statistic		0.835				**Shapiro Wilk GOF Test**		

157				1% Shapiro Wilk Critical Value	0.792	Detected Data appear Normal at 1% Significance Level						
158				Lilliefors Test Statistic	0.272	**Lilliefors GOF Test**						
159				1% Lilliefors Critical Value	0.291	Detected Data appear Normal at 1% Significance Level						
160	**Detected Data appear Normal at 1% Significance Level**											
161												
162	**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**											
163				KM Mean	1.5117E-4	KM SD	9.9149E-5					
164				95% UTL95% Coverage	3.4143E-4	95% KM UPL (t)	3.1655E-4					
165				90% KM Percentile (z)	2.7824E-4	95% KM Percentile (z)	3.1426E-4					
166				99% KM Percentile (z)	3.8183E-4	95% KM USL	4.7039E-4					
167												
168	**DL/2 Substitution Background Statistics Assuming Normal Distribution**											
169				Mean	1.9903E-4	SD	1.0793E-4					
170				95% UTL95% Coverage	4.0613E-4	95% UPL (t)	3.7905E-4					
171				90% Percentile (z)	3.3734E-4	95% Percentile (z)	3.7655E-4					
172				99% Percentile (z)	4.5010E-4	95% USL	5.4650E-4					
173												
174												
175	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
176	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
177	and consists of observations collected from clean unimpacted locations.											
178	The use of USL tends to provide a balance between false positives and false negatives provided the data											
179	represents a background data set and when many onsite observations need to be compared with the BTV.											
180												
181	**Chromium (total)**											
182												
183	**General Statistics**											
184				Total Number of Observations	104	Number of Missing Observations	1					
185				Number of Distinct Observations	2							
186				Number of Detects	1	Number of Non-Detects	103					
187				Number of Distinct Detects	1	Number of Distinct Non-Detects	2					
188				Minimum Detect	0.004	Minimum Non-Detect	0.004					
189				Maximum Detect	0.004	Maximum Non-Detect	0.005					
190				Variance Detected	N/A	Percent Non-Detects	99.04%					
191				Mean Detected	0.004	SD Detected	N/A					
192				Mean of Detected Logged Data	-5.521	SD of Detected Logged Data	N/A					
193												
194	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
195	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
196												
197	**The data set for variable Chromium (total) was not processed!**											
198												
199												
200	**Cobalt**											
201												
202	**General Statistics**											
203				Total Number of Observations	134	Number of Missing Observations	3					
204				Number of Distinct Observations	58							
205				Number of Detects	93	Number of Non-Detects	41					
206				Number of Distinct Detects	56	Number of Distinct Non-Detects	3					
207				Minimum Detect	3.0000E-4	Minimum Non-Detect	3.0000E-4					
208				Maximum Detect	0.0056	Maximum Non-Detect	0.004					

	A	B	C	D	E	F	G	H	I	J	K	L
209					Variance Detected	2.2257E-6				Percent Non-Detects		30.6%
210					Mean Detected	0.00173				SD Detected		0.00149
211					Mean of Detected Logged Data	-6.685				SD of Detected Logged Data		0.8
212												
213					**Critical Values for Background Threshold Values (BTVs)**							
214					Tolerance Factor K (For UTL)	1.882				d2max (for USL)		3.307
215												
216					**Nonparametric Distribution Free Background Statistics**							
217					**Data do not follow a Discernible Distribution**							
218												
219					**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
220					Order of Statistic, r	131				95% UTL with95% Coverage		0.0055
221					Approx, f used to compute achieved CC	1.724				Approximate Actual Confidence Coefficient achieved by UTL		0.907
222					Approximate Sample Size needed to achieve specified CC	124				95% UPL		0.00515
223					95% USL	0.0056				95% KM Chebyshev UPL		0.00741
224												
225					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
226					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
227					and consists of observations collected from clean unimpacted locations.							
228					The use of USL tends to provide a balance between false positives and false negatives provided the data							
229					represents a background data set and when many onsite observations need to be compared with the BTV.							
230												
231	**Lead**											
232												
233					**General Statistics**							
234					Total Number of Observations	102				Number of Missing Observations		2
235					Number of Distinct Observations	6						
236					Number of Detects	6				Number of Non-Detects		96
237					Number of Distinct Detects	5				Number of Distinct Non-Detects		2
238					Minimum Detect	6.2000E-4				Minimum Non-Detect		5.0000E-4
239					Maximum Detect	0.012				Maximum Non-Detect		0.01
240					Variance Detected	2.4730E-5				Percent Non-Detects		94.12%
241					Mean Detected	0.00759				SD Detected		0.00497
242					Mean of Detected Logged Data	-5.299				SD of Detected Logged Data		1.236
243												
244					**Critical Values for Background Threshold Values (BTVs)**							
245					Tolerance Factor K (For UTL)	1.92				d2max (for USL)		3.216
246												
247					**Normal GOF Test on Detects Only**							
248					Shapiro Wilk Test Statistic	0.788				**Shapiro Wilk GOF Test**		
249					1% Shapiro Wilk Critical Value	0.713				Detected Data appear Normal at 1% Significance Level		
250					Lilliefors Test Statistic	0.353				**Lilliefors GOF Test**		
251					1% Lilliefors Critical Value	0.373				Detected Data appear Normal at 1% Significance Level		
252					**Detected Data appear Normal at 1% Significance Level**							
253												
254					**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**							
255					KM Mean	9.3303E-4				KM SD		0.002
256					95% UTL95% Coverage	0.00477				95% KM UPL (t)		0.00427
257					90% KM Percentile (z)	0.0035				95% KM Percentile (z)		0.00422
258					99% KM Percentile (z)	0.00559				95% KM USL		0.00737
259												
260					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Mercury

General Statistics

Total Number of Observations	109	Number of Missing Observations	0
Number of Distinct Observations	1		
Number of Detects	0	Number of Non-Detects	109
Number of Distinct Detects	0	Number of Distinct Non-Detects	1
Minimum Detect	N/A	Minimum Non-Detect	2.0000E-4
Maximum Detect	N/A	Maximum Non-Detect	2.0000E-4
Variance Detected	N/A	Percent Non-Detects	100%
Mean Detected	N/A	SD Detected	N/A
Mean of Detected Logged Data	N/A	SD of Detected Logged Data	N/A

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!

Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!

The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Mercury was not processed!

Molybdenum

General Statistics

Total Number of Observations	134	Number of Missing Observations	1
Number of Distinct Observations	44		
Number of Detects	99	Number of Non-Detects	35
Number of Distinct Detects	41	Number of Distinct Non-Detects	5
Minimum Detect	0.0011	Minimum Non-Detect	0.001
Maximum Detect	0.0083	Maximum Non-Detect	0.01
Variance Detected	2.1222E-6	Percent Non-Detects	26.12%
Mean Detected	0.00308	SD Detected	0.00146
Mean of Detected Logged Data	-5.877	SD of Detected Logged Data	0.431

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	1.882	d2max (for USL)	3.307

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.971	**Shapiro Wilk GOF Test**
10% Shapiro Wilk P Value	0.172	Detected Data appear Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.07	**Lilliefors GOF Test**
10% Lilliefors Critical Value	0.0817	Detected Data appear Lognormal at 10% Significance Level

Detected Data appear Lognormal at 10% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.00269	Mean in Log Scale	-6.052
SD in Original Scale	0.00147	SD in Log Scale	0.521
95% UTL95% Coverage	0.00627	95% BCA UTL95% Coverage	0.00668

313				95% Bootstrap (%) UTL95% Coverage		0.007					95% UPL (t)	0.00559
314					90% Percentile (z)	0.00459					95% Percentile (z)	0.00554
315					99% Percentile (z)	0.00791					95% USL	0.0132
316												
317	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
318					KM Mean of Logged Data	-6.05					95% KM UTL (Lognormal)95% Coverage	0.0063
319					KM SD of Logged Data	0.523					95% KM UPL (Lognormal)	0.00562
320					95% KM Percentile Lognormal (z)	0.00557					95% KM USL (Lognormal)	0.0133
321												
322												
323	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
324	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
325	and consists of observations collected from clean unimpacted locations.											
326	The use of USL tends to provide a balance between false positives and false negatives provided the data											
327	represents a background data set and when many onsite observations need to be compared with the BTV.											
328												
329	**Selenium**											
330												
331	**General Statistics**											
332					Total Number of Observations	135					Number of Missing Observations	2
333					Number of Distinct Observations	16						
334					Number of Detects	19					Number of Non-Detects	116
335					Number of Distinct Detects	13					Number of Distinct Non-Detects	3
336					Minimum Detect	0.0011					Minimum Non-Detect	0.001
337					Maximum Detect	0.029					Maximum Non-Detect	0.025
338					Variance Detected	9.5477E-5					Percent Non-Detects	85.93%
339					Mean Detected	0.00934					SD Detected	0.00977
340					Mean of Detected Logged Data	-5.336					SD of Detected Logged Data	1.264
341												
342	**Critical Values for Background Threshold Values (BTVs)**											
343					Tolerance Factor K (For UTL)	1.881					d2max (for USL)	3.309
344												
345	**Nonparametric Distribution Free Background Statistics**											
346	**Data do not follow a Discernible Distribution**											
347												
348	**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**											
349					Order of Statistic, r	132					95% UTL with95% Coverage	0.025
350					Approx, f used to compute achieved CC	1.737					Approximate Actual Confidence Coefficient achieved by UTL	0.91
351					Approximate Sample Size needed to achieve specified CC	124					95% UPL	0.025
352					95% USL	0.029					95% KM Chebyshev UPL	0.0226
353												
354	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
355	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
356	and consists of observations collected from clean unimpacted locations.											
357	The use of USL tends to provide a balance between false positives and false negatives provided the data											
358	represents a background data set and when many onsite observations need to be compared with the BTV.											
359												
360	**Thallium**											
361												
362	**General Statistics**											
363					Total Number of Observations	111					Number of Missing Observations	9
364					Number of Distinct Observations	4						

365					Number of Detects	2					Number of Non-Detects	109
366					Number of Distinct Detects	2					Number of Distinct Non-Detects	2
367					Minimum Detect	5.6000E-5					Minimum Non-Detect	2.0000E-4
368					Maximum Detect	5.8000E-5					Maximum Non-Detect	0.001
369					Variance Detected	2.000E-12					Percent Non-Detects	98.2%
370					Mean Detected	5.7000E-5					SD Detected	1.4142E-6
371					Mean of Detected Logged Data	-9.773					SD of Detected Logged Data	0.0248
372												
373					**Warning: Data set has only 2 Detected Values.**							
374					**This is not enough to compute meaningful or reliable statistics and estimates.**							
375												
376												
377	**Calcium**											
378												
379	**General Statistics**											
380					Total Number of Observations	143					Number of Distinct Observations	94
381					Minimum	56.7					First Quartile	123
382					Second Largest	242					Median	156
383					Maximum	252					Third Quartile	203.5
384					Mean	158.1					SD	51.28
385					Coefficient of Variation	0.324					Skewness	-0.118
386					Mean of logged Data	5.003					SD of logged Data	0.363
387												
388					**Critical Values for Background Threshold Values (BTVs)**							
389					Tolerance Factor K (For UTL)	1.874					d2max (for USL)	3.328
390					**Nonparametric Distribution Free Background Statistics**							
391												
392					**Data do not follow a Discernible Distribution**							
393												
394					**Nonparametric Upper Limits for Background Threshold Values**							
395					Order of Statistic, order	141					95% UTL with 95% Coverage	241
396					Approx, f used to compute achieved CC	1.842					Approximate Actual Confidence Coefficient achieved by UTL	0.931
397											Approximate Sample Size needed to achieve specified CC	124
398					95% Percentile Bootstrap UTL with 95% Coverage	236					95% BCA Bootstrap UTL with 95% Coverage	232.7
399					95% UPL	229.6					90% Percentile	225.4
400					90% Chebyshev UPL	312.4					95% Percentile	228
401					95% Chebyshev UPL	382.4					99% Percentile	241.6
402					95% USL	252						
403												
404					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
405					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
406					and consists of observations collected from clean unimpacted locations.							
407					The use of USL tends to provide a balance between false positives and false negatives provided the data							
408					represents a background data set and when many onsite observations need to be compared with the BTV.							
409												
410	**Chloride**											
411												
412	**General Statistics**											
413					Total Number of Observations	87					Number of Distinct Observations	70
414					Minimum	15.4					First Quartile	23
415					Second Largest	100					Median	30.7
416					Maximum	105					Third Quartile	40.7

417					Mean	37.92					SD	22.22
418					Coefficient of Variation	0.586					Skewness	1.533
419					Mean of logged Data	3.502					SD of logged Data	0.495
420												
421					**Critical Values for Background Threshold Values (BTVs)**							
422					Tolerance Factor K (For UTL)	1.946					d2max (for USL)	3.161
423												
424					**Nonparametric Distribution Free Background Statistics**							
425					**Data do not follow a Discernible Distribution**							
426												
427					**Nonparametric Upper Limits for Background Threshold Values**							
428					Order of Statistic, order	87					95% UTL with 95% Coverage	105
429					Approx, f used to compute achieved CC	2.263					Approximate Actual Confidence Coefficient achieved by UTL	0.936
430											Approximate Sample Size needed to achieve specified CC	59
431					95% Percentile Bootstrap UTL with 95% Coverage	97.2					95% BCA Bootstrap UTL with 95% Coverage	98.5
432					95% UPL	94.6					90% Percentile	73.8
433					90% Chebyshev UPL	104.9					95% Percentile	91.57
434					95% Chebyshev UPL	135.3					99% Percentile	100.7
435					95% USL	105						
436												
437					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
438					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
439					and consists of observations collected from clean unimpacted locations.							
440					The use of USL tends to provide a balance between false positives and false negatives provided the data							
441					represents a background data set and when many onsite observations need to be compared with the BTV.							
442												
443	**Fluoride**											
444												
445					**General Statistics**							
446					Total Number of Observations	141					Number of Missing Observations	0
447					Number of Distinct Observations	18						
448					Number of Detects	30					Number of Non-Detects	111
449					Number of Distinct Detects	16					Number of Distinct Non-Detects	4
450					Minimum Detect	0.087					Minimum Non-Detect	0.2
451					Maximum Detect	0.33					Maximum Non-Detect	1
452					Variance Detected	0.00331					Percent Non-Detects	78.72%
453					Mean Detected	0.215					SD Detected	0.0575
454					Mean of Detected Logged Data	-1.576					SD of Detected Logged Data	0.309
455												
456					**Critical Values for Background Threshold Values (BTVs)**							
457					Tolerance Factor K (For UTL)	1.875					d2max (for USL)	3.323
458												
459					**Normal GOF Test on Detects Only**							
460					Shapiro Wilk Test Statistic	0.975					**Shapiro Wilk GOF Test**	
461					1% Shapiro Wilk Critical Value	0.9					Detected Data appear Normal at 1% Significance Level	
462					Lilliefors Test Statistic	0.0999					**Lilliefors GOF Test**	
463					1% Lilliefors Critical Value	0.185					Detected Data appear Normal at 1% Significance Level	
464					**Detected Data appear Normal at 1% Significance Level**							
465												
466					**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**							
467					KM Mean	0.191					KM SD	0.0497
468					95% UTL95% Coverage	0.285					95% KM UPL (t)	0.274

469				90% KM Percentile (z)	0.255				95% KM Percentile (z)		0.273
470				99% KM Percentile (z)	0.307				95% KM USL		0.357
471											
472	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.										
473	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers										
474	and consists of observations collected from clean unimpacted locations.										
475	The use of USL tends to provide a balance between false positives and false negatives provided the data										
476	represents a background data set and when many onsite observations need to be compared with the BTV.										
477											
478	**Lithium**										
479											
480	**General Statistics**										
481				Total Number of Observations	136				Number of Missing Observations		1
482				Number of Distinct Observations	15						
483				Number of Detects	29				Number of Non-Detects		107
484				Number of Distinct Detects	14				Number of Distinct Non-Detects		2
485				Minimum Detect	0.01				Minimum Non-Detect		0.01
486				Maximum Detect	0.046				Maximum Non-Detect		0.03
487				Variance Detected	7.7099E-5				Percent Non-Detects		78.68%
488				Mean Detected	0.0172				SD Detected		0.00878
489				Mean of Detected Logged Data	-4.151				SD of Detected Logged Data		0.395
490											
491	**Critical Values for Background Threshold Values (BTVs)**										
492				Tolerance Factor K (For UTL)	1.88				d2max (for USL)		3.311
493											
494	**Nonparametric Distribution Free Background Statistics**										
495	**Data do not follow a Discernible Distribution**										
496											
497	**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**										
498				Order of Statistic, r	133				95% UTL with95% Coverage		0.033
499				Approx, f used to compute achieved CC	1.75				Approximate Actual Confidence Coefficient achieved by UTL		0.913
500				Approximate Sample Size needed to achieve specified CC	124				95% UPL		0.03
501				95% USL	0.046				95% KM Chebyshev UPL		0.0365
502											
503	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.										
504	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers										
505	and consists of observations collected from clean unimpacted locations.										
506	The use of USL tends to provide a balance between false positives and false negatives provided the data										
507	represents a background data set and when many onsite observations need to be compared with the BTV.										
508											
509											
510	**Radium 228**										
511											
512	**General Statistics**										
513				Total Number of Observations	119				Number of Missing Observations		1
514				Number of Distinct Observations	108						
515				Number of Detects	81				Number of Non-Detects		38
516				Number of Distinct Detects	73				Number of Distinct Non-Detects		37
517				Minimum Detect	0.346				Minimum Non-Detect		0.297
518				Maximum Detect	1.58				Maximum Non-Detect		1.08
519				Variance Detected	0.0695				Percent Non-Detects		31.93%
520				Mean Detected	0.762				SD Detected		0.264

521	Mean of Detected Logged Data				-0.327	SD of Detected Logged Data						0.333
522												
523	**Critical Values for Background Threshold Values (BTVs)**											
524	Tolerance Factor K (For UTL)				1.898	d2max (for USL)						3.268
525												
526	**Gamma GOF Tests on Detected Observations Only**											
527	A-D Test Statistic				0.448	**Anderson-Darling GOF Test**						
528	5% A-D Critical Value				0.751	Detected data appear Gamma Distributed at 5% Significance Level						
529	K-S Test Statistic				0.0871	**Kolmogorov-Smirnov GOF**						
530	5% K-S Critical Value				0.0992	Detected data appear Gamma Distributed at 5% Significance Level						
531	**Detected data appear Gamma Distributed at 5% Significance Level**											
532												
533	**Gamma Statistics on Detected Data Only**											
534	k hat (MLE)				9.196	k star (bias corrected MLE)						8.863
535	Theta hat (MLE)				0.0828	Theta star (bias corrected MLE)						0.0859
536	nu hat (MLE)				1490	nu star (bias corrected)						1436
537	MLE Mean (bias corrected)				0.762							
538	MLE Sd (bias corrected)				0.256	95% Percentile of Chisquare (2kstar)						28.52
539												
540	**Gamma ROS Statistics using Imputed Non-Detects**											
541	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
542	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
543	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
544	This is especially true when the sample size is small.											
545	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
546	Minimum				0.152	Mean						0.638
547	Maximum				1.58	Median						0.579
548	SD				0.287	CV						0.45
549	k hat (MLE)				5.301	k star (bias corrected MLE)						5.173
550	Theta hat (MLE)				0.12	Theta star (bias corrected MLE)						0.123
551	nu hat (MLE)				1262	nu star (bias corrected)						1231
552	MLE Mean (bias corrected)				0.638	MLE Sd (bias corrected)						0.281
553	95% Percentile of Chisquare (2kstar)				18.78	90% Percentile						1.014
554	95% Percentile				1.158	99% Percentile						1.464
555	**The following statistics are computed using Gamma ROS Statistics on Imputed Data**											
556	**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**											
557				WH	HW					WH	HW	
558	95% Approx. Gamma UTL with 95% Coverage			1.26	1.278	95% Approx. Gamma UPL				1.161	1.172	
559	95% Gamma USL			1.961	2.055							
560												
561	**Estimates of Gamma Parameters using KM Estimates**											
562	Mean (KM)				0.649	SD (KM)						0.279
563	Variance (KM)				0.0781	SE of Mean (KM)						0.0265
564	k hat (KM)				5.388	k star (KM)						5.258
565	nu hat (KM)				1282	nu star (KM)						1251
566	theta hat (KM)				0.12	theta star (KM)						0.123
567	80% gamma percentile (KM)				0.867	90% gamma percentile (KM)						1.027
568	95% gamma percentile (KM)				1.173	99% gamma percentile (KM)						1.48
569												
570	**The following statistics are computed using gamma distribution and KM estimates**											
571	**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**											
572				WH	HW					WH	HW	

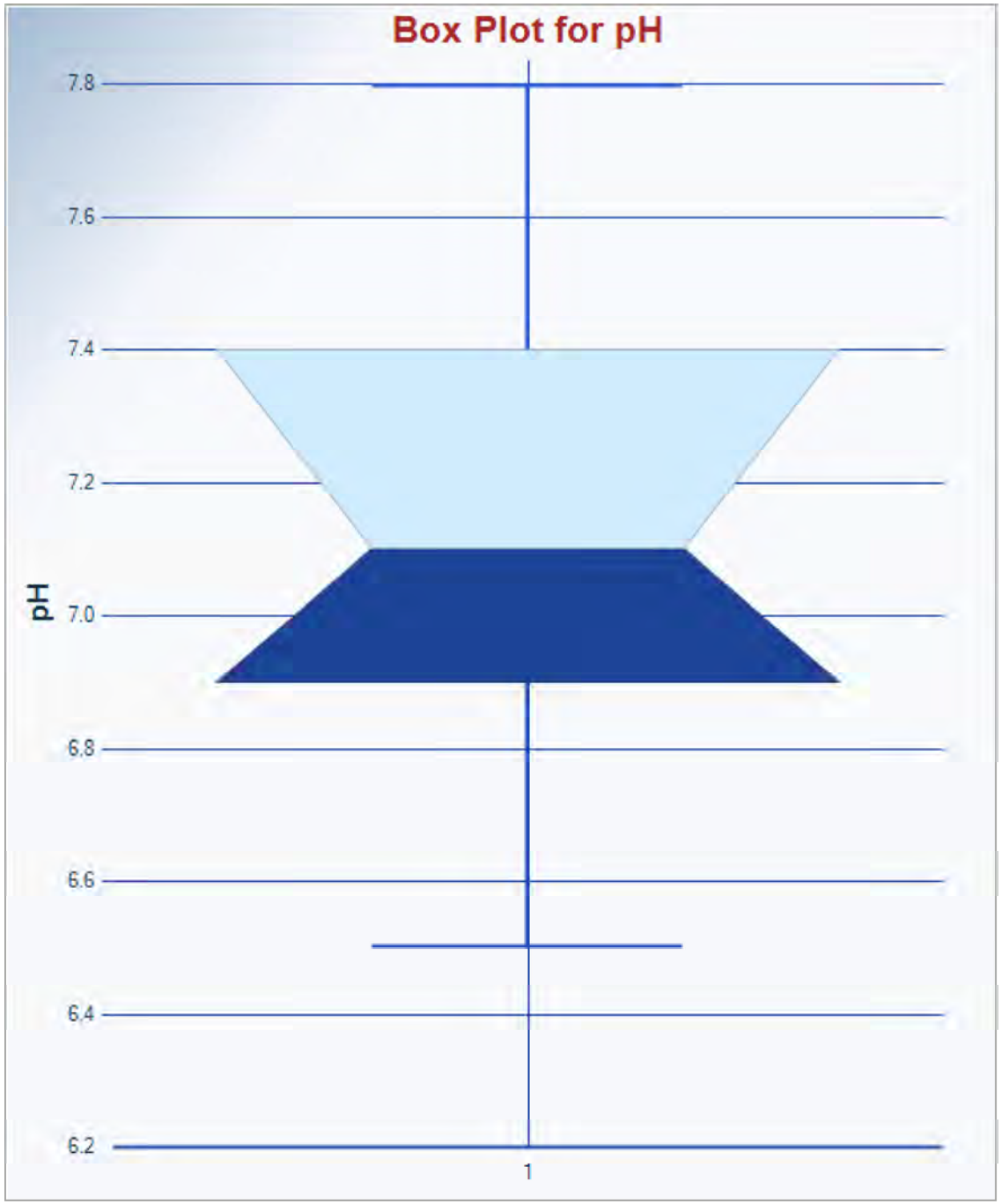
	A	B	C	D	E	F	G	H	I	J	K	L
573	95% Approx. Gamma UTL with 95% Coverage				1.242	1.255	95% Approx. Gamma UPL				1.148	1.156
574	95% KM Gamma Percentile				1.14	1.148	95% Gamma USL				1.896	1.974
575												
576	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
577	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
578	and consists of observations collected from clean unimpacted locations.											
579	The use of USL tends to provide a balance between false positives and false negatives provided the data											
580	represents a background data set and when many onsite observations need to be compared with the BTV.											
581												
582	**Total Dissolved Solids**											
583												
584	**General Statistics**											
585	Total Number of Observations				141		Number of Distinct Observations				110	
586							Number of Missing Observations				3	
587	Minimum				305		First Quartile				528	
588	Second Largest				1380		Median				638	
589	Maximum				1380		Third Quartile				847	
590	Mean				697.1		SD				248.7	
591	Coefficient of Variation				0.357		Skewness				0.525	
592	Mean of logged Data				6.482		SD of logged Data				0.368	
593												
594	**Critical Values for Background Threshold Values (BTVs)**											
595	Tolerance Factor K (For UTL)				1.875		d2max (for USL)				3.323	
596												
597												
598	**Nonparametric Distribution Free Background Statistics**											
599	**Data do not follow a Discernible Distribution**											
600												
601	**Nonparametric Upper Limits for Background Threshold Values**											
602	Order of Statistic, order				139		95% UTL with 95% Coverage				1300	
603	Approx, f used to compute achieved CC				1.816		Approximate Actual Confidence Coefficient achieved by UTL				0.926	
604							Approximate Sample Size needed to achieve specified CC				124	
605	95% Percentile Bootstrap UTL with 95% Coverage				1240		95% BCA Bootstrap UTL with 95% Coverage				1100	
606	95% UPL				1163		90% Percentile				1060	
607	90% Chebyshev UPL				1446		95% Percentile				1100	
608	95% Chebyshev UPL				1785		99% Percentile				1348	
609	95% USL				1380							
610												
611	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
612	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
613	and consists of observations collected from clean unimpacted locations.											
614	The use of USL tends to provide a balance between false positives and false negatives provided the data											
615	represents a background data set and when many onsite observations need to be compared with the BTV.											
616												
617	**Sulfate as SO4**											
618												
619	**General Statistics**											
620	Total Number of Observations				94		Number of Missing Observations				0	
621	Number of Distinct Observations				85							
622	Number of Detects				92		Number of Non-Detects				2	
623	Number of Distinct Detects				83		Number of Distinct Non-Detects				2	
624	Minimum Detect				1.8		Minimum Non-Detect				81.3	

625					Maximum Detect	270					Maximum Non-Detect	117
626					Variance Detected	4337					Percent Non-Detects	2.128%
627					Mean Detected	82.18					SD Detected	65.85
628					Mean of Detected Logged Data	4.045					SD of Detected Logged Data	0.971
629												
630	**Critical Values for Background Threshold Values (BTVs)**											
631					Tolerance Factor K (For UTL)	1.933					d2max (for USL)	3.188
632	**Gamma GOF Tests on Detected Observations Only**											
633					A-D Test Statistic	0.73	**Anderson-Darling GOF Test**					
634					5% A-D Critical Value	0.771	Detected data appear Gamma Distributed at 5% Significance Level					
635					K-S Test Statistic	0.0837	**Kolmogorov-Smirnov GOF**					
636					5% K-S Critical Value	0.095	Detected data appear Gamma Distributed at 5% Significance Level					
637	**Detected data appear Gamma Distributed at 5% Significance Level**											
638												
639	**Gamma Statistics on Detected Data Only**											
640					k hat (MLE)	1.517					k star (bias corrected MLE)	1.475
641					Theta hat (MLE)	54.17					Theta star (bias corrected MLE)	55.72
642					nu hat (MLE)	279.2					nu star (bias corrected)	271.4
643					MLE Mean (bias corrected)	82.18						
644					MLE Sd (bias corrected)	67.67					95% Percentile of Chisquare (2kstar)	7.728
645												
646	**Gamma ROS Statistics using Imputed Non-Detects**											
647	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
648	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
649	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
650	This is especially true when the sample size is small.											
651	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
652					Minimum	1.8					Mean	81.44
653					Maximum	270					Median	61.5
654					SD	65.34					CV	0.802
655					k hat (MLE)	1.537					k star (bias corrected MLE)	1.495
656					Theta hat (MLE)	53					Theta star (bias corrected MLE)	54.49
657					nu hat (MLE)	288.9					nu star (bias corrected)	281
658					MLE Mean (bias corrected)	81.44					MLE Sd (bias corrected)	66.62
659					95% Percentile of Chisquare (2kstar)	7.796					90% Percentile	169.9
660					95% Percentile	212.4					99% Percentile	308.5
661	**The following statistics are computed using Gamma ROS Statistics on Imputed Data**											
662	**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**											
663						WH	HW				WH	HW
664					95% Approx. Gamma UTL with 95% Coverage	245.8	260.8	95% Approx. Gamma UPL			211.7	221
665					95% Gamma USL	459.3	529.4					
666												
667	**Estimates of Gamma Parameters using KM Estimates**											
668					Mean (KM)	81.48					SD (KM)	65.08
669					Variance (KM)	4236					SE of Mean (KM)	6.761
670					k hat (KM)	1.567					k star (KM)	1.524
671					nu hat (KM)	294.6					nu star (KM)	286.6
672					theta hat (KM)	51.99					theta star (KM)	53.45
673					80% gamma percentile (KM)	125.8					90% gamma percentile (KM)	169.1
674					95% gamma percentile (KM)	211.1					99% gamma percentile (KM)	305.8
675												
676	**The following statistics are computed using gamma distribution and KM estimates**											

	A	B	C	D	E	F	G	H	I	J	K	L
677	**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**											
678					WH	HW					WH	HW
679	95% Approx. Gamma UTL with 95% Coverage				245.6	260.8	95% Approx. Gamma UPL				211.5	220.9
680	95% KM Gamma Percentile				208.4	217.3	95% Gamma USL				459.2	529.8
681												
682												
683	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
684	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
685	and consists of observations collected from clean unimpacted locations.											
686	The use of USL tends to provide a balance between false positives and false negatives provided the data											
687	represents a background data set and when many onsite observations need to be compared with the BTV.											
688												
689	**Boron**											
690												
691	**General Statistics**											
692	Total Number of Observations				103		Number of Missing Observations				3	
693	Number of Distinct Observations				48							
694	Number of Detects				72		Number of Non-Detects				31	
695	Number of Distinct Detects				48		Number of Distinct Non-Detects				2	
696	Minimum Detect				0.012		Minimum Non-Detect				0.02	
697	Maximum Detect				0.94		Maximum Non-Detect				0.1	
698	Variance Detected				0.0347		Percent Non-Detects				30.1%	
699	Mean Detected				0.209		SD Detected				0.186	
700	Mean of Detected Logged Data				-2.021		SD of Detected Logged Data				1.05	
701												
702	**Critical Values for Background Threshold Values (BTVs)**											
703	Tolerance Factor K (For UTL)				1.919		d2max (for USL)				3.22	
704												
705	**Nonparametric Distribution Free Background Statistics**											
706	**Data do not follow a Discernible Distribution**											
707												
708	**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**											
709	Order of Statistic, r				101		95% UTL with95% Coverage				0.68	
710	Approx, f used to compute achieved CC				1.772		Approximate Actual Confidence Coefficient achieved by UTL				0.894	
711	Approximate Sample Size needed to achieve specified CC				93		95% UPL				0.5	
712	95% USL				0.94		95% KM Chebyshev UPL				0.926	
713												
714	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
715	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
716	and consists of observations collected from clean unimpacted locations.											
717	The use of USL tends to provide a balance between false positives and false negatives provided the data											
718	represents a background data set and when many onsite observations need to be compared with the BTV.											
719												

1				**Background Statistics for Data Sets with Non-Detects**								
2			**User Selected Options**									
3			Date/Time of Computation	ProUCL 5.2 12/9/2025 1:24:57 PM								
4			From File	Outlier 2 2025.xls								
5			Full Precision	OFF								
6			Confidence Coefficient	95%								
7			Coverage	95%								
8			Different or Future K Observations	1								
9			Number of Bootstrap Operations	2000								
10												
11	**Radium (226)**											
12												
13						**General Statistics**						
14					Total Number of Observations	116			Number of Missing Observations	5		
15					Number of Distinct Observations	101						
16					Number of Detects	92			Number of Non-Detects	24		
17					Number of Distinct Detects	82			Number of Distinct Non-Detects	21		
18					Minimum Detect	0.101			Minimum Non-Detect	0.0816		
19					Maximum Detect	0.78			Maximum Non-Detect	0.583		
20					Variance Detected	0.0277			Percent Non-Detects	20.69%		
21					Mean Detected	0.431			SD Detected	0.166		
22					Mean of Detected Logged Data	-0.927			SD of Detected Logged Data	0.434		
23												
24						**Critical Values for Background Threshold Values (BTVs)**							
25					Tolerance Factor K (For UTL)	1.901			d2max (for USL)	3.259		
26												
27						**Normal GOF Test on Detects Only**							
28					Shapiro Wilk Test Statistic	0.961			**Normal GOF Test on Detected Observations Only**			
29					1% Shapiro Wilk P Value	0.0398			Detected Data appear Normal at 1% Significance Level			
30					Lilliefors Test Statistic	0.0713			**Lilliefors GOF Test**			
31					1% Lilliefors Critical Value	0.107			Detected Data appear Normal at 1% Significance Level			
32						**Detected Data appear Normal at 1% Significance Level**						
33												
34						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**						
35					KM Mean	0.378			KM SD	0.186		
36					95% UTL95% Coverage	0.732			95% KM UPL (t)	0.688		
37					90% KM Percentile (z)	0.616			95% KM Percentile (z)	0.684		
38					99% KM Percentile (z)	0.811			95% KM USL	0.985		
39												
40												
41						Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.						
42						Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers						
43						and consists of observations collected from clean unimpacted locations.						
44						The use of USL tends to provide a balance between false positives and false negatives provided the data						
45						represents a background data set and when many onsite observations need to be compared with the BTV.						
46												
47	**pH**											
48												
49	**General Statistics**											
50					Total Number of Observations	100			Number of Distinct Observations	14		
51					Minimum	6.5			First Quartile	6.9		
52					Second Largest	7.8			Median	7.1		

53					Maximum	7.8					Third Quartile	7.4
54					Mean	7.124					SD	0.316
55					Coefficient of Variation	0.0444					Skewness	0.139
56					Mean of logged Data	1.962					SD of logged Data	0.0443
57												
58					**Critical Values for Background Threshold Values (BTVs)**							
59					Tolerance Factor K (For UTL)	1.923					d2max (for USL)	3.21
60												
61												
62					**Nonparametric Upper Limits for Background Threshold Values**							
63					Order of Statistic, order	99					95% UTL with 95% Coverage	7.8
64					Approx, f used to compute achieved CC	1.719					Approximate Actual Confidence Coefficient achieved by UTL	0.882
65											Approximate Sample Size needed to achieve specified CC	93
66					95% Percentile Bootstrap UTL with 95% Coverage	7.705					95% BCA Bootstrap UTL with 95% Coverage	7.7
67					95% UPL	7.695					90% Percentile	7.6
68					90% Chebyshev UPL	8.078					95% Percentile	7.605
69					95% Chebyshev UPL	8.509					99% Percentile	7.8
70					95% USL	7.8						
71												
72					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
73					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
74					and consists of observations collected from clean unimpacted locations.							
75					The use of USL tends to provide a balance between false positives and false negatives provided the data							
76					represents a background data set and when many onsite observations need to be compared with the BTV.							
77												


Box Plot for pH
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
pH
1