



411 6th Avenue SE, Suite 400
Cedar Rapids, IA 52401
(319) 365-9565
foth.com

May 31, 2024

Brian Rath, P.E.
Iowa Department of Natural Resources
6200 Park Avenue
Suite 200
Des Moines, IA 50321

RE: Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

Dear Brian Rath, P.E.:

On behalf of the Cedar Rapids Linn County Solid Waste Agency (Agency), Foth Infrastructure & Environment, LLC (Foth) is submitting the notification and placement of notice in the operating record for the Appendix II constituents detected, statistically significant increases (SSIs) over background, and statistically significant levels (SSLs) over the groundwater protection standard (GWPS) for the Spring 2024 semiannual statistical evaluation at Site 1. In accordance with "Unnumbered Amendment Regarding Semiannual Water Quality Reports," the field sampling forms, laboratory reports, and the statistical report associated with the March 2024 monitoring event will be submitted with the 2024 Annual Water Quality Report (AWQR).

1. Report Priority

The following request was submitted with the 2023 AWQR (Foth, 2024) and is awaiting the Iowa Department of Natural Resources (IDNR) review and approval.

- ◆ Amend Permit Special Provision X.10 and the leachate monitoring network by replacing W-212 with W-214 and removing W-217. Replacement of W-212 with W-214 will maintain adequate coverage since W-214 is located approximately 400 feet east of W-212 and will continue to monitor leachate elevations along the mid-central portion of the north side of Site 1. Removal of W-217 is recommended since it cannot be repaired or replaced at the same location, and there are no suitable replacement locations to provide coverage near the top of the landfill due to the construction and demolition debris filled there.

2. Summary of the Monitoring Networks and Sampling Schedules

A summary of the groundwater monitoring network and the status of the sampling schedules are outlined in Table 1 of Attachment 1.

In March 2024, semiannual corrective action, background, and delineation monitoring was conducted at upper bedrock wells MW-12, MW-13, MW-16, MW-17, MW-32, MW-37, and MW-

101A and deeper bedrock wells MW-14, MW-33, MW-38, MW-101B, and MW-109B. In accordance with Permit Amendment #16, annual monitoring at upper bedrock wells AW-1, AW-2, AW-3, AW-4, AW-5, MW-20, MW-21, MW-23, MW-24, MW-26, MW-28, MW-30, MW-34, MW-35, VP-3, VP-4, MW-105A, MW-106A, MW-107A, and MW-109A and at deeper bedrock wells AW-6, CRL-9, MW-11, MW-15, MW-18, MW-19, MW-22, MW-25, MW-31, MW-36, MW-102B, MW-104B, MW-105B, MW-107B, and MW-108B is scheduled for Fall 2024. Therefore, these locations were not monitored in March 2024.

The groundwater monitoring locations are depicted in Figure 1 of Attachment 2. Low-flow or no-purge sampling was continued during the March 2024 sampling event in accordance with the standard operating procedures provided in Appendix B of *Response to DNR Comments dated March 10, 2015* (Foth, 2015). The low-flow and no-purge sampling rates and equipment utilized will be identified on the field sampling forms submitted with the 2024 AWQR.

3. Appendix II Detections

The Appendix II constituents detected in the groundwater monitoring wells under the corrective action monitoring programs during the March 2024 sampling event are presented in Tables 2 and 3 of Attachment 1.

4. Groundwater Assessment, Corrective Action, and Delineation Monitoring SSIs and SSLs

Summaries of the corrective action and delineation monitoring SSIs and SSLs are provided in Tables 4 and 5 of Attachment 1. The future monitoring schedules are provided in Table 1 of Attachment 1.

5. References

Foth Infrastructure & Environment (Foth), 2015. *Response to DNR Comments dated March 10, 2015, Cedar Rapids/Linn County Solid Waste Agency Site 1, Permit No. 57-SDP-03-75C*. May 6. [Doc. #83348].

Foth, 2024. *2023 Annual Water Quality Report, Cedar Rapids Linn County Solid Waste Agency Site 1, IDNR Permit No. 57-DSP-03-75C*. January 23. [Doc. #108899].

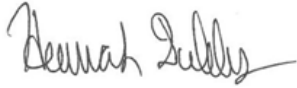
Iowa Department of Natural Resources (Matthew R. Phoenix, P.E.), Letter to Karmin McShane, 12 May 2016. "Cedar Rapids/Linn County Solid Waste Agency Sanitary Landfill (Site #1 – Cedar Rapids), 2015 Annual Water Quality Report and 2015 Statistical Notifications, Permit No. 57-SDP-03-75C." [Doc. #86317].

Iowa Department of Natural Resources (Matthew Graesch), Letter to Karmin McShane, 16 Apr 2019. "Cedar Rapids/Linn County Solid Waste Agency Sanitary Landfill #1, Permit No. 57-SDP-03-75C, 2019 Annual Water Quality Report (Doc No. 94330)." [Doc. #94910].

Thank you for your consideration of this matter. Please contact us at our numbers listed below if you have any questions or need additional information.

Sincerely,

Foth Infrastructure & Environment, LLC



Hannah Dubbs
Project Environmental Scientist
(319) 297-2055



Gina Wilming
Senior Project Manager
Iowa CGP #2099
(319) 297-2065

cc: Garrett Prestegard, Cedar Rapids Linn County Solid Waste Agency
Karmin McShane, Cedar Rapids Linn County Solid Waste Agency
IDNR Field Office #1
Foth Project File

Enclosures

Attachment 1: Tables
Attachment 2: Figure

Attachment 1
Tables

Table 1
Monitoring Program Implementation Schedule
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Monitoring Well | Monitoring Program | Sampling Date and Constituents ^(1,2) | Upcoming Sampling Dates and Constituents ⁽²⁾ | | Full Appendix II Sample Dates | |
|---|--------------------|---|---|------------------|---|------------|
| | | Mar. 2024 | Fall 2024 | Spring 2025 | Previously Collected | Next Event |
| Upper Bedrock Monitoring Locations | | | | | | |
| <i>Downgradient Monitoring Locations</i> | | | | | | |
| AW-1 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| AW-2 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| AW-3 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Mar. 2016, Jun. 2016, Aug. 2020 | Fall 2025 |
| AW-4 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Mar. 2016, Jun. 2016, Aug. 2020 | Fall 2025 |
| AW-5 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-12 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-13 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-16 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-17 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-20 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-21 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-23 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-24 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-26 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020, Jan. 2023, Mar. 2023 | Fall 2028 |
| MW-28 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-30 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-32 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-34 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-35 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| VP-3 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| VP-4 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Jul. 2019, Sep. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| <i>Background Monitoring Locations</i> | | | | | | |
| MW-37 | Background | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2015, Sep. 2015, Mar. 2016, Aug. 2020 | Fall 2025 |
| MW-101A | Background | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Oct. 2015, Mar. 2016, Aug. 2020 | Fall 2025 |
| <i>Delineation Monitoring Locations</i> | | | | | | |
| MW-105A | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-106A | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-107A | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-109A | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |

Table 1
Monitoring Program Implementation Schedule
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Monitoring Well | Monitoring Program | Upcoming Sampling Dates and Constituents ⁽²⁾ | | | Full Appendix II Sample Dates | |
|--|--------------------|---|---|------------------|---|-----------------|
| | | Mar. 2024 | Fall 2024 | Spring 2025 | Previously Collected | Next Event |
| Deeper Bedrock Monitoring Locations | | | | | | |
| <i>Downgradient Monitoring Locations</i> | | | | | | |
| AW-6 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| CRL-9 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-11 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-14 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sept. 2015, Aug. 2020 | Fall 2025 |
| MW-15 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Jun. 2016, Aug. 2016, Aug. 2020 | Fall 2025 |
| MW-18 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Jul. 2015, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-19 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Jul. 2015, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-22 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-25 | Assessment | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-31 | Detection | | Appendix I, TSS | | Aug. 2008, Mar. 2009 | N/A - Detection |
| MW-33 | Corrective Action | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| MW-36 | Corrective Action | | Appendix II, TSS | | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Aug. 2020 | Fall 2025 |
| <i>Background Monitoring Locations</i> | | | | | | |
| MW-38 | Background | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Aug. 2008, Mar. 2009, Sep. 2010, Sep. 2015, Mar. 2016, Aug. 2016, Aug. 2020 | Fall 2025 |
| MW-101B | Background | Appendix II, TSS | Appendix II, TSS | Appendix II, TSS | Sep. 2015, Mar. 2016, Sep. 2016, Aug. 2020 | Fall 2025 |
| <i>Delineation Monitoring Locations</i> | | | | | | |
| MW-102B | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-104B | Delineation | | Arsenic, TSS ⁽³⁾ | | N/A - Delineation Monitoring | N/A |
| MW-105B | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-107B | Delineation | | Appendix I, TSS | | N/A - Delineation Monitoring | N/A |
| MW-108B | Delineation | | Appendix I without Cobalt, TSS ⁽⁴⁾ | | N/A - Delineation Monitoring | N/A |
| MW-109B | Delineation | Appendix I, TSS | Appendix I, TSS | Appendix I, TSS | N/A - Delineation Monitoring | N/A |

Comments:

N/A = Not Applicable

⁽¹⁾ In Mar. 2024, semiannual corrective action, background, and delineation monitoring were continued at upper bedrock wells MW-12, MW-13, MW-16, MW-17, MW-32, MW-37, and MW-101A and deeper bedrock wells MW-14, MW-33, MW-38, MW-101B, and MW-109B. In accordance with Permit Amendment #16, annual detection, assessment, corrective action, and delineation monitoring will be conducted in Fall 2024 at upper bedrock wells AW-1, AW-2, AW-3, AW-4, AW-5, MW-20, MW-21, MW-23, MW-24, MW-26, MW-28, MW-30, MW-34, MW-35, VP-3, VP-4, MW-105A, MW-106A, MW-107A, and MW-109A and deeper bedrock wells AW-6, CRL-9, MW-11, MW-15, MW-18, MW-19, MW-22, MW-25, MW-31, MW-36, MW-102B, MW-104B, MW-105B, MW-107B, and MW-108B.

Table 1
Monitoring Program Implementation Schedule
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

Comments (Continued):

⁽²⁾ Appendix II locations were sampled for the Appendix I and detected Appendix II constituents in Mar. 2024, and will be sampled for the Appendix I and detected Appendix II constituents in Fall 2024 and Spring 2025. In accordance with Permit Amendment #6, resampling for the full Appendix II list at assessment, corrective action, and background monitoring wells is conducted every five years.

⁽³⁾ The Iowa Department of Natural Resources (IDNR) approved retaining MW-104B as an arsenic delineation monitoring well in the letter dated May 12, 2016 (IDNR, 2016).

⁽⁴⁾ The IDNR approved the removal of cobalt from the list of analytes at MW-108B in the letter dated April 16, 2019 (IDNR, 2019).

Table 2
March 2024 Appendix II Detections - Upper Bedrock Corrective Action Monitoring Locations
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Constituent | Unit | MW-12 (d) | MW-13 (d) | MW-16 (d) | MW-17 (d) | MW-32 (d) | MW-37 (b) | MW-101A (b) |
|------------------------|------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| 1,1-Dichloroethane | ug/L | 3.39 | | | | | | |
| 1,2-Dichlorobenzene | ug/L | 0.623 J | 2.51 | 1.13 | | 0.479 J | | |
| 1,4-Dichlorobenzene | ug/L | 1.2 | 15 | 4.6 | | 2.94 | | |
| Acetone | ug/L | | 5.01 J | | | 3.98 J | | |
| Arsenic | mg/L | 0.152 | 0.0527 | 0.183 | 0.0554 | 0.109 | | |
| Barium | mg/L | 0.388 | 0.787 | 0.0651 | 0.147 | 0.719 | 0.0403 | 0.105 |
| Benzene | ug/L | | 3.14 | | | 1 | | |
| Chlorobenzene | ug/L | | 3.94 | 2.12 | | 14.7 | | |
| Chloroethane | ug/L | | 4.87 | | | | | |
| cis-1,2-Dichloroethene | ug/L | 4.87 | | | | | | |
| Cobalt | mg/L | 0.00435 | 0.00163 | 0.00254 | 0.00627 | 0.00305 | 0.000177 J | 0.000391 J |
| Copper | mg/L | | | | | 0.00261 J | | |
| Nickel | mg/L | 0.076 | 0.0147 | 0.0898 | 0.0109 | 0.0355 | | 0.00201 J |
| Selenium | mg/L | | | | | | | 0.00324 J |
| Thallium | mg/L | 0.0038 | 0.000525 J | 0.000386 J | | | | |
| Total Suspended Solids | mg/L | 26.3 | 144 | 38.5 | 59 | 30 | 1.38 J | 1.88 |
| Zinc | mg/L | | | 0.0594 | | | | |

(d) = downgradient

(b) = background

Table 3
March 2024 Appendix II Detections - Deeper Bedrock Corrective Action Monitoring Locations
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Constituent | Unit | MW-14 (d) | MW-33 (d) | MW-38 (b) | MW-101B (b) |
|------------------------|-------------|----------------------|----------------------|----------------------|------------------------|
| 1,2-Dichlorobenzene | ug/L | 1.96 | | | |
| 1,4-Dichlorobenzene | ug/L | 12.1 | 0.892 J | | |
| Arsenic | mg/L | 0.0253 | 0.0409 | 0.00107 J | |
| Barium | mg/L | 0.687 | 0.517 | 0.0459 | 0.125 |
| Benzene | ug/L | 2.55 | 0.299 J | | |
| Chlorobenzene | ug/L | 3.2 | 5.33 | | |
| Cobalt | mg/L | 0.00126 | 0.00127 | | 0.000359 J |
| Nickel | mg/L | 0.0217 | 0.00682 | | 0.00244 J |
| Selenium | mg/L | | | | 0.0014 J |
| Total Suspended Solids | mg/L | 77 | 11.8 | | 0.75 J |

(d) = downgradient

(b) = background

Table 4
Summary of Ongoing and Newly Identified SSIs
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Well | Constituent ⁽¹⁾ | Units | Most Recent Result ⁽²⁾ | Background Standard ⁽³⁾ | Lower Confidence Limit | GWPS ⁽³⁾ | Sample Dates | | |
|---|----------------------------|-------|-----------------------------------|------------------------------------|------------------------|---------------------|---------------------------------------|----------------------------|-----------------------|
| | | | | | | | Initial Exceedance (above background) | Resample(s) ⁽⁴⁾ | 5th Background Sample |
| Upper Bedrock Monitoring Locations | | | | | | | | | |
| <i>Corrective Action Monitoring Locations - Assessment Constituents</i> | | | | | | | | | |
| MW-12 | 1,1-Dichloroethane | ug/L | 3.39 | 1.00 | 13.0 | 140 | Spring 2010 | N/S | Mar. 2010 |
| | 1,4-Dichlorobenzene | ug/L | 1.2 | 1.00 | 2.1 | 75 | Fall 2009 | N/S | Mar. 2010 |
| | Barium | mg/L | 0.388 | 0.121 | 0.16 | 2 | Fall 2011 | N/S | Mar. 2010 |
| | cis-1,2-Dichloroethene | ug/L | 4.87 | 1.00 | 4.2 | 70 | Fall 2009 | N/S | Mar. 2010 |
| | Nickel | mg/L | 0.076 | 0.0522 | 0.064 | 0.1 | Fall 2009 | N/S | Mar. 2010 |
| | Thallium | mg/L | 0.0038 | 0.001 | 0.00119 | 0.002 | Spring 2013 | N/S | Mar. 2010 |
| MW-13 | 1,2-Dichlorobenzene | ug/L | 2.51 | 1.00 | 2.2 | 600 | Fall 2010 | N/S | Mar. 2010 |
| | 1,4-Dichlorobenzene | ug/L | 15.0 | 1.00 | 11.9 | 75 | Fall 2009 | N/S | Mar. 2010 |
| | Barium | mg/L | 0.787 | 0.121 | 0.55 | 2 | Fall 2011 | N/S | Mar. 2010 |
| | Benzene | ug/L | 3.14 | 0.500 | 3.87 | 5 | Fall 2009 | N/S | Mar. 2010 |
| | Chlorobenzene | ug/L | 3.94 | 1.00 | 4.2 | 100 | Fall 2009 | N/S | Mar. 2010 |
| | Chloroethane | ug/L | 4.87 | 4.00 | 2.2 | 2800 | Fall 2011 | N/S | Mar. 2010 |
| MW-16 | 1,2-Dichlorobenzene | ug/L | 1.13 | 1.00 | 0.5 | 600 | Spring 2016 | N/S | Mar. 2010 |
| | 1,4-Dichlorobenzene | ug/L | 4.6 | 1.00 | 2.4 | 75 | Fall 2010 | N/S | Mar. 2010 |
| | Chlorobenzene | ug/L | 2.12 | 1.00 | 1.4 | 100 | Fall 2010 | N/S | Mar. 2010 |
| | Nickel | mg/L | 0.0898 | 0.0522 | 0.059 | 0.1 | Fall 2010 | N/S | Mar. 2010 |
| MW-17 | Barium | mg/L | 0.147 | 0.121 | 0.13 | 2 | Fall 2011 | N/S | Mar. 2010 |
| MW-32 | 1,4-Dichlorobenzene | ug/L | 2.94 | 1.00 | 3.4 | 75 | Fall 2009 | N/S | Mar. 2010 |
| | Barium | mg/L | 0.719 | 0.121 | 0.72 | 2 | Fall 2011 | N/S | Mar. 2010 |
| | Benzene | ug/L | 1.00 | 0.500 | 1.52 | 5 | Fall 2009 | N/S | Mar. 2010 |
| | Chlorobenzene | ug/L | 14.7 | 1.00 | 8.9 | 100 | Fall 2009 | N/S | Mar. 2010 |
| Deeper Bedrock Monitoring Locations | | | | | | | | | |
| <i>Corrective Action Monitoring Locations - Assessment Constituents</i> | | | | | | | | | |
| MW-14 | 1,2-Dichlorobenzene | ug/L | 1.96 | 1.00 | 1.2 | 600 | Fall 2011 | N/S | Mar. 2010 |
| | 1,4-Dichlorobenzene | ug/L | 12.1 | 1.00 | 5.1 | 75 | Spring 2011 | N/S | Mar. 2010 |
| | Barium | mg/L | 0.687 | 0.121 | 0.14 | 2 | Fall 2011 | N/S | Mar. 2010 |
| | Benzene | ug/L | 2.55 | 0.500 | 2.31 | 5 | Fall 2009 | N/S | Mar. 2010 |
| | Chlorobenzene | ug/L | 3.2 | 1.00 | 2.8 | 100 | Fall 2010 | N/S | Mar. 2010 |
| | Cobalt | mg/L | 0.00126 | 0.008 | 0.00079 | 0.0021 | Fall 2016 | N/S | Mar. 2010 |
| | Nickel | mg/L | 0.0217 | 0.0522 | 0.013 | 0.1 | Fall 2009 | N/S | Mar. 2010 |

Table 4
Summary of Ongoing and Newly Identified SSIs
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Well | Constituent ⁽¹⁾ | Units | Most Recent Result ⁽²⁾ | Background Standard ⁽³⁾ | Lower Confidence Limit | GWPS ⁽³⁾ | Sample Dates | | |
|---|----------------------------|-------|-----------------------------------|------------------------------------|------------------------|---------------------|---------------------------------------|----------------------------|-----------------------|
| | | | | | | | Initial Exceedance (above background) | Resample(s) ⁽⁴⁾ | 5th Background Sample |
| Deeper Bedrock Monitoring Locations | | | | | | | | | |
| <i>Corrective Action Monitoring Locations - Assessment Constituents Continued</i> | | | | | | | | | |
| MW-33 | Barium | mg/L | 0.517 | 0.121 | 0.44 | 2 | Fall 2011 | N/S | Mar. 2010 |
| | Chlorobenzene | ug/L | 5.33 | 1.00 | 3.5 | 100 | Fall 2009 | N/S | Mar. 2010 |
| | Cobalt | mg/L | 0.00127 | 0.008 | 0.00114 | 0.0021 | Fall 2016 | N/S | Mar. 2010 |
| <i>Delineation Monitoring Locations - Assessment Constituents</i> | | | | | | | | | |
| MW-109B | 1,4-Dichlorobenzene | ug/L | 1.79 | 1.00 | 0.9 | 75 | Nov. 2017 | Mar. 2018 | Nov. 2018 |
| | Barium | mg/L | 0.666 | 0.121 | 0.66 | 2 | Nov. 2017 | Mar. 2018 | Nov. 2018 |
| | Chlorobenzene | ug/L | 8.2 | 1.00 | 6.4 | 100 | Nov. 2017 | Mar. 2018 | Nov. 2018 |
| | Nickel | mg/L | 0.0378 | 0.0522 | 0.035 | 0.1 | Nov. 2017 | Mar. 2018 | Nov. 2018 |

* For assessment monitoring locations, all current results are below background. If confirmed by a second event, location may return to detection monitoring in accordance with IAC 113.10(6)e. However, three consecutive events will be utilized to make the determination to return to detection monitoring to limit frequent fluctuation of wells moving between the detection and assessment monitoring program.

** LCL has exceeded the GWPS, this well/constituent pair is now identified as an SSL.

*** Non-MSWLF Unit source of the SSI identified.

Comments:

N/A = Not applicable.

N/S = Not resampled; SSI was declared in lieu of conducting resample(s).

GWPS = Groundwater Protection Standard

⁽¹⁾ List contains constituents which have been identified as SSIs in Spring 2024. Unless otherwise noted, all current results listed in this table are above background. SSIs were declared in lieu of conducting resample(s).

⁽²⁾ Most recent results are from Mar. 2024.

⁽³⁾ Source of background standards and GWPS values are provided in the Spring 2024 statistical evaluation memo, which will be submitted with the 2024 Annual Water Quality Report (AWQR). N/A = not applicable.

⁽⁴⁾ Upper and deeper bedrock detection, assessment, and corrective action monitoring locations initiated the Appendix I/II monitoring required by the 2007 rule revisions with assessment monitoring for the full Appendix II list starting in Aug. 2008. Since locations were already in assessment monitoring, the initial statistical exceedances over background were declared as SSIs in lieu of conducting resample(s).

• No SSLs were identified for the assessment constituents in the upper and deeper bedrock corrective action monitoring locations. These locations will continue corrective action monitoring in Fall 2024 as listed in Table 1. A summary of the statistical comparisons for the corrective action constituents is provided in Table 5.

• No SSLs were identified for the assessment constituents in bedrock delineation monitoring well MW-109B. MW-109B will continue delineation monitoring in Fall 2024 as listed in Table 1. A summary of the statistical comparisons for the corrective action constituents is provided in Table 5.

Table 5
Summary of Ongoing and Newly Identified SSLs
Spring 2024 Statistical Notifications
Cedar Rapids Linn County Solid Waste Agency Site 1
Permit No. 57-SDP-03-75C

| Well ⁽¹⁾ | Constituent ⁽¹⁾ | Units | Most Recent Result ⁽¹⁾ | Upper Confidence Limit ⁽²⁾ | GWPS ⁽³⁾ | Initial Exceedance | Consecutive Compliance Dates | | |
|---|----------------------------|-------|-----------------------------------|---------------------------------------|---------------------|--------------------|------------------------------|-------------|----------|
| | | | | | | | 1st Occurrence | Most Recent | Duration |
| Upper Bedrock Monitoring Locations | | | | | | | | | |
| <i>Corrective Action Monitoring Locations</i> | | | | | | | | | |
| MW-12 | Arsenic | mg/L | 0.152 | 0.1388 | 0.01 | Fall 2010 | N/A | N/A | N/A |
| MW-13 | Arsenic | mg/L | 0.0527 | 0.055 | 0.01 | Fall 2010 | N/A | N/A | N/A |
| MW-16 | Arsenic | mg/L | 0.183 | 0.131 | 0.01 | Fall 2011 | N/A | N/A | N/A |
| MW-17 | Arsenic | mg/L | 0.0554 | 0.0654 | 0.01 | Fall 2010 | N/A | N/A | N/A |
| MW-32 | Arsenic | mg/L | 0.109 | 0.085 | 0.01 | Fall 2011 | N/A | N/A | N/A |
| Deeper Bedrock Monitoring Locations | | | | | | | | | |
| <i>Corrective Action Monitoring Locations</i> | | | | | | | | | |
| MW-14 | Arsenic | mg/L | 0.0253 | 0.026 | 0.01 | Fall 2011 | N/A | N/A | N/A |
| MW-33 | Arsenic | mg/L | 0.0409 | 0.038 | 0.01 | Fall 2011 | N/A | N/A | N/A |
| <i>Delineation Monitoring Locations</i> | | | | | | | | | |
| MW-109B | Arsenic | mg/L | 0.0196 | 0.021 | 0.01 | Winter 2018 | N/A | N/A | N/A |
| | Cobalt | mg/L | 0.0191 | 0.01857 | 0.0021 | Fall 2018 | N/A | N/A | N/A |
| | Thallium | mg/L | 0.00452 | 0.00502 | 0.002 | Fall 2018 | N/A | N/A | N/A |

* This well/contaminant pair has been compliant for 3 consecutive years and no longer has an SSL.
 ** Non-MSWLF Unit source of the SSL identified.

Comments:

GWPS = Groundwater Protection Standard

N/A = Not applicable; indicates the analyte/well pair has not achieved compliance with the GWPS (i.e., upper confident limit or the upper 95% confidence limit on the trend line is lower than the GWPS for a period of three consecutive years).

⁽¹⁾ The most recent results are from the Mar. 2024 event.

⁽²⁾ If a decreasing trend was identified, the value is the upper 95% confidence limit on the trend line.

⁽³⁾ Source of GWPS values are provided in the Spring 2024 statistical evaluation memo, which will be submitted with the 2024 Annual Water Quality Report (AWQR). N/A = not applicable.

- For the corrective action constituents in the upper bedrock corrective action monitoring locations, SSLs over the GWPS remained for arsenic in MW-12, MW-13, MW-16, MW-17, and MW-32. While compliance with the GWPS was not achieved, statistically significant decreasing trends were identified for arsenic in MW-12 and MW-17.

- For the corrective action constituents in the deeper bedrock corrective action and delineation monitoring locations, SSLs over the GWPS remained for arsenic in MW-14, MW-33, and MW-109B; for cobalt in MW-109B, and for thallium in MW-109B. While compliance with the GWPS was not achieved, a statistically significant decreasing trend was identified for cobalt in MW-109B.

- No changes are recommended for the upper and deeper bedrock corrective action and delineation monitoring locations based on the corrective action statistical results conducted during the Spring 2024 statistical evaluation.

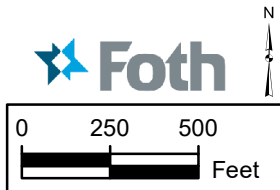
Attachment 2
Figure



NOTES:
 1. Aerial imagery was flown in Spring 2023 and provided by Linn County, Iowa.

LEGEND

| | | |
|-------|---|--------------------------------|
| MW-38 | ◆ | Deeper Bedrock Background Well |
| MW-27 | ◆ | Deeper Bedrock Monitoring Well |
| MW-37 | ◆ | Upper Bedrock Background Well |
| MW-26 | ◆ | Upper Bedrock Monitoring Well |
| | □ | Parcels |



| | |
|---|-----------------|
| Cedar Rapids Linn County Solid Waste Agency | |
| FIGURE 1 | |
| HMSCP MONITORING NETWORK | |
| Date: NOVEMBER 2023 | Revision Date: |
| Drawn By: DAT | Checked By: GMN |
| Project: 23C071.00 | |

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.