

March 20, 2026

Ms. Alexis Slade  
Environmental Engineer  
Iowa Department of Natural Resources  
6200 Park Avenue, Suite 200  
Des Moines, Iowa 50321



**RE: 2026 Semi-Annual Water Quality Notification  
Tama County Sanitary Landfill 86-SDP-01-72P**

Dear Ms. Slade:

**HMSP**

At the Tama County Sanitary Landfill, the following monitoring wells are the upgradient/background wells for the facility: MW-20, MW-26, MW-33, and MW-37.

The following downgradient monitoring points are in the detection monitoring system: SW-3.

The following downgradient wells are in the assessment monitoring system: MW-3A, MW-8, MW-10, MW-27, MW-34, MW-35, and MW-36.

**Notification of Results of Spring Sampling, Analysis, and Statistical Evaluation  
Detection Monitoring System**

Verified SSI for **inorganic** compounds:

*None.*

Verified SSI for **VOC** include:

*None.*

**Assessment/Corrective Action Monitoring Systems**

Verified **inorganic** compound detections that exceed the Prediction Limit:

MW-3A - none  
MW-8B - cobalt, nickel  
MW-10 - barium, cobalt, nickel  
MW-27 - none  
MW-34 - arsenic, cobalt, nickel  
MW-35 - barium  
MW-36 - none

Verified **VOC** detections that exceed the Prediction Limit:

MW-3A - none  
MW-8 - none  
MW-10 - none  
MW-27 - none  
MW-34 - 1,4-dichlorobenzene, chlorobenzene  
MW-35 - dichlorodifluoromethane  
MW-36 - none

## Assessment Monitoring Compound Detections

| Date      | bis(2-ethylhexyl)phthalate (ug/L) |             |       |             |             |             |       |
|-----------|-----------------------------------|-------------|-------|-------------|-------------|-------------|-------|
|           | MW-3A                             | MW-8        | MW-10 | MW-27       | MW-34       | MW-35       | MW-36 |
| 7/26/10   | NT                                | NT          | <8    | NT          | NT          | NT          | NT    |
| 3/29/11   | NT                                | <8          | NT    | NT          | NT          | NT          | NT    |
| 3/8/12    | NT                                | <b>25.0</b> | <8    | NT          | NT          | NT          | NT    |
| 10/30/12  | NT                                | <8          | NT    | NT          | <b>24.0</b> | <8          | NT    |
| 3/26/13   | NT                                | <10         | NT    | NT          | <8          | <8          | NT    |
| 5/17/13   | NT                                | <10         | NT    | NT          | NT          | <10         | NT    |
| 7/9/13    | NT                                | NT          | NT    | NT          | NT          | <b>36.0</b> | NT    |
| 9/25/13   | NT                                | <b>10.0</b> | NT    | NT          | NT          | <10         | NT    |
| 3/19/14   | NT                                | <10         | NT    | NT          | <10         | <10         | NT    |
| 8/20/14   | NT                                | NT          | NT    | NT          | <b>14.0</b> | NT          | NT    |
| 9/15/14   | NT                                | <10         | NT    | NT          | <b>36.0</b> | <b>20.0</b> | NT    |
| 3/6/15    | NT                                | <b>25.0</b> | NT    | NT          | <10         | <10         | NT    |
| 8/24/15   | NT                                | <10         | NT    | NT          | <b>13.0</b> | <b>13.0</b> | NT    |
| 3/1/16    | NT                                | <10         | NT    | NT          | <10         | <10         | NT    |
| 9/9/16    | NT                                | <10         | NT    | NT          | <10         | <10         | NT    |
| 3/22/17   | <8                                | <8          | <8    | <8          | <10         | <10         | <8    |
| 8/24/17   | NT                                | <b>35.0</b> | NT    | NT          | <6          | <b>15.0</b> | NT    |
| 2/26/18   | <b>193</b>                        | <b>262</b>  | NT    | <b>71.0</b> | <b>145</b>  | <6          | <6    |
| 8/29/18   | <6                                | <b>24</b>   | NT    | <6          | <6          | <b>7.0</b>  | NT    |
| 3/18/19   | <6                                | <6          | NT    | <b>13.0</b> | <6          | <6          | NT    |
| 9/10/19   | <6                                | <6          | NT    | <6          | <b>46.0</b> | <6          | NT    |
| 3/25/20   | <6                                | <6          | NT    | <6          | <6          | <6          | NT    |
| 9/4/20    | <6                                | <6          | NT    | <6          | <6          | <6          | NT    |
| 3/2/21    | <6                                | <6          | NT    | <6          | <6          | <6          | NT    |
| 9/2/21    | NT                                | NT          | NT    | NT          | NT          | NT          | NT    |
| 3/2/22    | <6                                | <6          | <6    | <6          | <b>8.0</b>  | <6          | NT    |
| 8/29/22   | NT                                | NT          | NT    | NT          | <6          | NT          | NT    |
| 3/23/23   | <b>8.0</b>                        | NT          | NT    | <6          | <6          | <6          | <6    |
| 9/25/23   | Dry                               | NT          | NT    | NT          | NT          | NT          | NT    |
| 3/5/24    | <6                                | NT          | NT    | NT          | NT          | NT          | NT    |
| 9/30/24   | NT                                | NT          | NT    | NT          | NT          | NT          | NT    |
| 3/6/2025  | NT                                | NT          | NT    | NT          | NT          | NT          | NT    |
| 9/17/2025 | NT                                | NT          | NT    | NT          | NT          | NT          | NT    |
| 3/2/2026  | NT                                | NT          | NT    | NT          | NT          | NT          | NT    |

| Date      | Dichlorodifluoromethane (ug/L) |      |       |       |       |       |       |
|-----------|--------------------------------|------|-------|-------|-------|-------|-------|
|           | MW-3A                          | MW-8 | MW-10 | MW-27 | MW-34 | MW-35 | MW-36 |
| 7/26/10   | NT                             | NT   | <1.0  | NT    | NT    | NT    | NT    |
| 3/29/11   | NT                             | <1.0 | NT    | NT    | NT    | NT    | NT    |
| 3/8/12    | NT                             | <1.0 | <1.0  | NT    | NT    | NT    | NT    |
| 10/30/12  | NT                             | NT   | NT    | NT    | 3.7   | <1.0  | NT    |
| 3/26/13   | NT                             | NT   | NT    | NT    | <1.0  | 1.7   | NT    |
| 5/17/13   | NT                             | NT   | NT    | NT    | NT    | 2.0   | NT    |
| 7/9/13    | NT                             | NT   | NT    | NT    | NT    | 1.5   | NT    |
| 9/25/13   | NT                             | NT   | NT    | NT    | NT    | 7.4   | NT    |
| 3/19/14   | NT                             | NT   | NT    | NT    | <1.0  | 3.5   | NT    |
| 8/20/14   | NT                             | NT   | NT    | NT    | <1.0  | NT    | NT    |
| 9/15/14   | NT                             | NT   | NT    | NT    | <1.0  | 2.3   | NT    |
| 3/6/15    | NT                             | NT   | NT    | NT    | <1.0  | 7.0   | NT    |
| 8/24/15   | NT                             | NT   | NT    | NT    | <1.0  | <1.0  | NT    |
| 3/1/16    | NT                             | NT   | NT    | NT    | <1.0  | 5.9   | NT    |
| 9/9/16    | NT                             | NT   | NT    | NT    | <1.0  | 4.3   | NT    |
| 3/22/17   | <1.0                           | <1.0 | <1.0  | <1.0  | <1.0  | 3.4   | <1.0  |
| 8/24/17   | NT                             | NT   | NT    | NT    | <1.0  | 3.1   | NT    |
| 2/26/18   | <1.0                           | NT   | NT    | <1.0  | <1.0  | 2.1   | <1.0  |
| 8/29/18   | NT                             | NT   | NT    | NT    | <1.0  | 1.8   | NT    |
| 3/18/19   | NT                             | NT   | NT    | NT    | <1.0  | 1.1   | NT    |
| 9/10/19   | NT                             | NT   | NT    | NT    | <1.0  | 1.5   | NT    |
| 3/25/20   | NT                             | NT   | NT    | NT    | NT    | 2.1   | NT    |
| 9/4/20    | NT                             | NT   | NT    | NT    | NT    | <1.0  | NT    |
| 3/2/21    | NT                             | NT   | NT    | NT    | NT    | <1.0  | NT    |
| 9/2/21    | NT                             | NT   | NT    | NT    | NT    | <1.0  | NT    |
| 3/2/22    | NT                             | <1.0 | <1.0  | NT    | NT    | 1.5   | NT    |
| 8/29/22   | NT                             | NT   | NT    | NT    | NT    | 1.5   | NT    |
| 3/23/23   | <1.0                           | NT   | NT    | <1.0  | <1.0  | <1.0  | <1.0  |
| 9/25/23   | Dry                            | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/5/24    | NT                             | NT   | NT    | NT    | NT    | 1.2   | NT    |
| 9/30/24   | NT                             | NT   | NT    | NT    | NT    | 1.2   | NT    |
| 3/6/2025  | NT                             | NT   | NT    | NT    | NT    | <1.0  | NT    |
| 9/17/2025 | NT                             | NT   | NT    | NT    | NT    | 1.8   | NT    |
| 3/2/2026  | NT                             | NT   | NT    | NT    | NT    | 1.1   | NT    |

| Date      | Cyanide (ug/L) |      |       |       |       |       |       |
|-----------|----------------|------|-------|-------|-------|-------|-------|
|           | MW-3A          | MW-8 | MW-10 | MW-27 | MW-34 | MW-35 | MW-36 |
| 7/26/10   | NT             | NT   | <7    | NT    | NT    | NT    | NT    |
| 3/29/11   | NT             | <7   | NT    | NT    | NT    | NT    | NT    |
| 3/8/12    | NT             | <7   | <7    | NT    | NT    | NT    | NT    |
| 10/30/12  | NT             | NT   | NT    | NT    | <7    | <7    | NT    |
| 3/26/13   | NT             | NT   | NT    | NT    | <7    | <7    | NT    |
| 5/17/13   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 7/9/13    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 9/25/13   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/19/14   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 8/20/14   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 9/15/14   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/6/15    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 8/24/15   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/1/16    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 9/9/16    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/22/17   | <5             | <5   | <5    | <5    | NT    | NT    | <5    |
| 8/24/17   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 2/26/18   | <5             | NT   | NT    | <5    | <5    | 12.0  | <5    |
| 8/29/18   | NT             | NT   | NT    | NT    | NT    | 9.0   | NT    |
| 3/18/19   | NT             | NT   | NT    | NT    | NT    | <5    | NT    |
| 9/10/19   | NT             | NT   | NT    | NT    | NT    | <5    | NT    |
| 3/25/20   | NT             | NT   | NT    | NT    | NT    | <5    | NT    |
| 9/4/20    | NT             | NT   | NT    | NT    | NT    | <5    | NT    |
| 3/2/21    | NT             | NT   | NT    | NT    | NT    | <5    | NT    |
| 9/2/21    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/2/22    | NT             | <5   | <5    | NT    | NT    | <5    | NT    |
| 8/29/22   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/23/23   | <5             | NT   | NT    | <5    | <5    | <5    | <5    |
| 9/25/23   | Dry            | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/5/24    | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 9/30/24   | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/6/2025  | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 9/17/2025 | NT             | NT   | NT    | NT    | NT    | NT    | NT    |
| 3/2/2026  | NT             | NT   | NT    | NT    | NT    | NT    | NT    |

**Current Appendix II Compound Detections**

MW-35 – dichlorodifluoromethane

**The following SSL are recorded**

The following compound persists as an SSL (the 95% UCL exceeds the GWPS).

| Well  | Compound | 95% LCL    | 95% UCL    | Site-Specific GWPS |
|-------|----------|------------|------------|--------------------|
| MW-10 | Cobalt   | 1.982 ug/L | 6.628 ug/L | 2.6 ug/L           |

The preparation and submittal of an Assessment of Corrective Measures (ACM) Report related to MW-10 has been deferred until May 10, 2027, unless Phase 4 plans and specification are submitted prior to May 10, 2027 (Doc #89475). A request was filed with IDNR to extend the deadline delay until 2030 (Doc #115995). A response from IDNR has not yet been received. The on-going monitoring of potential vertical migration of cobalt in PZ-11 is required.

**Corrective Action Monitoring System**

PZ-11 is the approved vertical migration route corrective action monitoring point associated with MW-10. PZ-11 is required to be sampled for cobalt annually at a minimum. Results of corrective Action Monitoring at PZ-11:

| <b>Monitoring Well</b> | <b>Compound</b> | <b>Date</b> | <b>Result (ug/L)</b> | <b>GWPS (ug/L)</b> |
|------------------------|-----------------|-------------|----------------------|--------------------|
| PZ-11                  | Cobalt          | 8/24/2017   | <0.8                 | 2.8                |
| PZ-11                  | Cobalt          | 2/26/2018   | <b>2.0</b>           | 2.1                |
| PZ-11                  | Cobalt          | 8/29/2018   | <0.8                 | 2.1                |
| PZ-11                  | Cobalt          | 3/18/2019   | <0.8                 | 2.1                |
| PZ-11                  | Cobalt          | 9/10/2019   | <0.8                 | 2.1                |
| PZ-11                  | Cobalt          | 3/25/2020   | <b>1.4</b>           | 2.1                |
| PZ-11                  | Cobalt          | 9/4/2020    | <0.4                 | 2.1                |
| PZ-11                  | Cobalt          | 9/2/2021    | <b>2.6</b>           | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 3/2/2022    | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 8/29/2022   | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 3/23/2023   | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 9/25/2023   | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 3/5/2024    | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 9/30/2024   | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 3/6/2025    | <0.4                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 9/17/2025   | <0.5                 | <b>2.6</b>         |
| PZ-11                  | Cobalt          | 3/2/2026    | <0.5                 | <b>2.6</b>         |

**Wells returning to the detection monitoring system**

None.

This notification is intended to satisfy requirements of Iowa Administrative Code (IAC) 567-113.10(5)"c"(1); 113.10(6)"d"(1); and 113.10(6)"g".

The water quality results for the Spring of 2026 will be fully evaluated in the Annual Water Quality Report in accordance with the permit and IAC 567-113.10(10).

Please feel free to contact our office at (515) 733-4144 with any questions you may have.

Sincerely,

**HLW Engineering Group**



Todd Whipple, CPG  
Project Manager

cc: Dave Sherwood, Administrator

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**GROUND WATER STATISTICS**  
**FOR THE**  
**TAMA COUNTY SANITARY LANDFILL**

**First Semi-Annual Monitoring Event in 2026**

Prepared for:  
**Tama County Sanitary Landfill**  
2872 K Avenue  
Toledo, Tama County, IA

Prepared by:  
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**March 2026**

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