

March 30, 2026

Mr. Michael Smith, P.E., Environmental Engineer Senior
 IDNR – Land Quality Bureau
 6200 Park Avenue, Suite 200
 Des Moines, Iowa 50321



**RE: 2026 - Spring Water Quality Notification Letter
 Clarke County SLF - SOUTH SITE
 Permit # 20-SDP-04-94C**

Mr. Smith:

HMSP

At the South Site of the Clarke County Sanitary Landfill, the monitoring wells listed in Table 1 comprise the HMSP. The sampling was completed on March 4, 2026 and is summarized in Table 1. In accordance with Permit Amendment #17, dated March 8, 2023 (Doc #106027) MW-33 is sampled semi-annually, while all remaining wells are sampled annually in alternating seasons. The sampling schedule in 2026 is summarized below for each HMSP well. Note that the full Appendix II sampling events, when required, are tied to the annual sample collection event each year to coordinate with the requirement to collect the annual events in alternating seasons.

Table 1

WELL	Monitoring Phase	March 2026 (Completed)	September, 2026 (Planned)	Most Recent Appendix II
MW-23 (b-till)	Detection Monitoring		Appendix I	
MW-27 (b-till)	Detection Monitoring		Appendix I	
MW-21	Assessment Monitoring		Appendix I ⁽¹⁾	9/2022
MW-31	Assessment Monitoring		Appendix II	3/2021
MW-33	Assessment Monitoring	Appendix I ⁽²⁾	Appendix II	9/2021
MW-34	Assessment Monitoring		Appendix I	4/2024
MW-28 (b-LS)	Detection Monitoring		Appendix I	
MW-29 (b-LS)	Detection Monitoring		Appendix I	
MW-36 (b-LS)	Detection Monitoring		Appendix I	
MW-37	Detection Monitoring		Appendix I	
MW-38	Assessment Monitoring		Appendix I	3/2025
MW-22	Detection Monitoring		Appendix I	
MW-32	Detection Monitoring		Appendix I	
Duplicate	QA/QC		Appendix I	

(b-till)(b-LS) background wells, glacial till system or limestone system.

- (1) = Appendix I plus no detected Appendix II compounds performed in accordance with 113.10(6)d.2.
- (2) = sulfide
- (3) = bis(2ethylhexyl)phthalate

The background for the glacial till system utilizes MW-23 and MW-27. The downgradient wells are MW-21, MW-31, MW-33, and MW-34. All downgradient wells are in the assessment monitoring program.

The background for the bedrock system utilizes MW-28, MW-29, and MW-36. The downgradient wells are MW-22, MW-32, MW-37, and MW-38. All downgradient wells are in the detection monitoring program, except MW-38 which is in the assessment monitoring program.

Notification of Results of Sampling, Analysis, and Statistical Evaluation

Wells in the Detection Monitoring System

Till/Fill System

Not applicable.

Limestone System

Verified Prediction Limit exceedances for inorganic compounds:

None.

Verified Prediction Limit exceedances for VOC include:

None.

Wells in the Assessment Monitoring System

Till/Fill System

Exceedances of the Prediction Limit for inorganic compounds:

MW-33 – None

Exceedances of the Prediction Limit for VOC include:

MW-33 – 1,1-dichloroethane, 1,2-dichloropropane, cis-1,2-dichloroethene

Limestone System

Verified Prediction Limit exceedances for inorganic compounds:

None – not sampled in March, 2026.

Verified Prediction Limit exceedances for VOC include:

None – not sampled in March, 2026.

Site-Specific GWPS

The prediction limit for the following compounds in the following HMSP systems *exceed* the published IAC 567, Chapter 137 Statewide Standard:

Shallow/Till System

<u>Compound</u>	<u>Prediction Limit</u>	<u>IAC 137 GWPS</u>
Cobalt	20.2173 ug/L	2.1 ug/L

Bedrock System

<u>Compound</u>	<u>Prediction Limit</u>	<u>IAC 137 GWPS</u>
Antimony	7.9 ug/L	6.0 ug/L
Cadmium	6.8 ug/L	5.0 ug/L
Cobalt	15.3211 ug/L	2.1 ug/L

The Site-Specific GWPS should not be set lower than the Site Prediction Limit calculated from the site background data. For this report, the prediction limits itemized above are utilized as the Site-Specific GWPS for the respective HMSP Systems. For all other compounds the published IAC 567, Chapter 137 Statewide Standard are utilized as the GWPS.

The following SSL are recorded

None and there are no wells in the corrective action system.

Current Appendix II Compound Detections

None.

Summary of Historic Appendix II Compound Detections

The summary of assessment monitoring detections to date (beyond the Appendix I list) is presented in Table 2 and Table 3 on pages 4 and 5 that follow. The full Appendix II sampling episodes are highlighted in green in Table 2 and Table 3.

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 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: *Dean Robins, CCLC*

Table 2 - Sulfide (mg/L) Results

Date	MW-21	MW-31	MW-33	MW-34	MW-38
2/27/10	NT	NT	NT	<1	---
3/22/10	NT	NT	1.9	NT	---
9/7/10	NT	NT	<1	NT	---
9/20/11	NT	NT	<1	NT	---
12/15/11	NT	NT	<1	NT	---
2/17/12	NT	NT	NT	<1	---
3/19/12	NT	NT	<1	NT	---
6/20/12	NT	NT	NT	NT	---
9/6/12	NT	NT	<0.23	NT	---
2/1/13	NT	NT	<1	NT	---
6/20/13	NT	NT	NT	NT	---
9/27/13	NT	NT	<1	<1	---
3/13/14	NT	NT	<1	NT	---
9/29/14	NT	NT	<0.1	<0.1	---
11/24/14	NT	NT	NT	NT	---
3/19/15	NT	NT	<0.1	NT	---
8/26/15	NT	NT	0.33	NT	---
3/9/2016	NT	NT	0.40	NT	---
9/14/16	NT	NT	0.11	NT	---
3/7/17	NT	NT	0.13	NT	---
9/11/17	NT	NT	1.2	NT	---
3/7/2018	NT	NT	4.9	NT	---
9/5/18	NT	NT	0.71	<0.3	---
4/1/19	NT	NT	0.47	NT	---
9/9/19	NT	NT	<0.1	NT	---
3/10/20	NT	<0.1	0.18	NT	---
9/14/20	NT	NT	1.9	NT	---
3/4/21	NT	<0.1	2.4	NT	---
9/9/21	<0.1	NT	0.17	NT	---
3/24/22	NT	NT	3.5	NT	NT
9/9/22	<0.15	NT	0.29	NT	NT
3/1/23	NT	NT	2.4	NT	NT
9/7/2023	NT	NT	3.0	NT	NT
3/6/2024	NT	NT	2.3	NT	NT
4/1/2024	NT	NT	NT	<0.15	NT
6/3/2024	NT	NT	NT	NT	<0.15
9/4/2024	NT	NT	18.0	NT	NT
3/10/2025	NT	NT	<0.10	NT	<0.10
9/5/2025	NT	NT	<0.10	NT	NT
3/9/2026	NT	NT	0.14	NT	NT

Table 3 - Bis(2-ethylhexyl)phthalate (ug/L) Results

Date	MW-21	MW-31	MW-33	MW-34	MW-38
2/27/10	NT	NT	NT	NT	---
3/22/10	NT	NT	<10	NT	---
9/7/10	NT	NT	<10	NT	---
9/20/11	NT	NT	<10	NT	---
2/17/12	NT	NT	NT	<10	---
3/19/12	NT	NT	NT	NT	---
6/20/12	NT	NT	NT	NT	---
9/6/12	NT	NT	NT	NT	---
2/1/13	NT	NT	NT	NT	---
9/27/13	NT	NT	NT	<10	---
3/13/14	NT	NT	NT	NT	---
9/29/14	NT	NT	NT	NT	---
3/19/15	NT	NT	NT	NT	---
8/26/15	NT	NT	NT	NT	---
3/9/2016	NT	NT	NT	NT	---
9/14/16	NT	NT	<8	NT	---
3/7/17	NT	NT	NT	NT	---
9/11/17	NT	NT	NT	NT	---
3/7/18	NT	NT	NT	NT	---
9/5/18	NT	NT	NT	<6	---
4/1/19	NT	NT	NT	NT	---
9/9/19	NT	NT	NT	NT	---
3/10/20	NT	<6	NT	NT	---
9/14/20	NT	NT	NT	NT	---
3/4/21	NT	34.0	NT	NT	---
9/9/21	<6	33.0	<6	NT	---
3/24/22	NT	<6	NT	NT	NT
9/9/22	9.0	97.0	NT	NT	NT
3/1/23	<6	<6	NT	NT	NT
9/7/2023	NT	NT	NT	NT	NT
3/6/2024	NT	NT	NT	NT	NT
4/1/2024	NT	NT	NT	<6	NT
6/3/2024	NT	NT	NT	NT	<6
9/4/2024	NT	NT	NT	NT	NT
3/10/2025	NT	NT	NT	NT	<6
9/5/2025	NT	NT	NT	NT	NT
3/9/2026	NT	NT	NT	NT	NT

**Results of the Ground Water Statistics
for Clarke County Sanitary Landfill**

First Semi-Annual Monitoring Event in 2026

Prepared for:
Clarke County Sanitary Landfill
Osceola, Iowa

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, L.L.C.
Elgin, IL
(847) 464-1355

March 2026
