

June 5, 2024

Mr. Mick Leat, Environmental Specialist  
Land Quality Bureau  
Iowa Department of Natural Resources  
502 East 9<sup>th</sup> Street  
Des Moines, Iowa 50319-0034



**RE: 2024 Spring Water Quality Notification Letter  
Jones County Sanitary Landfill 53-SDP-1-76C**

Dear Mr. Leat:

**HMSP**

At the Jones County Sanitary Landfill, the following monitoring wells are the upgradient/background wells for the facility: MW-12.

The following downgradient well remains in the detection monitoring system: MW-11, MW-16, and MW-20.

The following downgradient wells are in the assessment monitoring system: MW-6.

The following downgradient wells are in the corrective action monitoring system: MW-15 (Supplemental Well) and MW-22 (Attenuation Zone Point of Compliance (AZPOC) Well). Corrective Action Monitoring Points also include leachate piezometer LPZ-6 and the 12 gas vents associated with the vent trenches.

**Notification of Results of Spring Sampling, Analysis, and Statistical Evaluation**

Wells in the Detection Monitoring System

Prediction Limit exceedances **for inorganic** compounds:

MW-16 – zinc\*

*\* A verification sample is required prior to July 8, 2024.*

Prediction Limit exceedances **for VOC** include:

None.

Wells in the Assessment Monitoring System

Prediction Limit exceedances **for inorganic** compounds:

None.

Prediction Limit exceedances **for VOC** include:

MW-6 - Bis(2-ethylhexyl)phthalate

Current Appendix II Compound Detections

MW-6 - Bis(2-ethylhexyl)phthalate

Historic Appendix II Compound Detections (Green highlights = Full Appendix II samples)

**Bis(2-ethylhexyl)phthalate (ug/L)** **GWPS = 6.0 ug/L**

Date	MW-6	MW-15	MW-22
3/6/2009	<8	<8	<8
4/1/2013	NT	10.0	NT
9/9/2013	NT	<10	NT
3/30/2014	36.0	85.0	NT
9/19/2014	NT	<10	NT
4/20/2015	<10	<10	NT
7/9/2015	<10	NT	NT
10/5/2015	<10	10.0	NT
4/5/2016	<10	<10	<10
10/5/2016	<10	<10	No Sample
4/4/2017	<10	<10	<10
10/3/2017	10.0	<6	<6
4/10/2018	<6	<6	NT
10/12/2018	<6	<6	NT
4/16/2019	<6	10.0	NT
9/30/2019	<6	<6	NT
4/7/2020	<6	<6	NT
10/7/2020	<6	<6	NT
4/22/2021	NT	NT	NT
10/5/2021	NT	NT	NT
4/4/2022	NT	NT	NT
10/5/2022	NT	NT	NT
4/14/2023	NT	NT	NT
10/18/2023	NT	NT	NT
4/8/2024	32.0	NT	NT

**Dichlorodifluoromethane (ug/L)****GWPS = 1,000.0 ug/L**

<b>Date</b>	<b>MW-6</b>	<b>MW-15</b>	<b>MW-22</b>
3/6/2009	<1	<1	<1
4/1/2013	NT	<1	NT
9/9/2013	NT	NT	NT
3/30/2014	<b>3.5</b>	<b>2.5</b>	NT
9/19/2014	<b>1.3</b>	<1	NT
4/20/2015	<b>1.0</b>	<1	NT
7/9/2015	NT	NT	NT
10/5/2015	<1	<1	NT
4/5/2016	<1	<1	<1
10/5/2016	<b>1.0</b>	<1	No Sample
4/4/2017	<1	<b>1.0</b>	<1
10/3/2017	<1	<1	<1
4/10/2018	<1	<1	NT
10/12/2018	<1	<1	NT
4/16/2019	<1	<1	NT
9/30/2019	<1	<1	NT
4/7/2020	<1	<1	NT
10/7/2020	<1	<1	NT
4/22/2021	NT	NT	NT
10/5/2021	NT	NT	NT
4/4/2022	NT	NT	NT
10/5/2022	NT	NT	NT
4/14/2023	NT	NT	NT
10/18/2023	NT	NT	NT
4/4/2024	<1	NT	NT

Wells in the Corrective Action Monitoring SystemPrediction Limit exceedances **for inorganic** compounds:MW-15 - arsenic<sup>†</sup>, barium, cobalt<sup>†</sup>, nickel<sup>†</sup> Exceeds IAC 567, Chapter 137 GWPSPrediction Limit exceedances **for VOC** include:LPZ-6 - 1,4-dichlorobenzene, 2-hexanone, benzene<sup>†</sup>, chlorobenzene, chloroethane, ethylbenzene, styrene, toluene, xylenes

MW-15 - 1,1-dichloroethane, 1,4-dichlorobenzene, benzene, chlorobenzene, chloroethane

<sup>†</sup> Exceeds IAC 567, Chapter 137 GWPS

Leachate & Groundwater Characterization - CAMP Monitoring Update

Standardized Table 12 (LPZ-6 leachate quality over time) and Table 13 (Gas Vent Monitoring Results over time) are attached. Dissolved methane testing was not completed due to a laboratory error.

SSL Record and Evaluation

The 95% LCL and 95% UCL are as follows:

Well	Compound	95% LCL	95% UCL	GWPS
MW-15 Supplemental	Arsenic (ug/L)	131.036	236.464	10.0
MW-15 Supplemental	Cobalt (ug/L)	11.831	20.319	2.6 (site-specific)
MW-15 Supplemental	Benzene (ug/L)	1.834	5.016	5.0
MW-22 AZPOC	Arsenic (ug/L)	2.000	2.000	10.0
MW-22 AZPOC	Cobalt (ug/L)	0.000	2.160	2.6 (site-specific)
MW-22 AZPOC	Benzene (ug/L)	0.500	0.500	5.0

*Note that MW-15 (Supplemental Well) is located upgradient from the groundwater seep collection system. MW-22 is the attenuation zone point of compliance (AZPOC) well located downgradient of the groundwater seep collection system to monitor the static nature of the impact plume.*

Wells returning to detection monitoring

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 2024 will be fully evaluated in the Annual Water Quality Report in accordance with the unnumbered permit amendments dated May 22, 2013, July 10, 2014, 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: Karl Taylor, Director

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**GROUND WATER STATISTICS**

**FOR THE**

**JONES COUNTY SANITARY LANDFILL**

**First Semi-Annual Monitoring Event in 2024**

Prepared for:  
**Jones County Solid Waste Management**  
13859 Edinburgh Road  
Anamosa, IA 52205

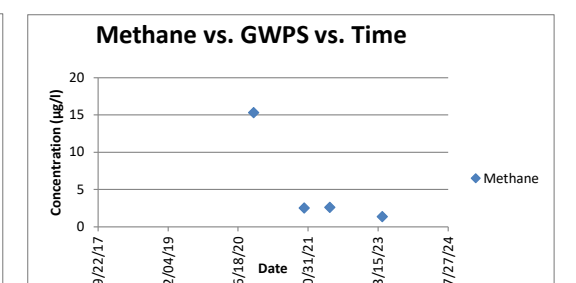
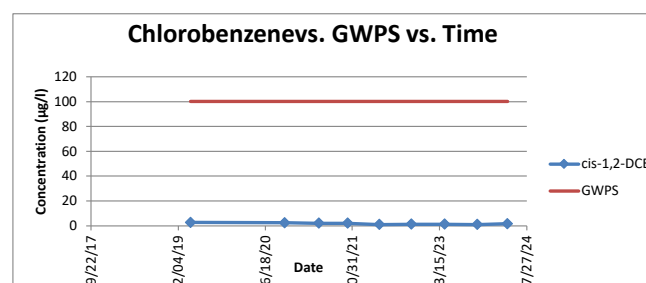
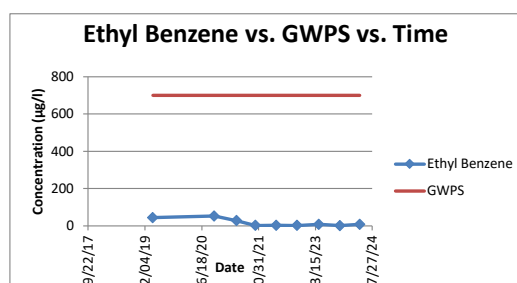
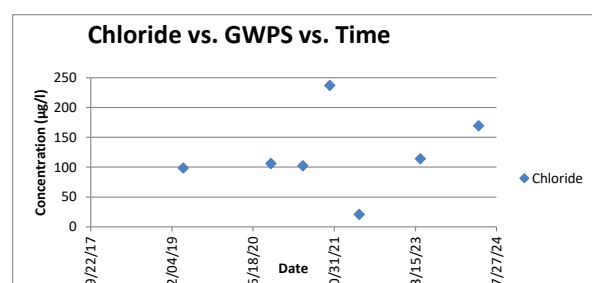
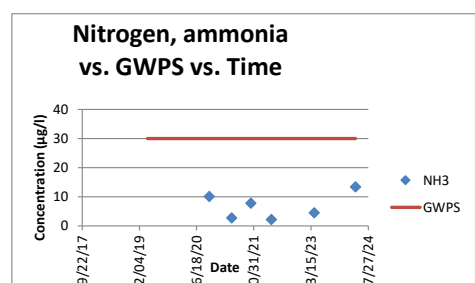
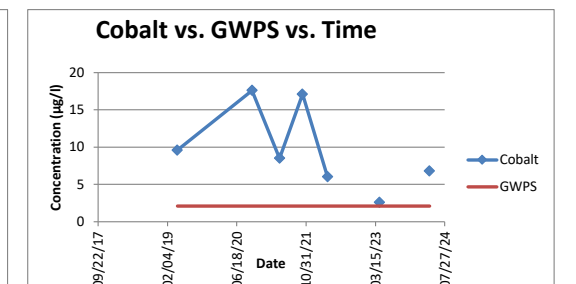
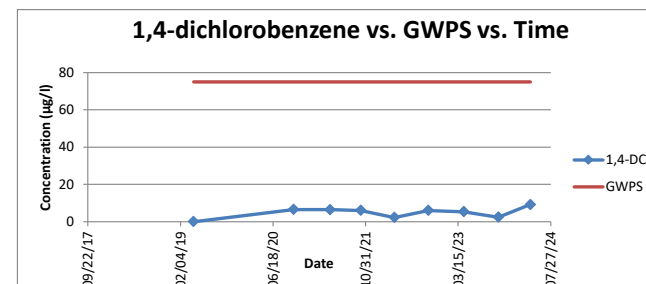
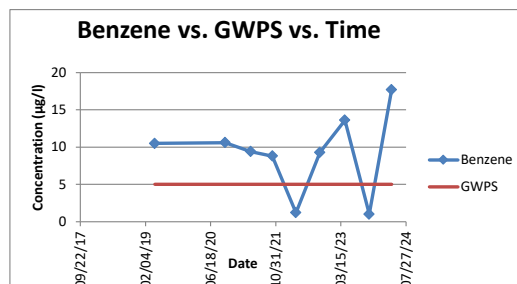
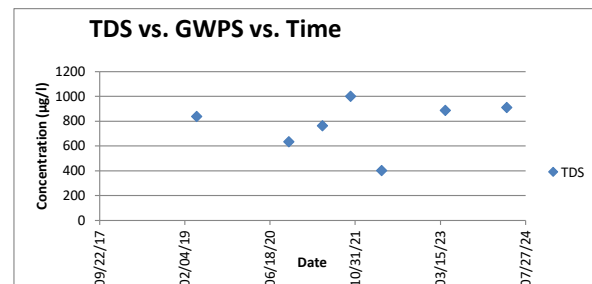
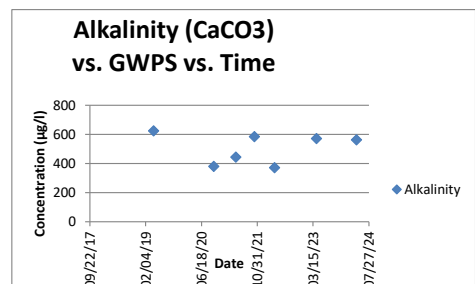
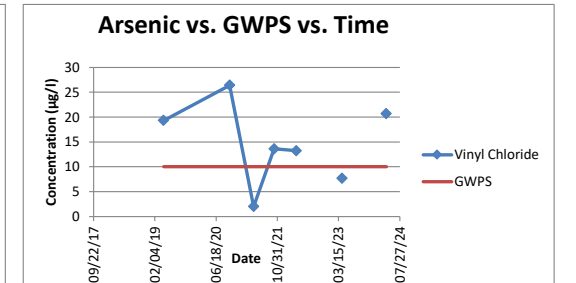
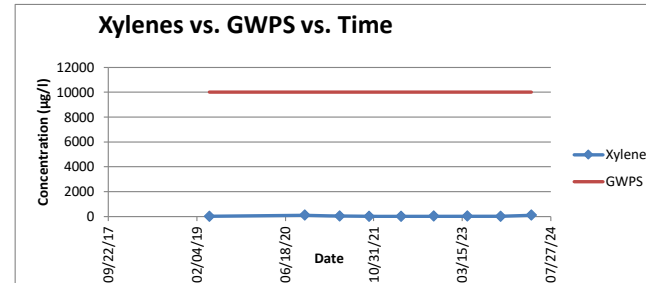
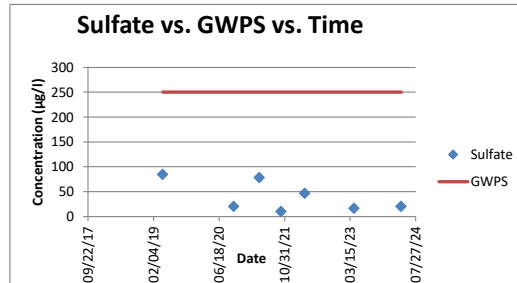
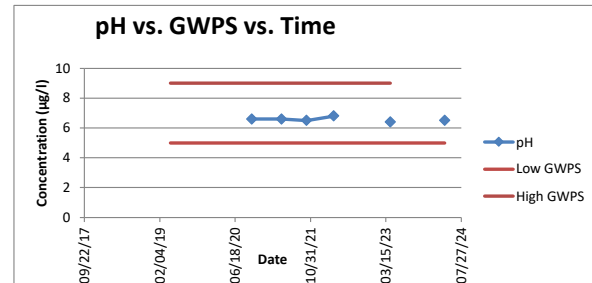
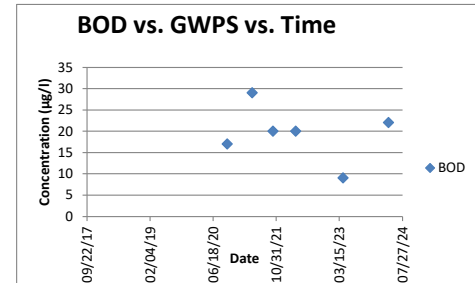
Prepared by:  
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**Otter Creek Environmental Services, LLC**  
40W565 Foxwick Court  
Elgin, IL 60124  
(847) 464-1355

**June 2024**

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Table 12  
**Leachate Well LPZ-6 - Leachate Quality over Time**  
 Annual Water Quality Report  
 Jones County Sanitary Landfill  
 Permit No. 53-SDP-01-76C

Sample Date	BOD		Alkalinity		Nitrogen (NH3)		pH		Low GWPS	High GWPS	TDS Concentration mg/L	chloride		Sulfate		Benzene		Ethyl Benzene		Xylene		1,4-dichlorobenzene		Chlorobenzene		Arsenic		Cobalt		Methane			
	Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L				Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L	Concentration mg/L	GWPS mg/L	Concentration ug/L	GWPS ug/L	Concentration ug/L	GWPS ug/L	Concentration ug/L	GWPS ug/L	Concentration ug/L	GWPS ug/L	Concentration ug/L	GWPS ug/L	Concentration ug/L	GWPS ug/L	Concentration mg/L	GWPS mg/L
4/16/2019		none	623	none			30			5	9	836	none	98.5	none	84.4	250	10.5	5	43.6	700	9.5	10000	<1.0	75	2.7	100	19.3	10	9.6	2.1	none	
10/7/2020	17	none	380	none	9.99	30			6.6	5	9	633	none	106	none	20.3	250	10.6	5	52	700	99.1	10000	6.5	75	2.4	100	26.4	10	17.6	2.1	15.3	none
4/22/2021	29	none	442	none	2.65	30			6.6	5	9	763	none	102	none	78.2	250	9.4	5	27.4	700	27.5	10000	6.4	75	2	100	2	10	8.5	2.1	none	
10/5/2021	20	none	585	none	7.7	30			6.5	5	9	1000	none	237	none	9.6	250	8.8	5	1.6	700	4.9	10000	6	75	2	100	13.6	10	17.1	2.1	2.48	none
4/4/2022	20	none	370	none	2.14	30			6.8	5	9	400	none	20.4	none	46.3	250	1.2	5	2.6	700	2.4	10000	2.2	75	1	100	13.2	10	6	2.1	2.57	none
10/5/2022		none		none		30				5	9		none		none	250		9.3	5	2.1	700	22.3	10000	6	75	1.3	100		10		2.1	none	
4/14/2023	9	none	571	none	4.38	30			6.4	5	9	886	none	114	none	16.1	250	13.6	5	7.4	700	22.6	10000	5.3	75	1.3	100	7.7	10	2.6	2.1	1.34	none
10/18/2023		none		none		30				5	9		none		none	250		1	5	1	700	3.8	10000	2.4	75	1	100		10		2.1	none	
4/8/2024	22	none	562	none	13.3	30			6.5	5	9	908	none	169	none	20.3	250	17.7	5	7.6	700	95	10000	9.2	75	1.7	100	20.7	10	6.8	2.1	none	



**Table 13**  
**CAMP Vent Gas Evaluation**  
**Annual Water Quality Report**  
 Jones County Sanitary Landfill  
 Permit No. 53-SDP-01-76C

KEY: **101** = a value that exceeds 100% of the LEL

%LEL Date	North to South						North to South					
	Vent E1	Vent E2	Vent E3	Vent E4	Vent E5	Vent E6	Vent W1	Vent W2	Vent W3	Vent W4	Vent W5	Vent W6
4/22/2021	0	0	0	0	0	0	101	0	0	101	90.9	42
10/5/2021	0	0	0	0	0	0	0	0	0	36	0	0
4/4/2022	0	0	0	2.2	0	0	9.2	5.0	0	8.0	0	0
10/5/2022	0	0	0	0	0	0	45	9.2	0	15.9	0	0
4/14/2023	0	0	0	0	44	12.3	101	71.3	58.4	90.3	2.2	0
10/18/2023	0	0	0	0	0	0	33.1	6.2	0	101	0	0
4/8/2024	0	0	0	0	0	0	101	0.0	0	67.7	101	50

