



LOESS HILLS REGIONAL SOLID WASTE LANDFILL

59722 290TH Street

Malvern, IA 51551

September 24, 2024

Mr. Mike Smith
Iowa Department of Natural Resources
Land Quality Bureau
Wallace Street Office Building
502 E 9th Street
Des Moines, IA 50319-0034

Re: **3rd Quarter 2024 Methane Monitoring Exceedance Notification, Loess Hills Regional Sanitary Landfill, Permit No. 65-SDP-01-72P**

Dear Mike,

Per Iowa Administrative Code 567-113.9(2), Iowa Waste Services, LLC, has completed the 3rd Quarter 2024 Methane Monitoring event and the results are summarized below.

MONITORING ACTIVITIES

Monitoring activities for the 3rd Quarter 2024 Methane Monitoring Event were performed on September 24, 2024. Facility personnel performed the monitoring activities which included monitoring for methane (CH₄), carbon dioxide (CO₂), and oxygen (O₂) at the applicable monitoring locations. A Landtec GEM 5000 gas analyzer was used to monitor all of the applicable monitoring locations at the facility during the quarterly monitoring event.

SUMMARY OF FINDINGS

Methane was detected at two of the applicable site monitoring locations at or above regulatory limits (100% of the lower explosive limit (LEL)) during the 3rd Quarter 2024 Methane Monitoring Event. The locations and percent methane by volume of these exceedances are listed below and can also be found on the attached LFG Monitoring Network Figure.

- #17A Sub-surface GUCO-2A Vadose zone, groundwater underdrain cleanout on the west end of Cell D. (18.5% CH₄)
- #19A Sub-surface GUCO-4A Vadose zone, groundwater underdrain cleanout on the west end of Cell E. (20.1% CH₄)

The two exceedance locations have historically had methane monitoring exceedances, with both locations having exceedances during the 4th Quarter 2023 Methane Monitoring Event. Iowa Waste Services, LLC, will continue to utilize the installed Gas Collection and Control System (GCCS) as a current remedy and will continue to observe the levels on a quarterly basis to determine if further action is needed.

Thanks,



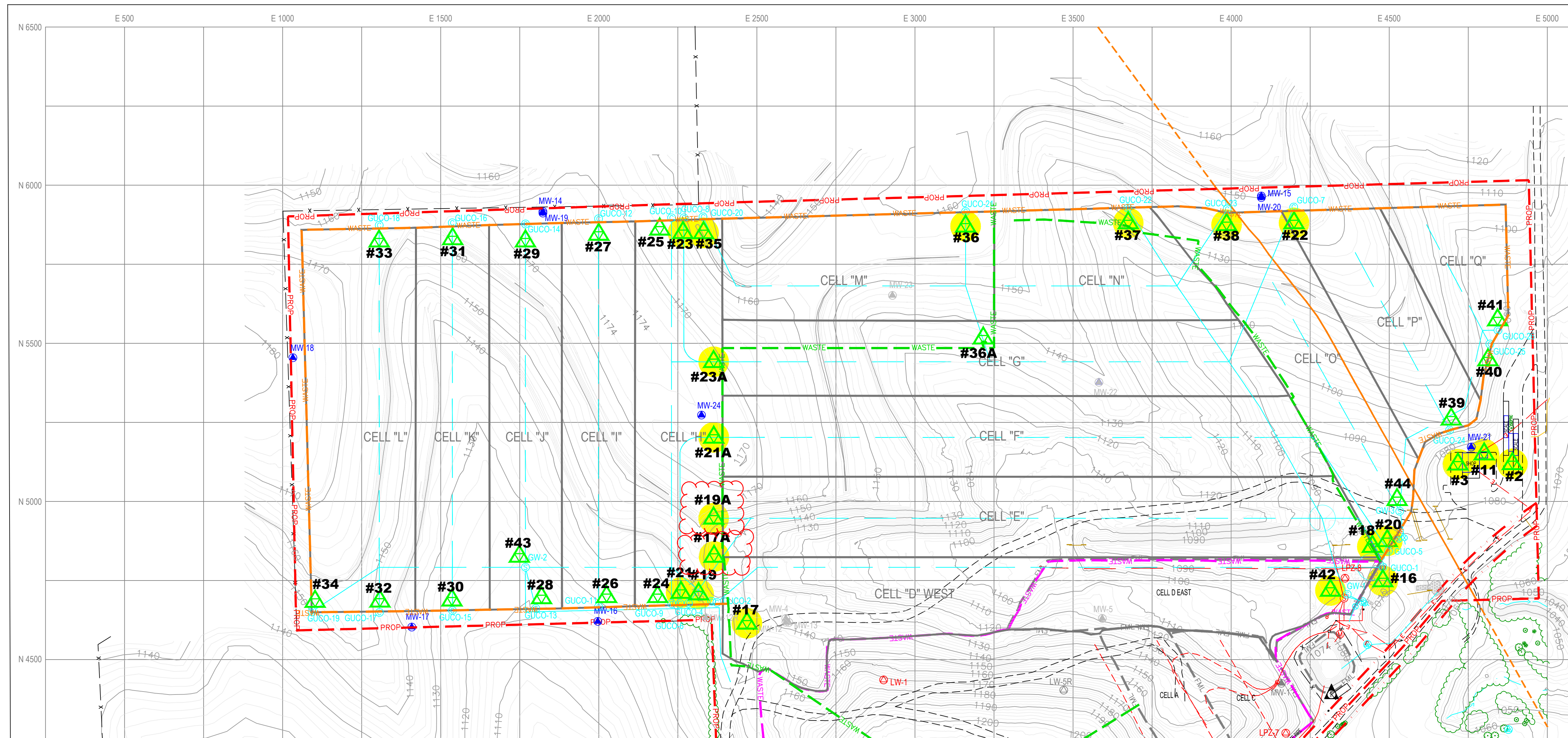
Bret Stephens

Environmental Manager

Iowa Waste Services, LLC

cc: Kelly Danielson, Iowa Waste Services, LLC
Chaz Roberts, Iowa Waste Services, LLC
Ryan Mitchell, Iowa Waste Services, LLC
Rachel Hanigan, Iowa Waste Services, LLC

IOWA ESCO PROJECT 2222054-00 DATA AND CALCULATIONS METHANE MONITORING NETWORK DWG



- ### LEGEND
- ▲ MW-1 APPROX. LOCATION OF MONITORING WELL
 - ▲ MW-12 ABANDONED MONITORING WELL
 - ▲ LW-4 APPROX. LOCATION OF LEACHATE PIEZOMETER
 - ▲ APPROX. LOCATION OF WATER SUPPLY WELL
 - EXISTING GROUND SURFACE (2 FT. CONTOUR INTERVAL)
 - ▭ BUILDING/STRUCTURE
 - - - APPROXIMATE LOCATION OF GRAVEL ROAD
 - PAVED ROAD
 - CULVERT
 - PROP APPROXIMATE PROPERTY BOUNDARY
 - WASTE APPROXIMATE WASTE BOUNDARY
 - WASTE LOCATED WASTE BOUNDARY
 - WASTE FUTURE WASTE BOUNDARY
 - STREAM CHANNEL
 - AMOCO OIL PIPELINE (APPROXIMATE LOCATION)
 - AMOCO OIL PIPELINE (BASED ON 12/16/98 SURVEY OF UTILITY LOCATE PERFORMED BY AMOCO PIPELINE ON 12/9/98)
 - - - EXISTING PERFORATED HDPE LEACHATE PIPING
 - EXISTING SOLID WALL HDPE LEACHATE PIPING
 - - - EXISTING PERFORATED HDPE GROUNDWATER UNDERDRAIN PIPING
 - EXISTING SOLID WALL HDPE GROUNDWATER UNDERDRAIN PIPING
 - ⊙ LEACHATE MANHOLE
 - ⊙ LEACHATE SUMP
 - ⊙ GROUNDWATER UNDERDRAIN SUMP
 - ⊙ LEACHATE CLEANOUT
 - ⊙ GROUNDWATER UNDERDRAIN CLEANOUT
 - FML — FML ANCHOR TRENCH
 - - - 1973 EASEMENT (66')
 - x - FENCELINE
 - e - BURIED ELECTRIC LINE
 - ▲ SURVEY CONTROL
 - ▲ METHANE MONITORING POINT
 - ▲ CURRENT METHANE MONITORING POINT
 - ⬡ Points Exceeding LEL September 2024

Map Point No.	Monitoring Point	Type	Description
#2	Office	Indoor	Inside office
#3	Shop	Indoor	Inside shop
#11	Break Room	Indoor	Inside break room
#12	MW-7	Subsurface	Vadose zone, west of the current borrow area referred to as Cell "B".
#13	MW-8	Indoor	Vadose zone, south side of the Southern Waste Footprint.
#15	MW-11	Subsurface	Vadose zone, southeast waste boundary of Cell A near the southeast property boundary.
#16	GUCO-1	Subsurface	Vadose zone, groundwater underdrain cleanout on the east end of Cell D.
#17	GUCO-2	Subsurface	Vadose zone, groundwater underdrain cleanout on the west end of Cell D.
#17A	GUCO-2A	Subsurface	Temporary monitoring point. Vadose zone, groundwater underdrain cleanout on the west end of Cell D.
#18	GUCO-3	Subsurface	Vadose zone, groundwater underdrain cleanout on the east end of Cell E.
#19	GUCO-4	Subsurface	Vadose zone, groundwater underdrain cleanout on the west end of Cell E.
#19A	GUCO-4A	Subsurface	Temporary monitoring point. Vadose zone, groundwater underdrain cleanout on the west end of Cell E.
#20	GUCO-5	Subsurface	Vadose zone, groundwater underdrain cleanout on the east end of Cell F.
#21	GUCO-6	Subsurface	Vadose zone, groundwater underdrain cleanout on the west end of Cell F.
#21A	GUCO-6A	Subsurface	Temporary monitoring point. Vadose zone, groundwater underdrain cleanout on the west end of Cell F.
#22	GUCO-7	Subsurface	Vadose zone, groundwater underdrain cleanout on the east end of Cell G.
#23	GUCO-8	Subsurface	Vadose zone, groundwater underdrain cleanout on the west end of Cell G.
#23A	GUCO-8A	Subsurface	Temporary monitoring point. Vadose zone, groundwater underdrain cleanout on the west end of Cell G.
#24	GUCO-9	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell H.
#25	GUCO-10	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell H.
#26	GUCO-11	Subsurface	Vadose zone, groundwater underdrain cleanout on the south end of Cell I.
#27	GUCO-12	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell I.
#28	GUCO-13	Subsurface	Vadose zone, groundwater underdrain cleanout on the south end of Cell J.
#29	GUCO-14	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell J.
#30	GUCO-15	Subsurface	Vadose zone, groundwater underdrain cleanout on the south end of Cell K.
#31	GUCO-16	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell K.
#32	GUCO-17	Subsurface	Vadose zone, groundwater underdrain cleanout on the north end of Cell L.
#33	GUCO-18	Subsurface	Vadose zone, groundwater underdrain cleanout on north end of Cell L.
#34	GUCO-19	Subsurface	Vadose zone, groundwater underdrain cleanout of south sump area of Cells L, K, J, I, and H.
#35	GUCO-20	Subsurface	Vadose zone, groundwater underdrain cleanout on west end of Cell M.
#36	GUCO-21	Subsurface	Vadose zone, groundwater underdrain cleanout on east end of Cell M.
#36A	GUCO-21A	Subsurface	Temporary monitoring point. Vadose zone, groundwater underdrain cleanout on east end of Cell M.
#37	GUCO-22	Subsurface	Vadose zone, groundwater underdrain cleanout on east end of Cells D, E, F, G, and N.
#38	GUCO-23	Subsurface	Vadose zone, groundwater underdrain cleanout on the north side of Cell N.
#39	GUCO-24	Subsurface	Vadose zone, groundwater underdrain cleanout of Cell P.
#40	GUCO-25	Subsurface	Vadose zone, groundwater underdrain cleanout of Cell Q.
#41	GUCO-26	Subsurface	Vadose zone, groundwater sump for Cells O, P, and Q.
#42	GW-1	Subsurface	Vadose zone, groundwater sump for Cells O, P, and Q.
#43	GW-2	Subsurface	Vadose zone, groundwater sump for Cells H, I, J, K, and L.
#44	GW-3	Subsurface	Vadose zone, groundwater sump for Cells O, P, and Q.



CK	BY	DATE	REV	
			▲	▲
SHEET TITLE		METHANE MONITORING NETWORK		
CLIENT		WASTE CONNECTIONS		
PROJECT TITLE		LOESS HILLS REGIONAL SANITARY LANDFILL MALVERN, IOWA		
DRAWN BY		MRK		
CHECKED BY		CLC		
DATE		8/29/22		
DRAWING NO.		1		

SCS ENGINEERS
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 Omaha, NE 68144
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