
TO: Chris Perea, Landfill Manager, Sandoval County Landfill

cc: Erica Gordan, Water Resources Professional III, NMED Solid Waste Bureau

FROM: Tyler S. Zack; Parkhill

DATE: December 29, 2022

SUBJECT: Sandoval County Landfill:
December 2022 Landfill Gas Monitoring Event [04011122.00]

On December 22, 2022, Parkhill performed quarterly landfill gas (LFG) monitoring at the Sandoval County Landfill (SCLF). Landfill gas measurements were recorded at the seventeen (17) active perimeter gas monitoring probes and ten (10) on-site structures shown on **Exhibit A**. Monitoring results for this event are provided as **Exhibit B**, and a copy of the field notes is included as **Exhibit C**.

Monitoring was performed using a CES Landtec™ GEM-5000® portable gas analyzer to measure methane (CH₄), oxygen (O₂), carbon dioxide (CO₂), and balance gas (typically nitrogen) in and around facility structures and in the perimeter probes. The GEM-5000® records gas measurements in terms of percent by volume in air; and was calibrated in the field prior to monitoring with 50% CH₄, 35% CO₂, and 4% O₂ calibration gases. Methane was not detected above the regulatory threshold of 25% of the lower explosive limit (LEL) for methane (1.25% by volume in air) at any of the monitoring locations or in any of the dedicated methane monitoring probes. The detected values for carbon dioxide and oxygen are generally consistent with the results of previous monitoring events.

Landfill gas monitoring at the perimeter probes is accomplished by connecting the GEM-5000® to the quick-connect port atop the probe with flexible Teflon tubing. Monitoring within structures is performed by connecting a 3-foot-long fiberglass extension rod to the tubing. For each type of monitoring, the pump on the GEM-5000® was turned on and the instrument was allowed to operate for a minimum of 90 seconds before stabilized instrument readings were recorded.

Exhibit B - Landfill Gas Monitoring Field Log

Monitoring Personnel: Tyler Zack
Methane Monitoring Type: Dedicated Probe
Probe Depth: 30'
Monitoring Date: 12/22/2022

Weather Information

Date and amount of last precipitation: 12/7/2022 0.05 in
Temp: 40 °F
Wind Speed: 0-5 mph
Wind Direction: South (observed at site)
Barometric Pressure: 30.02 inches mercury (Hg)
Weather Conditions: Clear

Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 5000
Date and Time Last Calibrated: 12/22/2022 @ 0920

Permanent Landfill Gas Monitoring Probes

Monitoring Probe ID	Time of Measurement	CH ₄ (% in air)	CO ₂ (% in air)	O ₂ (% in air)	Balance Gas (% in air)
LFG-2	10:26	0.0	0.6	21.0	78.4
LFG-3	10:35	0.0	0.8	20.5	78.7
LFG-5	10:45	0.0	4.7	17.1	78.2
LFG-6	11:43	0.0	0.4	21.1	78.5
LFG-7	11:57	0.0	1.2	20.2	78.6
LFG-8	12:03	0.0	0.9	20.4	78.7
LFG-9B	10:51	0.0	0.7	19.8	79.5
LFG-10A	10:10	0.0	0.7	20.2	79.1
LFG-12	10:16	0.0	0.5	21.1	78.4
LFG-14	9:40	0.0	0.4	21.0	78.6
LFG-15	10:04	0.0	0.3	21.2	78.5
LFG-16	11:37	0.0	1.1	20.6	78.3
LFG-17	11:12	0.0	0.3	20.8	78.9
LFG-18	11:18	0.0	0.4	20.7	78.9
LFG-19	11:25	0.0	1.0	20.2	78.8
LFG-20	11:04	0.0	0.1	21.0	78.9
LFG-21	10:56	0.0	0.3	20.9	78.8

Landfill Structures

Scalehouse (ticket office)	9:56	0.0	0.1	21.5	78.4
Scalehouse (supervisor's office)	9:58	0.0	0.1	21.5	78.4
Employee Breakroom	9:54	0.0	0.1	21.5	78.4
Spotter's Shed	9:45	0.0	0.1	21.4	78.5
Recycling Storage	9:46	0.0	0.1	21.5	78.4
Portable Toilet	9:51	0.0	0.1	21.5	78.4
Gray Storage Shed	9:49	0.0	0.1	21.5	78.4
Composting Office	10:21	0.0	0.1	21.3	78.6
Public Works Dept. Admin.	9:27	0.0	0.2	21.2	78.6
Roads & Fleet Maintenance Bldg.	9:32	0.0	0.2	21.3	78.5
North Storage Shed	9:35	0.0	0.1	21.3	78.6

Ambient Readings

Office	9:24	0.0	0.2	21.3	78.5
Near LFG 8	12:05	0.0	0.1	21.3	78.6

Signature(s): 

Exhibit C - Landfill Gas Monitoring Field Log

Monitoring Personnel: Tyler Zack

Methane Monitoring Type: Dedicated Probe

Probe Depth: 30'

Monitoring Date: 12/22/22

Weather Information

Date and amount of last precipitation 12/7/22 0.05"

Temp: 40 °F

Wind Speed: 0-5 mph

Wind Direction: South (observed at site)

Barometric Pressure: 30.02 inches mercury (Hg)

Weather Conditions: Clear

Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 2000-5000

Date and Time Last Calibrated: 12/24/22 @ 0920

Permanent Landfill Gas Monitoring Probes

Monitoring Probe ID	Time of Measurement	CH ₄ (% in air)	CO ₂ (% in air)	O ₂ (% in air)	Balance Gas (% in air)
LFG-2	1026	0	0.6	21.0	78.4
LFG-3	1035	0	0.8	20.5	78.7
LFG-5	1045	0	4.7	17.1	78.2
LFG-6	1143	0	0.4	21.1	78.5
LFG-7	1157	0	1.2	20.2	78.6
LFG-8	1203	0	0.9	20.4	78.7
LFG-9B	1051	0	0.7	19.8	79.5
LFG-10A	1010	0	0.7	20.2	79.1
LFG-12	1016	0	0.5	21.1	78.4
LFG-14	0940	0	0.4	21.0	78.6
LFG-15	1004	0	0.3	21.2	78.5
LFG-16	1137	0	1.1	20.6	78.3
LFG-17	1112	0	0.3	20.8	78.9
LFG-18	1118	0	0.4	20.7	78.9
LFG-19	1125	0	1.0	20.2	78.8
LFG-20	1104	0	0.1	21.0	78.9
LFG-21	1056	0	0.3	20.9	78.8

Landfill Structures

Scalehouse (ticket office)	0956	0	0.1	21.5	78.4
Scalehouse (supervisor's office)	0958	0	0.1	21.5	78.4
Employee Breakroom	0954	0	0.1	21.5	78.4
Spotter's Shed	0945	0	0.1	21.4	78.5
Recycling Storage	0946	0	0.1	21.5	78.4
Portable Toilet	0951	0	0.1	21.5	78.4
Gray Storage Shed	0949	0	0.1	21.5	78.4
Composting Office	1021	0	0.1	21.3	78.6
Public Works Dept. Admin.	0927	0	0.2	21.2	78.6
Roads & Fleet Maintenance Bldg.	0932	0	0.2	21.3	78.5
North Storage Shed	0935	0	0.1	21.3	78.6

Ambient Readings

Office	0924	0	0.2	21.3	78.5
Near LFG-8	1205	0	0.1	21.3	78.6

Signature(s):

