

GORDON ENVIRONMENTAL/PSC

TO: Chris Perea, Sandoval County Landfill

cc: George Schuman, Permit Section Manager, NMED Solid Waste Bureau

FROM: Mike Crepeau, P.E.; Gordon Environmental/PSC
Diego Y. Ramirez, EIT; Gordon Environmental/PSC

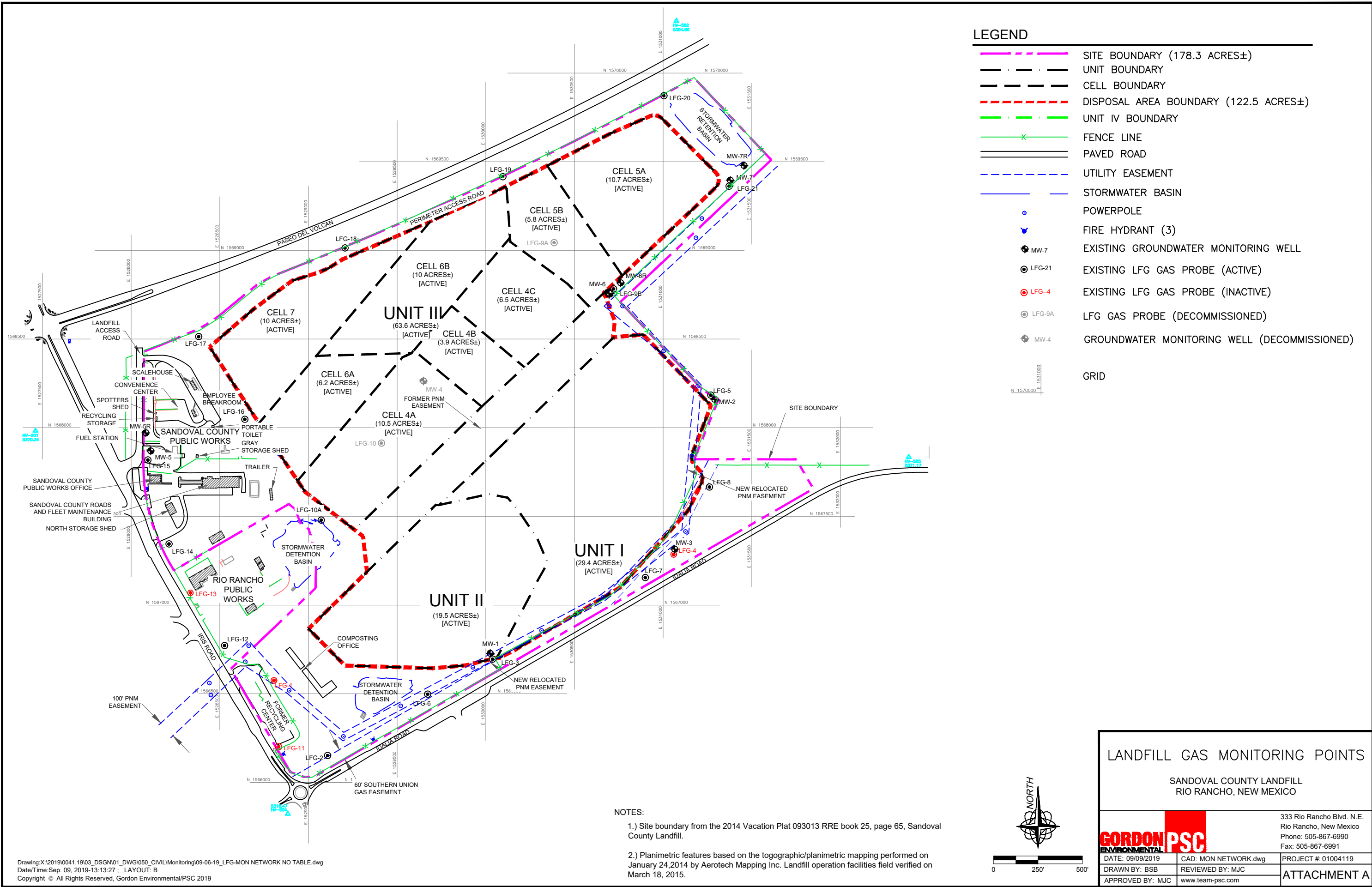
DATE: November 12, 2019

SUBJECT: Sandoval County Landfill:
November 2019 Landfill Gas Monitoring Event [01004119]

On November 1, 2019, Gordon Environmental/PSC 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 eleven (11) on-site structures shown on **Attachment A**. Monitoring results for this event are provided as **Attachment B**, and a copy of the field notes is included as **Attachment C**.

Monitoring was performed using a CES Landtec™ GEM-2000® 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-2000® 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. Methane was detected at a concentration of 0.1% by volume in air in LFG monitoring probe LFG-8. 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-2000® 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-2000® was turned on and the instrument was allowed to operate for a minimum of 90 seconds before stabilized instrument readings were recorded.



Attachment B - Landfill Gas Monitoring Field Data

Monitoring Personnel: Tyler Zach, Diego Ramirez
Methane Monitoring Type: Dedicated Probe
Probe Depth: 30'
Monitoring Date: 11/1/2019

Weather Information

Date and amount of last precipitation 10/29/2019; 0.01 in
Temp: 44 °F
Wind Speed: 5 mph
Wind Direction: North (observed at site)
Barometric Pressure: 30.19 (↑) inches mercury (Hg)
Weather Conditions: Sunny/Clear

Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 2000

Date and Time Last Calibrated: 11/01/19; 1125

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	1307	0.0	0.2	20.0	79.8
LFG-3	1328	0.0	0.6	20.1	79.3
LFG-5	1340	0.0	2.8	18.3	78.9
LFG-6	1313	0.0	0.1	20.0	79.9
LFG-7	1535	0.0	0.8	19.6	79.6
LFG-8	1612	0.1	0.5	19.7	79.7
LFG-9B	1416	0.0	0.0	20.9	79.1
LFG-10A	1517	0.0	0.0	20.5	79.5
LFG-12	1255	0.0	0.2	20.3	79.5
LFG-14	1233	0.0	0.1	20.3	79.6
LFG-15	1207	0.0	0.2	20.0	79.8
LFG-16	1508	0.0	0.4	20.0	79.6
LFG-17	1503	0.0	0.6	19.8	79.6
LFG-18	1458	0.0	0.4	20.1	79.5
LFG-19	1454	0.0	0.3	20.2	79.5
LFG-20	1447	0.0	0.2	20.4	79.4
LFG-21	1424	0.0	0.1	20.5	79.4

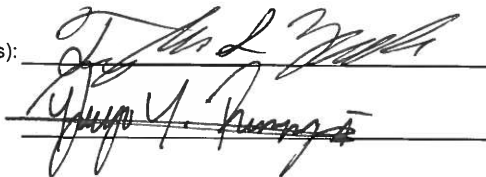
Landfill Structures

Scalehouse (ticket office)	1137	0.0	0.0	20.4	79.6
Scalehouse (supervisor's office)	1138	0.0	0.0	20.4	79.6
Employee Breakroom	1135	0.0	0.0	20.4	79.6
Spotter's Shed	1142	0.0	0.0	20.6	79.4
Recycling Storage	1141	0.0	0.0	20.6	79.4
Portable Toilet	1245	0.0	0.0	20.9	79.1
Gray Storage Shed	1145	0.0	0.0	20.7	79.3
Composting Office	1301	0.0	0.0	20.2	79.8
Public Works Dept. Admin.	1522	0.0	0.0	20.4	79.6
Roads & Fleet Maintenance Bldg.	1224	0.0	0.0	20.4	79.6
Trailer	1242	0.0	0.0	20.7	79.3
North Storage Shed	1227	0.0	0.0	20.6	79.4

Ambient Readings

Outside Public Works Office	1132	0	0.0	20.5	79.5
Near LFG-8	1524	0	0	20.6	79.4

Signature(s):



Attachment C - Landfill Gas Monitoring Field Log

Monitoring Personnel: Tyler Zach, Diego Ramirez
Methane Monitoring Type: Dedicated Probe

Probe Depth: 30'

Monitoring Date: 11/1/19

Weather Information

Date and amount of last precipitation: 10/29/19; 0.01 in
Temp: 49 °F
Wind Speed: 5 mph
Wind Direction: North (observed at site)
Barometric Pressure: 30.19 (in) inches mercury (Hg)
Weather Conditions: Sunny / clear

Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 2000

Date and Time Last Calibrated: 11/1/19 @ 11:25

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	13:27	0	0.2	20.0	79.8
LFG-3	13:28	0	0.6	20.1	79.3
LFG-5	13:40	0	2.8	18.3	78.9
LFG-6	13:43	0	0.1	20.0	79.9
LFG-7	15:35	0	0.3	19.6	79.6
LFG-8	15:17	0	0	20.5	79.5
LFG-9B	14:16	0	0	20.9	79.1
LFG-10A	16:12	0.1	0.5	19.7	79.7
LFG-12	12:55	0	0.2	20.3	79.5
LFG-14	12:23	0	0.1	20.3	79.6
LFG-15	12:07	0	0.2	20.0	79.8
LFG-16	13:08	0	0.4	20.0	79.6
LFG-17	15:03	0	0.6	19.8	79.6
LFG-18	14:58	0	0.4	20.1	79.5
LFG-19	14:54	0	0.3	20.2	79.5
LFG-20	14:17	0	0.2	20.4	79.4
LFG-21	14:24	0	0.1	20.5	79.4

Landfill Structures

Scalehouse (ticket office)	1137	0	0	20.4	79.6
Scalehouse (supervisor's office)	1138	0	0	20.4	79.6
Employee Breakroom	1135	0	0	20.4	79.6
Spotter's Shed	1142	0	0	20.6	79.4
Recycling Storage	1141	0	0	20.6	79.4
Portable Toilet	1245	0	0	20.9	79.1
Gray Storage Shed	1145	0	0	20.7	79.3
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Public Works Dept. Admin.	1522	0	0	20.4	79.6
Roads & Fleet Maintenance Bldg.	1224	0	0	20.4	79.6
Trailer	1242	0	0	20.7	79.3
North Storage Shed	1227	0	0	20.6	79.4

Ambient Readings

Near Employee Lounge	1132	0	0	20.5	79.5
Near Employee Lounge	1524	0	0	20.6	79.4

Signature(s):

Tyler Zach
Diego Ramirez