

# GORDON ENVIRONMENTAL/PSC

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**TO:** Chris Perea, Sandoval County Landfill

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

**FROM:** Mike Crepeau, P.E.; Gordon Environmental/PSC  
Braden Belliveau, EIT; Gordon Environmental/PSC

**DATE:** June 27, 2019

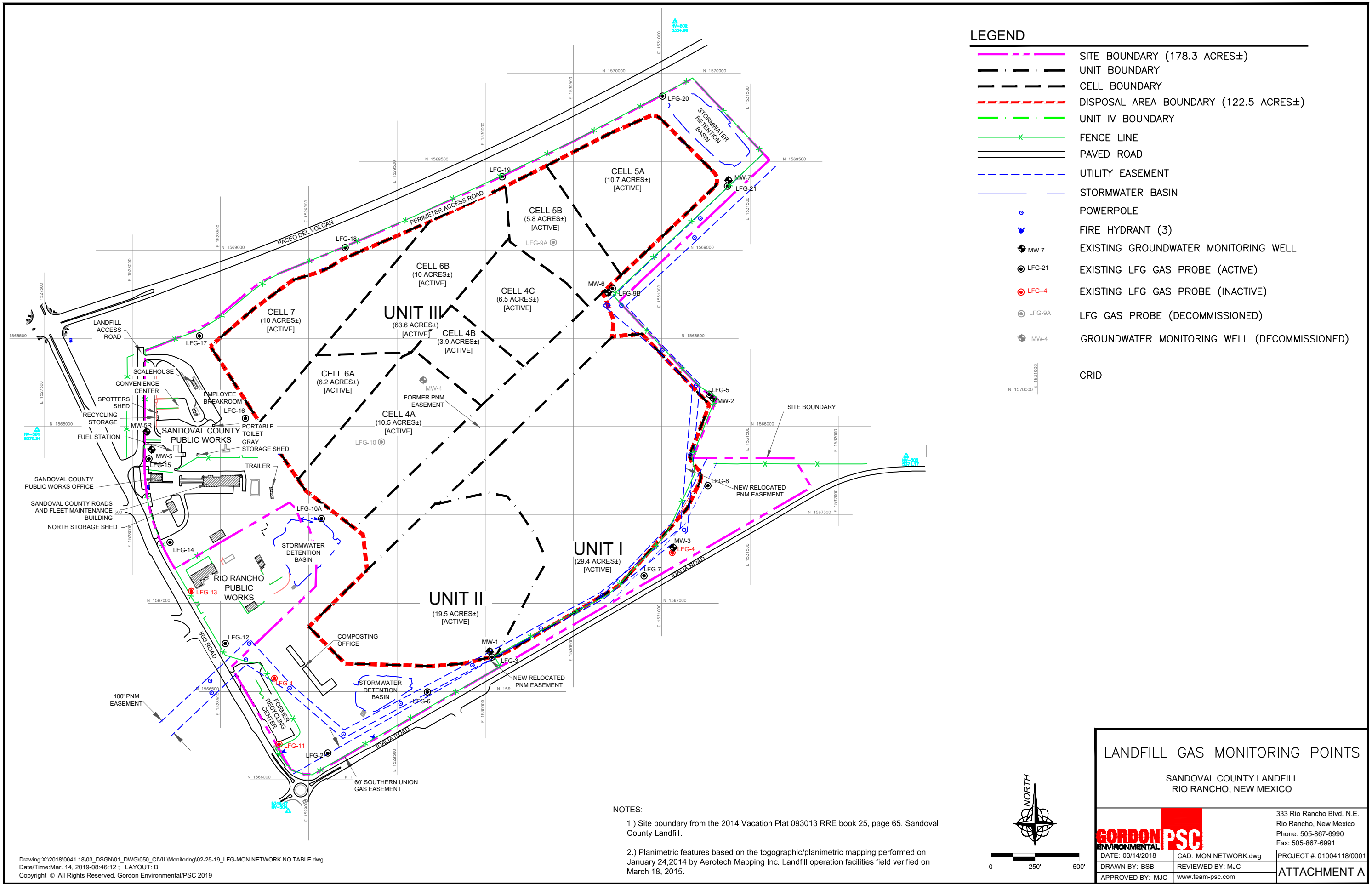
**SUBJECT:** Sandoval County Landfill:  
June 2019 Landfill Gas Monitoring Event [01004118/0002]

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On June 25, 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 (CH<sub>4</sub>), oxygen (O<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), 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% CH<sub>4</sub>, 35% CO<sub>2</sub>, and 4% O<sub>2</sub> 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: Don Gray, Tyler Zack  
Methane Monitoring Type: Dedicated Probe  
Probe Depth: 30'  
Monitoring Date: 6/25/2019

Weather Information

Date and amount of last precipitation: 6/17/2019; 0.15 in  
Temp: 91 °F  
Wind Speed: 0-5 mph  
Wind Direction: NW (observed at site)  
Barometric Pressure: 30.07 (S) inches mercury (Hg)  
Weather Conditions: Clear

Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 2000

Date and Time Last Calibrated: 06/25/19; 1354

Permanent Landfill Gas Monitoring Probes

Monitoring Probe ID	Time of Measurement	CH <sub>4</sub> (% in air)	CO <sub>2</sub> (% in air)	O <sub>2</sub> (% in air)	Balance Gas (% in air)
LFG-2	1617	0.0	0.1	20.8	79.1
LFG-3	1457	0.0	0.0	20.3	79.7
LFG-5	1506	0.0	2.8	17.4	79.8
LFG-6	1452	0.0	0.1	20.0	79.9
LFG-7	1637	0.0	0.4	20.3	79.3
LFG-8	1631	0.1	0.2	20.6	79.1
LFG-9B	1511	0.0	0.0	20.5	79.5
LFG-10A	1603	0.0	0.0	21.0	79.0
LFG-12	1610	0.0	0.0	20.7	79.3
LFG-14	1557	0.0	0.0	21.0	79.0
LFG-15	1548	0.0	0.0	20.7	79.3
LFG-16	1544	0.0	0.1	20.6	79.3
LFG-17	1538	0.0	0.1	20.1	79.8
LFG-18	1534	0.0	0.1	20.0	79.9
LFG-19	1530	0.0	0.2	20.0	79.8
LFG-20	1525	0.0	0.1	19.8	80.1
LFG-21	1516	0.0	0.0	20.7	79.3

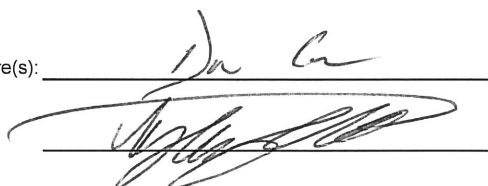
Landfill Structures

Scalehouse (ticket office)	1424	0.0	0.0	20.5	79.5
Scalehouse (supervisor's office)	1426	0.0	0.0	20.5	79.5
Employee Breakroom	1409	0.0	0.0	20.6	79.4
Spotter's Shed	1411	0.0	0.0	20.6	79.4
Recycling Storage	1413	0.0	0.0	20.6	79.4
Portable Toilet	1418	0.0	0.0	20.6	79.4
Gray Storage Shed	1415	0.0	0.0	20.5	79.5
Composting Office	1430	0.0	0.0	20.8	79.2
Public Works Dept. Admin.	1400	0.0	0.0	20.6	79.4
Roads & Fleet Maintenance Bldg.	1403	0.0	0.0	20.4	79.6
Trailer	1432	0.0	0.0	20.8	79.2
North Storage Shed	1552	0.0	0.0	21.3	78.7

Ambient Readings

Outside Public Works Office	1357	0	0.0	20.5	79.5
Near LFG-8	1643	0	0	21.2	78.8

Signature(s):



# ATTACHMENT C

## LANDFILL GAS MONITORING FIELD LOG

### SANDOVAL COUNTY LANDFILL

### SANDOVAL COUNTY, NM

Monitoring Personnel: Don Gray / Tyler Zack  
 Methane Monitoring Type: Dedicated Probe  
 Probe Depth: 30'

#### Weather Information

Date and amount of last precipitation: 6/17/19 0.15 in  
 Temp: 91 °F  
 Wind Speed: 0-5 mph

Wind Direction: NW (observed at site)  
 Barometric Pressure: 30.07 inches mercury (Hg)  
 Weather Conditions: Clear

#### Equipment Information

Monitoring Equipment Used: CES-LandTec™ GEM 2000®  
 Date and Time Last Calibrated: 1354 6/25/19

#### Permanent Landfill Gas Monitoring Probes

Monitoring Probe ID	Time of Measurement	CH <sub>4</sub> (% in air)	CO <sub>2</sub> (% in air)	O <sub>2</sub> (% in air)	Balance Gas (% in air)
LFG-2	1617	φ	4.1	20.8	79.1
LFG-3	1457	φ	φ	20.3	79.7
LFG-5	1506	φ	2.8	17.4	79.8
LFG-6	1452	φ	φ.1	20.0	79.9
LFG-7	1637	φ	φ.4	20.3	79.3
LFG-8	1631	φ.1	φ.2	20.6	79.1
LFG-9B	1511	φ	φ	20.5	79.5
LFG-10A	1603	φ	φ	21.0	79.0
LFG-12	1610	φ	φ	20.7	79.3
LFG-14	1557	φ	φ	21.0	79.0
LFG-15	1548	φ	φ	20.7	79.3
LFG-16	1544	φ	0.1	20.6	79.3
LFG-17	1538	φ	0.1	20.1	79.8
LFG-18	1534	φ	0.1	20.0	79.9
LFG-19	1530	φ	0.2	20.0	79.8
LFG-20	1525	φ	0.1	19.8	80.1
LFG-21	1516	φ	φ	20.7	79.3

#### Landfill Structures

Scalehouse (ticket office)	1424	φ	φ	20.5	79.5
Scalehouse (supervisor's office)	1426	φ	φ	20.5	79.5
Employee Breakroom	1409	φ	φ	20.6	79.4
Spotter's Shed	1411	φ	φ	20.6	79.4
Recycling Storage	1413	φ	φ	20.6	79.4
Portable Toilet	1418	φ	φ	20.6	79.4
Gray Storage Shed	1415	φ	φ	20.5	79.5
Composting Office	1430	φ	φ	20.5	79.5
Public Works Dept. Admin.	1400	φ	φ	20.6	79.4
Roads & Fleet Maintenance Bldg.	1403	φ	φ	20.4	79.6
<del>FIRE</del> Trailer	1432	φ	φ	20.8	79.2
North Storage Shed	1552	φ	φ	21.3	78.7
<del>Recycling Center Office</del>					
<del>Storage Locker</del>					
<del>Recycling Center Storage #2</del>					
<del>Recycling Center Storage #3</del>					
Recycling Center Portable Toilet					

#### Ambient Readings

<del>Near LFG-8</del>	1357	φ	φ	20.5	79.5
<del>Near Employee Lounge</del>	1643	φ	φ	21.2	78.8

Signature(s):