

2 COMBINED MONITORING REPORT

In accordance with Title V Permit Standard Condition 1.F, BAAQMD Rule 8-34-411 and §60.757(f) in the NSPS, this report is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report that is required to be submitted by the GRDF. The report contains monitoring data for the operation of the landfill gas collection and control system (GCCS). The operational records have been reviewed and summarized. The timeframe included in this report is October 1, 2012 through March 31, 2013. The following table lists the rules and regulations that are required to be included in this Combined Report.

Table 2-1 Combined Report Requirements

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-501.1 §60.757(f)(4)	All collection system downtime, including individual well shutdown times and the reason for the shutdown.	Section 2.1, Appendices B, D, & E
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2, Appendices B & E
8-34-501.3, 8-34-507, §60.757(f)(1)	Continuous temperature for all operating flares and any enclosed combustor subject to Section 8-34-507.	Section 2.3, Appendix F
8-34-501.4, 8-34-505, 8-34-510	Testing performed to satisfy any of the requirements of this rule.	Section 2.4 & 2.10 Appendices G & J
8-34-501.5	Monthly landfill gas flow (LFG) rates and well concentration readings for facilities subject to 8-34-404.	Section 2.5, 2.11 Appendix L
8-34-501.6, 8-34-503, 8-34-506, §60.757(f)(5)	For operations subject to Section 8-34-503 and 8-34-506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in parts per million by volume (ppmv), date of discovery, the action taken to repair the leak, date of the repair, date of any required re-monitoring, and the re-monitored concentration in ppmv.	Section 2.6 & 2.7, Appendix H
8-34-501.7	Annual waste acceptance rate and current amount of waste in-place.	Section 2.8 Appendix I
8-34-501.8	Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the GCCS Design Plan.	Section 2.9

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-501.9, 8-34-505, §60.757(f)(1)	For operations subject to Section 8-34-505, records of all monitoring dates and any excesses of the limits stated in Section 8-34-305 that are discovered by the operator, including well identification number, the measured excess, the action taken to repair the excess, and the date of repair.	Section 2.10, 2.10.1, Appendices J & K
8-34-501.10, 8-34-508, §60.757(f)(1)	Continuous gas flow rate records for any site subject to Section 8-34-508.	Section 2.11, Appendices F and L
8-34-501.11, 8-34-509	For operations subject to Section 8-34-509, records or key emission control system operating parameters.	Section 2.2.2
8-34-501.12	The records required above shall be made available and retained for a period of five years.	Section 1.2
§60.757(f)(2)	Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.	Section 2.2.1
§60.757(f)(6)	The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), (c)(4) of §60.755.	Section 2.12
§60.10 (d)(5)(i)	Startup, Shutdown, Malfunction Events	Section 4.0, Appendices D & E

2.1 Collection System Operation (BAAQMD 8-34-501.1 & §60.757(f)(4))

Appendix A contains a current map of the GRDF's existing GCCS. Section 2.1.1 includes the GCCS downtime for the reporting period. The information contained in Section 2.1.2 includes the wellfield SSM information.

2.1.1 Collection System Downtime

During the period covered in this report, the GCCS was not shut down for more than five days on any one occasion. Total 2012 downtime was 21.10 hours, out of an allowable 240 hours per year. The downtime for the reporting period of October 1, 2012 through March 31, 2013 was 11.03 hours. Downtime for the partial 2013 calendar year from January 1, 2013 through March 31, 2013, was 11.03 hours, out of an allowable 240 hours per year.

Appendix B contains the GCCS Downtime Report which lists dates, times, and lengths of shutdowns for the reporting period and year-to-date.

2.1.2 Well Start-Up & Disconnection Log

There were 40 wellfield SSM events during the reporting period. See Appendix D, Wellfield SSM Log for details of well disconnection and reconnection events.

2.2 Emission Control Device Downtime (BAAQMD 8-34-501.2 & §60.757(f)(3))

The emission control system consists of four internal combustion (IC) engines owned and operated by Fortistar, previously known as Gas Recovery Systems (GRS), under a separate BAAQMD permit (Facility Number B1669) and the GRDF back-up flare (A-9), which began operation in August 2003. The control system was not bypassed at any time during the reporting period. Raw LFG was not emitted during the reporting period. The SSM log for the A-9 Flare is located in Appendix E. As indicated in Section 2.1.1, the total GCCS downtime for the reporting period of October 1, 2012 through March 31, 2013 was 11.03 hours out of an allowable 240 hours per year. The GCCS Downtime Log for the reporting period is included in Appendix B.

2.2.1 LFG Bypass Operations (§60.757(f)(2))

Title 40 CFR §60.757(f)(2) is not applicable at the GRDF because a by-pass line has not been installed. LFG cannot be diverted from the control equipment.

2.2.2 Key Emission Control Operating Parameters (BAAQMD 8-34-501.11 & 8-34-509)

BAAQMD Regulation 8-34-501.11 and 8-34-509 are not applicable to the A-9 Flare because the A-9 Flare is subject to continuous temperature monitoring as required in BAAQMD Regulation 8-34-507 and §60.757(f)(1).

2.3 Temperature Monitoring Results (BAAQMD 8-34-501.3, 8-34-507, & §60.757(f)(1))

The combustion zone temperature of the flare is monitored with Thermo-Electric Thermocouples. The temperature is displayed with a Yokogawa UT37 and recorded every two minutes with a Yokogawa DX100 digital recorder. The temperature readings are downloaded and archived each working day. There were no temperature deviations during the reporting period. There was one (1) missing data/recorder shutdown event during the reporting period totaling 0.10 hours. Appendix F contains the Flare Temperature Deviation/ Inoperative Monitor/Missing Data Report for October 1, 2012 through March 31, 2013. Additionally, all recorder SSM events were less than 24 continuous hours and therefore not required to be reported under BAAQMD 1-523.

2.4 Monthly Cover Integrity Monitoring (BAAQMD 8-34-501.4)

The cover integrity monitoring was performed on the following dates:

- October 1, 2, 4, 5, 9, 12, 17, 22, and 23, 2012
- November 9, 12, 15, 16, 19, 20, 28 and 30, 2012
- December 4, 6, 8, 13, 18, and 28, 2012
- January 2, 3, 4, 9, 16, 17, 18, 21, 22, 23, 24, 25, 28, 30, and 31, 2013
- February 6, 7, 8, 11, 12, 13, 14, 21, 22, 26, and 27, 2013

- March 4, 5, 6, and 7, 2013

No cover integrity monitoring issues occurred during the reporting period. The Monthly Cover Integrity Monitoring reports are included in Appendix G.

2.5 Less Than Continuous Operation (BAAQMD 8-34-501.5)

The GRDF does not operate under BAAQMD Regulation 8-34-404 (Less Than Continuous Operation) and, therefore, is not required to submit monthly LFG flow rates.

2.6 Surface Emissions Monitoring (BAAQMD 8-34-501.6, 8-34-506, & §60.757(f)(5))

Quarterly Surface Emissions Monitoring (SEM), pursuant to BAAQMD Regulation 8-34-506 occurred during the reporting period on the following dates:

- Fourth Quarter 2012 – November 6, 15, and 27, 2012
- First Quarter 2013 – January 30, 2013; February 7 and 27, 2013

A Photovac Micro Flame Ionization Detector (FID) was used to monitor the path along the landfill surface according to the Landfill Surface Emissions Monitoring Plan map. Any areas suspected of having emissions problems based on visible observations were also monitored. Prior to both monitoring events, the FID instrument was zeroed and calibrated using zero air and a 500 parts per million by volume (ppmv) methane calibration gas.

The Initial Fourth Quarter 2012 SEM was conducted by Roberts Environmental Services (RES) personnel on November 6, 2012. Five (5) exceedances were detected during the initial monitoring event. The 10-day re-monitoring and 30-day follow-up monitoring events were conducted on November 15, and 27, 2012, respectively, and no exceedances were detected at either event. Detailed monitoring results are available in the Fourth Quarter 2012 SEM Report, included in Appendix H.

The initial First Quarter 2013 SEM was conducted by RES personnel on January 30, 2013. Seven (7) exceedances were detected during the initial monitoring event. The 10-day re-monitoring and 30-day follow-up monitoring events were conducted on February 7 and 27, 2013, respectively, and no exceedances were detected at either event. Detailed monitoring results are available in the First Quarter 2013 SEM Report, included in Appendix H.

2.7 Component Leak Testing (BAAQMD 8-34-501.6 & 8-34-503)

Quarterly component leak testing, pursuant to BAAQMD Regulation 8-34-503, occurred during the reporting period on the following dates:

- Fourth Quarter 2012 – November 6, 2012 and December 12, 2012

- First Quarter 2013 – January 30, 2013; February 27, 2013

A TVA was used to perform the leak testing. Component leaks were not identified during either quarterly monitoring event. Appendix H contains the Quarterly LFG Component Leak Monitoring Reports.

2.8 Waste Acceptance Records (BAAQMD 8-34-501.7)

The Annual Waste Acceptance Rate was compiled for the timeframe of October 1, 2012 through March 31, 2013. The Current Waste-In-Place figure includes waste placed through March 31, 2013. Below is a summary of the waste acceptance records for the reporting period. A table of monthly totals for the reporting period is provided in Appendix I.

Table 2-2 Waste Acceptance

Description	Total Waste Landfilled (Excluding Cover)
Waste Acceptance October 1, 2012 through March 31, 2013	54,475
Current Waste In Place as of March 31, 2013	Approximately 9.73 Million tons

2.9 Non-degradable waste acceptance records (BAAQMD 8-34-501.8)

The GCCS Design Plan for the GRDF does not indicate non-degradable waste areas that are excluded from the collection system. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable.

2.10 Wellhead Monitoring Data (BAAQMD 8-34-501.4 & 8-34-505)

Wellhead monitoring was performed on a monthly basis pursuant to 8-34-505. The well readings for October 1, 2012 through March 31, 2013 are included in Appendix J. Each well was monitored in accordance with the following requirements:

- 8-34-305.1 – Each wellhead shall operate under a vacuum;
- 8-34-305.2 – The LFG temperature in each wellhead shall be less than 55 degrees Celsius (°C) (131 degrees Fahrenheit [°F]); and
- 8-34-305.4 – The oxygen concentration in each wellhead shall be less than 5 percent by volume.

The wellhead monitoring was performed on the following dates:

- October 1, 2, 4, 5, 9, 12, 17, 22, and 23, 2012
- November 9, 12, 15, 16, 19, 20, 28 and 30, 2012
- December 4, 6, 8, 13, 18, and 28, 2012
- January 2, 3, 4, 9, 16, 17, 18, 21, 22, 23, 24, 25, 28, 30, and 31, 2013

- February 6, 7, 8, 11, 12, 13, 14, 21, 22, 26, and 27, 2013
- March 4, 5, 6, and 7, 2013

2.10.1 Wellhead Deviations (BAAQMD 8-34-501.9 & §60.757(f)(1))

There were nine (9) deviations at wells with readings that exceeded the limits set forth in BAAQMD Regulation 8-34-305 during the reporting period. Corrective action for wells was initiated within the required 5-day time period and re-monitoring was completed within 15 days of the deviation pursuant to BAAQMD Regulation 8-34-414. Of the 9 deviations, 8 were corrected during 15 days. Horizontal collector H18 was watered in and placed on the 120-day list, with a completion deadline of April 27, 2013. The expansion consisted of draining the collector and compliance was achieved on February 27, 2013. See Appendix K, Wellfield Deviation Log, for more detail.

2.10.2 Higher Operating Value (HOV) Wells

As of March 31, 2013, the following wells are approved to operate at a temperature HOV of 145°F: Wells 114, 115, 116, 117, 121, 123, 134, 135, 149, 151, 154, 156, 157, 160, 161, and 162. Horizontal Leachate Collectors H11L, H12L are approved for less than continuous operation (LTCO), and may operate at up to 15.0 percent oxygen, and 0.5 inches of water column, until June 2013 when Permit to Operate (PTO) 21931 is due for renewal.

2.11 Gas Flow Monitoring Results (BAAQMD 8-34-501.10, 8-34-508, & §60.757(f)(1))

The flare LFG flow rate is measured with a Fluid Components International (FCI) Model ST98 flow meter. The General Electric data panel displays the LFG flow and the digital Yokogawa data recorder records LFG flow every two minutes and is downloaded and saved to a compact flash card. The flare flow meter meets the requirements of BAAQMD Regulation 8-34-508 by recording data at least every 15 minutes. The flow meter is maintained and calibrated pursuant to manufacturer's recommendations. The flow data for the flare is available for review at the GRDF. Appendix L contains a summary of the monthly flow rates for the flare. No deviations of the flare flow were identified during the monitoring period. There was data recorded at least once every fifteen minutes. Table 2-3 below is a summary of the total LFG flow for the reporting period of October 1, 2012 through March 31, 2013.

Table 2-3 Total LFG Flow for October 1, 2012 through March 31, 2013

Permit Number	Average Flow (scfm)	Average CH ₄ (%)*	Total LFG Volume (scf)	Total CH ₄ Volume (scf)	Heat Input (MMBTU)
1000000000	1,383	48.9	362,582,922	117,316,385	179,621

scfm = standard cubic feet per minute

CH₄ = methane

scf = standard cubic feet

*Methane content determined from the May 24, 2012 and August 24, 2012 Source Tests

MMBTU = million British thermal units

2.12 Compliance with §60.757(f)(6)

"The date of installation and the location of each well or collection system expansion added pursuant to (a)(3), (b), (c)(4) of §60.755."

The GCCS was modified pursuant to Title V Permit Condition Number 6188 Part 2 as modified by the Permit to Operate (PTO) Condition Number 21931, during the reporting period.

LFG wells that were placed in service during the reported period are summarized below:

- H13L, Startup on January 30, 2013

As of March 31, 2013, the GRDF has 58 vertical wells and 11 horizontal collectors. After accounting for the well actions listed above, Title V Permit Condition Number 6188 Part 2, as modified by PTO Condition Number 21931, still allows for the replacement of up to 40 vertical wells, installation of up to 70 new vertical wells, installation of up to 16 new horizontal collectors, the decommissioning of up to 39 vertical wells, and the decommissioning of up to 10 horizontal collectors. See Appendix C, Correspondence, for copies of the Notification Letters.

2.13 Compliance with Title V Permit Condition Number 23202 for S-23

Title V Permit Condition Number 23202 for S-23 is no longer applicable. A Permit Surrender Letter for S-23 was submitted to the BAAQMD on September 15, 2010, which was included in Appendix C of the April 1, 2010 through September 30, 2010 Combined Report.

2.14 Compliance with Title V Permit Cond. No. 6188, Part 20

No contaminated soil containing volatile organic compounds (VOCs) greater than 50 ppm_v was received during the reporting period. No Low-VOC soil (containing less than 50 ppm of VOCs) was received during the reporting period. Required records of soil acceptance are available for review at the GRDF.

4 STARTUP, SHUTDOWN, MALFUNCTION (SSM) PLAN

4.1 SSM Log for the GCCS at the GRDF

The NESHAP contained in 40 CFR Part 63, AAAA for MSW landfills to control hazardous air pollutants include the regulatory requirements for submittal of a semi-annual report (under 40 CFR §63.10(d)(5) of the general provisions) if an SSM event occurred during the reporting period. The reports required by §63.1980(a) of the NESHAP and §60.757(f) of the NSPS summarize the GCCS exceedances. These two semi-annual reports contain similar information and have been combined as allowed by §63.10(d)(5)(i) of the General Provisions.

NESHAP 40 CFR part 63, AAAA became effective on January 16, 2004. Those SSM events that occurred during the NSPS semi-annual reporting period are reported in this section (October 1, 2012 through March 31, 2013). The following information is included as required:

- During the reporting period, forty (40) Wellfield SSM events occurred. Details are included in Appendix D, Well SSM Log.
- During the reporting period, four (4) A-9 Flare SSM events occurred. The A-9 Flare (back-up LFG control device) was shut down and restarted during the reporting period due to the reasons noted in Appendix E, Flare SSM Log.
- During the reporting period one (1) recorder SSM event occurred. Details are included in Appendix F, Temperature Deviation/Inoperative Monitor/Missing Data Report.
- There were forty-five (45) events in total. In all events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan. There were no deviations from the SSM plan.
- Exceedances were not identified during the reporting period in any applicable emission limitation in the landfills NESHAP (§63.10(d)(5)(i)).
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).