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 Vasco Road. 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 February 1, 2015 through July 31, 2015. 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 C & D
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2, Appendix 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 J & K
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, Appendices H & I
8-34-501.7	Annual waste acceptance rate and current amount of waste in-place.	Section 2.8
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
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 E and I

Rule	Requirement	Location in Report
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 5 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, Appendices A & C
§60.10 (d)(5)(i)	Startup, Shutdown, Malfunction Events	Section 4.0, Appendices C, D & E

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

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

2.1.1 Collection System Downtime

During the period covered in this report, the GCCS was not shut down for more than five (5) days on any one (1) occasion. The downtime for the reporting period of February 1, 2015 through July 31, 2015 was 6.85 hours. The total downtime for the 2015 calendar year (to date) is 6.85 hours, out of an allowable 240 hours per year.

Appendix D contains the A-4 Flare SSM Log for the reporting period. Appendix E contains the GCCS Downtime.

2.1.2 Well Start-Up & Disconnection Log

There were 18 wellfield SSM events that occurred during the reporting period. Two (2) wells were decommissioned (Wells VRLFEW31 and VR12GT01). See Appendix C, Wellfield SSM Log for further details. Well Decommissioning Notification Letters were submitted to the BAAQMD as required and are included in Appendix B.

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

The emission control system consists of one flare (A-4), which began operation in June 2009 and one landfill gas to energy (LFGTE) facility consisting of two (2) internal combustion (IC) engines which began operation in February 2014. 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-4 Flare is located in Appendix D. As indicated in Section 2.1.1, the total GCCS downtime for the reporting period of February 1, 2015 through July 31, 2015 was 6.85 hours. The GCCS Downtime Log for the reporting period is included in Appendix E.

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

Title 40 CFR §60.757(f)(2) is not applicable at Vasco Road 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-4 Flare because the A-4 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 recorded every 20 seconds with a Yokogawa FX100 digital recorder, and the data is downloaded and archived. There were no temperature deviations during the reporting period. Appendix F contains the Flare Temperature Deviation/ Inoperative Monitor/Missing Data Report for February 1, 2015 through July 31, 2015.

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

The cover integrity monitoring was performed on the following dates:

- February 27, 2015;
- March 26, 2015;
- April 29, 2015;

- May 28, 2015;
- June 30, 2015; and
- July 25, 2015.

Refer to the Monthly Cover Integrity Monitoring Logs, included in Appendix G, for further details.

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

The Vasco Road GCCS operates under BAAQMD Regulation 8-34-404 (Less Than Continuous Operation) as of November 19, 2014.

Pursuant to Application Number 26049 Condition 818 Part 1 (b), the owner/operator may operate the A-4 Flare on a less than continuous basis. If the three month rolling average LFG methane content exceeds 50 percent the owner/operator shall attempt to restart the A-4 flare within one week of discovery of this excess. If the restart is successful, the A-4 Flare shall operate continuously until the remaining amount of LFG available for flaring is less than 800 standard cubic feet per minute (scfm) or the equivalent heat input rate for this excess LFG is less than 24 million British thermal units (MMBTU/hour). The owner/operator shall attempt to restart the A-4 Flare once per week until the rolling average methane content calculated above is below 50 percent methane pursuant to Title V Permit Condition Number 818 Part 3. The rolling average methane content is currently being calculated using the average of the inlet readings collected onsite.

2.6 Surface Emissions Monitoring ((BAAQMD 8-34-501.6, 8-34-506, §60.757(f)(5) & California Air Resources Board Assembly Bill 32 Methane Control Measure (CARB AB-32 LF MCM))

Quarterly Surface Emissions Monitoring (SEM) was conducted for First and Second Quarter 2015. Refer to the First and Second Quarter 2015 SEM Reports, located in Appendix H, for detailed results.

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

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

- First Quarter 2015 – January 9, and February 4, 2015; and
- Second Quarter 2015 – June 27, 2015

No leaks were detected during the First or Second Quarter 2015 monitoring. Refer to the Quarterly LFG Component Leak Monitoring Forms, located in Appendix I, for detailed results.

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

The amount of waste accepted during the reporting period of February 1, 2015 through July 31, 2015 was approximately 287,075.10 tons. The current Waste-In-Place as of July 31, 2015 is approximately 15,664,801 tons.

2.9 Non-degradable Waste Acceptance Records (BAAQMD 8-34-501.8)

The GCCS Design Plan for Vasco Road 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 February 1, 2015 through July 31, 2015 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.

Wellhead monitoring was performed on the following dates:

- February 3, 5, 19, 25, and 27, 2015;
- March 12 and 26, 2015;
- April 3, 7, 8, 16, 17, 20, 28, 29, and 30, 2015;
- May 6, 9, 13, 14, 15, 19, 27, 28, and 29, 2015;
- June 9, 17, 23, and 30, 2015; and
- July 7, 13, 16, 24, and 25, 2015.

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

There were 29 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. See Appendix K, Wellfield Deviation Log, for further details.

2.10.2 Higher Operating Value (HOV) Wells

Temperature HOV Wells

Pursuant to Title V Permit Condition 818, Part 3(b)(i), the following wells are approved to operate at a temperature HOV of 140°F: EW-9, EW-33A, and EW-44.

Oxygen HOV Wells

Pursuant to Title V Permit Condition 818, Part 3(b)(ii), the oxygen concentration limit does not apply to the wells listed below, provided that the oxygen concentration in the LFG at the main header does not exceed 5 percent oxygen by volume (dry basis) and the methane concentration is greater than 35 percent by volume (dry basis): EW-9, EW-27, EW-31, EW-33A, EW-38, and EW-41.

The following wells are approved for both the temperature and oxygen HOV listed above: EW-9 and EW-33A.

Pursuant to Title V Permit Condition 818, Part 3(c)(i-iv) four (4) vertical leachate recirculation wells (VRLRW001, VRLRW002, VRLRW003 and VRLRW004) and two (2) horizontal leachate recirculation wells (VRLHC001 and VRLHC002) are subject to an alternative oxygen limit of 15 percent by volume and are allowed to operate on a less than continuous basis and may be disconnected from the vacuum system if the wellhead oxygen concentration is above 15 percent or the wellhead temperature is greater than 131°F.

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

The A-4 Flare LFG flow rate is measured with a Veris Verabar flow meter with Rosemount transmitter. The General Electric data panel displays the LFG flow and the digital Yokogawa data recorder records LFG flow every twenty seconds and the data 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 Vasco Road. Appendix L includes a summary of the monthly LFG flow rates for the flare. No deviations of the flare flow were identified during the monitoring period. Table 2-2 below is a summary of the total LFG flow for the reporting period of February 1, 2015 through July 31, 2015.

TABLE 2-2 - TOTAL LFG FLOW FOR FEBRUARY 1, 2015 THROUGH JULY 31, 2015

Emission Control Device	Average Flow (SCFM)	Average CH_4 (%)	Total LFG Volume (SCF)	Total CH_4 Volume (scf)	Heat Input (MMBTU)
A-4 Flare	1,161.6	47.0	67,837,211.8	32,567,798.6	32,991.1

scfm = standard cubic feet per minute
CH_4 = methane
scf = standard cubic feet
MMBTU = million British thermal units
*Methane content determined from the monthly blower inlet readings pursuant to Title V Permit Condition 818 Part 13

2.12 Compliance with Title V Permit Condition Number 818 Part 12

Pursuant to Title V Permit Condition Number 818 Part 12(a), the Permit Holder shall analyze the LFG for Hydrogen Sulfide (H_2S) concentration on a quarterly basis using a combination of field testing and laboratory analytical results. The field testing procedure shall measure H_2S content in the LFG using a Draeger tube, and calculated for total reduced sulfur (TRS) by multiplying the H_2S result by 1.2. The annual average TRS concentration shall be calculated and recorded for each rolling four-quarter period based on the TRS data recorded from the field and lab samples described above. The February 1 through July 31, 2015 Quarterly H_2S readings, the calculated TRS, and the calculated TRS rolling annual average (including the quarterly monitoring and May 11, 2015 source test results) are included in Appendix N of this Combined Report. The TRS annual average is within the 320 ppmv permitted limit.

2.13 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 Number A3294 during the reporting period.

Two (2) wells were decommissioned (Wells VRLFEW31 and VR12GT01) and no well were started-up during the reporting period, pursuant to Application Number 23493. Well Decommissioning Notification Letters were submitted to the BAAQMD and are included in Appendix B.

Application Number 23493 still allows for the replacement of unlimited vertical wells, installation of up to 37 new vertical wells, installation of up to 15 new horizontal collectors, the decommissioning of up to 63 vertical wells, and the decommissioning of up to two (2) horizontal collectors.

As of July 31, 2015, Vasco Road consists of 101 vertical LFG wells and four (4) horizontal collectors.

2.14 Compliance with Title V Permit Condition Number 818, Parts 15 and 16

No contaminated soil containing volatile organic compound (VOC) concentrations greater than 50 ppmv was received during this reporting period. The total amount of metal-laden and VOC-laden soil (containing less than 50 ppmv of VOCs) used as cover material did not exceed 180,000 tons during any consecutive 12-month period during the reporting period.

2.15 Compliance with Title V Permit Condition Number 7523 for S-7 Non-Retail Gasoline Dispensing Facility G#9551

Pursuant to Title V Permit Condition Number 7523, Part 1, the annual gasoline throughput for S-7 shall not exceed 400,000 gallons in any consecutive 12-month period. The annual gasoline throughput did not exceed the permitted limit during any consecutive 12-month period during this reporting period. Monthly gasoline throughput and consecutive 12-month gasoline usage for the reporting period of February 1, 2015 through July 31, 2015 are included in Appendix O.

2.16 Compliance with Permit to Operate Condition Number 25515 for S-14 Green Waste Processing Operation

Pursuant to Permit to Operate (PTO) issued April 23, 2013, Condition Number 25515, Part 1, the amount of green waste processed shall not exceed more than 16,000 tons in any consecutive 12-month period. The amount of green waste processed did not exceed the permitted limit during any consecutive 12-month period during this reporting period. Monthly and consecutive 12-month amount of green waste processed for the reporting period of February 1, 2015 through July 31, 2015 are included in Appendix P.

2.17 Compliance with Permit to Operate Condition Number 25516 for S-15 Wood Waste Processing Operation

Pursuant to PTO issued April 23, 2013, Condition Number 25516, Part 1, the amount of wood waste processed shall not exceed more than 5,000 tons in any consecutive 12-month period. The amount of wood waste processed did not exceed the permitted limit during any consecutive 12-month period during this reporting period. Monthly and consecutive 12-month amount of wood waste processed for the reporting period of February 1, 2015 through July 31, 2015 are included in Appendix Q.

4 START-UP, SHUTDOWN, MALFUNCTION REPORT

4.1 SSM Log for the GCCS at Vasco Road

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 2 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 (February 1, 2015 through July 31, 2015). The following information is included as required:

- During the reporting period, 30 A-4 Flare SSM events occurred. The A-4 Flare was shut down and restarted during the reporting period due to the reasons noted in Appendix D, Flare SSM Log.
- During the reporting period, 18 Wellfield SSM events occurred. Details are included in Appendix C, Well SSM Log.
- There were 48 events in total. In all 48 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)).