

## 2 SEMI-ANNUAL MONITORING REPORT

In accordance with RLI Title V Permit Standard Conditions I.F and 19867, Part 32; BAAQMD Regulation 8-34-411; and 40 CFR §60.757(f) of the NSPS for landfills, this report is a Title V Combined Semi-Annual Report and Partial 8-34 Annual Report that is required to be submitted by RLI. This Report contains monitoring data for the operation of the gas collection and control system (GCCS). The operational records have been reviewed and summarized. The timeframe included in this Report is November 1, 2012 to April 30, 2013. The following table lists the rules and regulations that are required to be included in this Combined Report:

**Table 2-1 Semi-Annual Report Requirements**

| RULE   | REQUIREMENT  | LOCATION IN REPORT                             |
|--|--|--|
| 8-34-501.1,<br>§60.757(f)(4)                           | All collection system downtime, including individual well shutdown times and the reason for the shutdown.  | Section 2.1,<br>Appendices<br>B & D            |
| 8-34-501.2,<br>§60.757(f)(3)                           | All emission control system downtime and the reason for the shutdown.  | Section 2.2,<br>Appendix B                     |
| 8-34-501.3,<br>8-34-507,<br>§60.757(f)(1)              | Continuous temperature for all operating flares and any enclosed combustor subject to Section 8-34-507.  | Section 2.3,<br>Appendices E<br>& F            |
| 8-34-501.4,<br>8-34-505,<br>8-34-510                   | Testing performed to satisfy any of the requirements of this rule.   | Sections 2.4<br>& 2.10,<br>Appendices<br>G & I |
| 8-34-501.5   | Monthly landfill gas (LFG) flow rates and well concentration readings for facilities subject to 8-34-404.  | Sections 2.5<br>& 2.11,<br>Appendix K          |
| 8-34-501.6,<br>8-34-503,<br>8-34-506,<br>§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 (ppm <sub>v</sub> ), 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 ppm <sub>v</sub> . | Sections 2.6<br>& 2.7,<br>Appendix<br>H        |
| 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,<br>8-34-505,<br>§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,<br>Appendices<br>I & J           |
| 8-34-501.10,<br>8-34-508,<br>§60.757(f)(1)             | Continuous gas flow rate records for any site subject to Section 8-34-508.   | Section 2.11,<br>Appendix K                    |

| RULE                     | REQUIREMENT  | LOCATION IN REPORT                      |
|--------------------------|--|---|
| 8-34-501.11,<br>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<br>(d)(5)(i)      | Start-up, Shutdown, Malfunction Events   | Section 4,<br>Appendices<br>B, D, and E |

## 2.1 COLLECTION SYSTEM OPERATION [BAAQMD 8-34-501.1& §60.757(f)(4)]

Appendix A contains a map of the GCCS at RLI. Section 2.1.1 includes all collection system downtimes. The information contained in Appendix B, A-51 and A-60 Flares SSM Logs and GCCS Downtime Summary, includes the individual well shutdown times and the reason for each shutdown.

### 2.1.1 FLARE SYSTEM DOWNTIME

The A-51 Flare commenced operation in June 2005, and the A-60 Flare commenced operation on April 1, 2009. Table 2-2 summarizes the A-51 and A-60 Flares' downtimes for the reporting period.

**Table 2-2 A-51 and A-60 Downtimes**

| Month               | A-51 Downtime (Hours) | A-60 Downtime (Hours) |
|---------------------|-----------------------|-----------------------|
| November 2012       | 0.00                  | 0.00                  |
| December 2012       | 70.97                 | 36.97                 |
| January 2013        | 1.37                  | 1.33                  |
| February 2013       | 12.53                 | 2.70                  |
| March 2013          | 161.53                | 6.37                  |
| April 2013          | 3.87                  | 2.50                  |
| <b>Total Hours:</b> | <b>250.27</b>         | <b>49.87</b>          |

During the period covered in this report, the GCCS was not shut down for more than five days on any one occasion. Appendix B contains the A-51 and A-60 Flare SSM

logs, and GCCS Downtime Summary which lists dates, times, and lengths of shutdowns for the reporting period and year-to-date.

### **2.1.2 WELL DISCONNECTION LOG**

There were 8 wellfield SSM events which occurred 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)]**

No bypassing of the control system or emissions of raw LFG occurred. The Flare SSM Logs that include all downtimes and reasons for each shutdown for the A-51 and A-60 Flares are contained in Appendix B. The total GCCS downtime for the period of November 1, 2012 to April 30, 2013 was 43.93 hours.

Total downtime for the 2012 calendar year was 65.37 hours out of 240 hours available per calendar year pursuant to BAAQMD Regulation 8-34-113 (Limited Exemption, Inspection and Maintenance).

Total downtime from January 1, 2012 to April 30, 2012 was 7.53 hours out of 240 hours available per calendar year pursuant to BAAQMD Regulation 8-34-113 (Limited Exemption, Inspection and Maintenance).

### **2.2.1 LFG BYPASS OPERATIONS (§60.757(f)(2))**

Title 40 CFR §60.757(f)(2) is not applicable at RLI because no bypass line is installed. LFG cannot be diverted around the control equipment.

### **2.2.2 KEY EMISSION CONTROL OPERATING PARAMETERS (BAAQMD 8-34-501.11 & 8-34-509)**

The A-51 and A-60 Flares are subject to continuous temperature monitoring as required in BAAQMD Regulation 8-34-507 and 40 CFR §60.757(f)(1).

## **2.3 TEMPERATURE MONITORING RESULTS [(BAAQMD 8-34-501.3, 8-34-507, & §60.757(f)(1))]**

### **A-51 Flare**

The A-51 Flare commenced operation in June 2005. The combustion zone temperature of the A-51 Flare is monitored with Omega Type K thermocouples. The temperature is primarily recorded with a Yokogawa DX100 paperless chart recorder. There were no temperature deviations for the A-51 Flare during the reporting period. A copy of the Temperature Deviation Report for the A-51 Flare is included in Appendix E.

The A-51 Flare operated at an average temperature of 1,501 degrees Fahrenheit (°F) during the March 21, 2012 Source Test, which results in a calculated NSPS minimum operating temperature of 1,451°F. Title V Permit Condition Number 19867 Part 22 states that the minimum combustion zone temperature shall be equal to the average combustion zone temperature determined during the most recent complying source test minus 50°F, provided that the minimum combustion zone temperature is not less than 1,400°F. As a result, the enforceable minimum combustion zone temperature during this reporting period was 1,451°F. Operating records for the A-51 Flare indicate that the three-hour average combustion zone temperature of the A-51 Flare did not operate below the minimum operating temperature of 1,451°F on a three-hour average basis while the flare was in operation from November 1, 2012 to April 30, 2013.

As shown in Appendix F, there were no periods of missing temperature data for the A-51 Flare during the reporting period.

#### **A-60 Flare**

The A-60 Flare commenced operation on April 1, 2009. The combustion zone temperature of the A-60 Flare is monitored with Omega Type E thermocouples. The temperature is primarily recorded with a Yokogawa DX100 paperless chart recorder. There were no temperature deviations for the A-60 Flare during the reporting period. A copy of the Temperature Deviation Report for the A-60 Flare is included in Appendix E

The A-60 Flare Zone A operated at an average temperature of 1,499°F during the March 21, 2012 Source Test, which results in a calculated minimum operating temperature of 1,449°F. The A-60 Flare Zone B operated at an average temperature of 1,462°F during the April 5, 2010 Source Test, which results in a calculated NSPS minimum operating temperature of 1,412°F. Title V Permit Condition Number 19867 Part 22 states that the minimum combustion zone temperature shall be equal to the average combustion zone temperature determined during the most recent complying source test minus 50°F, provided that the minimum combustion zone temperature is not less than 1,400°F. As a result, the enforceable minimum combustion zone temperature for the A-60 Flare during this reporting period was 1,449°F for Zone A, and 1,412°F for Zone B. Pursuant to Title V Permit Condition Number 19867, Part 30g, the annual source test at A-60 may be conducted while A-60 is operating in either zone, provided that each operating zone is tested at least once every five years. Therefore, the source test from Zone B is due by April 5, 2015.

Operating records for Zones A and B of the A-60 Flare indicate that the three-hour average combustion zone temperatures of Zones A and B of the A-60 did not operate below the minimum operating temperature of 1,449°F on a three-hour average basis while the flare was in operation from November 1, 2012 to April 30, 2013.

As shown in Appendix F, there were no periods of missing temperature data for the A-60 Flare during the reporting period.

## **2.4 MONTHLY COVER INTEGRITY MONITORING [BAAQMD 8-34-501.3, 8-34-507, & §60.757(f)(1)]**

The Monthly Cover Integrity Monitoring Reports are included in Appendix G. The cover integrity monitoring was performed on the following dates:

- November 1, 2, 3, 5, 7, 8, 12, 13, 14, 15, 16, 19, 20, 21, 26, 27, and 28, 2012
- December 3, 4, 5, 7, 10, 12, and 14, 2012
- January 3, 7, 8, 10, 14, 15, 16, 17, 18, and 19, 2013
- February 5, 6, 7, 11, 14, 18, 19, 26, and 27, 2013
- March 20, 21, 27, 28, and 29, 2013
- April 3, 5, 9, 10, 11, 16, 17, 18, 19, 23, 24, 25, 26, and 30, 2013

No breaches of cover integrity (e.g., cover cracks or exposed garbage) were found during the reporting period.

## **2.5 LESS THAN CONTINUOUS OPERATION (BAAQMD 8-34-501.5)**

The RLI 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, was conducted during the reporting period on the following dates:

Fourth Quarter 2012 – October 15 and 16, 2012

First Quarter 2013 – January 8 and 9, 2013

A Toxic Vapor Analyzer (TVA) 1000 and an Organic Vapor Analyzer (OVA) 128 (both are flame ionization detectors [FIDs]) were used during the SEM events to monitor the path along the landfill surface according to the Landfill SEM Map. Any areas suspected of having emission problems by visible observations also were monitored. Immediately prior to both monitoring events, the FID was zeroed and calibrated using zero air and a 500-ppm<sub>v</sub> methane calibration gas.

The Fourth Quarter 2012 SEM event was conducted by Roberts Environmental Services (RES) personnel on October 15 and 16, 2012; 5 exceedances were detected. Corrective actions were completed and RLI personnel conducted the 10-day re-monitoring event on October 23, 2012 and no exceedances were detected. The 30-day follow-up was conducted by RLI personnel on November 12, 2012 and no exceedances were observed.

The First Quarter 2013 SEM event was conducted by RES personnel on January 8 and 9, 2013; no exceedances were detected.

The Fourth Quarter 2012 and First Quarter 2013 SEM Reports are 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 – October 18, 2012 and December 13, 2012

First Quarter 2013 – January 10, 2013

No exceedances were identified during either event.

The Fourth Quarter 2012 and First Quarter 2013 Component Leak Testing results are included in Appendix H.

## **2.8 SOLID WASTE PLACEMENT RECORDS (BAAQMD 8-34-501.7)**

The solid waste placement total was calculated for the period of November 1, 2012 to April 30, 2013. The current waste in place figure includes solid waste placed in the landfill through April 30, 2013. Table 2-3 summarizes the RLI solid waste placement records for the reporting period.

**Table 2-3 Solid Waste Placement**

|   | <b>Total Waste Landfilled<br/>(tons)</b> |
|---|--|
| Waste Placement<br>(November 1, 2012 to April 30, 2013) | 86,330                                   |
| Current Waste In Place as of April 30, 2013             | 12.68 million                            |

## **2.9 NON-DEGRADABLE WASTE ACCEPTANCE RECORDS (BAAQMD 8-34-501.8)**

RLI does not have 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 BAAQMD Regulation 8-34-505. The well data for November 1, 2012 to April 30, 2013 are included in Appendix I. 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 (131 °F).
- 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:

- November 1, 2, 3, 5, 7, 8, 12, 13, 14, 15, 16, 19, 20, 21, 26, 27, and 28, 2012
- December 3, 4, 5, 7, 10, 12, and 14, 2012
- January 3, 7, 8, 10, 14, 15, 16, 17, 18, and 19, 2013
- February 5, 6, 7, 11, 14, 18, 19, 26, and 27, 2013, 2012
- March 20, 21, 27, 28, and 29, 2013
- April 3, 5, 9, 10, 11, 16, 17, 18, 19, 23, 24, 25, 26, and 30, 2013

### WELLHEAD DEVIATIONS [BAAQMD 8-34-501.9 & §60.757(f)(1)]

A total of 37 deviations from the wellhead standards in 8-34-305 occurred during the reporting period. 16 were for static pressure and 21 were for oxygen concentration. All static pressure exceedances were corrected during the reporting period. 10 of the oxygen concentration exceedances were corrected during the reporting period, leaving 11 wells in exceedance at the end of the reporting period, all of which are on the 120-day repair list.

A copy of the Wellfield Deviation Log is included in Appendix J.

### 2.11 GAS FLOW MONITORING RESULTS [BAAQMD 8-34-501.10, 8-34-508 & §60.757(f)(1)]

The LFG flow rates from both the A-51 and A-60 flares are measured with Veris flow meters. The flare flow meters meet the requirements of BAAQMD Regulation 8-34-508 by recording fuel flow at least every 15 minutes.

Appendix K contains a summary of the daily and monthly LFG flow rates and heat input for the flares. These flow rates are summarized in Table 2-4:

**Table 2-4 Total LFG Flow**

| Emission Control Device | Total Runtime (hours) | Average Flow Rate (scfm) | Average Methane (%) <sup>1</sup> | Total LFG Flow (scf) | Total LFG Flow (scf) Corrected to 500 BTU/scf | Total Methane Flow (scf) | Heat Input (MMBTU) |
|-------------------------|-----------------------|--------------------------|----------------------------------|----------------------|---|--------------------------|--------------------|
| A-51 Flare              | 4,093.73              | 1,341                    | 47.5                             | 329,444,022          | 317,040,455                                   | 156,485,910              | 158,520            |
| A-60 Flare              | 4,294.13              | 1,475                    | 47.8                             | 380,118,372          | 368,117,274                                   | 181,696,582              | 184,059            |

<sup>1</sup>Methane content determined from the March 21, 2012 Source Test. Heating value of methane used in heat input calculations is 1,013 BTU/scf

scfm = standard cubic feet per minute

scf = standard cubic feet

MMBTU = million British thermal units

Pursuant to Title V Condition Number 19867, Part 20, the total LFG throughput to the A-51 Flare did not exceed 4,320,000 scf during any one day, and the total LFG throughput to the A-60 Flare did not exceed 4,320,000 scf during any one day during the reporting period of November 1, 2012 to April 30, 2013. The A-51 and A-60 Flares combined total LFG throughput did not exceed 2,207,520,000 scf during any consecutive 12-month period.

Appendix K contains a summary of the combined daily LFG flow rates for the A-51 and A-60 Flares and the consecutive 12-month summaries.

There were no periods of missing data or chart recorder non-operation for the A-51 or A-60 Flares during the reporting period. The Flare Missing Data Report Forms are included in Appendix F.

## 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."*

Routine GCCS maintenance occurred during the reporting period. The Wellfield SSM Log is included in Appendix D, Wellfield SSM Log.

The well count for RLI as of April 30, 2013 is 93 vertical wells and 14 horizontal collectors. A map of the LFG collection system showing the positioning of all vertical wells, horizontal collectors, and other LFG extraction devices is included in Appendix A.

## 2.13 COMPLIANCE WITH TITLE V PERMIT CONDITION 13123 (S-34 & S-39)

The S-34 Compost Facility Operations and S-39 Screening Operations were utilized during the reporting period. The total amount of material processed did not exceed 50,000 tons during any consecutive 12-month period during the reporting period of November 1, 2012 to April 30, 2013. Monthly and 12-month rolling throughputs are summarized in Table 2.5.

**Table 2-5 Composting and Screening Operations Throughput**

| Month         | Total Throughput (tons) | Rolling 12-Month Throughput (tons) |
|---------------|-------------------------|------------------------------------|
| November 2012 | 3,097.11                | 36,545.94                          |
| December 2012 | 2,954.60                | 36,145.45                          |
| January 2013  | 3,099.20                | 36,215.38                          |
| February 2013 | 2,686.01                | 36,047.90                          |
| March 2013    | 2,889.80                | 36,155.29                          |
| April 2013    | 3,276.82                | 36,272.53                          |
| <b>TOTAL:</b> | <b>18,003.54</b>        | <b>---</b>                         |

Pursuant to Title V Permit Condition Number 13123 Part 7, all yard waste material was processed within 72 hours of receipt. In addition, pursuant to Title V Permit Condition Number 13123 Part 8, the plant received no public nuisance notices of violation during the reporting period of November 1, 2012 to April 30, 2013.

## **2.14 COMPLIANCE WITH TITLE V PERMIT CONDITIONS 14098 AND 16516 (S-55)**

Pursuant to Title V Permit Condition Number 14098, the annual gasoline throughput for the S-55 Non-Retail Gasoline Dispensing Facility Number 8573 did not exceed 940,000 gallons in any consecutive 12-month period during the timeframe of this report. The gasoline throughput for the 6-month period of November 1, 2012 to April 30, 2013 was 2,035 gallons. The maximum 12-month rolling total throughput for November 1, 2012 to April 30, 2013 was 4,646 gallons. Monthly gasoline throughput totals for the reporting period are listed in Table 2-6:

**Table 2-6 Unleaded Gasoline Throughput**

| Month         | Total Throughput (gallons) | Rolling 12-Month Fuel Usage (gallons) |
|---------------|----------------------------|---------------------------------------|
| November 2012 | 395                        | 4,620                                 |
| December 2012 | 391                        | 4,663                                 |
| January 2013  | 398                        | 4,646                                 |
| February 2013 | 268                        | 4,593                                 |
| March 2013    | 312                        | 4,580                                 |
| April 2013    | 271                        | 4,561                                 |
| <b>TOTAL:</b> | 2,035                      | ---                                   |

Pursuant to Title V Permit Condition Number 16516, the Static Pressure Performance Test (Leak Test) for S-55 was performed on April 18, 2013. S-55 passed the 2013 Leak Test. The Static Pressure Performance Test results are included in Appendix O.

## **2.15 Compliance With Title V Permit Condition 22820 (S-49)**

The S-49 Diesel Engine for Emergency Back-Up Generator operated for a total a total of 0 hours for the Semi-Annual reporting period (November 1, 2012 to April 30, 2013), and a total of 0 hours for the partial 2012 calendar year (through October 31, 2012), which is less than the 20 hours limit per calendar year for reliability-related activities.

## **2.16 COMPLIANCE WITH TITLE V PERMIT CONDITION 19865 (S-41)**

Pursuant to Title V Permit Condition 19865, the total of waste processed at the S-41 Yard and Green Waste Shredding Operation did not exceed 820 tons per day or 200,000 tons per year. A total 18,003 tons of green waste and yard waste were processed at S-41 during the reporting period (November 1, 2012 to April 30, 2013),

and a total of 41,040 tons were processed during the 2012 calendar year. Table 2-7 summarizes the amount of waste processed at S-41 during the monitoring period:

**Table 2-7 Waste Processed at S-41**

| Month         | Total Throughput (tons) | Rolling 12-Month Throughput (tons) |
|---------------|-------------------------|------------------------------------|
| November 2012 | 3,825.19                | 41,440.9                           |
| December 2012 | 3,097.11                | 41,040.4                           |
| January 2013  | 2,954.60                | 41,008.4                           |
| February 2013 | 3,099.20                | 40,778.5                           |
| March 2013    | 2,686.01                | 40,730.1                           |
| April 2013    | 2,889.80                | 39,931.8                           |
| <b>TOTAL:</b> | <b>18,003.54</b>        | <b>---</b>                         |

## **2.17 COMPLIANCE WITH TITLE V PERMIT CONDITION 19866 (S-42)**

The total amount of material received at the S-42 Soil and Cover Stockpiles did not exceed 1,160 tons per day and 105,500 tons per year.

## **2.18 COMPLIANCE WITH TITLE V PERMIT CONDITION 19867, PARTS 6-10**

The following is a summary of vehicle activity at the RLI:

- The mean vehicle fleet weight for all off-site vehicles traveling on paved roads was 14.46 tons, which is below the permit limit of 15.31 tons.
- Mean vehicle fleet weight for all off-site vehicles traveling on gravel or dirt roads was 15.87 tons, which is below the permit limit of 16.63 tons.
- The mean vehicle fleet weight for all on-site landfilling and construction related vehicles was 10.6 tons, which is below the permit limit of 28.37 tons.
- During the reporting period, the vehicle miles travelled (VMT) per day on gravel roads did not exceed the permit limit of 280 VMT per day. 2012 calendar year VMT on gravel roads was 33,228 VMT, below the limit of 87,080 VMT. 2013 partial calendar year VMT on gravel roads is 34,527 VMT.
- During the reporting period, the VMT per day on dirt roads did not exceed the permit limit of 639 VMT per day. 2012 calendar year VMT on dirt roads is 83,118 VMT, below the limit of 198,650 VMT. 2013 partial calendar year VMT on dirt roads is 85,861 VMT.
- During the reporting period, the VMT per day on paved roads did not exceed the permit limit of 622 VMT per day. 2012 calendar year VMT on paved roads is 49,890 VMT, below the limit of 205,880 VMT. 2013 partial calendar year VMT on paved roads is 51,604 VMT.

- During the reporting period, the VMT per day on paved roads for the on-site vehicle fleet did not exceed the permit limit of 61 VMT per day. 2012 calendar year VMT on paved roads is 16,022 VMT, below the limit of 19,080 VMT. 2013 partial calendar year VMT on paved roads is 4,071 VMT.

The records for VMT and average vehicle fleet weights are available for review at RLI.

## 2.19 Compliance With Title V Permit Condition 19867, Parts 14 and 15

No contaminated soil containing volatile organic compound (VOC) concentrations greater than 50 parts per million (ppm) was received during this reporting period. VOC-laden soil (containing less than 50 ppm of VOCs) was received during this reporting period. The total VOC emission rate for the reporting period (November 1, 2012 to April 30, 2013) is 0.00 lbs. The VOC soil log is included in Appendix L.

## 2.20 Compliance With Title V Permit Condition 19867, Parts 31 and 33

Pursuant to Title V Permit Condition Number 19867, Part 31b, weekly hydrogen sulfide (H<sub>2</sub>S) readings were taken using Draeger tubes. However, RLI discovered that the results from samples believed to be collected during the weeks of February 4, 2013; February 11, 2013; and February 18, 2013 could not be located. RLI notified BAAQMD of the missing data on April 4, 2013 in a 10-day Deviation Letter. A 30-day follow-up letter was submitted to BAAQMD on May 1, 2013. Copies of these letters are included in Appendix C.

The Fourth Quarter 2012, First Quarter 2013, and partial Second Quarter 2013 weekly H<sub>2</sub>S readings and quarterly averages are included in Appendix M, H<sub>2</sub>S Weekly and Quarterly Monitoring.

Pursuant to Title V Permit Condition Number 19867, Part 31a, RLI collected the quarterly characterization of the LFG for analysis of sulfur compounds on December 27, 2012 for the Fourth Quarter 2012, and on March 14, 2013 for the First Quarter 2013. The results are included in Tables 2-8 and Appendix M. The H<sub>2</sub>S results were less than the peak total reduced sulfur limit of 505 ppm<sub>v</sub> during the both sampling events.

**Table 2-8 LFG Characterization Results**

| Compound                    | Fourth Quarter 2012 Result (ppm <sub>v</sub> ) | First Quarter 2013 Result (ppm <sub>v</sub> ) | Permit Limits (ppm <sub>v</sub> ) |
|-----------------------------|--|---|-----------------------------------|
| Carbon Disulfide            | ND   | ND  | N/A                               |
| Carbonyl Sulfide            | ND   | ND  | N/A                               |
| Dimethyl Sulfide            | ND   | ND  | N/A                               |
| Ethyl Mercaptan             | ND   | 0.079   | N/A                               |
| Hydrogen Sulfide            | 250  | 402.6   | N/A                               |
| Methyl Mercaptan            | ND   | 0.13  | N/A                               |
| <b>Total Reduced Sulfur</b> | <b>250</b>                                     | <b>405.6</b>                                  | <b>505</b>                        |

ND = not detected  
N/A = not applicable

Pursuant to Title V Permit Condition Number 19867, Part 33, RLI submitted a proposal, on May 17, 2011, for monitoring ground level H<sub>2</sub>S concentrations at or near the fence line or property boundary. RLI will initiate H<sub>2</sub>S monitoring within 3 months of approval from the District for the monitoring protocol. As of this Semi-annual reporting period (November 1, 2012 to April 30, 2013), approval from the District has not been received.

## 2.21 COMPLIANCE WITH TITLE V PERMIT CONDITION 22940 (S-56)

Conditions from the California Air Resources Board (CARB) Permit Number 117378 for the S-56 Portable Horizontal Grinder have been incorporated by reference into the RLI Title V Permit. Therefore, the compliance records for this equipment have been included in this Combined Report. Pursuant to BAAQMD Condition Number 22940, the emissions of particulate matter less than 10 microns in diameter (PM<sub>10</sub>) did not exceed 10 tons per year. The PM<sub>10</sub> emissions are 0.97 tons for the reporting period (November 1, 2012 to April 30, 2013), and 1.66 tons for the partial 2012 calendar year (through October 31, 2012). The maximum daily throughput for the portable horizontal grinder (S-56) did not exceed 820 tons per day or 200,000 tons per year. Monitoring was performed daily for the recording of total throughput of all registered equipment units operating as part of a project. Table 2-9 lists the PM<sub>10</sub> emissions and total throughput of waste processed at S-56 for the reporting period:

**Table 2-9 Waste Processed at S-56**

| Month         | Emissions of Particulate Matter Less than 10 microns (tons) | Estimated Total Throughput (tons) |
|---------------|---|-----------------------------------|
| November 2012 | 0.041   | 825                               |
| December 2012 | 0.206   | 4,125                             |
| January 2013  | 0.182   | 3,630                             |
| February 2013 | 0.003   | 55                                |
| March 2013    | 0.003   | 55                                |
| April 2013    | 0.036   | 715                               |
| <b>TOTAL:</b> | 0.470   | 9,405                             |

## 2.22 Compliance With Title V Permit Condition 23052 (S-58)

Pursuant to Permit Condition 23052 Part 1, the total leachate influent rate to the Aerated Leachate Pond (S-58), excluding non-contact storm runoff, did not exceed 39.42 million gallons during any consecutive 12-month period. The total leachate flow rate to S-58 for each month (gallons/month) and the total cumulative flow rate to S-58 for each rolling 12-month period (millions of gallons/year) were recorded. Table 2-10 displays the leachate flow information for S-58.

**Table 2-10 Leachate Flow Information for S-58**

| Month         | Total Leachate Influent Rate to S-58 (gallons/month) | Total Rolling 12-Month Flow Rate to S-58 (millions of gallons/year) |
|---------------|--|---|
| November 2012 | 2,404,259  | 18,582,219  |

| Month         | Total Leachate Influent Rate to S-58 (gallons/month) | Total Rolling 12-Month Flow Rate to S-58 (millions of gallons/year) |
|---------------|--|---|
| December 2012 | 3,102,053  | 20,373,669  |
| January 2013  | 3,507,962  | 22,576,397  |
| February 2013 | 5,072,006  | 26,240,138  |
| March 2013    | 1,453,702  | 25,540,190  |
| April 2013    | 1,274,292  | 24,186,858  |
| <b>TOTAL:</b> | 16,814,274   | ---   |

The average concentration of precursor organic compounds (POCs) in the leachate influent to S-58 did not exceed 500 parts per billion (pp<sub>b</sub>) by weight as required by Title V Permit Condition Number 23052 Part 2. The average concentrations of specified toxic air contaminants in the leachate influent to S-58 did not exceed 19 ppb by weight of benzene, 48 pp<sub>b</sub> by weight of 1,4-dichlorobenzene, and 7 pp<sub>b</sub> by weight of vinyl chloride as required by Title V Permit Condition Number 23052, Part 3. Table 2-11 summarizes POC concentrations in the influent to S-58, as determined by the analysis for calendar year 2012.

**Table 2-11 POC Concentrations for S-58**

| Date         | Benzene (pp <sub>b</sub> ) | 1,4-Dichlorobenzene (pp <sub>b</sub> ) | Vinyl Chloride (pp <sub>b</sub> ) | Total POC Concentration (pp <sub>b</sub> ) |
|--------------|----------------------------|--|-----------------------------------|--|
| May 23, 2012 | 15                         | 21.5                                   | ND<1.6                            | 132.55                                     |

## 2.23 Compliance With Title V Permit Condition 24527 (S-61 and S-62)

The S-61 Portable Diesel Engine for Waste Tipper and S-62 Portable Diesel Engine for Power Screens operated less than 4,992 hours combined during any 12-month period ending in the November 1, 2012 to April 30, 2013 reporting period. S-61 and S-62 operated a maximum of 342 hours combined during any 12-month period ending in the reporting period, out of the limit of 4,992 hours per rolling 12-month period. Table 2-12 displays runtime hours for S-61 and S-62 during the reporting period.

**Table 2-12 S-61 and S-62 Portable Diesel Engines**

| Month          | S-61 Total Runtime (Hours) | S-62 Total Runtime (Hours) | Combined Rolling 12-Month Total (Hours) |
|----------------|----------------------------|----------------------------|---|
| November 2012  | 22                         | 20                         | 275                                     |
| December 2012  | 15                         | 19                         | 292                                     |
| January 2013   | 20                         | 14                         | 292                                     |
| February 2013  | 16                         | 17                         | 315                                     |
| March 2013     | 19                         | 6                          | 331                                     |
| April 2013     | 24                         | 3                          | 342                                     |
| <b>TOTALS:</b> | 116                        | 79                         | ---                                     |

## 4 START-UP, SHUTDOWN, MALFUNCTION REPORT

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### **Start-up, Shutdown, Malfunction (SSM) Report for the Collection and Control Systems at the Redwood Landfill**

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 40 CFR §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 40 CFR §63.10(d)(5)(i) of the General Provisions.

NESHAP 40 CFR Part 63, AAAA became effective on January 16, 2004. SSM events that occurred during the semi-annual reporting period (November 1, 2012 to April 30, 2013) are noted in this section and included in Appendix B. The following information is included as required:

- During the reporting period, 23 A-51 Flare SSM events, and 18 A-60 Flare SSM events occurred. The time, duration, and cause of each event are included in Appendix B, Flare SSM Logs.
- During the reporting period, 8 wellfield SSM events occurred. The time and duration of these events are included in Appendix D, Wellfield SSM Log.
- During the reporting period, no monitoring/recorder equipment SSM events occurred.
- In all 49 flare and wellfield SSM events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan.
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required nor prepared (§63.6(e)(3)(viii)).