



**Kirby Canyon Recycling & Disposal Facility**  
A Waste Management Company

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July 24, 2020

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
Attn: Title V Reports

Director of Enforcement Division  
USEPA, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105  
Attn: TRI and Air Section (ENF-2-1)

SUBJECT: Combined Title V Semi-Annual and Partial 8-34 Annual Report 40 CFR 63  
Subpart AAAA Semi-Annual Report  
The Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive, San Jose, CA 95037  
Facility Number A1812

Dear Sir or Madam:

The Kirby Canyon Recycling & Disposal Facility (KCRDF) is pleased to submit the attached Combined Title V Semi-Annual and Partial 8-34 Annual Report for the period of January 1, 2020 through June 30, 2020 to the Bay Area Air Quality Management District (BAAQMD) and the United States Environmental Protection Agency (USEPA), Region IX. As required by 40 Code of Federal Regulations (CFR) Part 63 Subpart AAAA, the Semi-Annual Startup, Shutdown and Malfunction (SSM) Report is also enclosed. The Combined Title V Semi-Annual and Partial 8-34 Annual Report satisfies the requirements of the Title V Permit listed in Condition Number 1437 Part 16 and Standard Condition I.F.

Based on information and belief formed after reasonable inquiry, I certify under penalty of law that the statements included in this report are true, accurate, and complete.

Sincerely,  
The Kirby Canyon Recycling & Disposal Facility

Enrique Perez  
Responsible Official

Attachments:  
Combined Title V Semi-Annual and Partial 8-34 Annual Report

**Combined  
Title V Semi-Annual and Partial 8-34 Annual  
Report**

**For the Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive  
San Jose, California 95037  
Facility Number A1812**

**January 1, 2020 through June 30, 2020**

Submitted on:  
July 29, 2020

Prepared for:  
The Kirby Canyon Recycling & Disposal Facility

**For Submittal to:  
The Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
Attn: Title V Reports**

and

**USEPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Attn: Director Enforcement Division, TRI & Air Section (ENF-2-1)**

Prepared by:



Kirby Canyon Recycling & Disposal Facility

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# 1 INTRODUCTION

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## 1.1 Purpose

This document is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report for the Kirby Canyon Recycling & Disposal Facility (KCRDF), pursuant to Title V Permit Standard Condition 1.F and Condition Number 1437 Part 16. This Combined Report satisfies the requirements of Regulation 8, Rule 34, Section 411 of the Bay Area Air Quality Management District (BAAQMD) and Title 40 Code of Federal Regulations (CFR) Part 60 Subpart CC, Emission Guidelines (EG) for municipal solid waste (MSW) landfills. This Combined Report meets the requirements of Title V Standard Condition 1.F, BAAQMD Regulation 8-34-411, and 40 CFR §60.757(f) and covers compliance activities conducted from January 1, 2020 through June 30, 2020. This Combined Report also includes the Semi-Annual Report of Start-up, Shutdown and Malfunction (SSM) Plan activities pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AAAAA for Landfills.

Section 2 of this Combined Report contains the elements required to satisfy both BAAQMD Regulation 8-34-411 and 40 CFR §60.757(f). A Performance Test Report for the A-12 Flare that meets the requirements of both BAAQMD Regulation 8-34-413 and 40 CFR §60.758(g) was conducted on March 4, 2020. Section 3 of this Combined Report includes performance test data collected during the reporting period as well as a discussion of the data from the Performance Test for the A-12 Flare, in compliance with BAAQMD Regulation 8-34-412, and Title V Permit Condition Number 1437 Parts 12 and 13. The March 4, 2020, Performance Test Report results for the A-12 Flare are included in Appendix O of the Combined Report.

Section 4 contains the Semi-Annual Report of SSM Plan activities.

## 1.2 Record Keeping and Reporting

Records are maintained and available for inspection in accordance with BAAQMD Regulation 8-34-501.12 and 40 CFR §60.758. The primary location for records storage is at the KCRDF. Records are maintained at this location for a minimum of five years.

## 1.3 Report Preparation

This Combined Report has been prepared by the KCRDF.

## 2 SEMI-ANNUAL MONITORING REPORT

In accordance with the KCRDF Title V Permit Standard Condition 1.F; Condition 1437, Part 16; BAAQMD Regulation 8-34-411 and 40 CFR §60.757(f), this report is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report that is required to be submitted by the KCRDF. 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 January 1, 2020 through June 30, 2020. 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 §60.757(f)(4)	All collection system downtime, including individual well shutdown times and the reason for the shutdown.	Section 2.1, Appendices B & C
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2, Appendix B
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 D
8-34-501.4, 8-34-510	Testing performed to satisfy any of the requirements of this Rule.	Sections 2.4 & 2.10, Appendix E
8-34-501.5, 8-34-505	Monthly landfill gas (LFG) flow rates and well concentration readings for facilities subject to 8-34-404.	Sections 2.5, 2.10 & 2.11, Appendices I & 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 F & G
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 Collection and Control 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, Appendices I & 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, Appendix 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

**Table 2-1 (Continued)**

RULE	REQUIREMENT	LOCATION IN REPORT
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 2.13
§60.10 (d)(5)(i)	Start-up, Shutdown, and Malfunction Events	Section 4, Appendices B & C

## **2.1 Collection System operation (BAAQMD 8-34-501.1 & §60.757(f)(4))**

Appendix A contains a map of the KCRDF's existing landfill GCCS. Section 2.1.1 summarizes the collection system downtime. Section 2.1.2 includes the individual well shutdown times and the reason for each shutdown.

### **2.1.1 Collection System Downtime**

During the period covered in this report, the landfill GCCS was not shutdown for more than five days on any one occasion. The downtime for the 2020 partial calendar year (January 1, 2020 through June 30, 2020) is 44.3 hours out of an allowable 240 hours per year pursuant to BAAQMD Regulation 8-34-113.2 (Limited Exemption, Inspection and Maintenance). The Flare SSM Log that list dates, times, and lengths of shutdowns for the reporting period is included in Appendix B.

### **2.1.2 Well Start-Up and Disconnection Log**

There were thirteen (13) Well SSM events during the reporting period. Wellfield construction activity is discussed in Section 2.13.

The Wellfield SSM Log that list dates, times, and lengths of shutdowns for the reporting period is included in Appendix C.

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

No bypassing of the control system or other emissions of raw LFG occurred during the reporting period. The SSM Log that includes all downtimes and reasons for each shutdown for the A-12 Flare is presented in Appendix B. As indicated in Section 2.1.1, the collection system downtime for the 2020 partial calendar year (January 1, 2020 through June 30, 2020) is 44.3 hours.

During the reporting period, BAAQMD issued KCRDF Notice of Violation ("NOV") Number A-57372 dated June 18, 2020, for temporary flare shutdown events caused by



unplanned utility power outages on February 28, June 10, July 24, July 26, August 1, August 6, September 8, November 11, November 12, November 26, and December 29, 2019 (“NOV Dates”). KCRDF submitted via email the 10-day NOV response and Title V 10-day letters on June 28, 2020, and Title V 30-day letter on July 17, 2020. Copies of submitted letters are included in Appendix J.

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

Title 40 CFR §60.757(f)(2) is not applicable at the KCRDF because a bypass 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)**

The A-12 Flare is subject to continuous temperature monitoring as required in BAAQMD Regulation 8-34-507 and §60.757(f)(1). See Section 2.3 for flare temperature monitoring results.

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

The combustion zone temperature of the A-12 Flare is monitored with Type K Thermocouples. The temperature is displayed and digitally recorded with a General Electric (GE) data panel and Yokogawa FX112 continuous digital recorder. The temperature readings are downloaded and archived each working day.

Flare operating records indicate that the A-12 Flare three-hour average combustion zone temperature did not drop below the 1,400 degrees Fahrenheit (°F) limit, as required by Title V Permit A1812 Condition 1437 Part 10, during the reporting period when the A-12 Flare was in operation.

The flare operating records also indicate that the A-12 Flare combustion zone temperature did not drop below 1,545°F and 1,549°F on a three-hour average basis, while in operation during the reporting period (January 1, 2020 through June 30, 2020), pursuant to the limits established during the March 13, 2019 and March 4, 2020 Performance Tests.

Appendix D contains flare temperature deviation/ inoperative monitor reports for the reporting period while the A-12 Flare was in operation.

## **2.4 Monthly Cover Integrity Monitoring (BAAQMD 8-34-510)**

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

- January 23, 2020
- February 14 and 28, 2020
- March 27, 2020

- April 30, 2020
- May 29, 2020
- June 29, 2020

During February 2020 monthly monitoring event, it was noted that additional soil coverage was needed near wells 82, 123, 75, 141, 90, 134, 109, and 48. Operations added soil to cover these well locations in February 2020. In May 2020 one area in the cover was identified with moisture on the surface. The site immediately addressed the area in May by adding soil and compacting the area and the moisture did not re-appear. The site also submitted a construction notification to review the area in more detail and perform additional repairs as needed to prevent a re-occurrence. No other breaches of cover integrity (e.g. cover cracks or exposed garbage) were found during the reporting period. See Appendix E, Cover Integrity Monitoring Reports, for more detail.

## **2.5 Less than Continuous Operation (BAAQMD 8-34-501.5)**

The KCRDF 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:

- First Quarter 2020 – February 12, 2020
- Second Quarter 2020- June 2, 2020

A Thermo Scientific Toxic Vapor Analyzer 1000 (TVA1000) flame ionization detector (FID) was used to perform the SEM during the Third and Fourth Quarter 2019 event. The landfill surface was monitored along the path delineated on the SEM walking path map. Any areas suspected of having emission problems by visible observations were also monitored. Immediately prior to the First and Second Quarter 2020 monitoring events, the monitoring equipment was calibrated using zero air and a 500 parts per million by volume (ppmv) methane (CH<sub>4</sub>) calibration gas.

The First Quarter 2020 SEM was performed on February 12, 2020 and nine (9) exceedances (FID readings greater than 500 ppm CH<sub>4</sub> above background measurements) were detected. Corrective actions were completed. The ten-day re-monitoring event was conducted on February 19, 2020, and no further exceedances were detected. The thirty-day follow-up monitoring event was conducted on March 10 and 11, 2020 and no exceedances were detected.

The Second Quarter 2020 SEM was performed on June 2, 2020 and eight (8) exceedances (FID readings greater than 500 ppm CH<sub>4</sub> above background measurements) were detected. Corrective actions were completed. The ten-day re-monitoring event was conducted on June 8, 2020, and no further exceedances were detected. The thirty-day follow-up monitoring event was conducted on July 2, 2020 and no exceedances were detected.

The First and Second Quarter 2020 SEM Reports are included in Appendix F.

## 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:

- First Quarter 2020 – February 12, 2020
- Second Quarter 2020- June 2, 2020

A Thermo Scientific TVA1000 FID was used to perform both the First and Second Quarter 2020 component leak testing events. No exceedances of 1,000 ppm were identified during the First and Second Quarter 2020 monitoring events.

Appendix G contains the Quarterly Component Leak Check Monitoring Reports.

## 2.8 Solid Waste Placement Records (BAAQMD 8-34-501.7)

The solid waste placement records were reviewed for the timeframe of January 1, 2020 through June 30, 2020. The current waste-in-place figure includes solid waste placed in the landfill through June 30, 2020. A table of monthly totals for the reporting period is provided in Appendix H. The total waste accepted and placed at the KCRDF landfill did not exceed the 2,600 ton-per-day limit during the reporting period, pursuant to Title V Permit Condition Number 1437, Part 1a. The current waste-in-place tonnage listed below did not exceed the 19.84 million tons limit as required in the Title V Permit Condition Number 1437, Part 1b. Table 2-2 summarizes the solid waste placement records for the reporting period.

**Table 2-2 Solid Waste Placement**

Waste Placement	Total Waste Landfilled Excluding Cover
January 1 through June 30, 2020, Waste Placement	109,182 tons
Current Waste-In-Place as of June 30, 2020	Approximately 7.72 Million tons

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

The GCCS Design Plan for the KCRDF does not include 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 readings for January 1, 2020 through June 30, 2020 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 (O<sub>2</sub>) concentration in each wellhead shall be less than 5 percent (%) by volume.

The wellhead monitoring was performed on the following dates:

- January 10, 14, 17, 20, and 28, 2020
- February 1, 4, 5, 8, 26 and 27, 2020
- March 4, 18, 20, 23 and 25, 2020
- April 1, 8, 14, 15, and 16, 2020
- May 11, 12, 13, 20, and 22, 2020
- June 14, 15, 16, and 24, 2020

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

There were fourteen wellfield exceedances during this reporting period. Please refer to the Wellfield Deviation Log, included in Appendix K, for exceedance records for the reporting period of January 1, 2020 through June 30, 2020.

### **2.10.2 Higher Operating Value (HOV) Wells**

During the reporting period, the following wells were approved to operate at a temperature higher operating value (HOV) of 145°F: 37, 51, 57, 58, 65, 66, 71, 74, 78, 86, 91, 92, 95, 98, 99, 119, 127, 128, 133, and 135. Wells 56, 75, 76, 87, 89, and 120, are approved to operate at a temperature HOV of 156°F.

Copies of all BAAQMD correspondence are located in Appendix J.

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

The A-12 Flare LFG flow rate is measured continuously with a Kurz flowmeter. The LFG flow is displayed and digitally recorded with a General Electric data panel and Yokogawa FX112 continuous digital recorder. The flow meter is maintained and calibrated pursuant to the manufacturer's recommendations. The flare flow meter meets the requirements of BAAQMD Regulation 8-34-508 by recording fuel flow at least every fifteen (15) minutes. Appendix D contains the specific details. The flow data for the flare are available for review at the KCRDF. Appendix L contains a summary of the monthly LFG flow rates and heat input for the flare.

Table 2-3 below is a summary of the LFG flow from January 1, 2020 through June 30, 2020, for the A-12 Flare. The A-12 Flare did not exceed the annual heat input rate of 1,087,700 million British Thermal Units (MMBTU), pursuant to Title V Permit A1812 Condition Number 1437, Part 8. The A-12 Flare did not exceed the permitted daily limit of 2,980 million British Thermal Units (BTU) for the duration of this event.

**Table 2-3 Total LFG Flow A-12 Flare – January 1, 2020 through June 30, 2020**

Emission Control Device	Average Flow (scfm)	Methane (%)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heat Input (MMBTU)
A-12 Flare	2,207	50.0	572,704,360	283,624,224	286,926

*scfm = standard cubic feet per minute CH<sub>4</sub> = methane % = percent scf = standard cubic feet  
\*Methane concentration from March 13, 2019 and March 4, 2020, Source Test for the A-12 Flare.*

## 2.12 Compliance with Title V Permit Cond. No. 1437, Part 14

The condensate injection rate did not exceed five (5) gallons per minute (gpm) during injection events (excluding startup times).

Table 2-4 summarizes the condensate injection rate and 12-month (consecutive) throughput in gallons for January 1, 2020 through June 30, 2020. Per Title V Permit A1812 Condition Number 1437 Part 14, the 12-month rolling average is below the permitted condensate injection limit of 2.0 million gallons per year. The monthly condensate injection logs are included in Appendix M.

**Table 2-4 Condensate Injection Rates**

Month	Average Condensate Injection Rate (gpm)	Monthly Condensate Injection Throughput (gallons)	Condensate Injection Throughput 12-Month Total (gallons)
January 2020	2.1	77,427	860,372
February 2020	2.5	90,691	868,280
March 2020	2.3	96,514	863,047
April 2020	2.3	88,798	861,053
May 2020	2.2	80,028	848,299

Month	Average Condensate Injection Rate (gpm)	Monthly Condensate Injection Throughput (gallons)	Condensate Injection Throughput 12-Month Total (gallons)
June 2020	1.2	46,650	819,919

gpm= gallons per minute

## 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 A1812 during the reporting period. During the reporting period, one vertical well was decommissioned and two new vertical wells were started pursuant to Title V Permit Condition 1437 Part 6.

As of June 30, 2020, the GCCS system consists of 76 vertical wells, 0 horizontal collectors, and 3 leachate collection risers (LCRS).

## 2.14 Compliance with Title V Permit Cond. No. 1437, Parts 2 and 3

A total of 10,191.5 tons of contaminated soil containing volatile organic compounds (VOCs) greater than 50 parts per million (ppm) was received during the reporting period. 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 KCRDF.

## 2.15 Compliance with Title V Permit Cond. No. 23022, Part 2

Diesel Engine S-8 (the diesel engine for the portable compressor) is required to be operated less than 1,290 hours during any consecutive 12-month period. S-8 operated a total of 130 hours during the 12-month period, July 1, 2019 through June 30, 2020. S-8 operated a total of 50 hours during the 6-month reporting period, January 1, 2020 through June 30, 2020. S-8 used a total of approximately 189 gallons of diesel fuel during the 6-month reporting period.

## 2.16 Compliance with Title V Permit Cond. No. 1437, Part 20

Effective July 2012, the A-12 Flare Sulfur dioxide emissions shall not exceed 300 ppmv and SO<sub>2</sub> (dry) emissions shall not exceed 94.9 tons per year. The total reduced sulfur (TRS) shall not exceed 860 ppmv (dry) expressed as hydrogen sulfide.

To demonstrate compliance with above limits, the site will conduct annual testing of total TRS at the landfill gas main header. The source test data for (source test conducted on conducted March 13, 2019 and March 4, 2020) TRS value was used to calculate the monthly SO<sub>2</sub> emissions in tons. The SO<sub>2</sub> emission did not exceed limit during the reporting period. The SO<sub>2</sub> tons 12-month rolling logs are included in Appendix P.

## **2.17 Compliance with Title V Permit Cond. No. 25872**

To demonstrate compliance with permit limits for Source S-24, Construction & Demolition Debris Stockpile, the total construction and demolition debris accepted at S-24 in any consecutive 12-month period is limited to 104,000 tons and 500 tons for each day. To demonstrate compliance with Source S-25 Green and Wood Waste Stockpile the total combined green waste and wood waste debris accepted at S-25 in any consecutive 12-month period is limited to 250,000 and 4,500 tons each day. During the reporting period, the site did not exceed the permitted annual and daily limits. Required records are available for review at the KCRDF.

### 3 PERFORMANCE TEST REPORT

In accordance with BAAQMD Regulation 8-34-413 and 40 CFR §60.757(g) in the New Source Performance Standard (NSPS), a Performance Test Report is required to be submitted from subject facilities containing performance and monitoring data for the operation of the GCCS. The operational records listed in Table 3-1 have been reviewed, summarized, and are included in this Performance Test Report.

**Table 3-1 Performance Test Requirements**

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-412, §60.8, §60.752(b)(2)(iii)(B), §60.754(d)	Compliance Demonstration Test	Section 3.1, Appendix O
§60.757(g)(1)	A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for future collection system expansion.	Section 3.2, Appendix A
§60.757(g)(2)	The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.	Section 3.3
§60.757(g)(3)	The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material.	Section 3.4
§60.757(g)(4)	The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area.	Section 3.5
§60.757(g)(5)	The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill.	Section 3.6
§60.757(g)(6)	The provisions for the control of off-site migration.	Section 3.7 Appendix N

#### 3.1 A-12 Flare Performance Test Results (BAAQMD 8-34-412)

The most recent A-12 Flare Compliance Demonstration Test (Performance Test) was performed on the A-12 Flare by Blue Sky Environmental, LLC on March 4, 2020, pursuant to Title V Permit A1812 Condition Number 1437 Part 12. The Performance Test Report for the A-12 Flare indicates that the flare is in compliance with BAAQMD Regulation 8-34-301.3. As required by BAAQMD Regulation 8-34-301.3, the flare meets the non-methane organic compound (NMOC) emission rate of less than 30 ppmv. Pursuant to Title V Permit A1812 Condition Number 1437 Part 10, the A-12 Flare meets the oxides of nitrogen (NO<sub>x</sub>) emission concentration limit of less than 0.06 pounds (lbs)/MMBTU. The A-12 Flare meets the carbon monoxide (CO) emission concentration



limit of less than 0.3 lbs/MMBTU, pursuant to Title V Permit A1812 Condition Number 1437 Part 11. Table 3-2 shows the results of the A-12 Flare Performance Test, averaged from six test runs - three with condensate on, and three with condensate off.

The A-12 2020 Source Test Report was submitted to the BAAQMD on April 28, 2020, within 60 days of the test date. The source test results for the above control device is included in Appendix O.

**Table 3-2 A-12 Flare Performance Test Results – March 4, 2020**

Condition	Flare (A-12) Average Results		8-34-301.3 limit	Compliance Status
	Condensate ON	Condensate OFF		
NMOC (ppmv @ 3% O <sub>2</sub> , as CH <sub>4</sub> )	1.0	1.0	30 ppmv	In Compliance
NO <sub>x</sub> , lbs/MMBTU	0.045	0.037	0.06	In Compliance
CO, lbs/MMBTU	0.003	0.004	0.30	In Compliance

### 3.2 Compliance with §60.757(g)(1)

*“A diagram of the collection system showing collection system positioning including wells, horizontal collectors...”*

A map dated January 29, 2020 of the landfill GCCS showing the positioning of all vertical wells, horizontal collectors, and other LFG extraction devices is included in Appendix A.

### 3.3 Compliance with §60.757(g)(2)

*“The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.”*

The KCRDF GCCS has historically provided LFG wells and collectors spaced in accordance with standard industry practices. The A-12 flare, LFG extraction wells, and piping are more than adequate to move the current LFG flow rate. KCRDF will continue to add additional LFG control capacity as necessary with the approval of BAAQMD. The installed collector density appears more than adequate for controlling surface emissions, based on continuous compliance and operational experience.

The total capacity of the LFG mover equipment was designed and will be designed to meet the current United States Environmental Protection Agency (USEPA) Model AP-42 projections of LFG generation and the historic LFG extraction rates determined to be continuously available from the facility.

## **Demonstrating Compliance with §60.757(g)(2)**

*“The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.”*

Compliance with 40 CFR §60.757(g)(2) is maintained by performing quarterly SEM. Refer to Section 2.6, Surface Emissions Monitoring for information pertaining to the SEM results. These results show that the GCCS has sufficient coverage over the waste footprint. Combined LFG recovery for the reporting period was 2,207 scfm. The current A-12 flare system has the capacity to destroy ~ twice the actual recovery. Well monitoring data shows that adequate vacuum is available at all points in the wellfield, demonstrating that the piping network is sufficient to handle all extracted LFG.

### **3.4 Compliance with §60.757(g)(3)**

*“The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material.”*

There are no segregated areas or accumulations of asbestos material documented for the site in the GCCS Design Plan. Therefore, 40 CFR §60.757(g)(3) is not applicable.

### **3.5 Compliance with §60.757(g)(4)**

*“The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area.”*

Non-productive areas have not been excluded from the coverage of the GCCS. Therefore, 40 CFR §60.757(g)(4) is not applicable.

### **3.6 Compliance with §60.757(g)(5)**

*“The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill.”*

The A-12 Flare and blower system were installed in October and November 2007 and started up on December 3, 2007. The A-12 Flare and blower system is anticipated to be able to accommodate the expected LFG flow rate over the life of the landfill.

### **3.7 Compliance with §60.757(g)(6)**

*“The provisions for the control of off-site migration.”*

Quarterly LFG migration monitoring, including all on-site buildings, occurred on the following dates:

- First Quarter 2020 – January 29 and 30, 2020
- Second Quarter 2020- May 14 and 20, 2020 and June 12, 2020

All probes were in compliance with no detections above the 5.0 percent methane limit during the First and Second Quarter 2020 monitoring events. There were no LFG migration occurrences at the KCRDF, and no areas of concern were identified during the First and Second Quarter 2020 monitoring events. The LFG migration monitoring and building monitoring results for both quarterly events are included in Appendix N.

### **Demonstrating Compliance with §60.757(g)(6)**

*“The provisions for the control of off-site migration.”*

The landfill operator will continue surface and perimeter monitoring in accordance with the approved monitoring plans. If the GCCS at the KCRDF does not meet the measures of performance set forth in the NSPS/EG, the GCCS will be adjusted or modified in accordance with the NSPS/EG requirements.

## 4 START-UP, SHUTDOWN, MALFUNCTION REPORT

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### 4.1 SSM Report for the Collection and Control Systems at the KCRDF

The NESHAPS 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 semi-annual reporting period are reported in this section (January 1, 2020 through June 30, 2020). The following information is included as required:

- During the reporting period, twenty-five (25) A-12 Flare SSM events occurred. The A-12 Flare shut down and restarted during the reporting period due to the reasons noted in the Flare SSM Log, located in Appendix B.
- During the reporting period, thirteen (13) wellfield SSM events occurred. Details are included in the Wellfield SSM Log, located in Appendix C.
- During the reporting period, no monitoring/recorder equipment SSM events occurred.
- In all thirty-eight (38) events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan.
- No exceedances of any applicable emission limitation in the landfills NESHAP (63.10(d)(5)(i)) occurred.
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).

**I certify the following:**

**Based on information and belief formed after reasonable inquiry, information on the startup, shutdown, malfunction forms, all accompanying reports, and other required certifications are true, accurate, and complete.**



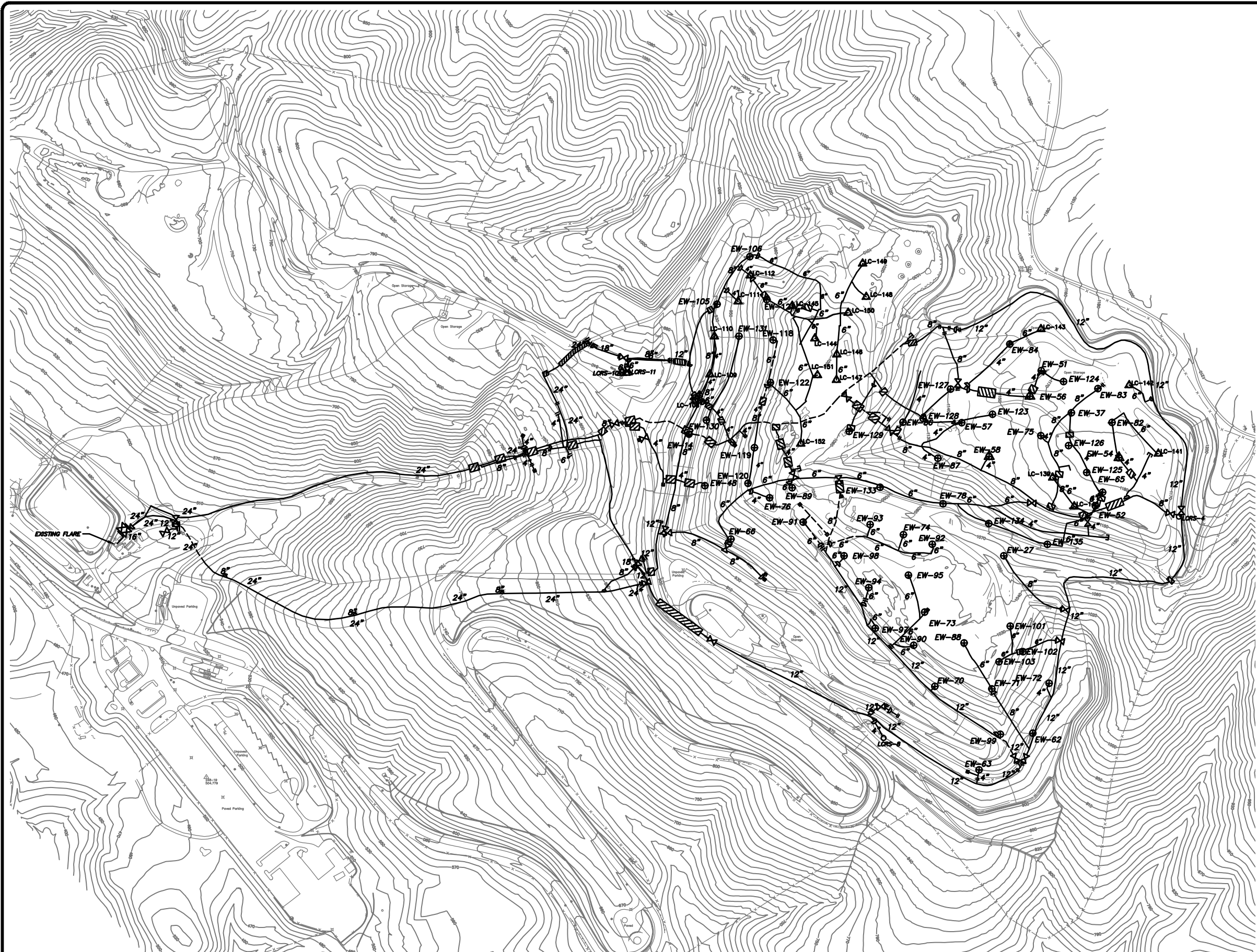
\_\_\_\_\_  
**Signature of Responsible Official**

7-24-2020  
**Date**

Enrique Perez  
**Name of Responsible Official**

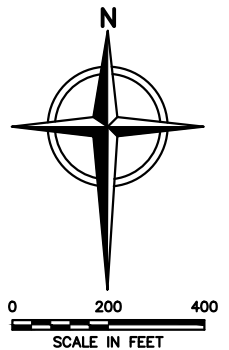
## **APPENDIX A**

### **LANDFILL GAS COLLECTION SYSTEM SITE MAP**



**LEGEND**

	EXISTING 10' CONTOUR
	EXISTING ABOVEGROUND PIPING
	EXISTING BELOWGROUND PIPING
	EXISTING HORIZONTAL COLLECTOR
	EXISTING LFG EXTRACTION WELL
	EXISTING LOCAL CONTROL WELL
	EXISTING REMOTE WELLHEAD
	EXISTING PROBE
	EXISTING PROBE
	EXISTING HORIZONTAL COLLECTOR WELLHEAD
	EXISTING CONTROL VALVE
	EXISTING BLIND FLANGE
	EXISTING FLANGE CONNECTION
	EXISTING REDUCER FITTING
	EXISTING ROAD CROSSING
	EXISTING CONDENSATE SUMP
	EXISTING RISER
	EXISTING CAP ON EXISTING PIPE



- NOTES:**
1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 29, 2019.
  2. SUPPLEMENTAL 2016 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JULY 19, 2017. WELL LOCATIONS PER RECORD DRAWINGS WELL SCHEDULE DATED: JULY 13, 2016.
  3. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017
  4. 2019 GCCS AS-BUILT SURVEYS PROVIDED BY F3 AND ASSOCIATES, INC. DATED: AUGUST 19, 2019 AND DECEMBER 30, 2019
  5. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM DATED: JANUARY 27, 2020.

1" = 100' (Scale)  
 1/2" = 0" (Scale)  
 File: X:\PROJECTS\KIRBY CANYON\190367 - 2019 GCCS AS-BUILT UPDATE & IMPROVEMENTS DESIGN\As-Built Drawings\DUCKINGS\_2019 GCCS\_1.28.20.dwg Layout: Sheet 1 User: SNA\YOUNG\N Jan 29, 2020 - 10:57am

**PRELIMINARY AS-BUILT**



This drawing represents intellectual property of Cornerstone Environmental Group LLC. Any modification to the original by other than Cornerstone Environmental Group LLC personnel violates its original purpose and as such is rendered void. Cornerstone Environmental Group LLC will not be held liable for any changes made to this document without express written consent of the originator.

REV	DATE	DESCRIPTION	DNW BY	DES BY	CHK BY	APP BY
DATE OF ISSUE	JAN. 2020	DRAWN BY SEY	DESIGNED BY AMN	CHECKED BY HLV	APPROVED BY PJS	



ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY FULLY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROVING STATE REGISTERED PROFESSIONAL ENGINEER.

KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
SAN JOSE, CALIFORNIA

2019 GCCS IMPROVEMENTS  
AS-BUILT SITE PLAN

SHEET NO.

1

PROJECT NO.  
190367

## **APPENDIX B**

### **FLARE SSM LOG AND GCCS DOWNTIME REPORT**



**CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG**  
**AFFECTED EQUIPMENT: A-12 Flare**

Completed By: Markus Bernard/Rajan Phadnis

KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA												
SSMP REPORT - From January 1 2020 through June 30, 2020												
Identify Flare & Check Applicable Event	(1) Start of Event	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Expendance	(12) Describe Emission Standard(s) Exceeded
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	1/02/20 23:52	1/02/20 23:56	0.07	9.37	Flare was shutdown due to power outage. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/2/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	1/03/20 09:14	1/03/20 09:20	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	1/03/20 09:24	1/03/20 09:28	0.07	0.20	Flare was shutdown during startup sequence. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	1/03/20 09:36	1/03/20 09:42	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	1/03/20 09:46	1/03/20 09:50	0.07	0.37	Flare was shutdown during startup sequence. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	1/03/20 10:08	1/03/20 10:14	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	1/09/20 06:44	1/09/20 06:48	0.07	7.73	Flare was shutdown due to power outage. Third party electrician visited the site and hard wired flare and electrical panel and started generator power. Flare power source was moved to generator power from utility power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	1/09/20 14:28	1/09/20 14:34	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	1/10/20 14:54	1/10/20 14:58	0.07	0.77	Flare was shutdown to switch from generator power to utility power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	1/10/20 15:40	1/10/20 15:46	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	2/06/20 09:52	2/06/20 09:56	0.07	1.93	Flare was shutdown during annual inspection. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	2/06/20 11:48	2/06/20 11:54	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	2/06/20 14:32	2/06/20 14:36	0.07	0.97	Flare was shutdown during annual inspection. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	2/06/20 15:30	2/06/20 15:36	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	2/07/20 15:08	2/07/20 15:12	0.07	2.27	Flare was shutdown during inspection and maintenance. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/7/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	2/07/20 17:24	2/07/20 17:30	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/7/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	2/09/20 12:56	2/09/20 13:00	0.07	3.23	Flare was shutdown due to power outage. Generator was started to power the flare and other devices. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	2/09/20 16:10	2/09/20 16:16	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	2/10/20 11:06	2/10/20 11:10	0.07	3.50	Flare was shutdown to install new firmwaredcard on flowmeter. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	2/10/20 14:36	2/10/20 14:42	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	

**CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG**  
**AFFECTED EQUIPMENT: A-12 Flare**

Completed By: Markus Bernard/Rajan Phadnis

KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA												
SSMP REPORT - From January 1 2020 through June 30, 2020												
Identify Flare & Check Applicable Event	(1) Start of Event	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/11/20 09:24	2/11/20 09:28	0.07	2.57	Flare was shutdown to switch back to utility power. Utility power had single phasing issues. Generator was restarted to power the flare and other devices. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/11/20 11:58	2/11/20 12:04	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/12/20 15:12	2/12/20 15:16	0.07	0.30	Flare was shutdown to switch from generator power to utility power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/12/20 15:30	2/12/20 15:36	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/24/20 11:30	2/24/20 11:34	0.07	0.30	Flare was shutdown during inspection and maintenance on condensate injection system. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/24/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	2/24/20 11:48	2/24/20 11:54	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/24/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/17/20 16:02	3/17/20 16:06	0.07	0.43	Flare was shutdown during power surge. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	X No (Stop) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/17/20 16:28	3/17/20 16:34	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/17/20 17:40	3/17/20 17:44	0.07	1.00	Flare power source was moved to generator power from utility. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/17/20 18:40	3/17/20 18:46	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/18/20 08:44	3/18/20 08:48	0.07	0.23	Flare was shutdown to switch from generator power to utility power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/18/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/18/20 08:58	3/18/20 09:04	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/18/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/18/20 09:10	3/18/20 09:14	0.07	0.17	Flare was shutdown during startup sequence. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/18/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	X No (Stop) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	3/18/20 09:20	3/18/20 09:26	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/18/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	4/03/20 09:04	4/03/20 09:08	0.07	1.60	Flare was shutdown during power surge. Flare was restarted. Flare was inspected.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/3/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	X No (Stop) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	4/03/20 10:40	4/03/20 10:46	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/3/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	5/08/20 18:00	5/08/20 18:04	0.07	1.23	Flare was shutdown due to power outage. Flare was restarted. Flare was inspected.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/8/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	X No (Stop) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	5/08/20 19:14	5/08/20 19:20	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/8/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	5/09/20 05:50	5/09/20 05:54	0.07	0.40	Flare was shutdown during power outage. Flare was restarted. Flare was inspected during the next business day.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/9/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	X No (Stop) No (Stop)	
Component: A-12 Flare Startup Event Shutdown Event Malfunction Event	5/09/20 06:14	5/09/20 06:20	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/9/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	

**CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG**  
**AFFECTED EQUIPMENT: A-12 Flare**

Completed By: Markus Bernard/Rajan Phadnis

KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA												
SSMP REPORT - From January 1 2020 through June 30, 2020												
Identify Flare & Check Applicable Event	(1) Start of Event	(2) End of Event	(3) Duration	(4) Duration	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event	(9) Procedures Used	(10) Did Steps Taken Vary	(11) Did Event Cause Any	(12) Describe Emission Standard(s) Exceeded
	Start Date and Time	End Date and Time	of Event (Hours)	Shutdown (Hours)				(Startup and Shutdown Events Only)		From Section 9?	Emission Limit Exceedance	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	5/27/20 18:20	5/27/20 18:24	0.07	0.40	Flare was shutdown during power outage. Flare was restarted. Flare was inspected.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/27/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	5/27/20 18:44	5/27/20 18:50	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/27/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	6/09/20 18:02	6/09/20 18:06	0.07	2.47	Flare was shutdown during power outage. Flare was switched to generator power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	6/09/20 20:30	6/09/20 20:36	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/9/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	6/10/20 09:06	6/10/20 09:10	0.07	1.23	Flare was shutdown during switch over to utility power. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	6/10/20 10:20	6/10/20 10:26	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/10/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	6/11/20 09:12	6/11/20 09:16	0.07	1.43	Flare was shutdown during blower inspection. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/11/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	6/11/20 10:38	6/11/20 10:44	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/11/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Component: A-12 Flare Startup Event x Shutdown Event Malfunction Event	6/30/20 12:16	6/30/20 12:20	0.07	0.20	Flare was shutdown due to power surge. Flare was restarted. Flare was inspected.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/30/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	
Component: A-12 Flare x Startup Event Shutdown Event Malfunction Event	6/30/20 12:28	6/30/20 12:34	0.10			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/30/2020	Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) No (Stop)	Yes (Go to Section 12) No (Stop)	

TOTAL DOWNTIME January 1 through June 30, 2020 (HOURS):	44.3
TOTAL PERMITTED GCCS DOWNTIME FOR 1 YEAR (HOURS):	240.0
TOTAL AVAILABLE RUNTIME January 1 through June 30, 2020 (HOURS):	4367.0
TOTAL RUNTIME January 1 through June 30, 2020 (HOURS):	4322.7
RUNTIME PERCENTAGE January 1 through June 30, 2020:	99.0%

**(a) STANDARD OPERATING PROCEDURES**

**Shutdown**

<u>Procedure No.</u>	<u>Procedure</u>
1	Ensure that there are no unsafe conditions present, contact manager immediately
2	Initiate shutdown sequence below by one or more of the following (Note date and time in Section 1 of form above)
a.	Press Emergency Stop if necessary
b.	Close On/Off switch(es) or Push On/Off button(s)
c.	Close adjacent valves if necessary
3	Observe that system achieves normal shutdown ranges for levels, pressures, and temperatures (Note date and time in Section 2 of form above)

**Startup**

<u>Procedure No.</u>	<u>Procedure</u>
1	Ensure that there are no unsafe conditions present
2	Ensure that the system is ready to start by one of the following:
a.	Valves are in correct position
b.	Levels, pressures, and temperatures are within normal starting range
c.	Alarms are cleared
d.	Power is on and available to control panel and ready to energize equipment.
e.	Emergency stop is de-energized
3	Initiate start sequence (Note time and date in section 1 of form above)
4	Observe that system achieves normal startup ranges for levels, pressures, and temperatures (Note time and date in Section 2 of form above)

**Malfunction**

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	PROCEDURE NO. -TYPICAL RESPONSE ACTIONS
<b>LFG Collection and Control System</b>				
Blower or Other Gas Mover Equipment	Applies vacuum to wellfield to extract LFG and transport to control device	Loss of LFG Flow/Blower Malfunction	-Flame arrestor fouling/deterioration -Automatic valve problems -Blower failure (e.g., belt, motor, impeller, coupling, seizing, etc.) -Loss of power  -Extraction piping failure -Condensate knock-out problems -Extraction piping blockages	1. Repair breakages in extraction piping 2. Clean flame arrestor 3. Repair blockages in extraction piping 4. Verify automatic valve operation, compressed air/nitrogen supply 5. Notify power utility, if appropriate 6. Provide/utilize auxiliary power source, if necessary 7. Repair Settlement in Collection Piping 8. Repair Blower 9. Activate back-up blower, if available 10. Clean knock-up pot/demister 11. Drain knock-out pot
Extraction Wells and Collection Piping	Conduits for extractions and movement of LFG flow	Collection well and pipe failures	-Break/crack in header or lateral -Leaks at wellheads, valves, flanges, -Collection piping blockages  -Problems due to settlement (e.g. pipe separation, deformation, development of low points)	12. Repair leaks or breaks in lines or wellheads 13. Follow procedures for loss of LFG flow/blower malfunction 14. Repair blockages in collection piping 15. Repair settlement in collection piping 16. Re-install, repair, or replace piping
Blower or Other Gas Mover Equipment And Control Device	Collection and control of LFG	Loss of electrical power	- Force majeure/Act of God (e.g., lightning, flood, earthquake, etc.) -Area-wide or local blackout or brown-out -Interruption in service (e.g. blown service fuse) -Electrical line failure -Breaker trip -Transformer failure -Motor starter failure/trip -Overdraw of power -Problems in electrical panel  -Damage to electrical equipment from on-site operations	17. Check/reset breaker 18. Check/repair electrical panel components 19. Check/repair transformer 20. Check/repair motor starter 21. Check/repair electrical line 22. Test amperage to various equipment 23. Contact electricity supplier 24. Contact/contract electrician 25. Provide auxiliary power (if necessary)
LFG Control Device	Combusts LFG	Low temperature conditions at control device	-Problems with temperature - monitoring equipment -Problems/failure of -thermocouple and/or thermocouple wiring  -Change of LFG flow -Change of LFG quality -Problems with air louvers -Problems with air/fuel controls -Change in atmospheric conditions	26. Check/repair temperature monitoring equipment 27. Check/repair thermocouple and/or wiring 28. Follow procedures for loss of flow/blower malfunction 29. Check/adjust louvers 30. Check/adjust air/fuel controls
LFG Control Device	Combusts LFG	Loss of Flame	-Problems/failure of thermocouple  -Loss/change of LFG flow -Loss/change of LFG quality -Problems with air/fuel controls -Problems/failure of flame sensor -Problems with temperature monitoring equipment	31. Check/repair temperature monitoring equipment 32. Check/repair thermocouple 33. Follow procedures for loss of flow/blower malfunction 34. Check/adjust air/fuel controls 35. Check/adjust/repair flame sensor 36. Check/adjust LFG collectors
Flow Monitoring/ Recording Device	Measures and records gas flow from collection system to control	Malfunctions of Flow Monitoring/Recording Device	-Problems with orifice plate, pitot tube, or other in-line flow measuring device -Problems with device controls and/or wiring -Problems with chart recorder	37. Check/adjust/repair flow measuring device and/or wiring 38. Check/repair chart recorder 39. Replace paper in chart recorder

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	PROCEDURE NO. -TYPICAL RESPONSE ACTIONS
<b>LFG Collection and Control System</b>				
Temperature Monitoring/Recording Device	Monitors and records combustion temperature of enclosed combustion device	Malfunctions of Temperature Monitoring/Recording Device	<ul style="list-style-type: none"> <li>-Problems with thermocouple</li> <li>-Problems with device controls and/or wiring</li> <li>-Problems with chart recorder</li> </ul>	<ul style="list-style-type: none"> <li>40. Check/adjust/repair thermocouple</li> <li>41. Check/adjust/repair controller and/or wiring</li> <li>42. Check/adjust/repair electrical panel components</li> <li>43. Check/repair chart recorder</li> <li>44. Replace paper in chart recorder</li> </ul>
Control Device	Combusts LFG	Other Control Device Malfunctions	<ul style="list-style-type: none"> <li>-Control device smoking (i.e. visible emissions)</li> <li>-Problems with flare insulation</li> <li>-Problems with pilot light system</li> <li>-Problems with air louvers</li> <li>-Problems with air/fuel controllers</li> <li>-Problems with thermocouple</li> <li>-Problems with burners</li> <li>-Problems with flame arrester</li> <li>-Alarmed malfunction conditions not covered above</li> <li>-Unalarmed conditions discovered during inspection not covered above</li> </ul>	<ul style="list-style-type: none"> <li>45. Site-specific diagnosis procedures</li> <li>46. Site-specific responses actions based on diagnosis</li> <li>47. Open manual louvers</li> <li>48. Clean pitot orifice</li> <li>49. Clean/drain flame arrester</li> <li>50. Refill propane supply</li> <li>51. Check/repair pilot sparking system</li> </ul>

(b) For each permit limit exceedance complete an "SSM Plan Departure Form". Notify BAAQMD verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission permit has occurred. Follow up in writing to the agency within 7 working days after the end of the event.

## **APPENDIX C**

### **WELLFIELD SSM LOG**

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield

Completed By: Markus Bernard/Rajan Phadnis

Kirby Canyon Recycling & Disposal Facility, San Jose, CA														
SSMP REPORT - From January 1 2020 through June 30, 2020														
Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded		
Well ID Number:152	1/06/20 14:12	1/06/20 14:14	0.03	336.3	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:152	1/20/20 14:32	1/20/20 14:34	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/20/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:88	1/24/20 11:05	1/24/20 11:07	0.03	125.3	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:88	1/29/20 16:25	1/29/20 16:27	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/29/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:147	1/10/20 10:16	1/10/20 10:18	0.03	NA	Startup per PTO Condition Number 1437 Part 6, as modified by Application Number 27673	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/10/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:147						X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/0/1900	X Manual (Go to Section 9)		Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:151	1/10/20 09:45	1/10/20 09:47	0.03	NA	Startup per PTO Condition Number 1437 Part 6, as modified by Application Number 27673	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/10/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:151						X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/0/1900	X Manual (Go to Section 9)		Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:152	1/20/20 14:35	1/20/20 14:37	0.03	360.8	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/20/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:152	2/04/20 15:20	2/04/20 15:22	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/4/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:144	1/31/20 14:30	1/31/20 14:32	0.03	169.1	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/31/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:144	2/07/20 15:37	2/07/20 15:39	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/7/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:146	1/27/20 09:25	1/27/20 09:27	0.03	1,753.2	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/27/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:146	4/09/20 10:35	4/09/20 10:37	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/9/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:150	2/10/20 14:30	2/10/20 14:32	0.03	1,411.8	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/10/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:150	4/09/20 10:20	4/09/20 10:22	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/9/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:145	3/04/20 16:15	3/04/20 16:17	0.03	978.0	Well offline for filling	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/4/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														
Well ID Number:145	4/14/20 10:15	4/14/20 10:17	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/14/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)			
X Shutdown Event								Automatic (Go to Section 11)					No (Stop)	No (Stop)
Malfunction Event														

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield

Completed By: Markus Bernard/Rajan Phadnis

Kirby Canyon Recycling & Disposal Facility, San Jose, CA												
SSMP REPORT - From January 1 2020 through June 30, 2020												
Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Well ID Number:LR08	3/25/20 14:30	3/25/20 14:32	0.03	330.5	Well offline for filling	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/25/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:LR08	4/08/20 09:00	4/08/20 09:02	0.03	NA	Well decommissioning per PTO Condition Number 1437 Part 6, as modified by Application Number 27673	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/1/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:106	4/01/20 13:46	4/01/20 13:48	0.03	NA	Well decommissioning per PTO Condition Number 1437 Part 6, as modified by Application Number 27673	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/0/1900	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:148	6/24/20 14:00	6/24/20 14:02	0.03	140.2	Well offline for filling	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:148	6/30/20 10:10	6/30/20 10:12	0.03	140.2	Well offline for filling	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/30/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:149	6/26/20 12:15	6/26/20 12:17	0.03	107.7	Well offline for filling	113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	6/26/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
Well ID Number:149	Pending						Pending	X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												
113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities								X Manual (Go to Section 9)	Procedure No. 1 to 4	X Yes (Go to Section 11)	Yes (Go to Section 12)	
Automatic (Go to Section 11)												

N/A = Not Applicable



**(a) STANDARD OPERATING PROCEDURES**

**Shutdown**

<u>Procedure No.</u>	<u>Procedure</u>
1	Ensure that there are no unsafe conditions present, contact manager immediately
2	Initiate shutdown sequence below by one or more of the following (Note date and time in Section 1 of form above)
a.	Press Emergency Stop if necessary
b.	Close On/Off switch(es) or Push On/Off button(s)
c.	Close adjacent valves if necessary
3	Observe that system achieves normal shutdown ranges for levels, pressures, and temperatures (Note date and time in Section 2 of form above)

**Startup**

<u>Procedure No.</u>	<u>Procedure</u>
1	Ensure that there are no unsafe conditions present
2	Ensure that the system is ready to start by one of the following:
a.	Valves are in correct position
b.	Levels, pressures, and temperatures are within normal starting range
c.	Alarms are cleared
d.	Power is on and available to control panel and ready to energize equipment.
e.	Emergency stop is de-energized
3	Initiate start sequence (Note time and date in section 1 of form above)
4	Observe that system achieves normal startup ranges for levels, pressures, and temperatures (Note time and date in Section 2 of form above)

**Malfunction**

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	PROCEDURE NO. -TYPICAL RESPONSE ACTIONS
<b>LFG Collection and Control System</b>				
Blower or Other Gas Mover Equipment	Applies vacuum to wellfield to extract LFG and transport to control device	Loss of LFG Flow/Blower Malfunction	-Flame arrestor fouling/deterioration  -Automatic valve problems -Blower failure (e.g., belt, motor, impeller, coupling, seizing, etc.) -Loss of power  -Extraction piping failure -Condensate knock-out problems -Extraction piping blockages	1. Repair breakages in extraction piping  2. Clean flame arrestor 3. Repair blockages in extraction piping  4. Verify automatic valve operation, compressed air/nitrogen supply 5. Notify power utility, if appropriate 6. Provide/utilize auxiliary power source, if necessary 7. Repair Settlement in Collection Piping 8. Repair Blower 9. Activate back-up blower, if available 10. Clean knock-up pot/demister 11. Drain knock-out pot
Extraction Wells and Collection Piping	Conduits for extractions and movement of LFG flow	Collection well and pipe failures	-Break/crack in header or lateral -Leaks at wellheads, valves, flanges, -Collection piping blockages  -Problems due to settlement (e.g. pipe separation, deformation, development of low points)	12. Repair leaks or breaks in lines or wellheads 13. Follow procedures for loss of LFG flow/blower malfunction 14. Repair blockages in collection piping  15. Repair settlement in collection piping  16. Re-install, repair, or replace piping
Blower or Other Gas Mover Equipment And Control Device	Collection and control of LFG	Loss of electrical power	- Force majeure/Act of God (e.g., lightning, flood, earthquake, etc.) -Area-wide or local blackout or brown-out -Interruption in service (e.g. blown service fuse) -Electrical line failure -Breaker trip -Transformer failure -Motor starter failure/trip -Overdraw of power -Problems in electrical panel  -Damage to electrical equipment from on-site operations	17. Check/reset breaker 18. Check/repair electrical panel components  19. Check/repair transformer 20. Check/repair motor starter 21. Check/repair electrical line 22. Test amperage to various equipment 23. Contact electricity supplier 24. Contact/contract electrician 25. Provide auxiliary power (if necessary)
LFG Control Device	Combusts LFG	Low temperature conditions at control device	-Problems with temperature - monitoring equipment -Problems/failure of -thermocouple and/or thermocouple wiring  -Change of LFG flow -Change of LFG quality -Problems with air louvers -Problems with air/fuel controls -Change in atmospheric conditions	26. Check/repair temperature monitoring equipment 27. Check/repair thermocouple and/or wiring  28. Follow procedures for loss of flow/blower malfunction 29. Check/adjust louvers 30. Check/adjust air/fuel controls

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	PROCEDURE NO. -TYPICAL RESPONSE ACTIONS
LFG Collection and Control System				
LFG Control Device	Combusts LFG	Loss of Flame	-Problems/failure of thermocouple -Loss/change of LFG flow -Loss/change of LFG quality -Problems with air/fuel controls -Problems/failure of flame sensor -Problems with temperature monitoring equipment	31. Check/repair temperature monitoring equipment 32. Check/repair thermocouple 33. Follow procedures for loss of flow/blower malfunction 34. Check/adjust air/fuel controls 35. Check/adjust/repair flame sensor 36. Check/adjust LFG collectors
Flow Monitoring/ Recording Device	Measures and records gas flow from collection system to control	Malfunctions of Flow Monitoring/Recording Device	-Problems with orifice plate, pitot tube, or other in-line flow measuring device -Problems with device controls and/or wiring -Problems with chart recorder	37. Check/adjust/repair flow measuring device and/or wiring 38. Check/repair chart recorder 39. Replace paper in chart recorder
Temperature Monitoring/ Recording Device	Monitors and records combustion temperature of enclosed combustion device	Malfunctions of Temperature Monitoring/Recording Device	-Problems with thermocouple -Problems with device controls and/or wiring -Problems with chart recorder	40. Check/adjust/repair thermocouple 41. Check/adjust/repair controller and/or wiring 42. Check/adjust/repair electrical panel components 43. Check/repair chart recorder 44. Replace paper in chart recorder
Control Device	Combusts LFG	Other Control Device Malfunctions	-Control device smoking (i.e. visible emissions) -Problems with flare insulation -Problems with pilot light system -Problems with air louvers -Problems with air/fuel controllers -Problems with thermocouple -Problems with burners -Problems with flame arrester  -Alarmed malfunction conditions not covered above -Unalarmed conditions discovered during inspection not covered above	45. Site-specific diagnosis procedures 46. Site-specific responses actions based on diagnosis 47. Open manual louvers 48. Clean pitot orifice 49. Clean/drain flame arrester 50. Refill propane supply 51. Check/repair pilot sparking system

(b) For each permit limit exceedance complete an "SSM Plan Departure Form". Notify BAAQMD verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission permit has occurred. Follow up in writing to the agency within 7 working days after the end of the event.

## **APPENDIX D**

### **FLARE TEMPERATURE DEVIATION/ INOPERATIVE MONITOR REPORTS**

**TEMPERATURE DEVIATION/ INOPERATIVE MONITOR REPORT From January 1 2020 through June 30, 2020**

**AFFECTED EQUIPMENT: A-12 Flare**

**REPORT PREPARED BY:** Rajan Phadnis **DATE:** July 1, 2020  
**TEMPERATURE SENSING DEVICE:** Thermocouple **MODEL:** Thermo-Electric

START DATE & TIME	END DATE & TIME	DURATION (hours)	TEMP (°F) / FLOW (SCFM)	CAUSE	EXPLANATION	ACTION TAKEN
No deviations, inoperative monitors, or missing data occurred in January 2020						
No deviations, inoperative monitors, or missing data occurred in February 2020						
No deviations, inoperative monitors, or missing data occurred in March 2020						
No deviations, inoperative monitors, or missing data occurred in April 2020						
No deviations, inoperative monitors, or missing data occurred in May 2020						
No deviations, inoperative monitors, or missing data occurred in June 2020						

The A-12 Flare combustion zone three-hour average temperature did not drop below the 1,549°F limit established in the March 4, 2020 Annual Source tests and 1,545°F limit established in the March 13, 2019 Annual Source tests, pursuant to Title V Permit A1812 Condition 1437 Part 9, during the reporting period while the flare was in operation.

°F= degrees Fahrenheit

scfm= standard cubic feet per minute

## **APPENDIX E**

### **COVER INTEGRITY MONITORING REPORTS**

### Monthly Cover Monitoring

**LOCATION:** Kirby Landfill  
**INSPECTION DATE:** January 23, 2020  
**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Acceptable vegetation	X		
Exposed waste		X	
<b>REPAIR AREAS:</b>			
Location Description Note cell and near-by wells	Date of Repair	Description of Repair (add soil, water)	
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

### Monthly Cover Monitoring

**LOCATION:** Kirby Landfill  
**INSPECTION DATE:** February 28, 2020  
**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking	X		Wells need soil to be added
Acceptable vegetation	X		
Exposed waste		X	
<b>REPAIR AREAS:</b>			
Location Description	Date of Repair	Description of Repair (add soil, water)	
<b>Note cell and near-by wells</b> Wells 82, 123, 75, 141, 90, 134, 109 and 48	2/14/2020	Soil and water was added near these wells	
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

Monthly Cover Monitoring

**LOCATION:** Kirby Canyon Recycling and Disposal Facility  
**INSPECTION DATE:** March 27, 2020  
**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Acceptable vegetation	X		
Exposed waste		X	

**REPAIR AREAS:**

Location Description Note cell and near-by wells	Date of Repair	Description of Repair (add soil, water)

Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4



### Monthly Cover Monitoring

**LOCATION:** Kirby Canyon Recycling and Disposal Facility

**INSPECTION DATE:** April 30, 2020

**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:		
Location Description Note cell and near-by wells	Date of Repair	Description of Repair (add soil, water)

Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4

### Monthly Cover Monitoring

**LOCATION:** Kirby Canyon Recycling and Disposal Facility

**INSPECTION DATE:** May 29, 2020

**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap	X		Leachate breakout was observed on slope
Surface cracking		X	
Acceptable vegetation	X		
Exposed waste		X	

**REPAIR AREAS:**

Location Description Note cell and near-by wells	Date of Repair	Description of Repair (add soil, water)
Leachate breakout was observed on slope at north east corner of landfill	5/29/2020	Soil was added to affected area at the slope. Leachate breakout stopped.
		Construction and required notification was proposed to implement permanent solution at this location.
	06/19/20	Submitted construction notification to implement permanent repair at leachate breakout area.

Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4

## Monthly Cover Monitoring

**LOCATION:** Kirby Canyon Recycling and Disposal Facility

**INSPECTION DATE:** June 29, 2020

**TECHNICIAN:** Markus Bernard

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation		X	
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Acceptable vegetation	X		
Exposed waste		X	

### REPAIR AREAS:

Location Description Note cell and near-by wells	Date of Repair/ Notification	Description of Repair (add soil, water)
	06/19/20	Submitted construction notification to implement permanent repair at leachate breakout area. Construction project was initiated in June and repairs occurring between June and September 30, 2020.

Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4

## **APPENDIX F**

### **SURFACE EMISSIONS MONITORING REPORTS**



172 98<sup>th</sup> Avenue • Oakland, California • 94568

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July 6, 2020

Ms. Becky Azevedo  
Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive  
San Jose, CA 95037.

**Re: Second Quarter 2020 Surface Emissions and Component Leak Monitoring Report for the Kirby Canyon Recycling and Disposal Facility**

Dear Ms. Azevedo:

This monitoring report for the “**Kirby Canyon Recycling and Disposal Facility (KCRDF) Landfill**” contains the results of the **Second Quarter 2020 Integrated and Instantaneous Surface Emissions Monitoring (SEM)** and Component Leak Monitoring. Initial surface emissions monitoring was performed by RES Environmental, Inc.(RES). Re-monitoring of surface emissions was conducted by KCRDF personnel.

**APPLICABLE REQUIREMENTS**

The monitoring discussed in this report was conducted in accordance with the following requirements:

**Surface Emission Monitoring (SEM)**

- New Source Performance Standard (NSPS), Title 40 of the Code of Federal Regulations (CFR) §60.755 (c) and (d), 40 CFR 60, Appendix A Method 21, promulgated by the United States Environmental Protection Agency (USEPA).
- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).
- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 303 (Landfill Surface Requirements) and Section 607 (Landfill Surface Inspection procedures).

**Component Leak Monitoring**

- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 301 (Landfill Gas Collection and Emission Control System Requirements) and Section 602 (Collection and Control System Leak Inspection procedures).
- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95464, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).

## **KCRDF Plan and Alternative Compliance Measures**

An Alternative Compliance Option (ACO) Request was submitted to the California Air Resources Board (CARB) on May 16, 2011. After receipt of comments, this ACO was amended, restated, and submitted to BAAQMD on July 1, 2016. SEM and Component Leak monitoring was conducted per the methods outlined in the July 1, 2016 ACO.

## **PROCEDURES**

### **General**

The surface of the KCRDF disposal area has been divided into one-hundred-and-fifty (150), approximately 50,000 square foot monitoring grids. The entire landfill surface is monitored with the exception of active portions of the Landfill, slope areas, and as requested in the approved ACO, areas containing only asbestos-containing waste, inert waste and/or non-decomposable waste which are excluded for safety as allowed by CCR Title 17 §95466.

Field personnel walked the surface of the landfill following the walking pattern as depicted the 2011 KCRDF AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

### **Instantaneous Surface Emissions Monitoring**

The Instantaneous SEM was conducted using a Toxic Vapor Analyzer (TVA) 1000 flame ionization detector (FID), which was calibrated to 500 parts per million by volume (ppm<sub>v</sub>) methane, which meets or exceeds all guidelines set forth in the CCR Title 17 §95471(a) and NSPS. The FID was calibrated prior to use in accordance with the United States Environmental Protection Agency (USEPA) Method 21 requirements. The Instantaneous SEM procedures followed the requirements of 40 CFR 60.755 (c) and (d) and CCR Title 17 §95471(c)(2).

RES personnel walked the surface of the landfill on a grid by grid basis with the wand tip held at 2 inches from the landfill surface. While sampling the grid; the technicians also checked any surface impoundments (wells or otherwise) for leaks. Technicians also checked any surface cracks, seeps, or other areas that show evidence of surface emissions (odors or distressed vegetation). Active and sloped areas excluded for safety were documented on field data sheets and maps.

All instantaneous surface monitoring was performed in accordance with the applicable requirements referenced in this report. Any detections of methane above 200 ppm<sub>v</sub> (areas of concern) or 500 ppm<sub>v</sub> (exceedances) for instantaneous were recorded, flagged, and marked on an SEM Map, which, wherever required, is included in the Appendices of this report. Applicable corrective action and re-monitoring timelines are listed below:

- Corrective actions must be initiated within 5 days of the initial exceedance and re-monitoring shall be conducted within 10 days of the initial exceedance.

- If the re-monitoring event shows the exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance.
- If the 1-month re-monitoring event shows the location is still corrected, all re-monitoring requirements have been completed.
- If either the first 10-day or 1-month re-monitoring events show a second exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance. If the 1-month re-monitoring event shows the area is still corrected, monitoring requirements have been completed.

If any location shows three exceedances, an additional well shall be installed within 120 days of the initial exceedance.

### **Integrated Surface Emissions Monitoring**

The Integrated surface monitoring was conducted using a TVA 1000 calibrated to 25 ppm<sub>v</sub> for the integrated monitoring, which meets or exceeds all guidelines set forth in the CCR Title 17 §95471(a). The field technician traversed the grid walking path over a continuous 25-minute period using the TVA 1000 held within 3 inches above the landfill surface. The Integrated monitoring procedures followed the requirements of CCR Title 17 §95471(c)(2).

Grids with results greater than 25 ppm<sub>v</sub> were recorded, marked on the SEM map, and flagged for remediation. Any grids with integrated concentrations greater than 25 ppm<sub>v</sub> are subject to the following re-monitoring timeline:

- Re-monitoring shall be conducted within 10 days of the initial exceedance.
- If the 10-day re-monitoring event shows the exceedance is corrected, all re-monitoring requirements have been completed.
- If either the first 10-day re-monitoring event shows a second grid exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, all re-monitoring requirements have been completed.
- The second 10-day re-monitoring event shows a third grid exceedance, an additional well shall be installed within 120 days of the third exceedance.

## **Component Leak Monitoring Procedures**

RES personnel monitored the exposed LFG components under positive pressure (pipes, wellheads, valves, blowers, and other mechanical appurtenances) using a TVA 1000 calibrated to 500 ppm<sub>v</sub>. All leaks measured one half inch or less from the component exceeding the compliance limit of 500 ppm<sub>v</sub> per requirements outlined in pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B) and 1,000 ppm<sub>v</sub> per requirements outlined in BAAQMD 8-34-303 were recorded. Applicable corrective action and re-monitoring timelines are listed below:

- Leaks between 500 and 999 ppm<sub>v</sub> must be corrected and re-monitored within 10 days of the initial exceedance.
- Leaks at or above 1000 ppm<sub>v</sub> must be corrected and re-monitored within 7 days of the initial exceedance.

## **SECOND QUARTER 2020 SEM AND COMPONENT LEAK RESULTS**

The following is a summary of the SEM and component leak monitoring results completed for the Second Quarter 2020.

### **Instantaneous Surface Emissions Monitoring Results**

The Instantaneous surface monitoring was performed on June 2, 2020 in accordance with the NSPS, BAAQMD 8-34, and CCR Title 17 §95469 and ACO. Results and data from the monitoring are presented in Attachment A.

#### *Initial Monitoring Event Exceedances of 500 ppm<sub>v</sub>*

There were 8 exceedances of 500 ppm<sub>v</sub> as methane detected on June 2, 2020. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (June 4, 2020, 2020).

#### *Ten-Day Re-Monitoring Results*

The 10-day re-monitoring event was completed on June 8, 2020. All locations were observed at less than 500 ppm<sub>v</sub>.

#### *One-Month Re-Monitoring Results*

The 1-month re-monitoring event was completed on July 2, 2020. All locations were observed at less than 500 ppm<sub>v</sub>.

#### *Readings between 200 ppm<sub>v</sub> and 499 ppm<sub>v</sub> (Initial and Re-monitored)*

There were no readings between 200 ppm<sub>v</sub> and 499 ppm<sub>v</sub> as methane detected during the initial monitoring event on June 2, 2020. Pursuant to CCR Title 17 §95471(c), instantaneous surface emissions exceeding 200 ppm<sub>v</sub> but below 500 ppm<sub>v</sub> are required to be recorded.



## **Integrated Surface Emissions Monitoring Results**

The Integrated surface sampling (ISS) was performed on June 3, 2020, in accordance with the ACO and requirements outlined in CCR Title 17 §95469.

### *Initial Monitoring Event Exceedances of 25 ppm<sub>v</sub>*

There were no grids with exceedances of 25 ppm<sub>v</sub> as methane detected during the initial monitoring event on June 3, 2020.

The average methane concentration of each grid was recorded during the monitoring event per applicable requirements. See Attachment B, Integrated SEM 25 ppm<sub>v</sub> Exceedances and Monitoring Log, and SEM Map included in Attachment B, for details.

## **Component Leak Monitoring Results**

Component leak monitoring was conducted per the applicable requirements on June 2, 2020. No leaks greater than 500 ppm<sub>v</sub> were identified. Please see Attachment C, for details.

## **WEATHER CONDITIONS**

### **Wind Speed Conductions during the Surface Emission Monitoring Events**

Wind speeds during initial monitoring were monitored using a portable weather station. The station has a strip chart that records the wind speed and direction. After completion of monitoring, the strip chart is reviewed by RES office staff to determine the average and maximum wind speeds during the monitoring and the average wind direction during each grid and ensure that the wind speed requirements are met (no gusts greater than 20 mph, average wind speed cannot exceed 10 mph). These values are documented in the field data sheets. The chart data is scanned and included in Attachment D.

### **Precipitation Requirements**

Per the KCRDF's ACO, the initial monitoring event was carefully scheduled so that it could be conducted in compliance with the precipitation requirements (no measurable precipitation within 24 hours). Re-monitoring events are required to adhere to strict timelines. Any conflicts with precipitation requirements are discussed in the results section of this document.

## **EQUIPMENT CALIBRATION**

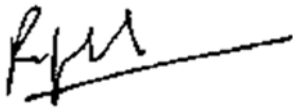
The portable analyzers were calibrated to meet the instrument specifications requirements of U.S. EPA Method 21. The calibration gas used was methane, diluted to a nominal concentration of 25 ppm<sub>v</sub> in air for integrated sample analyses and 500 ppm<sub>v</sub> in air for instantaneous monitoring to comply with the requirements.

All analyzers were calibrated prior to use with required response time and precision related instrument checks. Calibration records include the following: One time response time test record; One time response factor determination for methane; Calibration Precision test records (test to be

performed every 3 months); and Daily Instrument Calibration and Background test records for each gas meter that was used during the quarterly monitoring event. The calibration log records are included in Attachment E.

All monitoring was completed in accordance with the applicable regulatory requirements or approved alternatives. If you have any questions regarding this report, please do not hesitate to contact me at (510) 875-9338.

Thank you,  
Waste Management

A handwritten signature in black ink, appearing to read 'R. Phadnis', with a long horizontal line extending to the right.

Rajan Phadnis  
Environmental Protection Specialist

**Attachment A – Instantaneous Surface Emission Monitoring Event Records**

- Monitoring Logs and Exceedances
- SEM Map

**Attachment B – Integrated Surface Emission Monitoring Event Records**

- Monitoring Logs and Exceedances
- SEM Map

**Attachment C – Component Leak Monitoring Event Records**

- Component Leak Exceedances and Monitoring Logs

**Attachment D – Weather Station Data**

- Strip Chart Data

**Attachment E – Calibration Records**

- Instrument and Gas Calibration Records

**Attachment A**

Instantaneous Surface Emission Monitoring Event Records

**Table A.1**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Initial Monitoring Event Areas of Concern**

**2020 QUARTER:** 2  
**PERFORMED BY:** RES/WM  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

<b>Flag Number</b>	<b>Grid Number</b>	<b>Date of Monitoring</b>	<b>Concentration of Emission (ppmv)</b>	<b>Comments</b>
O 21	103	6/2/2020	1200 ppm	Well EW 78
O22	143	6/2/2020	1177 ppm	Well EW 71
O23	116	6/2/2020	2403 ppm	Well EW 66
O24	101	6/2/2020	994 ppm	Well EW 48
O1	136	6/2/2020	800 ppm	Well EW 97
O11	89	6/2/2020	1100 ppm	Well 75
O12	86	6/2/2020	1150 ppm	Well 119
O13	53	6/2/2020	2200 ppm	Well 121

**Table A.2  
Instantaneous Landfill Surface Emissions Monitoring  
Exceedance and Monitoring Logs (NSPS/BAAQMD 8-34)**

2020 QUARTER: 2  
 INITIAL MONITORING PERFORMED BY: RES/WM  
 FOLLOW-UP MONITORING PERFORMED BY: Markus Bernard/Rick Reed  
 LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			Comments
Flag	Monitoring	Field	Repair	Action taken to repair	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	Exceedance	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	
O 21	6/2/2020	1200 ppm	6/4/2020	Added Soil/ Water	6/8/2020	0		7/2/2020	0 ppm		Well EW 78
O22	6/2/2020	1177 ppm	6/4/2020	Added Soil/ Water	6/8/2020	0		7/2/2020	0 ppm		Well EW 71
O23	6/2/2020	2403 ppm	6/4/2020	Added Soil/ Water	6/8/2020	0		7/2/2020	0 ppm		Well EW 66
O24	6/2/2020	994 ppm	6/4/2020	Added Soil/ Water	6/8/2020	23		7/2/2020	0 ppm		Well EW 48
O1	6/2/2020	800 ppm	6/4/2020	Added Soil/ Water	6/8/2020	0		7/2/2020	0 ppm		Well EW 97
O11	6/2/2020	1100 ppm	6/4/2020	Added Soil/ Water	6/8/2020	86		7/2/2020	30 ppm		Well 75
O12	6/2/2020	1150 ppm	6/4/2020	Added Soil/ Water	6/8/2020	59		7/2/2020	75 ppm		Well 119
O13	6/2/2020	2200 ppm	6/4/2020	Added Soil/ Water	6/8/2020	44		7/2/2020	25 ppm		Well 121

**Table A.3**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Exceedance and Monitoring Logs (AB-32)**

**2020 QUARTER:** 2  
**INITIAL MONITORING PERFORMED BY:** RES/WM  
**FOLLOW-UP MONITORING PERFORMED BY:** Markus Bernard  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

Initial Monitoring Event			1st Re-mon Event - 10 Days			2nd Re-mon Event - 10 Days			Comments
Exceedance	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Grid ID No.	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	
103	6/2/2020	1200 ppm	6/8/2020	0					Well EW 78
143	6/2/2020	1177 ppm	6/8/2020	0					Well EW 71
116	6/2/2020	2403 ppm	6/8/2020	0					Well EW 66
101	6/2/2020	994 ppm	6/8/2020	23					Well EW 48
136	6/2/2020	800 ppm	6/8/2020	0					Well EW 97
89	6/2/2020	1100 ppm	6/8/2020	86					Well 75
86	6/2/2020	1150 ppm	6/8/2020	59					Well 119
53	6/2/2020	2200 ppm	6/8/2020	44					Well 121

**Table A.4**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Areas of Concern Greater than 200 ppmv**

**2020 QUARTER: 2**

**INITIAL MONITORING PERFORMED BY: RES/WM**

**FOLLOW-UP MONITORING PERFORMED BY: NA**

**LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility**

Initial Monitoring Event			Re-mon Event		Comments
Exceedance	Monitoring	Field	Monitoring	Reading	
Grid ID No.	Date	Reading	Date	ppm	
None					





# Orange Flag Landfill Surface Emissions Monitoring Exceedances and Monitoring Log

Site: KIRBY

Quarter / Year:			2ND 2020		Page	of	Pages
Technician:			LESHWADRE				
Instrument:			TVA 100D				
Calibration Standard:			500 ppm				
Initial Monitoring Event							
Flag Number	Grid Number	Field Reading (ppm)	Date		First Re-Monitoring Event - 10 Days	Second Re-Monitoring Event - 10 Days	30-Day Follow-up Monitoring
			Monitored	Excd.			
0-21	103	1,200	6-2-20				
0-22	143	1177	↓				
0-23	116	2403	↓				
0-24	101	994	↓				
0-1	136	800					Well EW78
0-11	89	1100					Well EW71
0-12	86	1150					Well EW66
0-13	53	2200					Well EW48
0-							Well EW97
0-							Well 17S
0-							Well 119
0-							Well 112J
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							
0-							

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADZ AMANDA PERCOTA  
AAARON ALBRITOE  
NICK BENKIS Cal. Gas Exp. Date: 9-21-20

Date: 6-2-20 Instrument Used: FVA 1000 Grid Spacing: 25

Temperature: 81 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
74	LW	1145	1200	190	2	3	12	
75	AM	1145	1200	27	2	3	12	
83	NB	1145	1200	54	2	3	12	
89	OP	1145	1200	1100	2	3	12	well 75
90	LW	1200	1215	41	2	3	14	
97	AM	1200	1215	89	2	3	14	
104	NB	1200	1215	37	2	3	14	
105	OP	1200	1215	22	2	3	14	
112	LW	1215	1230	59	2	3	14	
119	AM	1215	1230	37	2	3	14	
120	NB	1215	1230	25	2	3	14	
127	OP	1215	1230	31	2	3	14	
128	LW	1230	1245	19	2	3	13	
126	AM	1230	1245	26	2	3	13	
134	NB	1230	1245	41	2	3	13	
136	OP	1230	1245	860	2	3	13	well 97
138	LW	1245	1300	26	2	3	13	
139	AM	1245	1300	34	2	3	13	
141	NB	1245	1300	18	2	3	13	
142	OP	1245	1300	21	2	3	13	
143	LW	1300	1315	1177	2	3	13	well 71
144	AM	1300	1315	26	2	3	13	
145	NB	1300	1315	32	2	3	13	
146	OP	1300	1315	18	2	3	13	
147	LW	1315	1330	15	2	3	13	
148	AM	1315	1330	26	2	3	13	
149	NB	1315	1330	21	2	3	13	
150	OP	1315	1330	17	2	3	13	
140	LW	1330	1345	15	2	3	12	
137	AM	1330	1345	22	2	3	12	

Attach Calibration Sheet  
 Attach site map showing grid ID

## KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEISH WADE OMER PEROLA  
ARON MURPHY  
NICK BENKS Cal. Gas Exp. Date: 9-21-20

Date: 6-2-20 Instrument Used: LVA1000 Grid Spacing: 25'

Temperature: 82 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
132	NB	1330	1345	20	2	3	12	
135	OP	1330	1345	36	2	3	12	
133	LW	1345	1400	19	2	3	12	
124	AM	1345	1400	14	2	3	12	
125	NB	1345	1400	72	2	3	12	
116	OP	1345	1400	2,403	2	3	12	WELL EW 66
117	LW	1400	1415	58	2	3	12	
118	AM	1400	1415	96	2	3	12	
109	NB	1400	1415	45	2	3	12	
110	OP	1400	1415	71	2	3	12	
111	LW	1415	1430	40	2	3	14	
101	AM	1415	1430	994	2	3	14	WELL EW 48
102	NB	1415	1430	67	2	3	14	
103	OP	1415	1430	1,200	2	3	14	WELL EW 78
94	LW	1430	1445	38	2	3	13	
95	AM	1430	1445	87	2	3	13	
96	NB	1430	1445	51	2	3	13	
86	OP	1430	1445	1,150	2	3	13	WELL 119
87	LW	1445	1500	136	2	3	13	
79	AM	1445	1500	14	2	3	13	
80	NB	1445	1500	71	2	3	13	
81	OP	1445	1500	94	2	3	13	
70	LW	1500	1515	18	2	3	12	
71	AM	1500	1515	59	2	3	12	
72	NB	1500	1515	77	2	3	12	
64	OP	1500	1515	14	2	3	12	
65	LW	1515	1530	45	2	3	12	
66	AM	1515	1530	91	2	3	12	
57	NB	1515	1530	16	2	3	12	
58	OP	1515	1530	63	2	3	12	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE DAVID PARKER  
AARON ALBRECHT \_\_\_\_\_  
NIEL BOWLES \_\_\_\_\_ Cal. Gas Exp. Date: 9-21-20

Date: 6-2-20 Instrument Used: AVA1000 Grid Spacing: 25'

Temperature: 82 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
59	LW	1530	1545	137	2	3	W	
52	AM	1530	1545	69	2	3	W	
53	NB	1530	1545	2,200	2	3	W	WEL/121
47	OP	1530	1545	117	2	3	W	
48	LW	1545	1600	150	2	3	W	
41	AM	1545	1600	72	2	3	W	
42	NB	1545	1600	106	2	3	W	
37	OP	1545	1600	124	2	3	W	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Lough WOOD \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 6-2-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
43								Active-trash ↓
44								
49								
54								
55								
60								
61								
67								
68								
73								
82								
88								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Loughner \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 6-2-70 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
38								
39								
40								
45								
46								
50								
51								
56								
62								
63								
69								
76								

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: L. R. SWARTZ \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

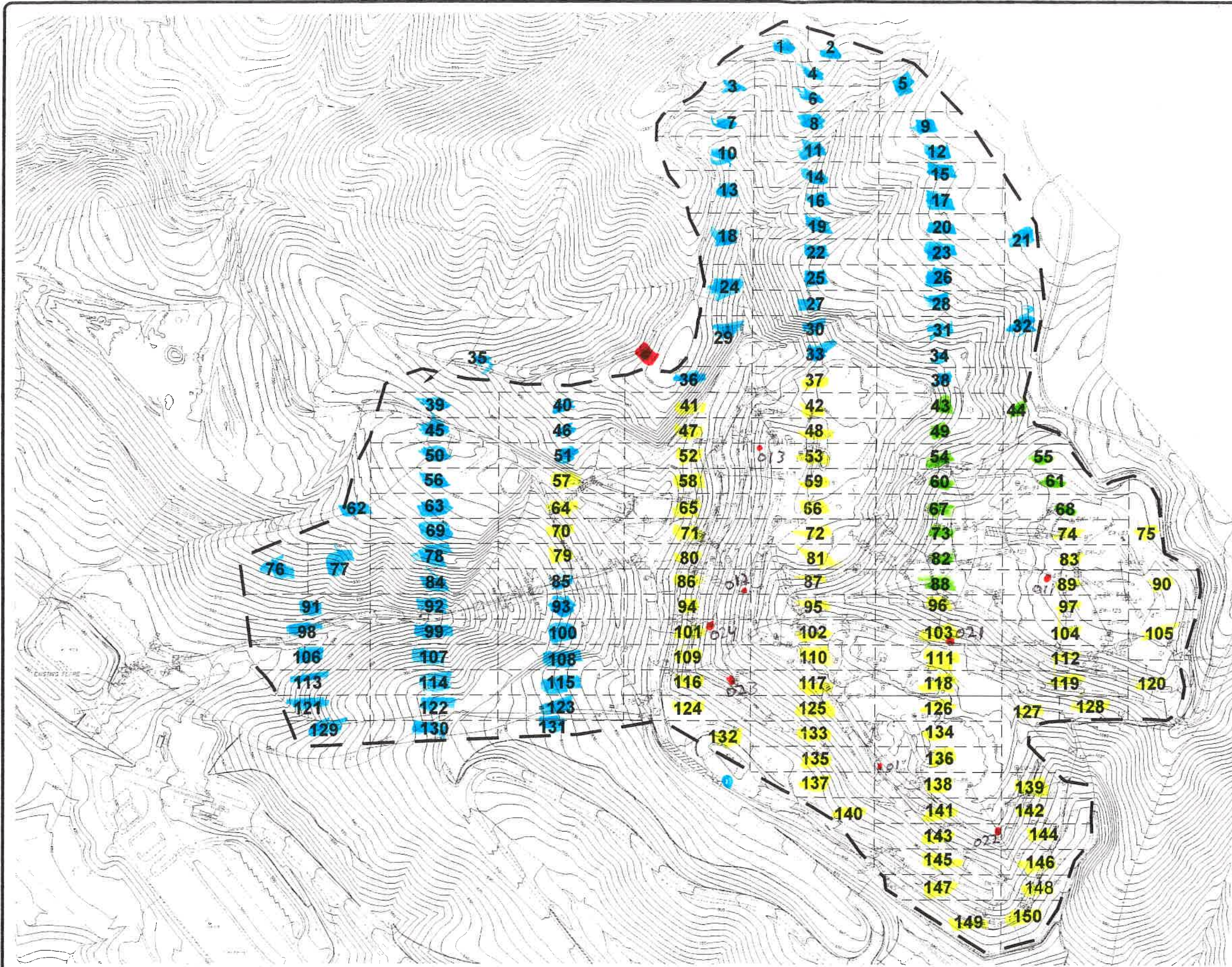
Cal. Gas Exp. Date: \_\_\_\_\_

Date: 6-2-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

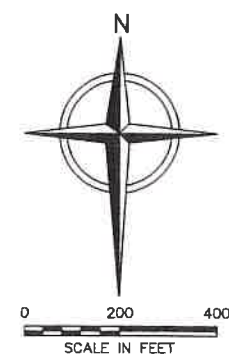
Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
77								↓
78								
84								
85								
91								
92								
93								
98								
99								
100								
106								
107								
108								
113								
114								
115								
121								
122								
123								
129								
130								
131								

Attach Calibration Sheet  
 Attach site map showing grid ID



- LEGEND**
- EXISTING 10' CONTOUR
  - EXISTING ABOVEGROUND PIPING
  - EXISTING BELOWGROUND PIPING
  - EXISTING HORIZONTAL COLLECTOR
  - EXISTING LFG EXTRACTION WELL
  - EXISTING LOCAL CONTROL WELL
  - EXISTING WELL WITH BECS INSTALLED
  - EXISTING REMOTE WELLHEAD
  - EXISTING HORIZONTAL COLLECTOR WELLHEAD
  - EXISTING CONTROL VALVE
  - EXISTING BLIND FLANGE
  - EXISTING FLANGE CONNECTION
  - EXISTING REDUCER FITTING
  - EXISTING RISER
  - EXISTING CAP ON EXISTING PIPE



**NOTES:**  
 1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.  
 2. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

*INS KENDAS NOTES 6-2-20*

- CRIS MONITORED
- ACTIVE - TRANS
- NO WASTE IN PLACE
- 500+PPM EXCEEDANCE
- DOWN WIND
- UPWIND

**AS-BUILT**



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	2/4/19					



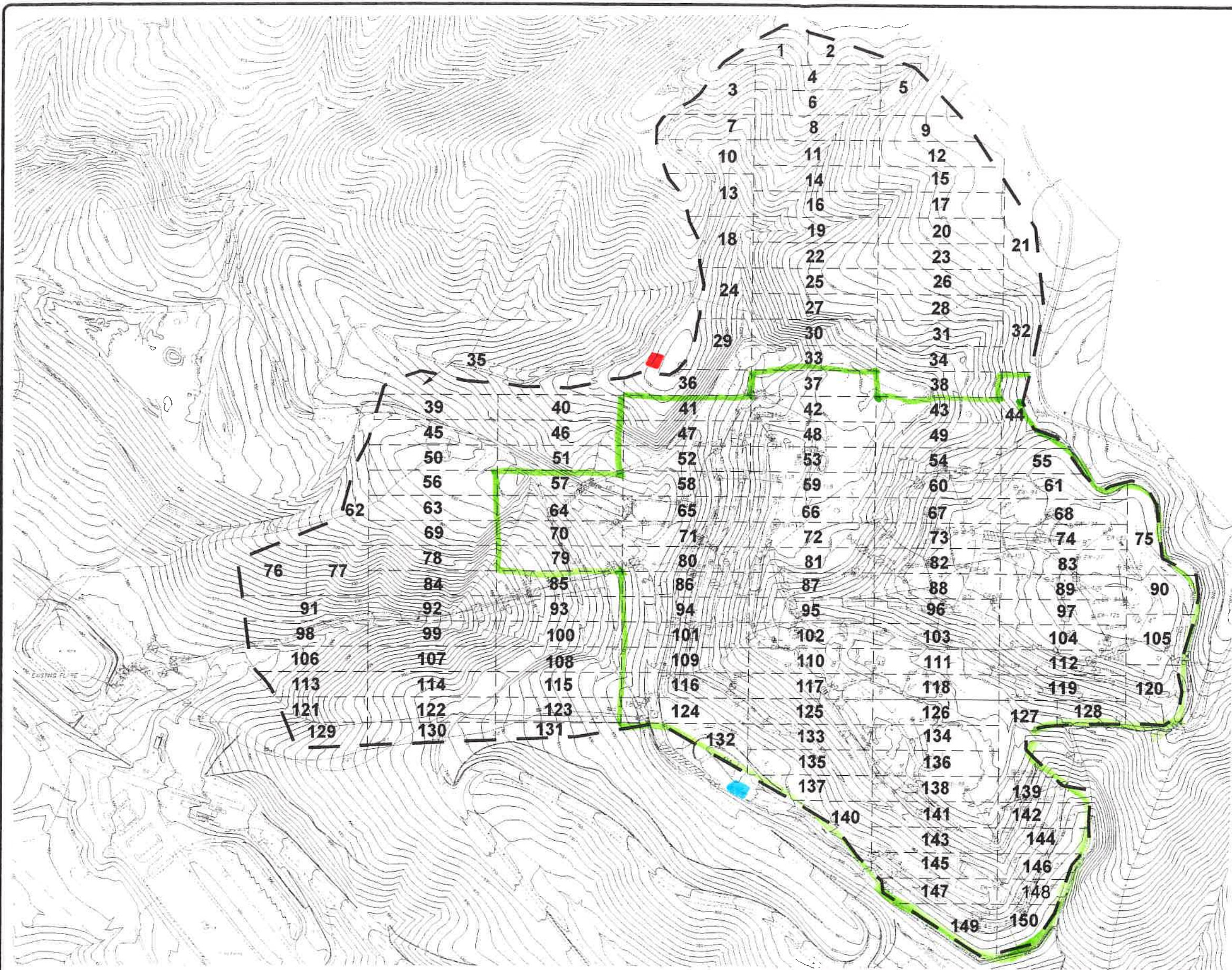
KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 MORGAN HILL, CALIFORNIA

2018 GCCS IMPROVEMENTS  
**AS-BUILT SITE PLAN**

SHEET NO.  
**1**  
 PROJECT NO.

PROJECT NUMBER: C:\PROJECTS\KIRBY\_CANDON\KIRBY\_CANDON\_2018\_SSDI\_CAD\KIRBY\_CANDON\_2018\_SSDI\_CAD.dwg  
 USER: RUSSELL WILLIAMS  
 PLOT DATE: 04/04/2019 11:17am





LEGEND	
	EXISTING 10' CONTOUR
	EXISTING ABOVEGROUND PIPING
	EXISTING BELOWGROUND PIPING
	EXISTING HORIZONTAL COLLECTOR
	EXISTING LFG EXTRACTION WELL
	EXISTING LOCAL CONTROL WELL
	EXISTING WELL WITH BECS INSTALLED
	EXISTING REMOTE WELLHEAD
	EXISTING HORIZONTAL COLLECTOR WELLHEAD
	EXISTING CONTROL VALVE
	EXISTING BLIND FLANGE
	EXISTING FLANGE CONNECTION
	EXISTING REDUCER FITTING
	EXISTING ROAD CROSSING
	EXISTING RISER
	EXISTING CAP ON EXISTING PIPE



NOTES:  
 1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.  
 2. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

2ND QUARTER 2020  
 NSPS

UPWIND  
 DOWNWIND

1" = 100' 0" (1/8" = 10' 0")  
 PROJECT: KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 SHEET: 1 OF 1  
 DATE: 2/4/19  
 DRAWN BY: RAW  
 CHECKED BY: AMN  
 APPROVED BY: PJS



REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY
1	2/4/19			RAW	AMN	PJS



KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 MORGAN HILL, CALIFORNIA  
 2018 GCCS IMPROVEMENTS  
 AS-BUILT SITE PLAN

AS-BUILT

SHEET NO.  
**1**  
 PROJECT NO.

**Attachment B**

Integrated Surface Emission Monitoring Event Records

## KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leighann Amelia Penella  
Aaron McBRIDE  
NICK BENKS Cal. Gas Exp. Date: 9-21-20

Date: 6-3-20 Instrument Used: VUA1000 Grid Spacing: 25'

Temperature: 63 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
74	LW	0545	0610	9.71	2	3	13	
75	Am	0545	0610	6.56	2	3	13	
83	NB	0545	0610	11.59	2	3	13	
89	OP	0545	0610	7.24	2	3	13	
90	LW	0610	0635	6.27	2	3	13	
97	Am	0610	0635	9.03	2	3	13	
104	NB	0610	0635	7.41	2	3	13	
105	OP	0610	0635	6.08	2	3	13	
112	LW	0635	0700	7.14	2	3	13	
119	Am	0635	0700	5.92	2	3	13	
120	NB	0635	0700	5.74	2	3	13	
127	OP	0635	0700	5.15	2	3	13	
128	LW	0700	0725	6.11	1	2	11	
126	Am	0700	0725	6.50	1	2	11	
134	NB	0700	0725	5.38	1	2	11	
136	OP	0700	0725	5.04	1	2	11	
138	LW	0725	0750	4.77	1	2	12	
139	Am	0725	0750	3.92	1	2	12	
141	NB	0725	0750	4.15	1	2	12	
142	OP	0725	0750	5.06	1	2	12	
143	LW	0750	0815	4.88	1	2	11	
144	Am	0750	0815	5.15	1	2	13	
145	NB	0750	0815	4.40	1	2	13	
146	OP	0750	0815	5.10	1	2	13	
147	LW	0815	0840	4.75	1	2	14	
148	Am	0815	0840	4.93	1	2	14	
149	NB	0815	0840	5.29	1	2	14	
150	OP	0815	0840	5.13	1	2	14	
140	LW	0840	0905	4.70	1	2	14	
137	Am	0840	0905	4.39	1	2	14	

Attach Calibration Sheet  
 Attach site map showing grid ID

## KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Caishnao Omaha  
AAaron McBRIDE  
NICK BONKES Cal. Gas Exp. Date: 9-21-20

Date: 6-3-20 Instrument Used: VUA 1000 Grid Spacing: 25'

Temperature: 71 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
132	NB	0840	0905	4.68	1	2	14	
135	OP	0840	0905	5.12	1	2	14	
133	LW	0905	0930	6.19	1	2	7	
124	AM	0905	0930	5.30	1	2	7	
125	NB	0905	0930	5.13	1	2	7	
116	OP	0905	0930	6.07	1	2	7	
117	LW	0930	0955	5.91	1	2	7	
118	AM	0930	0955	6.77	1	2	7	
109	NB	0930	0955	6.45	1	2	7	
110	OP	0930	0955	10.20	1	2	7	
111	LW	0955	1020	8.67	1	2	7	
101	AM	0955	1020	6.72	1	2	7	
102	NB	0955	1020	9.45	1	2	7	
103	OP	0955	1020	11.13	1	2	7	
94	LW	1020	1045	6.20	1	2	7	
95	AM	1020	1045	8.13	1	2	7	
96	NB	1020	1045	13.21	1	2	7	
86	OP	1020	1045	9.75	1	2	7	
87	LW	1045	1110	11.11	1	2	7	
79	AM	1045	1110	4.81	1	2	7	
80	NB	1045	1110	8.65	1	2	7	
81	OP	1045	1110	13.24	1	2	7	
70	LW	1110	1135	5.50	1	2	7	
71	AM	1110	1135	9.68	1	2	7	
72	NB	1110	1135	12.45	1	2	7	
64	OP	1110	1135	5.28	1	2	7	
65	LW	1135	1200	10.54	1	2	7	
66	AM	1135	1200	14.97	1	2	7	
57	NB	1135	1200	4.71	1	2	7	
58	OP	1135	1200	8.45	1	2	7	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LOIS SWADE DMC PUNSLTA  
ANON MCBRIDE  
NICK BEARDS Cal. Gas Exp. Date: 9-21-20

Date: 6-3-20 Instrument Used: LVA1000 Grid Spacing: 25'

Temperature: 78 Precip: 0 Upwind BG: 2.0 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
59	LW	1200	1225	15.94	1	2	7	
52	AM	1200	1225	11.71	1	2	7	
53	NB	1200	1225	13.80	1	2	7	
47	OP	1200	1225	15.66	1	2	7	
48	LW	1225	1250	13.95	1	2	7	
41	AM	1225	1250	11.79	1	2	7	
42	NB	1225	1250	20.64	1	2	7	
37	OP	1225	1250	14.22	1	2	7	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEISHMAN \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 6-3-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
43								Active trash
44								
49								
54								
55								
60								
61								
67								
68								
73								
82								
88								
1								no waste imp
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LOIS WADSWORTH \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 6-3-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
38								
39								
40								
45								
46								
50								
51								
56								
62								
63								
69								
76								

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEISHA AOK \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

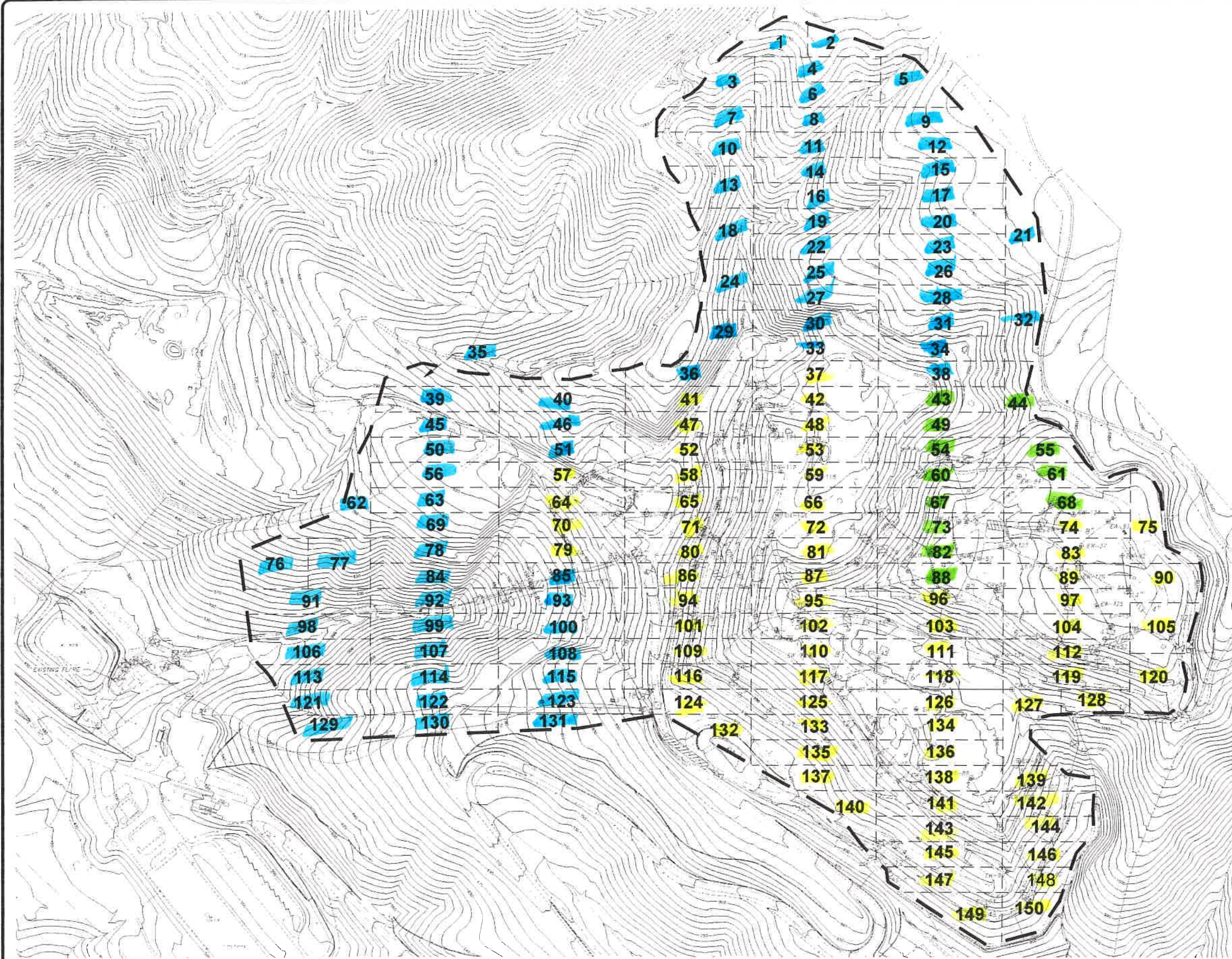
Date: 6-3-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
77								↓
78								
84								
85								
91								
92								
93								
98								
99								
100								
106								
107								
108								
113								
114								
115								
121								
122								
123								
129								
130								
130								

Attach Calibration Sheet  
 Attach site map showing grid ID





**LEGEND**

- EXISTING 10' CONTOUR
- EXISTING ABOVEGROUND PIPING
- EXISTING BELOWGROUND PIPING
- EXISTING HORIZONTAL COLLECTOR
- EXISTING LFG EXTRACTION WELL
- EXISTING LOCAL CONTROL WELL
- EXISTING WELL WITH BECS INSTALLED
- EXISTING REMOTE WELLHEAD
- EXISTING HORIZONTAL COLLECTOR WELLHEAD
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER FITTING
- EXISTING ROAD CROSSING
- EXISTING RISER
- EXISTING CAP ON EXISTING PIPE



NOTES:  
 1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.  
 2. 2017 GCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

*INTEGRATED 6-3-20*

- GRABS MONITORED
- ACTIVE GRABS
- NO WASTE IN PLACE

File: X:\PROJECTS\Water Conservation\2018 GCS AS-BUILT.dwg, Layout: S01, User: RUSSELL WILLIAMS, Fri 04/19/2018 11:17 AM  
 1" = 100'



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE: 2/4/19  
 DRAWN BY: RAW  
 DESIGNED BY: DK  
 CHECKED BY: AMN  
 APPROVED BY: PJS



**AS-BUILT**

KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 MORGAN HILL, CALIFORNIA

**2018 GCS IMPROVEMENTS  
 AS-BUILT SITE PLAN**

SHEET NO. **1**  
 PROJECT NO.

**Attachment C**

Component Leak Monitoring Event Records

**Table C.1**  
**AB-32 Component Leak Monitoring**  
**Summary of Component Leaks Greater than 500 ppmv**

**2020 QUARTER:** 2  
**INITIAL MONITORING PERFORMED BY:** RES/WM  
**FOLLOW-UP MONITORING PERFORMED BY:** WM  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station	06/02/20	ND	Leigh wade	-	-	-	-	-

ND= No Exceedances

**Table C.2**  
**BAAQMD Component Leak Monitoring**  
**Summary of Component Leaks Greater than 1,000 ppmv**

2020 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES/WM

FOLLOW-UP MONITORING PERFORMED BY: WM

LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station	06/02/20	ND	Leigh wade	-	-	-	-	-

ND= No Exceedances

**LANDFILL NAME:** *K.R.B4*  
**QUARTERLY LFG COMPONENT LEAK MONITORING**

INSTRUMENT: FID  
 MAKE: Thermo Environt  
 MODEL: TVA 1000  
 SIN: 1036346773

DATE OF SAMPLING: 6-2-20  
 TECHNICIAN: Lewis Winer

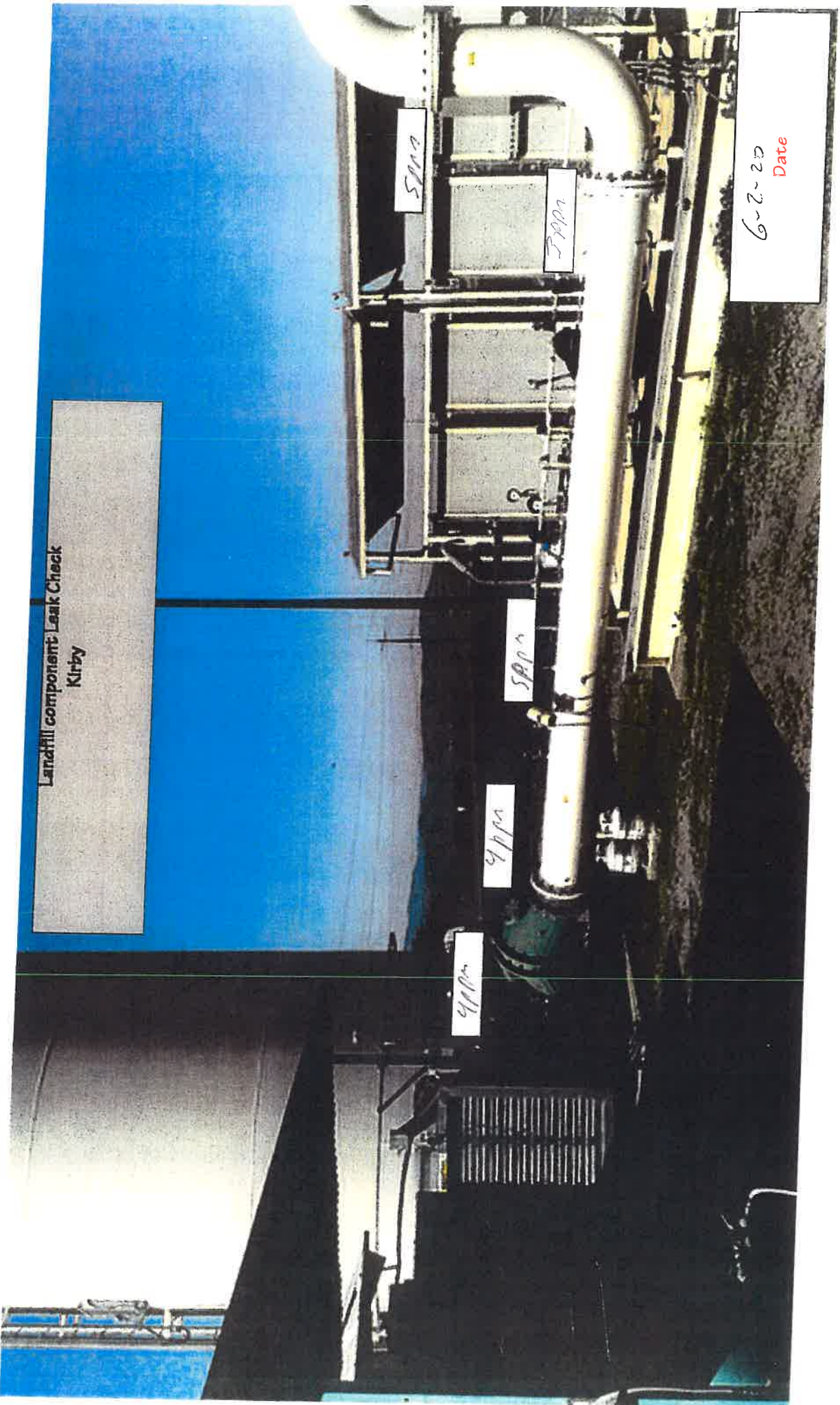
LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
<i>ADDITIONAL</i>							

In the event that an exceedance is detected, please initiate corrective action and re-monitor the exceedance location within 7 days of the initial exceedance.

NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).

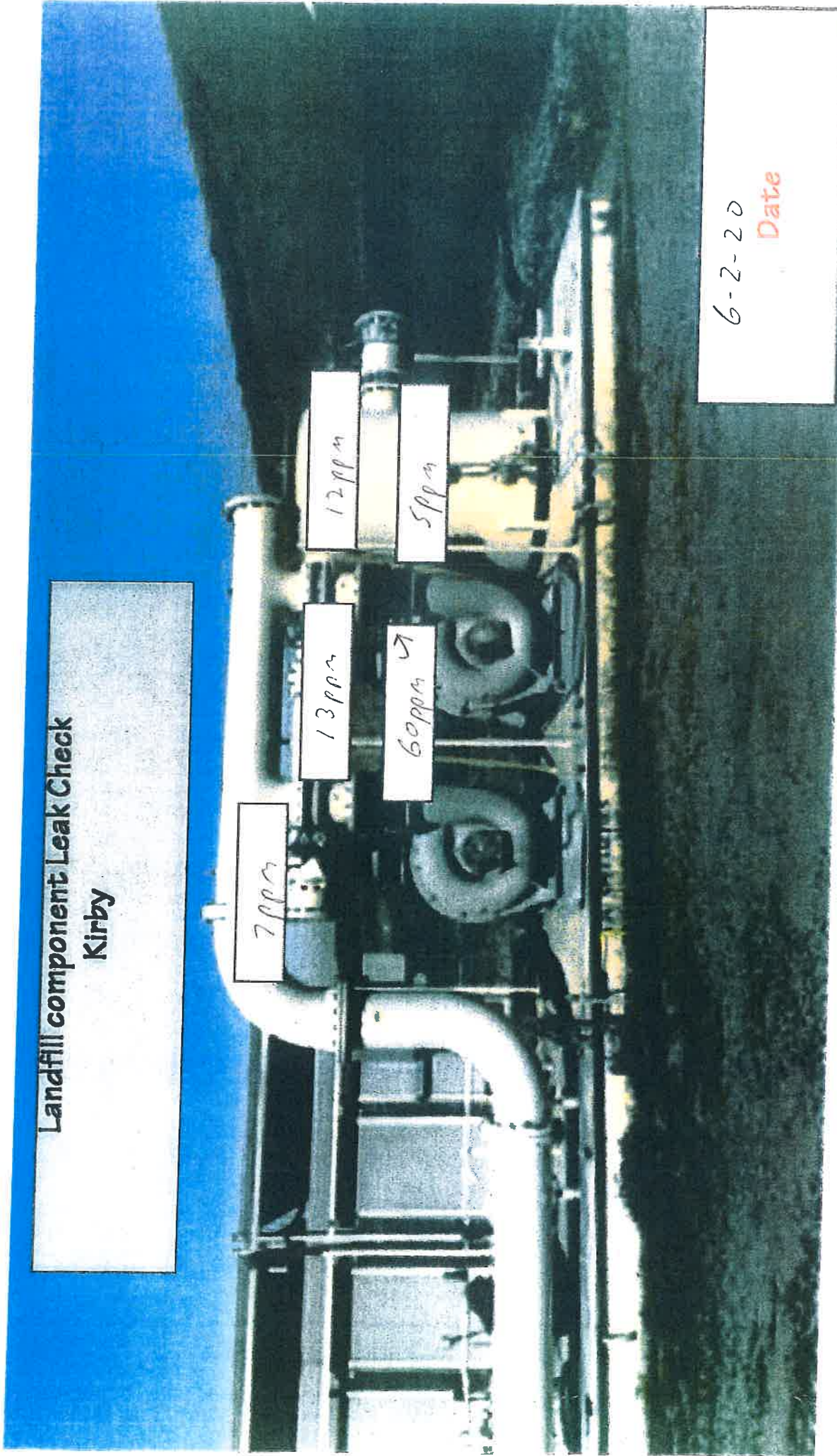
NOTE: Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

Landfill component: Leak Check  
Kirby



6-2-20  
Date

Landfill component Leak Check  
Kirby



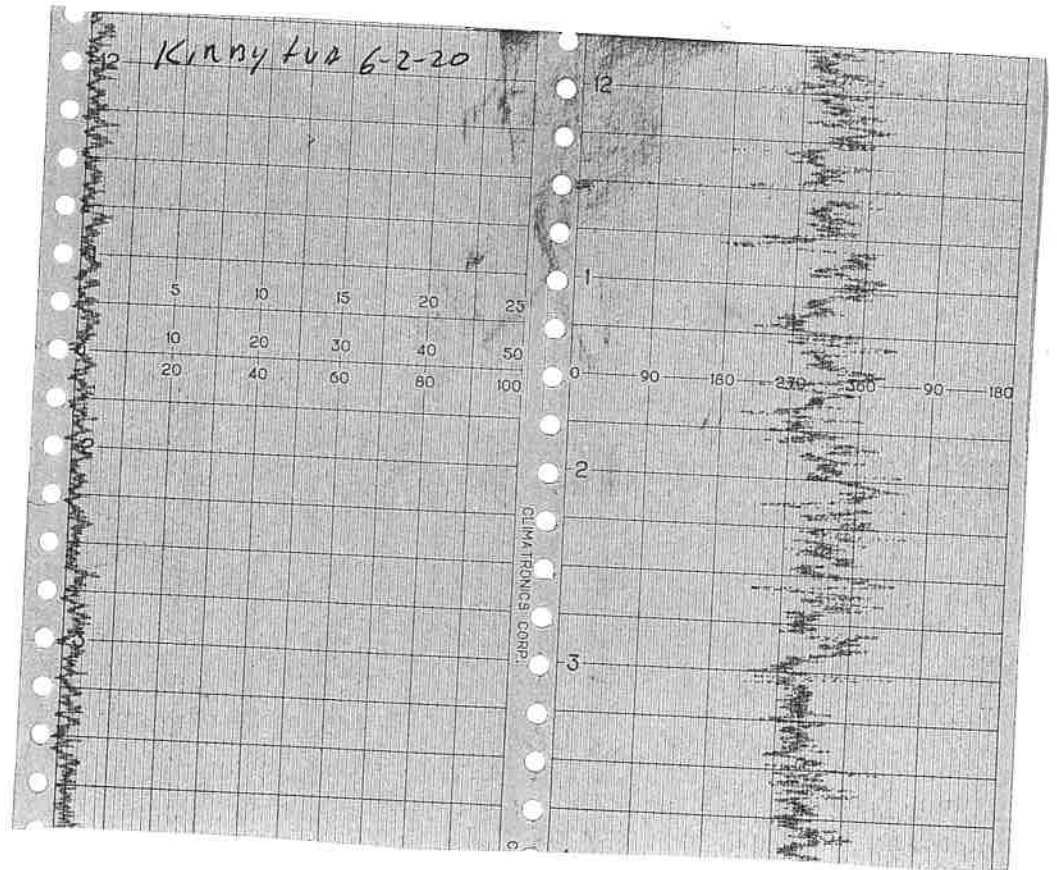
6-2-20  
Date

**Attachment D**

Weather Station Data



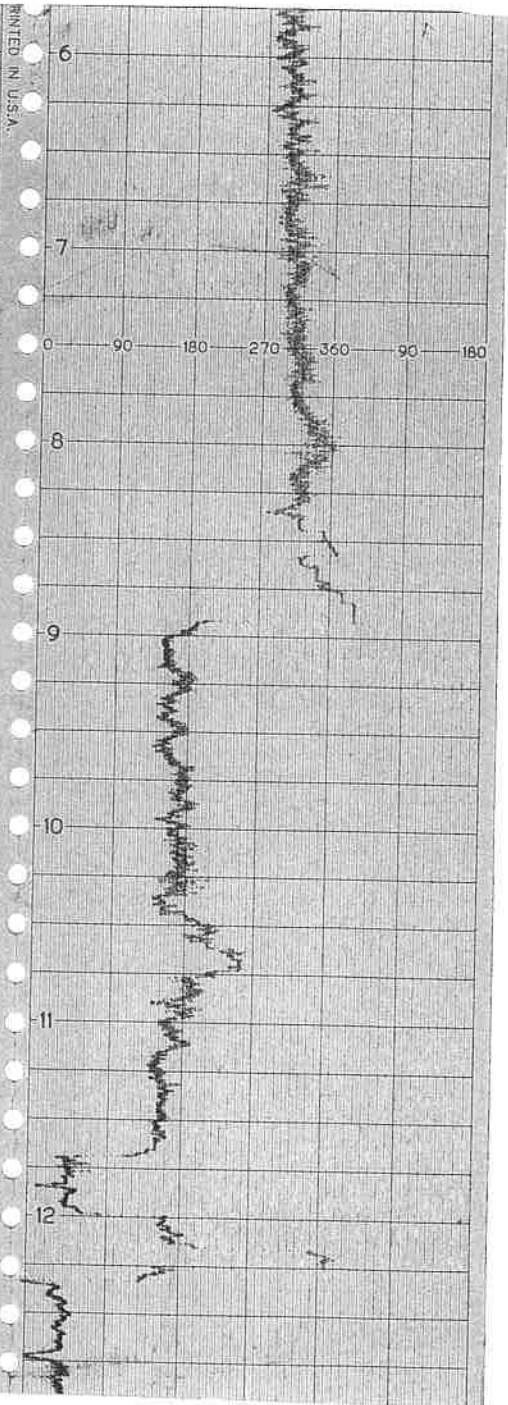
# WIND SPEED & DIRECTION CHART ROLL



# WIND SPEED & DIRECTION CHART ROLL

KIRBY 155 6-3-20

5	10	15	20	25
10	20	30	40	50
20	40	60	80	100



16-POINT WIND DIRECTION INDEX

<u>NO</u>	<u>DIRECTION</u>	<u>DEGREES</u>		
		<u>FROM</u>	<u>CENTER</u>	<u>TO</u>
16	NORTH (N)	348.8	<u>360.0</u>	0.0
1	NORTH-NORTHEAST (NNE)	011.3	<u>022.5</u>	033.8
2	NORTHEAST (NE)	033.8	<u>045.0</u>	056.3
3	EAST-NORTHEAST (ENE)	056.3	<u>067.5</u>	078.8
4	EAST (E)	078.8	<u>090.0</u>	101.3
5	EAST-SOUTHEAST (ESE)	101.3	<u>112.5</u>	123.8
6	SOUTHEAST (SE)	123.8	<u>135.0</u>	146.3
7	SOUTH-SOUTHEAST (SSE)	146.3	<u>157.5</u>	168.8
8	SOUTH (S)	168.8	<u>180.0</u>	191.3
9	SOUTH-SOUTHWEST (SSW)	191.3	<u>202.5</u>	213.8
10	SOUTHWEST (SW)	213.8	<u>225.0</u>	236.3
11	WEST-SOUTHWEST (WSW)	236.3	<u>247.5</u>	258.8
12	WEST (W)	258.8	<u>270.0</u>	281.3
13	WEST-NORTHWEST (WNW)	281.3	<u>292.5</u>	303.8
14	NORTHWEST (NW)	303.8	<u>315.0</u>	326.3
15	NORTH-NORTHWEST (NNW)	326.3	<u>337.5</u>	348.8

**Attachment E**  
Calibration Records

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: Herao  
 MODEL: LA1000 EQUIPMENT #: 10 SERIAL #: 1036346773  
 MONITORING DATE: 6-2-20 TIME: 1140

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>495</u> ppm	<u>445</u> ppm	<u>7</u>
#2	<u>502</u> ppm	<u>452</u> ppm	<u>7</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.26</u> ppm	<u>495</u> ppm	<u>5</u>
#2	<u>0.18</u> ppm	<u>502</u> ppm	<u>2</u>
#3	<u>0.09</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.46</u> #DIV/0! Must be less than 10%

Performed By: LOISHWAD Date/Time: 6-2-20-1140

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HANNO  
 MODEL: VIA 1000 EQUIPMENT #: 12 SERIAL #: 1036346774  
 MONITORING DATE: 6-2-20 TIME: 1140

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>503</u> ppm	<u>453</u> ppm	<u>6</u>
#2	<u>500</u> ppm	<u>450</u> ppm	<u>6</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.21</u> ppm	<u>503</u> ppm	<u>3</u>
#2	<u>0.14</u> ppm	<u>500</u> ppm	<u>0</u>
#3	<u>0.10</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$			<u>0.28</u> #DIV/0! Must be less than 10%

Performed By: AARON MIBANDK Date/Time: 6-2-20-1140

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: KUBOTA  
 MODEL: FA100 EQUIPMENT #: 13 SERIAL #: 1102746775  
 MONITORING DATE: 6-2-20 TIME: 1140

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>491</u> ppm	<u>441</u> ppm	<u>7</u>
#2	<u>502</u> ppm	<u>452</u> ppm	<u>7</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.31</u> ppm	<u>491</u> ppm	<u>9</u>
#2	<u>0.16</u> ppm	<u>502</u> ppm	<u>2</u>
#3	<u>0.14</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$			<u>0.73</u> #DIV/0! Must be less than 10%

Performed By: OMENPUNOTTA Date/Time: 6-2-20-1140

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HANNO  
 MODEL: VA 1000 EQUIPMENT #: 15 SERIAL #: 1036346772  
 MONITORING DATE: 6-2-20 TIME: 1140

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) 2
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>489</u> ppm	<u>439</u> ppm	<u>5</u>
#2	<u>497</u> ppm	<u>447</u> ppm	<u>5</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.14</u> ppm	<u>489</u> ppm	<u>11</u>
#2	<u>0.11</u> ppm	<u>497</u> ppm	<u>3</u>
#3	<u>0.08</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$			<u>0.93</u> #DIV/0! Must be less than 10%

Performed By: NICOLE BEARDS Date/Time: 6-2-20 -1140



**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KINSEY INSTRUMENT MAKE: LHUNMO  
 MODEL: LUX 1000 EQUIPMENT #: 10 SERIAL #: 1036346773  
 MONITORING DATE: 6-3-20 TIME: 0540

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.21</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.16</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.11</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>.26</u> #DIV/0! Must be less than 10%

Performed By: LAISHA WAOZ Date/Time: 6-3-20-0540

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: IC, 1234 INSTRUMENT MAKE: HEMCO  
 MODEL: LVA 1000 EQUIPMENT #: 12 SERIAL #: 1036246741  
 MONITORING DATE: 6-3-20 TIME: 0540

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>27</u> ppm	<u>20.7</u> ppm	<u>6</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>6</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.19</u> ppm	<u>2.3</u> ppm	<u>2</u>
#2	<u>0.13</u> ppm	<u>2.4</u> ppm	<u>1</u>
#3	<u>0.09</u> ppm	<u>2.5</u> ppm	<u>0</u>
Calculate Precision $\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{25} \times \frac{100}{1}$			<u>.40</u> #DIV/0! Must be less than 10%

Performed By ARON M BRIDGES Date/Time: 6-3-20-0540

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KINDY INSTRUMENT MAKE: HORAD  
 MODEL: LV41000 EQUIPMENT #: 13 SERIAL #: 1102746775  
 MONITORING DATE: 6-3-20 TIME: 0540

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>2.6</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>7</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.31</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.20</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.16</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision $\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{25} \times \frac{100}{1}$			<u>1.3</u> #DIV/0! Must be less than 10%

Performed By NICK BANKS Date/Time: 6-3-20-0540

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HERAO  
 MODEL: LVA1000 EQUIPMENT #: 15 SERIAL #: 1036346772  
 MONITORING DATE: 6-3-20 TIME: 0540

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>2.0</u> ppm	<u>2.4</u> ppm	<u>2.2</u> ppm

Background Value = 2.2 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>23</u> ppm	<u>20.7</u> ppm	<u>6</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.34</u> ppm	<u>23</u> ppm	<u>2</u>
#2	<u>0.22</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.12</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$			<u>2.6</u> #DIV/0! Must be less than 10%

Performed By OSCAR PARRALTA Date/Time: 6-3-20 0540

**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: \_\_\_\_\_ *M M*

Date: 6-7-20 Time: 0800

Model # TUA 1000 B

Serial # #10 1036346773

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<u>Pass</u> / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.3</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<u>Pass</u> / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<u>Pass</u> / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<u>Pass</u> / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>4-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<u>Pass</u> / Fail	Time required to attain 90% of Cal Gas ppm		
		1. <u>6</u>		
		2. <u>5</u>		
		3. <u>7</u>		
		Average _____		
		Equal to or less than 30 seconds?	<input checked="" type="checkbox"/>	N
		Instrument calibrated to <u>C4H4</u> gas.		

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: MM MM

Date: 6-7-20 Time: 0815

Model # TVA 1000 B

Serial # #11 10363 46774

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="radio"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.3</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="radio"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="radio"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="radio"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>4-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="radio"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>8</u>	
		2.	<u>6</u>	
		3.	<u>6</u>	
		Average		
		Equal to or less than 30 seconds?	<input checked="" type="radio"/> Y	N
		Instrument calibrated to	<u>C6H6</u>	gas.

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## SURFACE EMISSION MONITORING INSTRUMENT CALIBRATION LOG

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator:                                  *JM CM*

Date: 6-7-20

Time: 0830

Model # TVA 1000 B

Serial # #12 1036246741

INSTRUMENT INTEGRITY CHECKLIST	INSTRUMENT CALIBRATION										
<p>Battery test <span style="margin-left: 20px;"><u>Pass</u> / Fail</span></p> <p>Reading following ignition <span style="margin-left: 20px;"><u>2.2</u> ppm</span></p> <p>Leak test <span style="margin-left: 20px;"><u>Pass</u> / Fail / NA</span></p> <p>Clean system check (check valve chatter) <span style="margin-left: 20px;"><u>Pass</u> / Fail / NA</span></p> <p>H<sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12) <span style="margin-left: 20px;"><u>Pass</u> / Fail / NA</span></p> <p>Date of last factory calibration <span style="margin-left: 20px;"><u>4-3-20</u></span></p> <p>Factory calibration record w/instrument within 3 months <span style="margin-left: 20px;"><u>Pass</u> / Fail</span></p>	<p style="text-align: center;"><b>CALIBRATION CHECK</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Calibration Gas (ppm)</td> <td style="width: 33%;">Actual (ppm)</td> <td style="width: 33%;">% Accuracy</td> </tr> <tr> <td style="text-align: center;"><u>500</u></td> <td style="text-align: center;"><u>500</u></td> <td style="text-align: center;"><u>100%</u></td> </tr> </table> <p style="text-align: center;"><b>RESPONSE TIME</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Calibration Gas, ppm</td> <td style="text-align: right;"><u>500</u></td> </tr> <tr> <td>90% of Calibration Gas, ppm</td> <td style="text-align: right;"><u>450</u></td> </tr> </table> <p>Time required to attain 90% of Cal Gas ppm</p> <ol style="list-style-type: none"> <li>1. <u>7</u></li> <li>2. <u>7</u></li> <li>3. <u>6</u></li> </ol> <p>Average _____</p> <p>Equal to or less than 30 seconds? <input checked="" type="checkbox"/> <span style="margin-left: 20px;">N</span></p> <p>Instrument calibrated to <u>CH<sub>4</sub></u> gas.</p>	Calibration Gas (ppm)	Actual (ppm)	% Accuracy	<u>500</u>	<u>500</u>	<u>100%</u>	Calibration Gas, ppm	<u>500</u>	90% of Calibration Gas, ppm	<u>450</u>
Calibration Gas (ppm)	Actual (ppm)	% Accuracy									
<u>500</u>	<u>500</u>	<u>100%</u>									
Calibration Gas, ppm	<u>500</u>										
90% of Calibration Gas, ppm	<u>450</u>										

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: JM

Date: 6-7-20 Time: 0845

Model # FMA 1000 B

Serial # #131102746775

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="radio"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>1.9</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="radio"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="radio"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="radio"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>4-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="radio"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>6</u>	
		2.	<u>6</u>	
		3.	<u>8</u>	
		Average	_____	
		Equal to or less than 30 seconds?	<input checked="" type="radio"/> N	
		Instrument calibrated to	<u>CO<sub>2</sub></u> gas.	

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: JM

Date: 6-7-20

Time: 0915

Model # TUA 1000B

Serial # #151036346772

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="checkbox"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>1.8</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="checkbox"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="checkbox"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="checkbox"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>4-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="checkbox"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>6</u>	
		2.	<u>6</u>	
		3.	<u>7</u>	
		Average		
		Equal to or less than 30 seconds?	<input checked="" type="checkbox"/>	N
		Instrument calibrated to	<u>CLG</u>	gas.

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# TVA1000B CALIBRATION VERIFICATION

Environmental Inc.

CUSTOMER: RES UNIT #10

SERIAL NUMBER: 1036346773

TECHNICIAN: M. Uy DATE: 4-3-20

## GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.59	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



**RES** TVA1000B CALIBRATION VERIFICATION  
**Environmental Inc.**

CUSTOMER: RES UNIT #11

SERIAL NUMBER: 1036346774

TECHNICIAN: MM DATE: 4-3-70

**GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)**

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.78	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



**RES** TVA1000B CALIBRATION VERIFICATION  
**Environmental Inc.**

CUSTOMER: RES UNIT #12

SERIAL NUMBER: 1036246741

TECHNICIAN: MM DATE: 4-3-20

**GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)**

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.76	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# TVA1000B CALIBRATION VERIFICATION

Environmental Inc.

CUSTOMER: RES UNIT #13

SERIAL NUMBER: 1102746775

TECHNICIAN: MM DATE: 4-3-20

## GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	99	+/- 25
500	500	501	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.41	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



TVA1000B CALIBRATION VERIFICATION

Environmental Inc.

CUSTOMER: RES UNIT #15

SERIAL NUMBER: 1036346772

TECHNICIAN: MM DATE: 4-3-20

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.69	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

---

## CERTIFICATE OF ANALYSIS

---

<u>Composition</u>	<u>Certification</u>	<u>Analytical Accuracy</u>
Air - Zero		
THC	< 2 PPM	
Oxygen	20.9%	± 2%
Nitrogen	Balance	

<b>Lot #</b>	<b>19-6779</b>
--------------	----------------

Mfg. Date: 4/3/2019  
Parent Cylinder ID Number: 001739, 02268

### Method of Preparation:

Gravimetric/Pressure Transfilled

### Method of Analysis:

This mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart  
Quality Assurance Manager  
800-552-5003  
Certificate Date: 4/3/2019

...supply & Service  
INC

Concentration (Mole%) Accuracy

- 20.9% Oxygen  
- Bal. Nitrogen

Exp Date  
6/26/2023

3.6ft<sup>3</sup> @ 70°F and 1,000 PSIG



103 L

1991 Kaiser Avenue, Irvine, CA 92614  
714-277-0353 or (800) 201-8150 Fax (949) 757-0363

CAS No.

CONTAINER  
Please read the  
cylinder pressure  
Do not handle  
Use a backflow  
slowly Check  
Date Sheet  
Dispose of  
DO NOT REUSE  
Federal  
contains



10-100  
20.9% Nitrogen  
(Zero)

103 L

COA







# INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

---

## CERTIFICATE OF ANALYSIS

---

### Composition

Methane

Air

### Certification

25 ppm

Balance

### Analytical Accuracy

± 5%

<b>Lot #</b>	<b>17-6074</b>
--------------	----------------

Mfg. Date: 10/16/2017

Parent Cylinder ID 17161

Number:

### **Method of Preparation:**

Gravimetric/Pressure Transfilled

### **Method of Analysis:**

The parent mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart

Quality Assurance Manager

800-552-5003

Certificate Date: 10/16/2017

MicroSupply & Service  
INC.

Concentration (Mole%) Accuracy  
- 25 ppm  
(CH<sub>4</sub>) - Balance  
+/- 5%

Methane



CONTAINS GAS  
Read label before use  
label at hand. Use  
Do not handle with  
protective gloves, or  
Use a back flow preventer  
slowly. Close valve after  
sunlight when not in  
use  
Dispose of contents  
DO NOT REMOVE TAGS  
Federal law prohibits  
5124). Federal law

Contents: 3.6ft<sup>3</sup> @ 70°F and 1,000 PSIG

Exp Date  
11/7/2023

Lot#: 17-6074

P/N:23-0025

103 L

701 Kaiser Avenue, Irvine, CA 92614  
757-0353 or (800) 201-8150 Fax (949) 757-0363

103-23-0025

Methane 25 ppm/  
Oxygen 20.9%/ Nitrogen

103 L

Lot #  
17-6074



DOT SP 11323 NRC 1100/1505M-1102  
TC-SU6405 NRC 76/104



# INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

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## CERTIFICATE OF ANALYSIS

---

Composition

Methane

Air

Certification

500 ppm

Balance

Analytical Accuracy

± 2%

<b>Lot #</b>	<b>19-6955</b>
--------------	----------------

Mfg. Date: 7/24/2019

Parent Cylinder ID 001763

Number:

**Method of Preparation:**

Gravimetric/Pressure Transfilled

**Method of Analysis:**

The parent mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart

Quality Assurance Manager

800-552-5003

Certificate Date: 7/24/2019

MicroSupply & Service INC.

Concentration (Mole%) Accuracy  
(CH<sub>4</sub>) - 500 ppm +/- 2%  
- Balance

Methane



CONTAINS GAS UNDER PRESSURE  
Read label before use. Follow label at hand. Use eye protection.  
Do not handle until all safety protective gloves, goggles, and clothing are removed.  
Use a back flow preventer when slowly closing valve after use. Use in sunlight when ambient temperature is above 50°F.  
Dispose of contents according to local, state, and federal regulations. Federal law prohibits disposal into sewer (49 CFR 191.103-5124). Federal law prohibits disposal into environment.

Exp Date  
11/7/2023

Pressure: 3.6 ft<sup>3</sup> @ 70°F and 1,000 PSIG

Lot#: 19-6955

P/N: 23-0500

103 L

103 Kaiser Avenue, Irvine, CA 92614  
Tel: (949) 23-0500 or (800) 201-8150 Fax (949) 757-0363

103-23-0500

Methane 500 ppm/  
Nitrogen 20.9%

103 L

Lot #  
19-6955



SP 11323 NRC 1100/1505M-1102  
TC-SU6495 NRC 76/104

CAUTION  
NO OPEN FLAMES

**EQUIPCO**

**SALES & SERVICE**

2100 MERIDIAN PARK BLVD  
Concord, CA 94520  
TO REORDER CALL 1 (888) 234-5678

**AIR, ULTRA ZERO**  
**THC <0.1 PPM**

Analytical Accuracy +/- 2%

103L @ 70F & 1000 PSIG  
Lot# TX17983  
P/N AIR-ZER-103L

EXP: 10/11/2022

**EQUIPCO**

**SALES & SERVICE**

2100 MERIDIAN PARK BLVD  
Concord, CA 94520  
TO REORDER CALL 1 (888) 234-5678

**METHANE 500ppm**  
**AIR BALANCE**

Analytical Accuracy +/- 2%

103L @ 70F & 1000 PSIG  
Lot# K024306  
P/N MET-500-103L

EXP: 6/19/2022



# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Date: 6-8-20

Time: 8:15 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.  
Stable Reading = 499 ppm
3. Adjust meter to read 500 ppm.

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 2 ppm (a)
2. Downwind Reading (highest in 30 seconds): 1 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{1.5} \text{ ppm}$$

Performed by: Markus Bernard

# CALIBRATION PRECISION TEST RECORD

Date: 3/23/2020

Expiration Date (3 months): 6/23/2020

Time: 10:00 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 2 ppm (c)

Meter Reading for Calibration Gas: 500 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 2 ppm (e)

Meter Reading for Calibration Gas: 500 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

0.004 % (must be < than 10%)

Performed by: M. Bernard



# RESPONSE TIME TEST RECORD

Date: 3/23/20

Expiration Date (3 months): 06/23/20

Time: 10:00 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 500 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 500 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 496 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{5} \text{ seconds (must be less than 30 seconds)}$$

Performed by: M. Bernard

# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Date: 7/02/20

Time: 9:37 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.  
Stable Reading = 498 ppm
3. Adjust meter to read 500 ppm.

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 2 ppm (a)
2. Downwind Reading (highest in 30 seconds): 2 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{2} \text{ ppm}$$

Performed by: Markus Bernard

# CALIBRATION PRECISION TEST RECORD

Date: 7/02/2020

Expiration Date (3 months): 10/02/2020

Time: 9:37 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 498 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 498 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

0.4 % (must be < than 10%)

Performed by: M. Bernard

## RESPONSE TIME TEST RECORD

Date: 7/02/20

Expiration Date (3 months): 10/02/20

Time: 9:37 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 7 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 6 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{6} \text{ seconds (must be less than 30 seconds)}$$

Performed by: M. Bernard

# CALIBRATION PRECISION TEST RECORD

Date: 7/15/2020

Expiration Date (3 months): 10/15/2020

Time: 9:45 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 497 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 499 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

0.4 % (must be < than 10%)

Performed by: M. Bernard

# RESPONSE TIME TEST RECORD

Date: 7/15/20

Expiration Date (3 months): 10/15/20

Time: 9:45 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 2 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 497 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 499 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 7 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{4.666} \text{ seconds (must be less than 30 seconds)}$$

Performed by: M. Bernard



172 98<sup>th</sup> Avenue • Oakland, California • 94568

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April 1, 2020

Ms. Becky Azevedo  
Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive  
San Jose, CA 95037.

**Re: First Quarter 2020 Surface Emissions and Component Leak Monitoring Report for the Kirby Canyon Recycling and Disposal Facility**

Dear Ms. Azevedo:

This monitoring report for the “**Kirby Canyon Recycling and Disposal Facility (KCRDF) Landfill**” contains the results of the **First Quarter 2020 Integrated and Instantaneous** Surface Emissions Monitoring (SEM) and Component Leak Monitoring. Initial surface emissions monitoring was performed by RES Environmental, Inc.(RES). Re-monitoring of surface emissions was conducted by KCRDF personnel.

**APPLICABLE REQUIREMENTS**

The monitoring discussed in this report was conducted in accordance with the following requirements:

**Surface Emission Monitoring (SEM)**

- New Source Performance Standard (NSPS), Title 40 of the Code of Federal Regulations (CFR) §60.755 (c) and (d), 40 CFR 60, Appendix A Method 21, promulgated by the United States Environmental Protection Agency (USEPA).
- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).
- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 303 (Landfill Surface Requirements) and Section 607 (Landfill Surface Inspection procedures).

**Component Leak Monitoring**

- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 301 (Landfill Gas Collection and Emission Control System Requirements) and Section 602 (Collection and Control System Leak Inspection procedures).
- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95464, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).

## **KCRDF Plan and Alternative Compliance Measures**

An Alternative Compliance Option (ACO) Request was submitted to the California Air Resources Board (CARB) on May 16, 2011. After receipt of comments, this ACO was amended, restated, and submitted to BAAQMD on July 1, 2016. SEM and Component Leak monitoring was conducted per the methods outlined in the July 1, 2016 ACO.

## **PROCEDURES**

### **General**

The surface of the KCRDF disposal area has been divided into one-hundred-and-fifty (150), approximately 50,000 square foot monitoring grids. The entire landfill surface is monitored with the exception of active portions of the Landfill, slope areas, and as requested in the approved ACO, areas containing only asbestos-containing waste, inert waste and/or non-decomposable waste which are excluded for safety as allowed by CCR Title 17 §95466.

Field personnel walked the surface of the landfill following the walking pattern as depicted the 2011 KCRDF AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

### **Instantaneous Surface Emissions Monitoring**

The Instantaneous SEM was conducted using a Toxic Vapor Analyzer (TVA) 1000 flame ionization detector (FID), which was calibrated to 500 parts per million by volume (ppm<sub>v</sub>) methane, which meets or exceeds all guidelines set forth in the CCR Title 17 §95471(a) and NSPS. The FID was calibrated prior to use in accordance with the United States Environmental Protection Agency (USEPA) Method 21 requirements. The Instantaneous SEM procedures followed the requirements of 40 CFR 60.755 (c) and (d) and CCR Title 17 §95471(c)(2).

RES personnel walked the surface of the landfill on a grid by grid basis with the wand tip held at 2 inches from the landfill surface. While sampling the grid; the technicians also checked any surface impoundments (wells or otherwise) for leaks. Technicians also checked any surface cracks, seeps, or other areas that show evidence of surface emissions (odors or distressed vegetation). Active and sloped areas excluded for safety were documented on field data sheets and maps.

All instantaneous surface monitoring was performed in accordance with the applicable requirements referenced in this report. Any detections of methane above 200 ppm<sub>v</sub> (areas of concern) or 500 ppm<sub>v</sub> (exceedances) for instantaneous were recorded, flagged, and marked on an SEM Map, which, wherever required, is included in the Appendices of this report. Applicable corrective action and re-monitoring timelines are listed below:

- Corrective actions must be initiated within 5 days of the initial exceedance and re-monitoring shall be conducted within 10 days of the initial exceedance.



- If the re-monitoring event shows the exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance.
- If the 1-month re-monitoring event shows the location is still corrected, all re-monitoring requirements have been completed.
- If either the first 10-day or 1-month re-monitoring events show a second exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance. If the 1-month re-monitoring event shows the area is still corrected, monitoring requirements have been completed.

If any location shows three exceedances, an additional well shall be installed within 120 days of the initial exceedance.

### **Integrated Surface Emissions Monitoring**

The Integrated surface monitoring was conducted using a TVA 1000 calibrated to 25 ppm<sub>v</sub> for the integrated monitoring, which meets or exceeds all guidelines set forth in the CCR Title 17 §95471(a). The field technician traversed the grid walking path over a continuous 25-minute period using the TVA 1000 held within 3 inches above the landfill surface. The Integrated monitoring procedures followed the requirements of CCR Title 17 §95471(c)(2).

Grids with results greater than 25 ppm<sub>v</sub> were recorded, marked on the SEM map, and flagged for remediation. Any grids with integrated concentrations greater than 25 ppm<sub>v</sub> are subject to the following re-monitoring timeline:

- Re-monitoring shall be conducted within 10 days of the initial exceedance.
- If the 10-day re-monitoring event shows the exceedance is corrected, all re-monitoring requirements have been completed.
- If either the first 10-day re-monitoring event shows a second grid exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, all re-monitoring requirements have been completed.
- The second 10-day re-monitoring event shows a third grid exceedance, an additional well shall be installed within 120 days of the third exceedance.

## **Component Leak Monitoring Procedures**

RES personnel monitored the exposed LFG components under positive pressure (pipes, wellheads, valves, blowers, and other mechanical appurtenances) using a TVA 1000 calibrated to 500 ppm<sub>v</sub>. All leaks measured one half inch or less from the component exceeding the compliance limit of 500 ppm<sub>v</sub> per requirements outlined in pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B) and 1,000 ppm<sub>v</sub> per requirements outlined in BAAQMD 8-34-303 were recorded. Applicable corrective action and re-monitoring timelines are listed below:

- Leaks between 500 and 999 ppm<sub>v</sub> must be corrected and re-monitored within 10 days of the initial exceedance.
- Leaks at or above 1000 ppm<sub>v</sub> must be corrected and re-monitored within 7 days of the initial exceedance.

## **FIRST QUARTER 2020 SEM AND COMPONENT LEAK RESULTS**

The following is a summary of the SEM and component leak monitoring results completed for the First Quarter 2020.

### **Instantaneous Surface Emissions Monitoring Results**

The Instantaneous surface monitoring was performed on February 12, 2020 in accordance with the NSPS, BAAQMD 8-34, and CCR Title 17 §95469 and ACO. Results and data from the monitoring are presented in Attachment A.

#### *Initial Monitoring Event Exceedances of 500 ppm<sub>v</sub>*

There were 9 exceedances of 500 ppm<sub>v</sub> as methane detected on February 12, 2020. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (February 14, 2020).

#### *Ten-Day Re-Monitoring Results*

The 10-day re-monitoring event was completed on February 19, 2020. All locations were observed at less than 500 ppm<sub>v</sub>.

#### *One-Month Re-Monitoring Results*

The 1-month re-monitoring event was completed on March 10 and 11, 2020. All locations were observed at less than 500 ppm<sub>v</sub>.

#### *Readings between 200 ppm<sub>v</sub> and 499 ppm<sub>v</sub> (Initial and Re-monitored)*

There were no readings between 200 ppm<sub>v</sub> and 499 ppm<sub>v</sub> as methane detected during the initial monitoring event on February 12, 2020. Pursuant to CCR Title 17 §95471(c), instantaneous surface emissions exceeding 200 ppm<sub>v</sub> but below 500 ppm<sub>v</sub> are required to be recorded.

## **Integrated Surface Emissions Monitoring Results**

The Integrated surface sampling (ISS) was performed on February 11 and 12, 2020, in accordance with the ACO and requirements outlined in CCR Title 17 §95469.

### *Initial Monitoring Event Exceedances of 25 ppm<sub>v</sub>*

There were no grids with exceedances of 25 ppm<sub>v</sub> as methane detected during the initial monitoring event on February 11 and 12, 2020.

The average methane concentration of each grid was recorded during the monitoring event per applicable requirements. See Attachment B, Integrated SEM 25 ppm<sub>v</sub> Exceedances and Monitoring Log, and SEM Map included in Attachment B, for details.

## **Component Leak Monitoring Results**

Component leak monitoring was conducted per the applicable requirements on February 12, 2020. No leaks greater than 500 ppm<sub>v</sub> were identified. Please see Attachment C, for details.

## **WEATHER CONDITIONS**

### **Wind Speed Conductions during the Surface Emission Monitoring Events**

Wind speeds during initial monitoring were monitored using a portable weather station. The station has a strip chart that records the wind speed and direction. After completion of monitoring, the strip chart is reviewed by RES office staff to determine the average and maximum wind speeds during the monitoring and the average wind direction during each grid and ensure that the wind speed requirements are met (no gusts greater than 20 mph, average wind speed cannot exceed 10 mph). These values are documented in the field data sheets. The chart data is scanned and included in Attachment D.

### **Precipitation Requirements**

Per the KCRDF's ACO, the initial monitoring event was carefully scheduled so that it could be conducted in compliance with the precipitation requirements (no measurable precipitation within 24 hours). Re-monitoring events are required to adhere to strict timelines. Any conflicts with precipitation requirements are discussed in the results section of this document.

## **EQUIPMENT CALIBRATION**

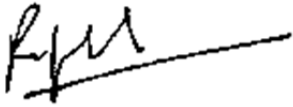
The portable analyzers were calibrated to meet the instrument specifications requirements of U.S. EPA Method 21. The calibration gas used was methane, diluted to a nominal concentration of 25 ppm<sub>v</sub> in air for integrated sample analyses and 500 ppm<sub>v</sub> in air for instantaneous monitoring to comply with the requirements.

All analyzers were calibrated prior to use with required response time and precision related instrument checks. Calibration records include the following: One time response time test record; One time response factor determination for methane; Calibration Precision test records (test to be

performed every 3 months); and Daily Instrument Calibration and Background test records for each gas meter that was used during the quarterly monitoring event. The calibration log records are included in Attachment E.

All monitoring was completed in accordance with the applicable regulatory requirements or approved alternatives. If you have any questions regarding this report, please do not hesitate to contact me at (510) 875-9338.

Thank you,  
Waste Management

A handwritten signature in black ink, appearing to read 'R. Phadnis', with a long horizontal line extending to the right.

Rajan Phadnis  
Environmental Protection Specialist

**Attachment A – Instantaneous Surface Emission Monitoring Event Records**

- Monitoring Logs and Exceedances
- SEM Map

**Attachment B – Integrated Surface Emission Monitoring Event Records**

- Monitoring Logs and Exceedances
- SEM Map

**Attachment C – Component Leak Monitoring Event Records**

- Component Leak Exceedances and Monitoring Logs

**Attachment D – Weather Station Data**

- Strip Chart Data

**Attachment E – Calibration Records**

- Instrument and Gas Calibration Records

**Attachment A**

Instantaneous Surface Emission Monitoring Event Records

**Table A.1**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Initial Monitoring Event Areas of Concern**

**2020 QUARTER:** 1  
**PERFORMED BY:** RES/WM  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

<b>Flag Number</b>	<b>Grid Number</b>	<b>Date of Monitoring</b>	<b>Concentration of Emission (ppmv)</b>	<b>Comments</b>
1	83	2/12/2020	1103 ppm	Well 82
11	82	2/12/2020	2000 ppm	Well 123
12	89	2/12/2020	40000 ppm	Well 75
13	143	2/12/2020	2600 ppm	Surface
2	668	2/12/2020	668 ppm	Well 141
3	138	2/12/2020	880 ppm	Well 90
31	111	2/12/2020	5500 ppm	Well 134
32	71	2/12/2020	4100 ppm	Well LC109
4	101	2/12/2020	789 ppm	Well 48

**Table A.2  
Instantaneous Landfill Surface Emissions Monitoring  
Exceedance and Monitoring Logs (NSPS/BAAQMD 8-34)**

2020 QUARTER: 1  
 INITIAL MONITORING PERFORMED BY: RES/WM  
 FOLLOW-UP MONITORING PERFORMED BY: Markus Bernard/Rick Reed  
 LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			Comments
Flag	Monitoring	Field	Repair	Action taken to repair	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	Exceedance	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	
1	2/12/2020	1103 ppm	2/14/2020	Water / Soil Added	2/19/2020	0 ppm		3/10/2020	40.86		Well 82
11	2/12/2020	2000 ppm	2/14/2020	Water / Soil Added	2/19/2020	0 ppm		3/11/2020	12.05		Well 123
12	2/12/2020	40000 ppm	2/14/2020	Water / Soil Added	2/19/2020	68 ppm		3/11/2020	283.0		Well 75
13	2/12/2020	2600 ppm	2/14/2020	Water / Soil Added	2/19/2020	20 ppm		3/11/2020	119.0		Surface
2	2/12/2020	668 ppm	2/14/2020	Water / Soil Added	2/19/2020	0 ppm		3/11/2020	1.69		Well 141
3	2/12/2020	880 ppm	2/14/2020	Water / Soil Added	2/19/2020	0 ppm		3/11/2020	14.24		Well 90
31	2/12/2020	5500 ppm	2/14/2020	Water / Soil Added	2/19/2020	35 ppm		3/10/2020	409.0		Well 134
32	2/12/2020	4100 ppm	2/14/2020	Water / Soil Added	2/19/2020	55 ppm		3/11/2020	70.12		Well LC109
4	2/12/2020	789 ppm	2/14/2020	Water / Soil Added	2/19/2020	82 ppm		3/11/2020	1.37		Well 48

**Table A.3**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Exceedance and Monitoring Logs (AB-32)**

**2020 QUARTER:** 1  
**INITIAL MONITORING PERFORMED BY:** RES/WM  
**FOLLOW-UP MONITORING PERFORMED BY:** Markus Bernard  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

Initial Monitoring Event			1st Re-mon Event - 10 Days			2nd Re-mon Event - 10 Days			Comments
Exceedance	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Grid ID No.	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	
1	2/12/2020	1103 ppm	2/19/2020	0 ppm					Well 82
11	2/12/2020	2000 ppm	2/19/2020	0 ppm					Well 123
12	2/12/2020	40000 ppm	2/19/2020	68 ppm					Well 75
13	2/12/2020	2600 ppm	2/19/2020	20 ppm					Surface
2	2/12/2020	668 ppm	2/19/2020	0 ppm					Well 141
3	2/12/2020	880 ppm	2/19/2020	0 ppm					Well 90
31	2/12/2020	5500 ppm	2/19/2020	35 ppm					Well 134
32	2/12/2020	4100 ppm	2/19/2020	55 ppm					Well LC109
4	2/12/2020	789 ppm	2/19/2020	82 ppm					Well 48



**Table A.4**  
**Instantaneous Landfill Surface Emissions Monitoring**  
**Areas of Concern Greater than 200 ppmv**

**2020 QUARTER: 1**

**INITIAL MONITORING PERFORMED BY: RES/WM**

**FOLLOW-UP MONITORING PERFORMED BY: NA**

**LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility**

Initial Monitoring Event			Re-mon Event		Comments
Exceedance	Monitoring	Field	Monitoring	Reading	
Grid ID No.	Date	Reading	Date	ppm	
None					

# Orange Flag Landfill Surface Emissions Monitoring Exceedances and Monitoring Log

Site: KIRBY

Quarter / Year:		1st 2020												Page	of	Pages
Technician:		CASHWOOD														
Instrument:		TVA-1000														
Calibration Standard:		SCOPP														
Flag Number	Grid Number	Initial Monitoring Event		First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			Comments			
		Field Reading (ppm)	Date Monitored	Date Monitored	No Excd.	Excd.	Date Monitored	No Excd.	Excd.	Date Monitored	No Excd.	Excd.				
0-31	111	5,500	2-12-20										WE1134			
0-32	71	4,100											WE1123			
0-11	82	2,000											WE1175			
0-12	89	40,000											54R FGL6			
0-13	143	2,600											WE1182			
0-1	83	1103											WE1192			
0-2	90	668											WE1190			
0-3	138	880											WE1148			
0-4	101	789														
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## KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADDE ANTHONY PUNICHA  
ARON MERRILL OMER PUNICHA  
BRUCE PERIN Cal. Gas Exp. Date: 9-21-20

Date: 2-12-20 Instrument Used: LVA 1000 Grid Spacing: 25'

Temperature: 51 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
43	LW	0955	1010	97	1	2	7	
44	AM	0955	1010	41	1	2	7	
49	BR	0955	1010	117	1	2	7	
54	AP	0955	1010	84	1	2	7	
55	OP	0955	1010	64	1	2	7	
61	LW	1010	1025	128	1	2	6	
68	AM	1010	1025	47	1	2	6	
73	BR	1010	1025	91	1	2	6	
74	AP	1010	1025	59	1	2	6	
75	OP	1010	1025	32	1	2	6	
82	LW	1025	1040	2,000	1	2	6	well 123
83	AM	1025	1040	1,103	1	2	6	well 82
88	BR	1025	1040	71	1	2	6	
89	AP	1025	1040	40,000	1	2	6	well 75
90	OP	1025	1040	668	1	2	6	well 142
96	LW	1040	1055	59	1	2	6	
97	AM	1040	1055	71	1	2	6	
103	BR	1040	1055	45	1	2	6	
104	AP	1040	1055	26	1	2	6	
105	OP	1040	1055	54	1	2	6	
111	LW	1055	1110	5,500	1	2	4	well 134
112	AM	1055	1110	43	1	2	4	
118	BR	1055	1110	37	1	2	4	
119	AP	1055	1110	56	1	2	4	
120	OP	1055	1110	40	1	2	4	
126	LW	1110	1125	32	1	2	6	
127	AM	1110	1125	58	1	2	6	
128	BR	1110	1125	21	1	2	6	
134	AP	1110	1125	43	1	2	6	
136	OP	1110	1125	30	1	2	6	

Attach Calibration Sheet  
 Attach site map showing grid ID

## KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LOIS WADZ Anthony peralta  
AARON McBRIDE DANIEL PERALTA  
ERIN JOY PERALTA Cal. Gas Exp. Date: 9-21-20

Date: 2-12-20 Instrument Used: LVA1000 Grid Spacing: 25'

Temperature: 54 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
138	LW	1125	1140	880	1	2	6	W 1190
139	Am	1125	1140	36	1	2	6	
141	ER	1125	1140	19	1	2	6	
142	AP	1125	1140	24	1	2	6	
143	OP	1125	1140	2,600	1	2	6	SURFACE
144	LW	1200	1225	38	1	2	7	
145	Am	1210	1225	26	1	2	7	
146	ER	1210	1225	47	1	2	7	
147	AP	1210	1225	24	1	2	7	
148	OP	1210	1225	64	1	2	7	
149	LW	1225	1240	30	1	2	8	
150	Am	1225	1240	45	1	2	8	
140	ER	1225	1240	36	1	2	8	
137	AP	1225	1240	29	1	2	8	
135	OP	1225	1240	34	1	2	8	
132	LW	1240	1255	20	1	2	8	
133	Am	1240	1255	57	1	2	8	
124	ER	1240	1255	18	1	2	8	
125	AD	1240	1255	46	1	2	8	
116	OP	1240	1255	32	1	2	8	
117	LW	1255	1310	76	2	3	9	
109	Am	1255	1310	35	2	3	9	
110	ER	1255	1310	29	2	3	9	
101	AP	1255	1310	789	2	3	9	W 1148
102	OP	1255	1310	45	2	3	9	
94	LW	1310	1325	60	2	3	9	
95	Am	1310	1325	44	2	3	9	
86	ER	1310	1325	65	2	3	9	
87	AP	1310	1325	24	2	3	9	
79	OP	1310	1325	31	2	3	9	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WLOZ      ANTHONY PERCETTA  
AARON MCBRIDE      OMER PERCETTA  
ERNEST PERCETTA      \_\_\_\_\_  
 Cal. Gas Exp. Date: 9-21-26

Date: 2-12-20 Instrument Used: LVA1000 Grid Spacing: 25'

Temperature: 56 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
80	LW	1325	1340	59	2	3	9	
81	AM	1325	1340	74	2	3	9	
70	ER	1325	1340	36	2	3	9	
71	AP	1325	1340	4,160	2	3	9	well LC 109
72	OP	1325	1340	114	2	3	9	
64	LW	1340	1355	19	2	3	9	
65	AM	1340	1355	89	2	3	9	
57	ER	1340	1355	16	2	3	9	
58	AP	1340	1355	169	2	3	9	
52	OP	1340	1355	94	2	3	9	
45	LW	1355	1410	79	2	3	9	
41	AM	1355	1410	88	2	3	9	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADSWORTH \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-12-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1								NO WASTE IMP/CLC ↓
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
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30								

Attach Calibration Sheet  
 Attach site map showing grid ID

## KIRBY LANDFILL INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-12-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
31								
32								
33								
34								
35								
36								
38								
39								
40								
45								
46								
50								
51								
56								
62								
63								
69								
76								
77								
78								
84								
85								
91								
92								
93								
98								
99								
100								
106								
107								

Attach Calibration Sheet  
 Attach site map showing grid ID



**KIRBY LANDFILL  
INSTANTANEOUS LANDFILL SURFACE MONITORING**

Personnel: LEISZ WNOB \_\_\_\_\_

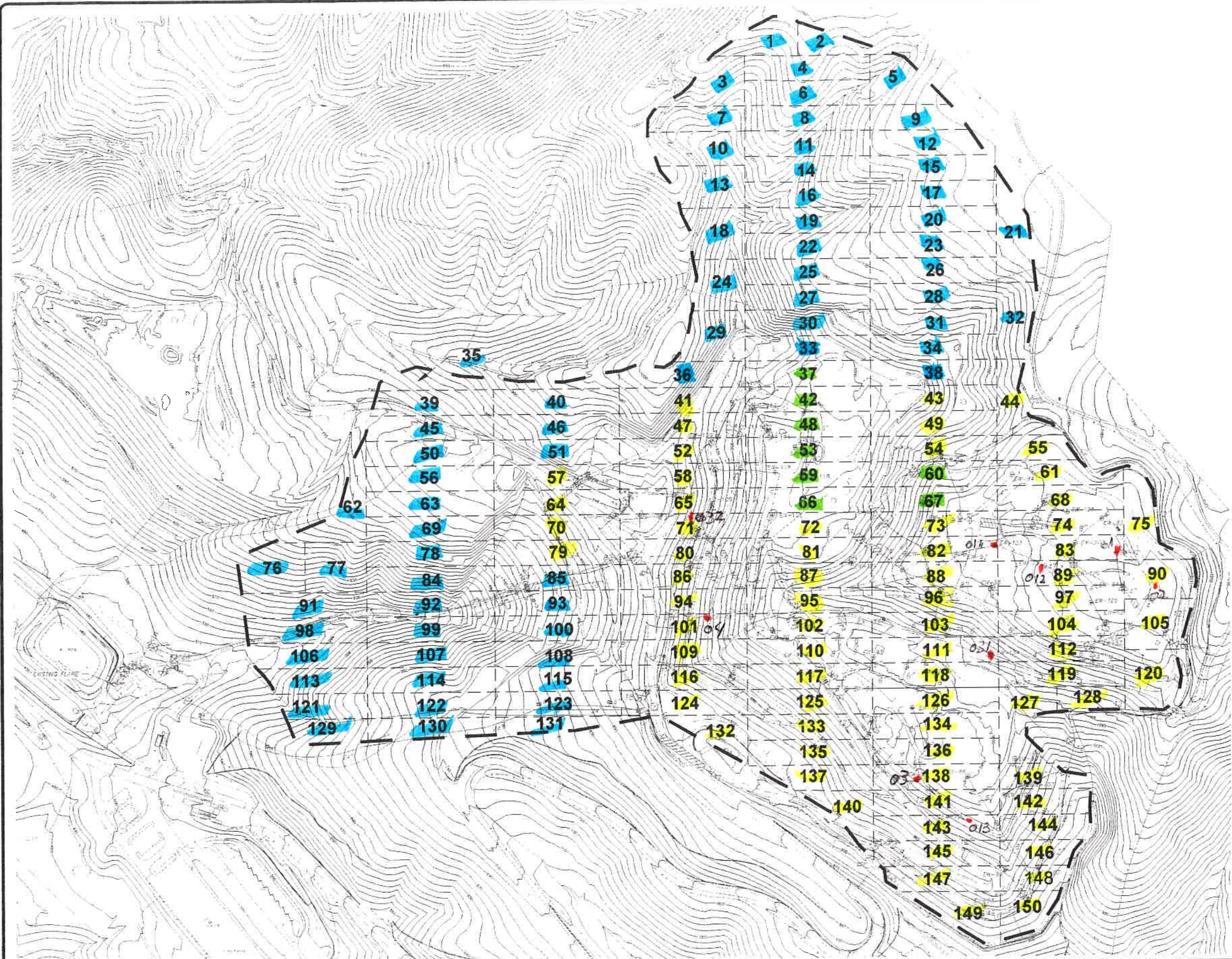
\_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-12-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
108								
113								
114								
115								
121								
122								
123								
129								
130								
131								
37								Active - Press
42								
48								
53								
59								
66								
60								
67								

Attach Calibration Sheet  
Attach site map showing grid ID



- LEGEND**
- EXISTING 10' CONTOUR
  - EXISTING ABOVEGROUND PIPING
  - EXISTING BELOWGROUND PIPING
  - EXISTING HORIZONTAL COLLECTOR
  - EXISTING LFG EXTRACTION WELL
  - EXISTING LOCAL CONTROL WELL
  - EXISTING WELL WITH BECS INSTALLED
  - EXISTING REMOTE WELLHEAD
  - EXISTING HORIZONTAL COLLECTOR WELLHEAD
  - EXISTING CONTROL VALVE
  - EXISTING BLIND FLANGE
  - EXISTING FLANGE CONNECTION
  - EXISTING REDUCER FITTING
  - EXISTING ROAD CROSSING
  - EXISTING RISER
  - EXISTING CAP ON EXISTING PIPE



- NOTES:**
- TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.
  - 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

INSTANTANEOUS 2-12-20

- GRIDS MONITORED
- NO WASTE IMPLCE
- ACTIVE - TRASH
- 500+ppm

AS-BUILT



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	2/4/19	RAW	DK	AMN	PJS	

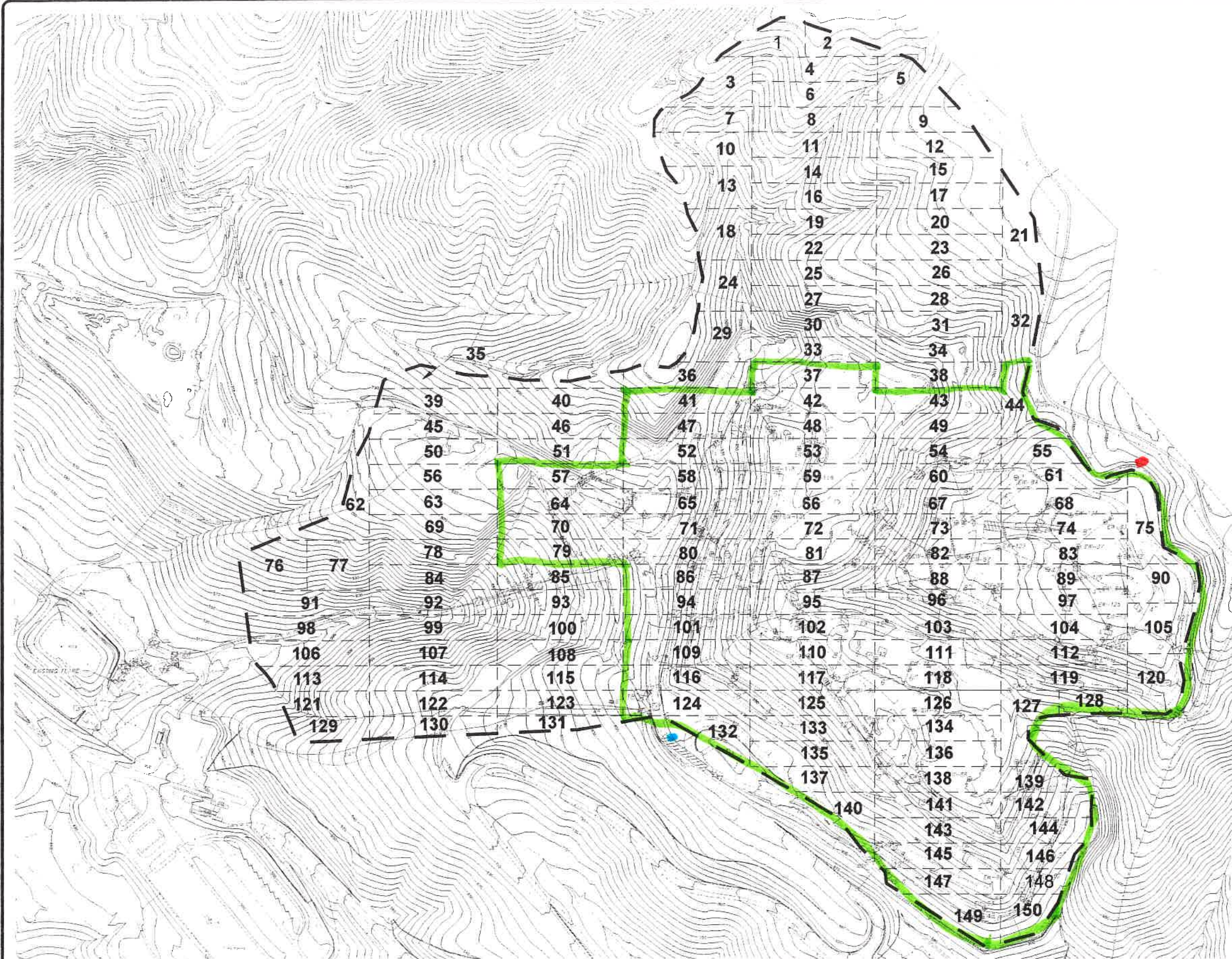


KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
MORGAN HILL, CALIFORNIA

2018 GCCS IMPROVEMENTS  
AS-BUILT SITE PLAN

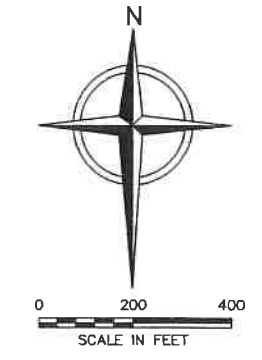
SHEET NO.  
**1**  
PROJECT NO.

File: C:\PROJECTS\KIRBY\_CANYON\GIS\AS-BUILT\AS-BUILT.dwg Layer: SHIT User: MRSOCL\MILLANUS Feb 04, 2019 - 11:27am  
 1" = 100' 0"



**LEGEND**

- EXISTING 10' CONTOUR
- EXISTING ABOVEGROUND PIPING
- EXISTING BELOWGROUND PIPING
- EXISTING HORIZONTAL COLLECTOR
- EXISTING LFG EXTRACTION WELL
- EXISTING LOCAL CONTROL WELL
- EXISTING WELL WITH BECS INSTALLED
- EXISTING REMOTE WELLHEAD
- EXISTING HORIZONTAL COLLECTOR WELLHEAD
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER FITTING
- EXISTING ROAD CROSSING
- EXISTING RISER
- EXISTING CAP ON EXISTING PIPE



**NOTES:**  
 1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.  
 2. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

*1st Quarter 2020 NSPs*

*Red dot DOWNWIND  
 Blue dot UPWIND*

File: A:\Projects\2018\2018\_05\_01\_001\_Map.dwg Layer: SHT 1 User: RUSSELL.MILLER Date: 04/10/19 11:37am  
 1" = 100' 0"



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE: 2/4/19  
 DRAWN BY: RAW  
 DESIGNED BY: DK  
 CHECKED BY: AMN  
 APPROVED BY: PJS



**AS-BUILT**

KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 MORGAN HILL, CALIFORNIA

2018 GCCS IMPROVEMENTS  
 AS-BUILT SITE PLAN

SHEET NO.  
**1**  
 PROJECT NO.

**Attachment B**

Integrated Surface Emission Monitoring Event Records

**Table B.1  
Integrated Landfill Surface Monitoring  
Exceedances and Monitoring Log**

**2020 QUARTER:** 1

**INITIAL MONITORING PERFORMED BY:** RES

**FOLLOW-UP MONITORING PERFORMED BY:** N/A

**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

Initial Monitoring Event			1st Re-mon Event - 10 Days			Comments
Exceedance	Monitoring	Field	Monitoring	No Exced.	No Exced.	
Grid ID No.	Date	Reading	Date	<25 ppm	>25 ppm	
None						

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADDE Anthony PERICLA  
AARON MCHADOCK OMER PERICLA  
ARWES L RICHARD Cal. Gas Exp. Date: 9-21-20

Date: 7-11-20 Instrument Used: 40A1000 Grid Spacing: 25'

Temperature: 66 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
43	LW	1300	1325	9.65	4	6	9	
44	AM	1300	1325	7.21	4	6	9	
49	ER	1300	1325	10.64	4	6	9	
54	AP	1300	1325	12.27	4	6	9	
55	OP	1300	1325	6.45	4	6	9	
61	LW	1325	1350	6.80	3	4	9	
68	AM	1325	1350	5.91	3	4	9	
73	ER	1325	1350	7.46	3	4	9	
74	AP	1325	1350	6.57	3	4	9	
75	OP	1325	1350	7.22	3	4	9	
82	LW	1350	1415	6.18	4	5	9	
83	AM	1350	1415	6.74	4	5	9	
88	ER	1350	1415	5.51	4	5	9	
89	AP	1350	1415	6.04	4	5	9	
90	OP	1350	1415	5.72	4	5	9	
96	LW	1415	1440	7.11	3	6	10	
97	AM	1415	1440	6.87	3	6	10	
103	ER	1415	1440	6.40	3	6	10	
104	AP	1415	1440	5.92	3	6	10	
105	OP	1415	1440	5.16	3	6	10	
111	LW	1440	1505	6.52	4	6	9	
112	AM	1440	1505	5.13	4	6	9	
118	ER	1440	1505	5.07	4	6	9	
119	AP	1440	1505	4.28	4	6	9	
120	OP	1440	1505	4.86	4	6	9	
126	LW	1505	1530	5.04	4	6	9	
127	AM	1505	1530	4.32	4	6	9	
128	ER	1505	1530	5.27	4	6	9	
134	AP	1505	1530	4.70	4	6	9	
136	OP	1505	1530	5.54	4	6	9	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leigh WAD \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-11-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1								NO WASTE IN DISCS
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADZ \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-11-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
31								
32								
33								
34								
35								
36								
38								
39								
40								
45								
46								
50								
51								
56								
62								
63								
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92								
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99								
100								
106								
107								

Attach Calibration Sheet  
 Attach site map showing grid ID



**KIRBY LANDFILL  
INTEGRATED LANDFILL SURFACE MONITORING**

Personnel: LEIGH WADE \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Cal. Gas Exp. Date: \_\_\_\_\_

Date: 2-11-20 Instrument Used: \_\_\_\_\_ Grid Spacing: \_\_\_\_\_

Temperature: \_\_\_\_\_ Precip: \_\_\_\_\_ Upwind BG: \_\_\_\_\_ Downwind BG: \_\_\_\_\_

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
108								↓
113								
114								
115								
121								
122								
123								
129								
130								
131								
37								
42							ACTIVE ↓ NWS?	
48								
53								
59								
66								
60								
67								

Attach Calibration Sheet  
 Attach site map showing grid ID

## KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leigh WOOD ANILONG PERALTA  
ARON McBRIDE OMER PERALTA  
ERNEST PERALTA Cal. Gas Exp. Date: 9-21-20

Date: 2-12-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 45 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
138	LW	0600	0625	5.75	3	5	2	
139	AM	0600	0625	4.62	3	5	2	
141	ER	0600	0625	5.80	3	5	2	
142	AP	0600	0625	4.23	3	5	2	
143	OP	0600	0625	5.07	3	5	2	
144	LW	0625	0650	4.96	2	4	2	
145	AM	0625	0650	5.72	2	4	2	
146	ER	0625	0650	5.48	2	4	2	
147	AP	0625	0650	4.20	2	4	2	
148	OP	0625	0650	4.06	2	4	2	
149	LW	0650	0715	5.52	2	3	3	
150	AM	0650	0715	5.71	2	3	3	
140	ER	0650	0715	5.84	2	3	3	
137	AP	0650	0715	6.57	2	3	3	
135	OP	0650	0715	5.29	2	3	3	
132	LW	0715	0740	6.15	2	3	3	
133	AM	0715	0740	6.49	2	3	3	
124	ER	0715	0740	5.41	2	3	3	
125	AP	0715	0740	6.17	2	3	3	
116	OP	0715	0740	5.03	2	3	3	
117	LW	0740	0805	5.49	2	4	3	
109	AM	0740	0805	4.78	2	4	3	
110	ER	0740	0805	7.81	2	4	3	
101	AP	0740	0805	6.42	2	4	3	
102	OP	0740	0805	6.97	2	4	3	
94	LW	0805	0830	5.14	2	4	3	
95	AM	0805	0830	7.30	2	4	3	
86	ER	0805	0830	6.21	2	4	3	
87	AP	0805	0830	9.32	2	4	3	
79	OP	0805	0830	5.07	2	4	3	

Attach Calibration Sheet  
 Attach site map showing grid ID

# KIRBY LANDFILL INTEGRATED LANDFILL SURFACE MONITORING

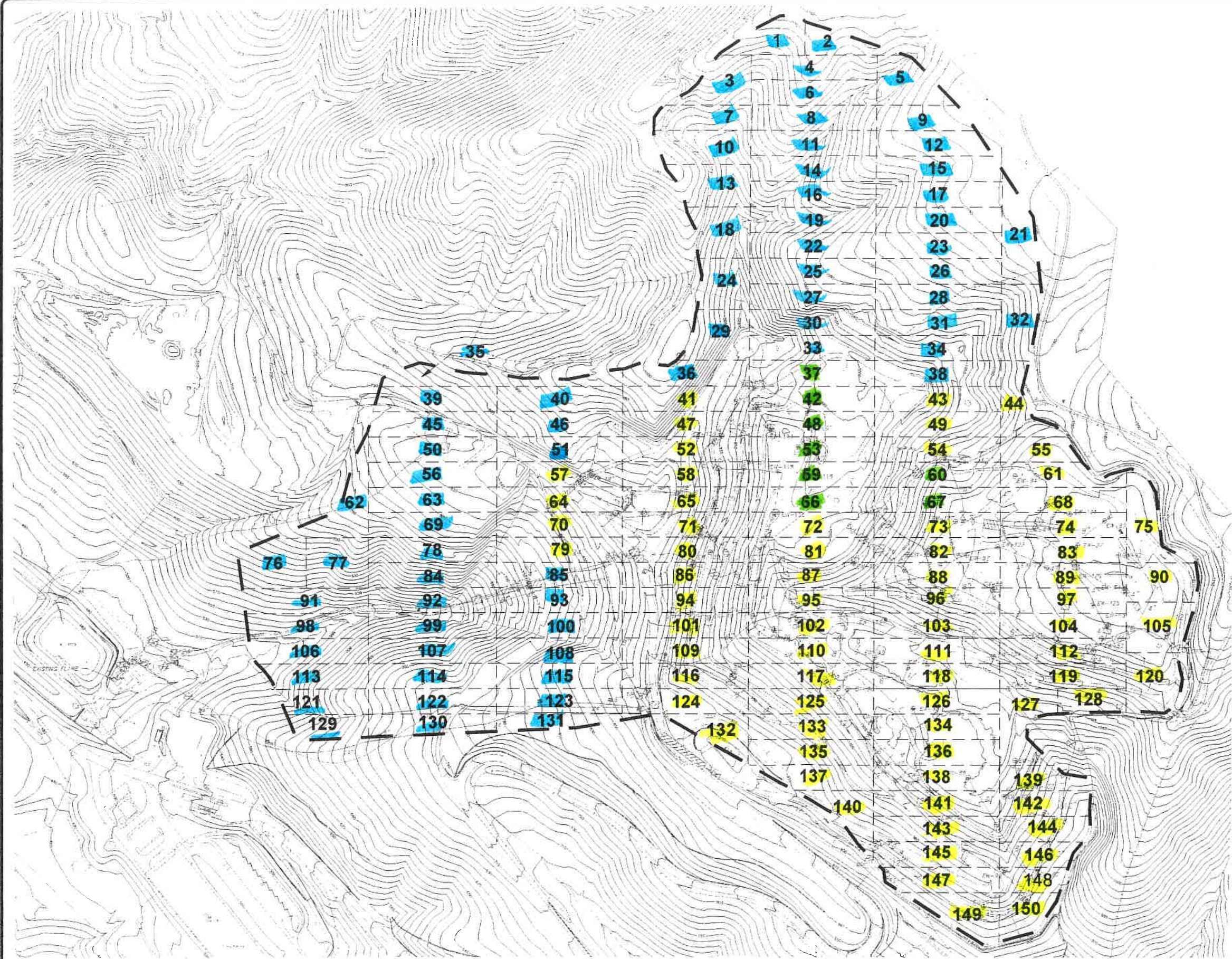
Personnel: LEIGH WADT ANTHONY PEROLTA  
AARON McBRIDE DAVID PEROLTA  
BRANDEE DANIEL \_\_\_\_\_  
 Cal. Gas Exp. Date: 9-21-20

Date: 2-12-20 Instrument Used: FVA 1000 Grid Spacing: 25'

Temperature: 47 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.2

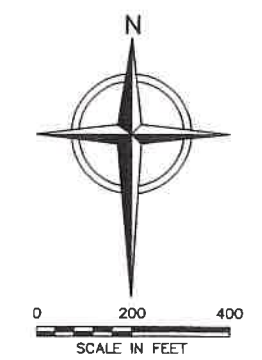
GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
80	LW	0830	0855	10.46	2	3	3	
81	AM	0830	0855	12.65	2	3	3	
70	BR	0830	0855	5.31	2	3	3	
71	AP	0830	0855	11.60	2	3	3	
72	OP	0830	0855	14.53	2	3	3	
64	LW	0855	0920	6.17	2	3	3	
65	AM	0855	0920	10.94	2	3	3	
57	BR	0855	0920	5.30	2	3	3	
58	AP	0855	0920	14.61	2	3	3	
52	OP	0855	0920	12.28	2	3	3	
47	LW	0920	0945	15.61	2	3	4	
41	AM	0920	0945	18.37	2	3	4	

Attach Calibration Sheet  
 Attach site map showing grid ID



**LEGEND**

- EXISTING 10' CONTOUR
- EXISTING ABOVEGROUND PIPING
- EXISTING BELOWGROUND PIPING
- EXISTING HORIZONTAL COLLECTOR
- EXISTING LFG EXTRACTION WELL
- EXISTING LOCAL CONTROL WELL
- EXISTING WELL WITH BECS INSTALLED
- EXISTING REMOTE WELLHEAD
- EXISTING HORIZONTAL COLLECTOR WELLHEAD
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER FITTING
- EXISTING ROAD CROSSING
- EXISTING RISER
- EXISTING CAP ON EXISTING PIPE



**NOTES:**  
 1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 10, 2018.  
 2. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.

*INTEGRATED 2-11-20  
 2-12-20*

- GRIDS MONITORED
- NO WASTE IN PLACE
- ACTIVITIES

**AS-BUILT**



REV	DATE	DESCRIPTION	DNW BY	DES BY	CHK BY	APP BY
1	2/4/19	RAW DESIGNED BY DK			AMN	PJS



KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 MORGAN HILL, CALIFORNIA

2018 GCCS IMPROVEMENTS  
 AS-BUILT SITE PLAN

SHEET NO.  
**1**  
 PROJECT NO.

File: X:\PROJECTS\KIRBY CANYON\AS-BUILT\DWG\AS-BUILT\_2018\_SDU\_CAD\_MAP.dwg  
 Layout: SITE 1 User: RUSSELL WILLIAMS Feb 04, 2019 - 11:17am

**Attachment C**

Component Leak Monitoring Event Records

**Table C.1**  
**AB-32 Component Leak Monitoring**  
**Summary of Component Leaks Greater than 500 ppmv**

**2020 QUARTER:** 1  
**INITIAL MONITORING PERFORMED BY:** RES/WM  
**FOLLOW-UP MONITORING PERFORMED BY:** WM  
**LANDFILL NAME:** Kirby Canyon Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station	02/12/20	ND	Leigh wade	-	-	-	-	-

ND= No Exceedances

**Table C.2**  
**BAAQMD Component Leak Monitoring**  
**Summary of Component Leaks Greater than 1,000 ppmv**

2020 QUARTER: 1

INITIAL MONITORING PERFORMED BY: RES/WM

FOLLOW-UP MONITORING PERFORMED BY: WM

LANDFILL NAME: Kirby Canyon Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station	02/12/20	ND	Leigh wade	-	-	-	-	-

ND= No Exceedances

Landfill component Leak Check

Kirby

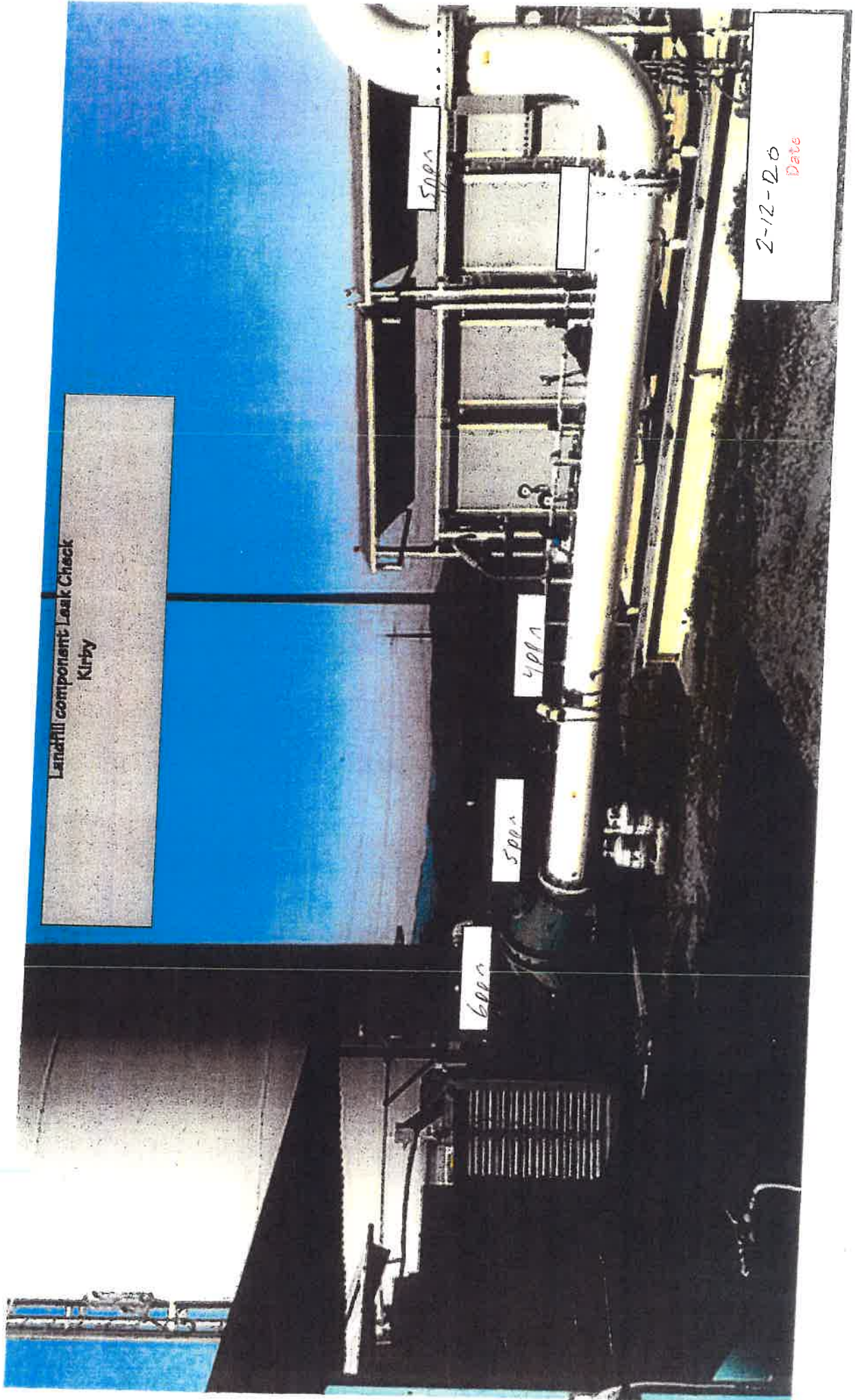


2-12-20

Date



Landfill component Leak Check  
Kirby



2-12-20  
Date

**LANDFILL NAME: KIRBY**  
**QUARTERLY LFG COMPONENT LEAK MONITORING**

**INSTRUMENT** FID  
**MAKE:** Thermo Envirotr  
**MODEL:** TVA 1000  
**S/N:** 1036346773  
  
**DATE OF SAMPLING:** 2-12-20  
**TECHNICIAN:** L.S. WOOD

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
A16 FKL68094485							

In the event that an exceedance is detected, please initiate corrective action and re-monitor the exceedance location within 7 days of the initial exceedance.

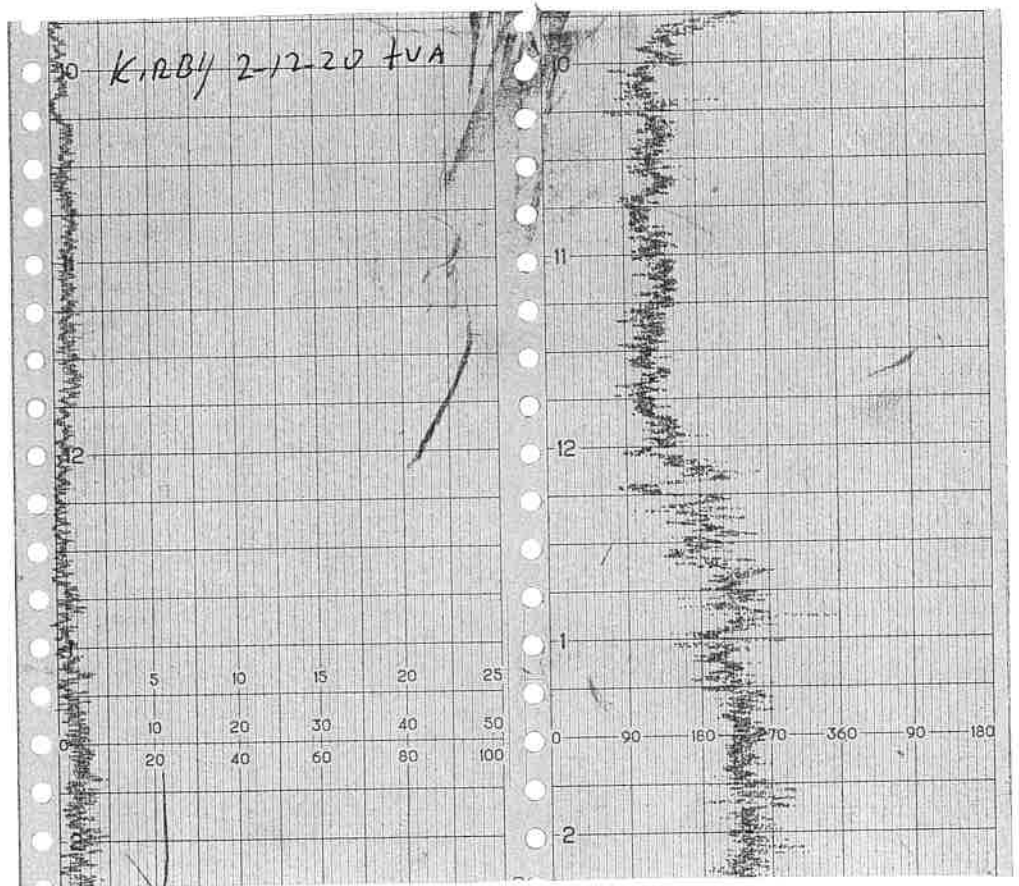
NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).

NOTE: Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

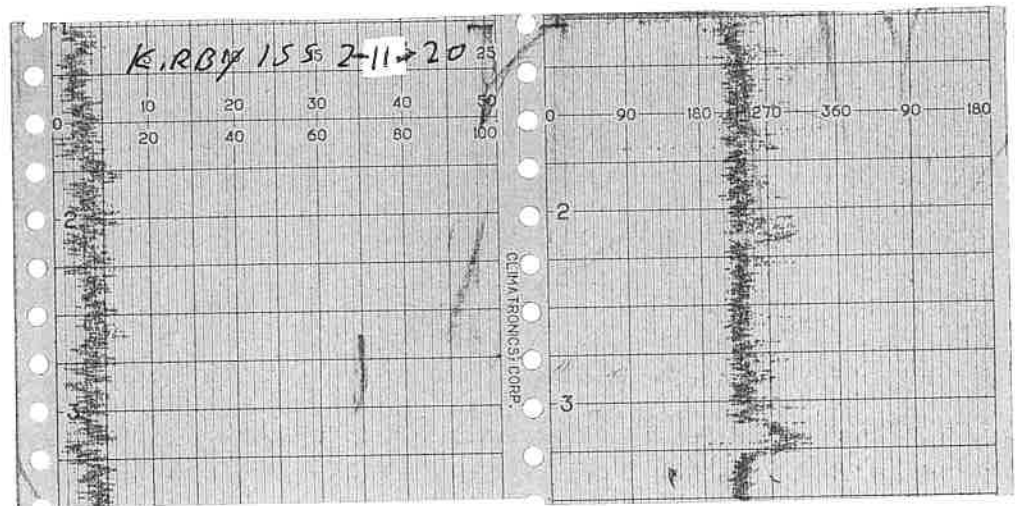
**Attachment D**

Weather Station Data

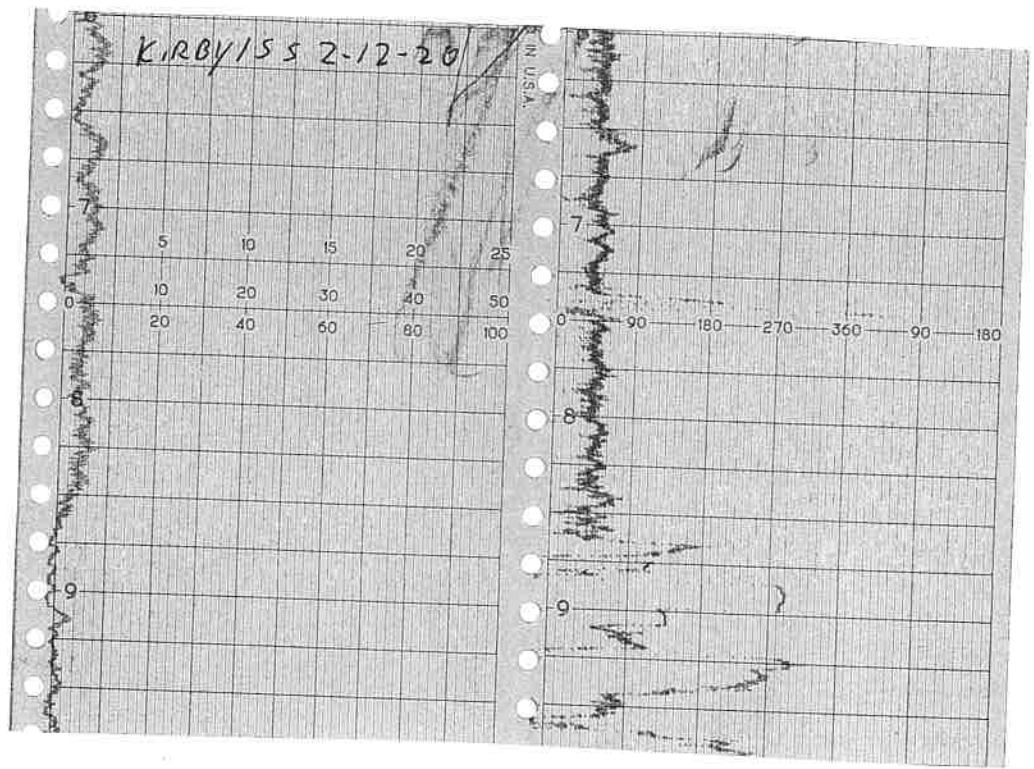
# WIND SPEED & DIRECTION CHART ROLL



# WIND SPEED & DIRECTION CHART ROLL



# WIND SPEED & DIRECTION CHART ROLL



16-POINT WIND DIRECTION INDEX

<u>NO</u>	<u>DIRECTION</u>	<u>DEGREES</u>		
		<u>FROM</u>	<u>CENTER</u>	<u>TO</u>
16	NORTH (N)	348.8	<u>360.0</u>	0.0
1	NORTH-NORTHEAST (NNE)	011.3	<u>022.5</u>	033.8
2	NORTHEAST (NE)	033.8	<u>045.0</u>	056.3
3	EAST-NORTHEAST (ENE)	056.3	<u>067.5</u>	078.8
4	EAST (E)	078.8	<u>090.0</u>	101.3
5	EAST-SOUTHEAST (ESE)	101.3	<u>112.5</u>	123.8
6	SOUTHEAST (SE)	123.8	<u>135.0</u>	146.3
7	SOUTH-SOUTHEAST (SSE)	146.3	<u>157.5</u>	168.8
8	SOUTH (S)	168.8	<u>180.0</u>	191.3
9	SOUTH-SOUTHWEST (SSW)	191.3	<u>202.5</u>	213.8
10	SOUTHWEST (SW)	213.8	<u>225.0</u>	236.3
11	WEST-SOUTHWEST (WSW)	236.3	<u>247.5</u>	258.8
12	WEST (W)	258.8	<u>270.0</u>	281.3
13	WEST-NORTHWEST (WNW)	281.3	<u>292.5</u>	303.8
14	NORTHWEST (NW)	303.8	<u>315.0</u>	326.3
15	NORTH-NORTHWEST (NNW)	326.3	<u>337.5</u>	348.8

**Attachment E**  
Calibration Records



**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HERNO  
 MODEL: IVA1000 EQUIPMENT #: 10 SERIAL #: 1036346773  
 MONITORING DATE: 2-12-20 TIME: 0950

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>507</u> ppm	<u>457</u> ppm	<u>7</u>
#2	<u>499</u> ppm	<u>449</u> ppm	<u>7</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.25</u> ppm	<u>507</u> ppm	<u>7</u>
#2	<u>0.13</u> ppm	<u>499</u> ppm	<u>1</u>
#3	<u>0.07</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.53</u> #DIV/0! Must be less than 10%

Performed By: LOSHWA02 Date/Time: 2-12-20-0950

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS**

LANDFILL NAME: RIRBY INSTRUMENT MAKE: HERNO  
 MODEL: LVA1000 EQUIPMENT #: 11 SERIAL #: 1036346774  
 MONITORING DATE: 2-12-20 TIME: 0950

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>490</u> ppm	<u>440</u> ppm	<u>6</u>
#2	<u>501</u> ppm	<u>451</u> ppm	<u>6</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.31</u> ppm	<u>490</u> ppm	<u>10</u>
#2	<u>0.20</u> ppm	<u>501</u> ppm	<u>1</u>
#3	<u>0.18</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.23</u> #DIV/0! Must be less than 10%

Performed By: Anthony Perella Date/Time: 2-12-20 - 0950

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: Thermo  
 MODEL: VVA 1000 EQUIPMENT #: 12 SERIAL #: 1636246741  
 MONITORING DATE: 2-12-20 TIME: 0950

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>489</u> ppm	<u>439</u> ppm	<u>6</u>
#2	<u>500</u> ppm	<u>450</u> ppm	<u>6</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.48</u> ppm	<u>489</u> ppm	<u>51</u>
#2	<u>0.27</u> ppm	<u>500</u> ppm	<u>0</u>
#3	<u>0.14</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.73</u> #DIV/0! Must be less than 10%

Performed By: AARON McBRIDE Date/Time: 2-12-20-0950

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HERNO  
 MODEL: LVA 1000 EQUIPMENT #: 13 SERIAL #: 1102746775  
 MONITORING DATE: 2-2-20 TIME: 0950

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>507</u> ppm	<u>457</u> ppm	<u>5</u>
#2	<u>498</u> ppm	<u>448</u> ppm	<u>5</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.37</u> ppm	<u>507</u> ppm	<u>7</u>
#2	<u>0.20</u> ppm	<u>498</u> ppm	<u>2</u>
#3	<u>0.19</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.60</u> #DIV/0! Must be less than 10%

Performed By: ERNEST R. G. RIVERA Date/Time: 2-2-20 - 0950

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INSTANTANEOUS**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: Thermo  
 MODEL: LVA1000 EQUIPMENT #: 15 SERIAL #: 1036346772  
 MONITORING DATE: 2-12-20 TIME: 0950

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 500 ppm
3. Adjust meter settings to read 500 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>492</u> ppm	<u>442</u> ppm	<u>7</u>
#2	<u>501</u> ppm	<u>451</u> ppm	<u>7</u>
#3	<u>500</u> ppm	<u>450</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>6.21</u> ppm	<u>492</u> ppm	<u>8</u>
#2	<u>6.16</u> ppm	<u>501</u> ppm	<u>1</u>
#3	<u>0.11</u> ppm	<u>500</u> ppm	<u>0</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{500} \times \frac{100}{1}$		<u>0.60</u> #DIV/0! Must be less than 10%

Performed By: Omarrp829677 Date/Time: 2-12-20 - 0950

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HERO  
 MODEL: FVA1000 EQUIPMENT #: 10 SERIAL #: 1036346773  
 MONITORING DATE: 2-11-20 TIME: 1255

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value:  (Upwind + Downwind) 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>23</u> ppm	<u>20.7</u> ppm	<u>6</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.32</u> ppm	<u>23</u> ppm	<u>2</u>
#2	<u>0.14</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.07</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$			<u>2.6</u> #DIV/0! Must be less than 10%

Performed By: LEIGH WADSWORTH Date/Time: 2-11-20 1255

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: KITCORMO  
 MODEL: LVA1000 EQUIPMENT #: 11 SERIAL #: 1036346774  
 MONITORING DATE: 2-11-20 TIME: 1255

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>7</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.24</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.14</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.06</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>1.3</u> #DIV/0! Must be less than 10%

Performed By: Anthony Perrella Date/Time: 2-11-20-1255

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED**

LANDFILL NAME: K.R.D.Y INSTRUMENT MAKE: HERRO  
 MODEL: LVA1000 EQUIPMENT #: 12 SERIAL #: 1036246741  
 MONITORING DATE: 2-11-20 TIME: 1255

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	<u>0.39</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.20</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.16</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision $\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$			<u>2.6</u> #DIV/0! Must be less than 10%

Performed By: ARON MCBRIDE Date/Time: 2-11-20-1255



**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED**

LANDFILL NAME: KRBY INSTRUMENT MAKE: HiRa  
 MODEL: LVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775  
 MONITORING DATE: 2-11-20 TIME: 1255

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value:  (Upwind + Downwind) 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>7</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.32</u> ppm	<u>24</u> ppm	<u>7</u>
#2	<u>0.19</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.14</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>1.3</u> #DIV/0! Must be less than 10%

Performed By: BRNOST R5012050 Date/Time: 2-11-20-1255

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED**

LANDFILL NAME: K.RBY INSTRUMENT MAKE: HERNO  
 MODEL: LVA1000 EQUIPMENT #: 15 SERIAL #: 1036346772  
 MONITORING DATE: 2-11-20 TIME: 1255

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>23</u> ppm	<u>20.7</u> ppm	<u>6</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>6</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.45</u> ppm	<u>23</u> ppm	<u>2</u>
#2	<u>0.26</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.14</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>4.0</u> #DIV/0! Must be less than 10%

Performed By: OMAR PEREZ LLA Date/Time: 2-11-20-1255

**CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HiTen 20  
 MODEL: LuA1000 EQUIPMENT #: 10 SERIAL #: 1036346773  
 MONITORING DATE: 2-12-20 TIME: 0555

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>5</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.45</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.26</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.21</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>2.6</u> #DIV/0! Must be less than 10%

Performed By: COUGH W 10/2 Date/Time: 2-12-20-0555

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KIRBY INSTRUMENT MAKE: HERRO  
 MODEL: LVA1000 EQUIPMENT #: 11 SERIAL #: 1036346774  
 MONITORING DATE: 2-12-20 TIME: 0555

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>23</u> ppm	<u>20.7</u> ppm	<u>&gt;</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>&gt;</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>&gt;</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>&gt;</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.51</u> ppm	<u>23</u> ppm	<u>2</u>
#2	<u>0.45</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.26</u> ppm	<u>25</u> ppm	<u>8</u>
Calculate Precision	$\frac{[\text{STD-B1}] + [\text{STD-B2}] + [\text{STD-B3}]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>4.0</u> #DIV/0! Must be less than 10%

Performed By: ANTHONY PERALTA Date/Time: 2-12-20 - 0555

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: KROY INSTRUMENT MAKE: HERNO  
 MODEL: FVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775  
 MONITORING DATE: 2-12-20 TIME: 0555

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>6</u>
#2	<u>24</u> ppm	<u>21.6</u> ppm	<u>6</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>6</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>6</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.21</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.15</u> ppm	<u>24</u> ppm	<u>1</u>
#3	<u>0.11</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>.2.6</u> #DIV/0! Must be less than 10%

Performed By: AARON MCBRIDE Date/Time: 2-12-20-0555

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: K.R.O.Y INSTRUMENT MAKE: Herao  
 MODEL: fvA1000 EQUIPMENT #: 12 SERIAL #: 1036246741  
 MONITORING DATE: 2-12-20 TIME: 0555

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>24</u> ppm	<u>21.6</u> ppm	<u>7</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>7</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>7</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.18</u> ppm	<u>24</u> ppm	<u>1</u>
#2	<u>0.12</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.09</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>1.3</u> #DIV/0! Must be less than 10%

Performed By: BRUNSK RAMIREZ Date/Time: 2-12-20-0555

**CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED**

LANDFILL NAME: K.R.B.Y INSTRUMENT MAKE: HERNO  
 MODEL: 4VA1000 EQUIPMENT #: 15 SERIAL #: 1036346772  
 MONITORING DATE: 2-12-20 TIME: 0555

**Calibration Procedure:**

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 25 ppm
3. Adjust meter settings to read 25 ppm.

**Background Determination Procedure**

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: <u>(Upwind + Downwind)</u> 2
<u>1.6</u> ppm	<u>2.2</u> ppm	<u>1.9</u> ppm

Background Value = 1.9 ppm

**INSTRUMENT RESPONSE TIME RECORD**

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	<u>23</u> ppm	<u>20.7</u> ppm	<u>5</u>
#2	<u>25</u> ppm	<u>22.5</u> ppm	<u>5</u>
#3	<u>25</u> ppm	<u>22.5</u> ppm	<u>5</u>
Calculate Response Time $\frac{(1+2+3)}{3}$			<u>5</u> #DIV/0! Must be less than 30 seconds

**CALIBRATION PRECISION RECORD**

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD - (B)]
#1	<u>0.45</u> ppm	<u>23</u> ppm	<u>2</u>
#2	<u>0.22</u> ppm	<u>25</u> ppm	<u>0</u>
#3	<u>0.14</u> ppm	<u>25</u> ppm	<u>0</u>
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		<u>2.6</u> #DIV/0! Must be less than 10%

Performed By: OMAR P BACTA Date/Time: 2-12-20-0555

# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Date: 02/19/20

Time:        AM 4:00 PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.  
Stable Reading = 500 ppm
3. Adjust meter to read 500 ppm.

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 0 ppm (a)
2. Downwind Reading (highest in 30 seconds): 0 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{0} \text{ ppm}$$

Performed by: Markus Bernard



# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Canyon Recycling & Disposal Date: 3/10/2020

Time: \_\_\_\_\_ AM 13:07 PM

Instrument Make: Thermo Scientific Model: TVA 1000B S/N: 092853411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.

Stable Reading = 494 ppm

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 3.26 ppm (a)
2. Downwind Reading (highest in 30 seconds): 7.43 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{6.97} \text{ ppm}$$

Performed By: RREED

# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Canyon Recycling & Disposal Date: 3/11/2020

Time: 09:50 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000B S/N: 092853411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.

Stable Reading = 496 ppm

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 0.11 ppm (a)
2. Downwind Reading (highest in 30 seconds): 2.88 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{1.5} \text{ ppm}$$

Performed By: RREED

# CALIBRATION PRECISION TEST RECORD

Date: 2/19/20

Expiration Date (3 months): 5/19/20

Time: 10:30 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 B S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 499 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

1 % (must be < than 10%)

Performed By: Markus Bernard

# RESPONSE TIME TEST RECORD

Date: 2/19/2020

Expiration Date (3 months): 5/19/2020

Time: 10:30 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 B S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 499 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 496 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{3} \text{ seconds (must be less than 30 seconds)}$$

Performed By: Markus Bernard



**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: \_\_\_\_\_ *M M*

Date: 2-8-20 Time: 0900

Model # TVA 1000 B

Serial # #10 1036346773

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<u>Pass</u> / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.1</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<u>Pass</u> / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<u>Pass</u> / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<u>Pass</u> / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>1-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<u>Pass</u> / Fail	Time required to attain 90% of Cal Gas ppm		
		1. <u>6</u>		
		2. <u>7</u>		
		3. <u>9</u>		
		Average <u>7.3</u>		
		Equal to or less than 30 seconds?	<input checked="" type="checkbox"/>	N
		Instrument calibrated to <u>C<sub>4</sub>H<sub>4</sub></u> gas.		

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## SURFACE EMISSION MONITORING INSTRUMENT CALIBRATION LOG

Site: \_\_\_\_\_  
 Purpose: \_\_\_\_\_  
 Operator:                     *MS*                      
 Date:           2-8-20                     Time:           0915                    

Model #           7VA 1000B                      
 Serial #           #11 1036346 774                    

INSTRUMENT INTEGRITY CHECKLIST	INSTRUMENT CALIBRATION																				
Battery test <span style="float: right;"><u>Pass</u> / Fail</span> Reading following ignition <span style="float: right;"><u>2.3</u> ppm</span> Leak test <span style="float: right;"><u>Pass</u> / Fail / NA</span> Clean system check (check valve chatter) <span style="float: right;"><u>Pass</u> / Fail / NA</span> H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12) <span style="float: right;"><u>Pass</u> / Fail / NA</span> Date of last factory calibration <span style="float: right;"><u>1-3-20</u></span> Factory calibration record w/instrument within 3 months <span style="float: right;"><u>Pass</u> / Fail</span>	<div style="text-align: center;"><b>CALIBRATION CHECK</b></div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">Calibration Gas (ppm)</td> <td style="width: 33%; text-align: center;">Actual (ppm)</td> <td style="width: 33%; text-align: center;">% Accuracy</td> </tr> <tr> <td style="text-align: center;"><u>500</u></td> <td style="text-align: center;"><u>500</u></td> <td style="text-align: center;"><u>100%</u></td> </tr> </table> <div style="text-align: center; margin-top: 10px;"><b>RESPONSE TIME</b></div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Calibration Gas, ppm</td> <td style="text-align: center;"><u>500</u></td> </tr> <tr> <td>90% of Calibration Gas, ppm</td> <td style="text-align: center;"><u>450</u></td> </tr> <tr> <td colspan="2">Time required to attain 90% of Cal Gas ppm</td> </tr> <tr> <td>1.</td> <td style="text-align: center;"><u>8</u></td> </tr> <tr> <td>2.</td> <td style="text-align: center;"><u>6</u></td> </tr> <tr> <td>3.</td> <td style="text-align: center;"><u>6</u></td> </tr> <tr> <td>Average</td> <td style="text-align: center;"><u>6.6</u></td> </tr> </table> <p>Equal to or less than 30 seconds? <span style="float: right;"><u>Y</u>    N</span>            Instrument calibrated to <u>CH<sub>4</sub></u> gas.</p>	Calibration Gas (ppm)	Actual (ppm)	% Accuracy	<u>500</u>	<u>500</u>	<u>100%</u>	Calibration Gas, ppm	<u>500</u>	90% of Calibration Gas, ppm	<u>450</u>	Time required to attain 90% of Cal Gas ppm		1.	<u>8</u>	2.	<u>6</u>	3.	<u>6</u>	Average	<u>6.6</u>
Calibration Gas (ppm)	Actual (ppm)	% Accuracy																			
<u>500</u>	<u>500</u>	<u>100%</u>																			
Calibration Gas, ppm	<u>500</u>																				
90% of Calibration Gas, ppm	<u>450</u>																				
Time required to attain 90% of Cal Gas ppm																					
1.	<u>8</u>																				
2.	<u>6</u>																				
3.	<u>6</u>																				
Average	<u>6.6</u>																				

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: REN Not

Date: 2-8-20 Time: 0930

Model # TJA1000B

Serial # #17 1036246741

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="radio"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.0</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="radio"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="radio"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="radio"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>1-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="radio"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>9</u>	
		2.	<u>9</u>	
		3.	<u>6</u>	
		Average	<u>8.0</u>	
		Equal to or less than 30 seconds?	<input checked="" type="radio"/> Y	N
		Instrument calibrated to	<u>CH<sub>4</sub></u> gas.	

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: MM

Date: 2-8-20

Time: 0945

Model # YUA 1000 B

Serial # #13 1102746775

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="checkbox"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.1</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="checkbox"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="checkbox"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="checkbox"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>1-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="checkbox"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>6</u>	
		2.	<u>8</u>	
		3.	<u>8</u>	
		Average	<u>7.3</u>	
		Equal to or less than 30 seconds?	<input checked="" type="checkbox"/>	N
		Instrument calibrated to	<u>C64</u>	gas.

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SURFACE EMISSION MONITORING INSTRUMENT  
 CALIBRATION LOG**

Site: \_\_\_\_\_

Purpose: \_\_\_\_\_

Operator: MM

Date: 2-8-20 Time: 1015

Model # TVA 1000 B

Serial # #15 1036346772

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	<input checked="" type="checkbox"/> Pass / Fail	CALIBRATION CHECK		
Reading following ignition	<u>2.3</u> ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	<input checked="" type="checkbox"/> Pass / Fail / NA	<u>500</u>	<u>500</u>	<u>100%</u>
Clean system check (check valve chatter)	<input checked="" type="checkbox"/> Pass / Fail / NA	RESPONSE TIME		
H <sub>2</sub> supply pressure gauge (acceptable range 9.5 - 12)	<input checked="" type="checkbox"/> Pass / Fail / NA	Calibration Gas, ppm	<u>500</u>	
Date of last factory calibration	<u>1-3-20</u>	90% of Calibration Gas, ppm	<u>450</u>	
Factory calibration record w/instrument within 3 months	<input checked="" type="checkbox"/> Pass / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	<u>6</u>	
		2.	<u>7</u>	
		3.	<u>7</u>	
		Average	<u>6.6</u>	
		Equal to or less than 30 seconds?	<input checked="" type="checkbox"/>	N
		Instrument calibrated to	<u>CH<sub>4</sub></u> gas.	

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**TVA1000B CALIBRATION VERIFICATION**  
**Environmental Inc.**

CUSTOMER: RES UNIT #10

SERIAL NUMBER: 1036346773

TECHNICIAN: JM DATE: 1-3-20

**GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)**

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,001	+/- 2500
< 1	ZERO GAS	0.53	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# TVA1000B CALIBRATION VERIFICATION

Environmental Inc.

CUSTOMER: RES UNIT #11

SERIAL NUMBER: 1036346774

TECHNICIAN: MM DATE: 1-3-20

### GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	99	+/- 25
500	500	500	+/- 125
10000	10000	10,021	+/- 2500
< 1	ZERO GAS	0.56	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# TVA1000B CALIBRATION VERIFICATION

Environmental Inc.

CUSTOMER: RES UNIT #12

SERIAL NUMBER: 1036246741

TECHNICIAN: MM DATE: 1-3-20

### GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	499	+/- 125
10000	10000	10,001	+/- 2500
< 1	ZERO GAS	0.57	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



**TVA1000B CALIBRATION VERIFICATION**  
**Environmental Inc.**

CUSTOMER: RES unit # 13

SERIAL NUMBER: 1102746775

TECHNICIAN: JM M DATE: 1-3-20

**GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)**

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.67	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# TVA1000B CALIBRATION VERIFICATION

**Environmental Inc.**

CUSTOMER: RES UNIT #15

SERIAL NUMBER: 1036346772

TECHNICIAN: MM

DATE: 1-3-20

### GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	101000	+/- 2500
< 1	ZERO GAS	0.73	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50	/	+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology.



# INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

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## CERTIFICATE OF ANALYSIS

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<u>Composition</u>	<u>Certification</u>	<u>Analytical Accuracy</u>
Air - Zero		
THC	< 2 PPM	
Oxygen	20.9%	± 2%
Nitrogen	Balance	

<b>Lot #</b>	<b>19-6779</b>
--------------	----------------

Mfg. Date: 4/3/2019  
Parent Cylinder ID Number: 001739, 02268

### Method of Preparation:

Gravimetric/Pressure Transfilled

### Method of Analysis:

This mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart  
Quality Assurance Manager  
800-552-5003  
Certificate Date: 4/3/2019



Supply & Service

Concentration (Mole%) Accuracy

- 20.9% Oxygen  
- Bal. Nitrogen

3.6% @ 70°F and 1,000 PSIG

Exp Date  
6/26/2022



103 L

291 Kaiser Avenue, Irvine, CA 92614  
949-4353 or (800) 201-8150 Fax (949) 757-0363

20.9% Nitrogen  
(Zero)

103 L

COA



Lot #  
19-6779

1033 NRC 1100/1500



# INTERMOUNTAIN SPECIALTY GASES

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## CERTIFICATE OF ANALYSIS

---

<u>Composition</u>	<u>Certification</u>	<u>Analytical Accuracy</u>
Methane	25 ppm	± 5%
Air	Balance	

<b>Lot #</b>	<b>17-6074</b>
--------------	----------------

Mfg. Date: 10/16/2017

Parent Cylinder ID Number: 17161

### Method of Preparation:

Gravimetric/Pressure Transfilled

### Method of Analysis:

The parent mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart  
Quality Assurance Manager

800-552-5003

Certificate Date: 10/16/2017

Supply Service INC.

Concentration (Mole%) Accuracy  
+/- 5%  
- 25 ppm  
- Balance

3.6% @ 70°F and 1,000 PSIG

Exp Date  
11/7/2023

Lot#: 17-6074

P/N:23-0025

103 L

Kaiser Avenue, Irvine, CA 92614  
or (800) 201-8150 Fax (949) 757-0363

Methane



CONTAINS GAS UNDER PRESSURE

Read label before use. Use label at hand. Use appropriate

Do not handle until all safety protective gloves, goggles

Use a back flow prevention slowly. Close valve after use sunlight when ambient

Dispose of contents and container

DO NOT REMOVE THIS LABEL

Federal law forbids transportation 5124). Federal law prohibits

103-23-0025

Methane 25 ppm/  
Oxygen 20.9%/ Nitrogen

103 L

Lot #  
17-6074

COA



2 of 5

DOT SP 114

1102



# INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

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## CERTIFICATE OF ANALYSIS

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Composition

Methane

Air

Certification

500 ppm

Balance

Analytical Accuracy

± 2%

<b>Lot #</b>	<b>19-6955</b>
--------------	----------------

Mfg. Date: 7/24/2019

Parent Cylinder ID  
Number: 001763

**Method of Preparation:**

Gravimetric/Pressure Transfilled

**Method of Analysis:**

The parent mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart  
Quality Assurance Manager

800-552-5003

Certificate Date: 7/24/2019

Pro Supply & Service  
INC.

**Concentration (Mole%) Accuracy**  
+/- 2%  
(CH<sub>4</sub>) - 500 ppm  
Balance

Warning



Keep away from heat,  
Do not use for...  
Do not handle...  
Do not...  
DO NOT...  
Federal...  
5525, Federal...

Pressure: 3.6ft<sup>3</sup> @ 70°F and 1,000 PSIG

Exp Date  
11/7/2023

Lot#: 19-6955  
P/N: 23-0500

**103 L**

171 Kaiser Avenue, Irvine, CA 92614  
949-4353 or (800) 201-8150 Fax (949) 757-0363

103-23-0500

Methane 500 ppm/  
Oxygen 20.9% / Nitrogen

**103 L**



Lot #  
19-6955

DOT SP 11323 NRC 1100/1505M-1102  
TC 5... 1104

## **APPENDIX G**

### **COMPONENT LEAK CHECK REPORTS**

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA  
FIRST QUARTER 2020 LFG COMPONENT LEAK MONITORING**

INSTRUMENT FID  
 MAKE: Photo Scientific  
 MODEL: TVA 1000  
 S/N: 1036346773

DATES OF SAMPLING: February 12, 2020

FIELD TECHNICIANS: Leigh Wade

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
<b>NO EXCEEDANCES WERE DETECTED DURING THE FIRST QUARTER 2020 MONITORING EVENT</b>							
In the event that an exceedance is detected, please initiate corrective action and re-monitor the exceedance location within 7 days of the initial exceedance.							
NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).							
NOTE: Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.							
ND = Not Detected							

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA  
 SECOND QUARTER 2020 LFG COMPONENT LEAK MONITORING**

INSTRUMENT FID  
 MAKE: Photo Scientific  
 MODEL: TVA 1000  
 S/N: 1036346773

DATES OF SAMPLING: June 2, 2020  
 FIELD TECHNICIANS: Leigh Wade

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
<b>NO EXCEEDANCES WERE DETECTED DURING THE SECOND QUARTER 2020 MONITORING EVENT</b>							
In the event that an exceedance is detected, please initiate corrective action and re-monitor the exceedance location within 7 days of the initial exceedance.							
NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).							
NOTE: Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.							
ND = Not Detected							



## **APPENDIX H**

### **MONTHLY SOLID WASTE PLACEMENT TOTALS**

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

**Solid Waste Placement Totals**

January 1, 2020 through June 30, 2020

January	Disposed	February	Disposed	March	Disposed	April	Disposed	May	Disposed	June	Disposed
Total in Tons	19,442		18,590		16,459		12,702		21,553		20,436

Total Disposed      January 1, 2020 through June 30, 2020      **109,182**

## **APPENDIX I**

### **WELLFIELD MONITORING LOGS**

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -January 10, 14, 17, 20, and 28, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCLC0108	1/17/2020 15:04	43.7	35.8	0.4	20.1	89.0	90.0	-24.4	-21.3
KCLC0109	1/17/2020 14:56	50.9	39.0	0.0	10.1	101.0	102.0	-45.9	-45.5
KCLC0110	1/17/2020 14:51	51.5	39.7	0.0	8.8	114.0	115.0	-45.0	-45.2
KCLC0111	1/17/2020 15:29	54.1	41.4	0.0	4.5	108.0	108.0	-44.9	-44.9
KCLC0112	1/17/2020 15:36	49.9	39.9	0.0	10.2	114.0	114.0	-39.3	-39.1
KCLC0139	1/14/2020 20:46	55.6	44.3	0.0	0.1	112.0	113.0	-3.3	-3.6
KCLC0140	1/14/2020 20:43	54.9	44.1	0.0	1.0	104.0	104.0	-1.4	-2.1
KCLC0141	1/14/2020 18:19	55.5	43.4	0.0	1.1	95.0	95.0	-1.8	-2.7
KCLC0142	1/17/2020 20:10	14.3	24.3	0.0	61.4	103.0	102.0	-0.7	-0.2
KCLC0143	1/17/2020 20:19	31.6	40.8	0.0	27.6	101.0	101.0	-0.5	-0.2
KCLC0144	1/17/2020 18:23	56.2	43.7	0.0	0.1	90.0	93.0	-17.9	-36.3
KCLC0145	1/17/2020 18:37	52.6	47.3	0.0	0.1	87.0	89.0	-4.2	-27.7
KCLC0146	1/17/2020 18:28	54.8	45.1	0.0	0.1	86.0	86.0	-5.4	-8.0
KCLC0147	1/10/2020 14:16	52.9	47.0	0.0	0.1	82.0	82.0	-5.4	-8.6
KCLC0148	1/17/2020 18:42	54.4	45.5	0.0	0.1	68.0	63.0	-7.1	-32.8
KCLC0149	1/17/2020 18:47	50.9	49.0	0.0	0.1	99.0	101.0	-1.3	-16.1
KCLC0150	1/17/2020 18:32	56.5	43.4	0.0	0.1	83.0	85.0	-18.3	-34.3
KCLC0151	1/10/2020 14:11	52.0	47.9	0.0	0.1	89.0	90.0	-0.7	-0.5
KCLC0152	1/20/2020 18:32	55.2	44.7	0.0	0.1	60.0	60.0	0.2	0.3
KCLC0152	1/20/2020 18:32	55.2	44.7	0.0	0.1	60.0	50.0	0.2	0.4
KCYN0014	1/17/2020 15:09	40.0	31.7	0.0	28.3	102.0	102.0	-10.1	-8.8
KCYN0027	1/14/2020 17:23	40.2	33.6	2.4	23.8	113.0	109.0	-25.1	-15.0
KCYN0037	1/14/2020 19:41	50.9	43.2	0.0	5.9	104.0	104.0	-4.6	-4.6
KCYN0048	1/17/2020 17:51	38.6	35.0	0.0	26.4	126.0	126.0	-2.0	-1.5
KCYN0051	1/14/2020 19:31	40.8	40.0	0.0	19.2	118.0	118.0	-30.6	-27.8
KCYN0054	1/14/2020 18:24	44.4	35.3	2.5	17.8	103.0	103.0	-3.7	-2.7
KCYN0056	1/14/2020 20:05	48.6	46.8	0.0	4.6	124.0	125.0	-9.2	-9.3
KCYN0057	1/14/2020 20:15	38.6	37.9	0.0	23.5	137.0	135.0	-9.7	-6.2
KCYN0058	1/14/2020 16:07	CO was 0 ppm							
KCYN0058	1/14/2020 20:28	49.5	42.9	0.0	7.6	131.0	131.0	-4.5	-4.5
KCYN0058	1/28/2020 16:06	53.2	44.0	0.0	2.8	131.0	131.0	-3.8	-4.7
KCYN0058	1/28/2020 16:40	CO was 0 ppm							
KCYN0062	1/14/2020 16:08	55.5	41.8	0.0	2.7	122.0	122.0	-1.8	-2.4
KCYN0063	1/14/2020 16:04	56.7	41.5	0.0	1.8	116.0	117.0	-0.9	-1.3
KCYN0065	1/14/2020 18:34	55.7	44.2	0.0	0.1	80.0	88.0	-0.6	-2.0
KCYN0066	1/17/2020 17:58	54.3	41.2	0.0	4.5	129.0	128.0	-12.9	-14.7
KCYN0070	1/17/2020 19:04	48.0	37.9	0.0	14.1	115.0	115.0	-5.0	-5.0
KCYN0071	1/14/2020 16:46	44.6	36.3	0.0	19.1	130.0	131.0	-12.3	-10.6
KCYN0072	1/14/2020 16:12	51.5	38.7	0.0	9.8	113.0	113.0	-2.7	-2.6
KCYN0074	1/17/2020 19:16	55.7	42.4	0.0	1.9	129.0	127.0	-43.4	-43.4
KCYN0075	1/14/2020 19:58	54.3	44.3	0.0	1.4	136.0	136.0	-32.7	-32.7
KCYN0076	1/15/2020 20:12	56.0	43.9	0.0	0.1	133.0	134.0	-10.7	-11.9
KCYN0078	1/14/2020 17:08	47.0	37.8	0.0	15.2	134.0	134.0	-31.9	-31.8
KCYN0082	1/14/2020 19:13	30.6	33.3	0.0	36.1	110.0	111.0	-6.0	-2.7
KCYN0083	1/14/2020 19:22	25.3	31.9	0.0	42.8	114.0	112.0	-11.1	-2.8
KCYN0084	1/20/2020 18:18	52.8	41.3	0.0	5.9	119.0	119.0	-1.4	-1.4
KCYN0086	1/15/2020 20:54	56.1	43.8	0.0	0.1	134.0	133.0	-30.3	-31.0
KCYN0087	1/17/2020 20:34	45.5	40.1	0.0	14.4	139.0	139.0	-13.6	-13.3

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -January 10, 14, 17, 20, and 28, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0088	1/20/2020 17:02	52.0	38.3	0.0	9.7	112.0	112.0	-40.9	-39.5
KCYN0089	1/15/2020 19:58	55.6	40.0	0.0	4.4	143.0	140.0	-20.8	-19.9
KCYN0090	1/17/2020 20:48	43.5	35.4	0.0	21.1	106.0	107.0	-39.2	-39.4
KCYN0091	1/15/2020 19:53	56.3	43.6	0.0	0.1	132.0	132.0	-9.9	-9.8
KCYN0092	1/17/2020 13:38	CO was 5 ppm							
KCYN0092	1/17/2020 19:27	49.9	38.3	0.0	11.8	131.0	132.0	-37.4	-36.5
KCYN0092	1/20/2020 14:57	CO was 0 ppm							
KCYN0092	1/20/2020 18:42	49.7	38.7	0.0	11.6	128.0	130.0	-34.1	-34.1
KCYN0092	1/20/2020 18:43	49.7	38.7	0.0	11.6	128.0	128.0	-34.1	-34.3
KCYN0093	1/14/2020 16:28	50.6	39.8	0.0	9.6	128.0	129.0	-4.0	-4.0
KCYN0093	1/17/2020 19:31	56.9	42.6	0.0	0.5	126.0	127.0	-7.8	-11.6
KCYN0094	1/17/2020 20:42	45.7	37.5	0.0	16.8	119.0	120.0	-12.8	-12.8
KCYN0095	1/15/2020 19:45	55.3	41.2	0.0	3.5	125.0	125.0	-41.2	-41.6
KCYN0097	1/17/2020 19:09	48.3	39.1	0.0	12.6	123.0	123.0	-13.9	-13.9
KCYN0098	1/15/2020 19:38	51.0	40.4	0.0	8.6	131.0	131.0	-5.7	-5.7
KCYN0099	1/20/2020 16:52	51.6	40.9	0.0	7.5	129.0	127.0	-5.1	-5.1
KCYN0101	1/14/2020 16:56	46.9	36.2	0.0	16.9	103.0	103.0	-1.4	-1.4
KCYN0102	1/20/2020 17:08	51.8	39.0	0.0	9.2	63.0	63.0	-0.8	-0.8
KCYN0103	1/14/2020 16:51	33.2	32.4	0.0	34.4	121.0	121.0	-11.0	-10.5
KCYN0105	1/17/2020 14:48	57.6	41.6	0.0	0.8	110.0	111.0	-41.5	-41.1
KCYN0106	1/17/2020 14:41	56.9	42.0	0.0	1.1	105.0	105.0	-43.5	-43.7
KCYN0118	1/15/2020 20:31	54.4	42.2	0.0	3.4	118.0	118.0	-36.9	-37.2
KCYN0119	1/15/2020 19:50	CO was 0 ppm							
KCYN0119	1/15/2020 20:25	42.3	37.3	0.0	20.4	131.0	132.0	-17.3	-14.7
KCYN0119	1/17/2020 17:35	44.3	37.0	0.0	18.7	131.0	132.0	-13.4	-13.3
KCYN0119	1/17/2020 19:39	CO was 10 ppm							
KCYN0120	1/15/2020 20:19	45.1	40.1	0.0	14.8	137.0	138.0	-32.4	-29.1
KCYN0121	1/15/2020 20:34	51.5	41.6	0.0	6.9	118.0	119.0	-38.5	-38.4
KCYN0122	1/15/2020 20:27	56.7	43.2	0.0	0.1	106.0	107.0	-40.1	-37.6
KCYN0123	1/14/2020 20:10	41.6	45.5	0.0	12.9	122.0	123.0	-8.2	-3.4
KCYN0124	1/14/2020 19:24	25.5	33.9	0.4	40.2	102.0	102.0	-1.8	-1.6
KCYN0125	1/14/2020 18:30	55.2	44.7	0.0	0.1	120.0	120.0	-5.0	-9.0
KCYN0126	1/14/2020 19:07	49.7	44.3	0.0	6.0	116.0	116.0	-8.6	-8.5
KCYN0127	1/14/2020 20:23	39.7	36.5	0.0	23.8	119.0	118.0	-2.2	-2.0
KCYN0128	1/17/2020 20:31	42.3	38.3	0.0	19.4	134.0	134.0	-30.4	-26.4
KCYN0129	1/10/2020 14:35	57.2	42.7	0.0	0.1	120.0	121.0	-28.3	-29.6
KCYN0130	1/17/2020 15:18	47.2	37.8	0.0	15.0	115.0	89.0	-13.3	-13.1
KCYN0131	1/17/2020 15:25	56.8	41.8	0.0	1.4	110.0	111.0	-44.0	-44.1
KCYN0133	1/20/2020 16:55	55.2	44.7	0.0	0.1	125.0	126.0	-10.3	-13.8
KCYN0134	1/14/2020 17:12	45.5	38.1	0.0	16.4	110.0	110.0	-16.9	-16.9
KCYN0135	1/14/2020 17:18	46.2	40.2	0.0	13.6	128.0	128.0	-27.4	-27.3
KCYNLR04	1/20/2020 18:15	51.0	37.0	0.1	11.9	99.0	99.0	-34.7	-34.5
KCYNLR08	1/20/2020 16:38	57.4	38.8	0.0	3.8	80.0	80.0	-52.9	-54.1

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -January 10, 14, 17, 20, and 28, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYNLR11	1/14/2020 15:53	45.9	32.6	3.6	17.9	65.0	65.0	-42.8	-42.8

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58, 65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120, 128 and 135. Wells 56, 75, 76, 87, 89, and 120, are approved to operate at a temperature HOV of 156°F .

As of January 31, 2020, there are 77 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -February 1, 4, 5, 8, 26 and 27, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCLC0108	2/1/2020 11:48	50.9	37.9	0.2	11.0	92.0	92.0	-16.8	-20.1
KCLC0109	2/1/2020 12:02	54.4	39.9	0.0	5.7	102.0	102.0	-41.5	-41.4
KCLC0110	2/1/2020 12:08	53.2	40.3	0.0	6.5	114.0	115.0	-40.1	-40.3
KCLC0111	2/1/2020 12:50	56.0	42.0	0.0	2.0	109.0	109.0	-39.3	-39.3
KCLC0112	2/1/2020 12:31	53.1	41.3	0.0	5.6	114.0	115.0	-26.7	-26.7
KCLC0139	2/8/2020 13:08	55.0	44.9	0.0	0.1	114.0	114.0	-4.6	-5.0
KCLC0140	2/8/2020 13:04	49.8	42.2	0.0	8.0	108.0	108.0	-2.4	-2.7
KCLC0141	2/8/2020 12:50	54.1	40.9	0.0	5.0	97.0	97.0	-3.1	-4.6
KCLC0142	2/8/2020 12:34	42.1	30.9	0.0	27.0	99.0	99.0	-0.2	-0.1
KCLC0143	2/8/2020 13:55	55.7	44.2	0.0	0.1	66.0	71.0	-0.1	-0.4
KCLC0144	2/8/2020 16:56	57.4	42.5	0.0	0.1	67.0	66.0	-29.6	-31.2
KCLC0144	2/8/2020 16:57	57.4	42.5	0.0	0.1	67.0	65.0	-29.6	-31.0
KCLC0145	2/1/2020 16:33	35.8	35.6	0.0	28.6	91.0	92.0	-17.6	-17.3
KCLC0146		Offline for filling							
KCLC0147	2/1/2020 16:19	54.4	45.5	0.0	0.1	89.0	89.0	-17.3	-21.6
KCLC0148	2/1/2020 16:37	45.3	39.9	0.0	14.8	86.0	87.0	-10.4	-10.6
KCLC0148	2/1/2020 16:38	45.2	39.8	0.0	15.0	84.0	84.0	-27.0	-27.2
KCLC0149	2/8/2020 17:18	22.6	30.5	0.3	46.6	115.0	117.0	-22.1	-3.6
KCLC0150	2/1/2020 16:28	56.3	43.6	0.0	0.1	86.0	86.0	-19.3	-19.4
KCLC0151	2/1/2020 16:09	53.1	46.8	0.0	0.1	102.0	103.0	-1.9	-1.7
KCLC0152	2/4/2020 15:42	56.6	43.3	0.0	0.1	90.0	91.0	-3.4	-3.5
KCYN0014	2/1/2020 11:56	42.1	31.7	0.0	26.2	102.0	103.0	-7.5	-7.3
KCYN0027	2/4/2020 16:24	57.4	42.5	0.0	0.1	102.0	106.0	-4.8	-7.0
KCYN0037	2/8/2020 13:30	43.0	38.3	0.6	18.1	106.0	106.0	-25.4	-25.5
KCYN0048	2/1/2020 13:44	49.4	39.1	0.0	11.5	123.0	124.0	-0.9	-1.6
KCYN0051	2/8/2020 13:43	46.3	41.0	0.0	12.7	117.0	118.0	-25.9	-25.6
KCYN0054	2/8/2020 12:55	57.1	42.8	0.0	0.1	98.0	102.0	-1.0	-8.1
KCYN0056	2/8/2020 13:39	52.2	45.5	0.0	2.3	124.0	124.0	-6.9	-6.9
KCYN0057	2/8/2020 16:14	51.5	41.0	0.0	7.5	123.0	124.0	-1.1	-1.2
KCYN0058	2/8/2020 16:09	53.3	44.8	0.0	1.9	130.0	131.0	-5.1	-5.9
KCYN0062	2/27/2020 12:27	48.2	38.1	0.0	13.7	122.0	122.0	-2.9	-2.9
KCYN0063	2/8/2020 17:42	48.5	39.1	0.0	12.4	117.0	117.0	-2.0	-2.0
KCYN0065	2/8/2020 13:00	56.3	43.6	0.0	0.1	92.0	92.0	-0.3	-1.2
KCYN0066	2/1/2020 13:24	49.8	39.8	0.0	10.4	129.0	129.0	-17.7	-18.2
KCYN0070	2/5/2020 15:34	49.4	38.3	0.0	12.3	115.0	115.0	-4.7	-4.7
KCYN0071	2/5/2020 16:35	48.1	38.7	0.0	13.2	132.0	132.0	-9.1	-9.1
KCYN0072	2/8/2020 17:49	50.3	39.4	0.0	10.3	113.0	113.0	-3.2	-3.3
KCYN0074	2/4/2020 16:12	54.2	42.1	0.0	3.7	133.0	134.0	-43.4	-43.6
KCYN0075	2/8/2020 13:35	55.3	44.6	0.0	0.1	138.0	139.0	-34.2	-34.2
KCYN0076	2/8/2020 17:23	56.4	43.3	0.0	0.3	137.0	137.0	-17.6	-18.0
KCYN0078	2/4/2020 16:39	45.2	38.1	0.0	16.7	135.0	135.0	-34.8	-34.6
KCYN0082	2/26/2020 17:10	44.7	38.7	0.0	16.6	108.0	108.0	-1.1	-0.7
KCYN0083	2/8/2020 12:37	49.6	37.6	0.0	12.8	93.0	94.0	-0.4	-1.0
KCYN0084	2/8/2020 14:02	48.4	40.4	0.0	11.2	122.0	122.0	-2.1	-2.1
KCYN0086	2/8/2020 16:48	56.2	43.7	0.0	0.1	135.0	135.0	-29.7	-30.0
KCYN0087	2/8/2020 16:41	47.6	41.3	0.0	11.1	139.0	139.0	-12.7	-11.4
KCYN0088	2/8/2020 17:35	54.1	39.8	0.0	6.1	112.0	113.0	-38.0	-40.7
KCYN0089	2/4/2020 17:04	53.3	41.0	0.0	5.7	137.0	138.0	-20.4	-21.3
KCYN0090	2/5/2020 16:23	43.2	36.0	0.0	20.8	109.0	109.0	-39.9	-39.9
KCYN0090	2/8/2020 17:32	43.0	35.9	0.0	21.1	107.0	104.0	-39.3	-37.9
KCYN0091	2/4/2020 17:14	54.2	42.3	0.0	3.5	132.0	136.0	-16.2	-16.8
KCYN0092	2/4/2020 16:00	49.5	38.5	0.0	12.0	132.0	132.0	-35.1	-34.5

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -February 1, 4, 5, 8, 26 and 27, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0092	2/4/2020 16:14	CO was 0 ppm							
KCYN0093	2/4/2020 16:18	39.6	36.4	0.0	24.0	128.0	129.0	-17.4	-14.9
KCYN0094	2/5/2020 16:09	44.3	37.8	0.0	17.9	123.0	124.0	-13.2	-12.7
KCYN0095	2/5/2020 16:15	56.0	40.6	0.0	3.4	125.0	126.0	-41.1	-40.9
KCYN0097	2/5/2020 15:41	46.0	38.1	0.0	15.9	122.0	122.0	-13.6	-13.6
KCYN0098	2/5/2020 15:53	47.1	39.1	0.0	13.8	135.0	135.0	-6.9	-6.9
KCYN0099	2/5/2020 15:27	45.1	38.6	0.0	16.3	128.0	130.0	-7.1	-7.1
KCYN0101	2/5/2020 16:45	52.4	38.0	0.0	9.6	98.0	98.0	-1.6	-1.5
KCYN0102	2/5/2020 16:30	53.0	39.8	0.0	7.2	89.0	89.0	-0.9	-1.1
KCYN0103	2/5/2020 16:40	52.1	40.0	0.0	7.9	110.0	115.0	-3.0	-3.3
KCYN0105	2/1/2020 12:14	57.8	42.1	0.0	0.1	112.0	112.0	-40.2	-40.4
KCYN0106	2/1/2020 12:25	57.4	42.4	0.0	0.2	93.0	95.0	-39.5	-39.6
KCYN0118	2/1/2020 14:01	55.3	41.6	0.0	3.1	119.0	119.0	-33.6	-33.2
KCYN0119	2/1/2020 14:11	51.8	39.5	0.0	8.7	129.0	130.0	-11.4	-13.1
KCYN0120	2/1/2020 14:17	42.5	34.2	3.1	20.2	70.0	70.0	-29.5	-28.3
KCYN0121	2/1/2020 13:51	57.1	42.8	0.0	0.1	117.0	118.0	-23.4	-23.5
KCYN0122	2/1/2020 14:06	57.5	42.4	0.0	0.1	108.0	108.0	-31.9	-32.6
KCYN0123	2/8/2020 16:05	53.1	43.2	0.0	3.7	121.0	122.0	-1.3	-1.5
KCYN0124	2/8/2020 13:48	40.5	37.5	0.0	22.0	93.0	93.0	-0.3	-0.3
KCYN0125	2/8/2020 13:18	55.8	43.8	0.0	0.4	120.0	121.0	-12.6	-12.7
KCYN0126	2/8/2020 13:13	50.5	43.8	0.0	5.7	116.0	117.0	-8.4	-8.4
KCYN0127	2/8/2020 16:22	51.5	40.2	0.0	8.3	116.0	116.0	-0.6	-0.6
KCYN0128	2/8/2020 16:18	51.0	42.0	0.0	7.0	133.0	133.0	-18.9	-18.9
KCYN0129	2/1/2020 16:05	57.5	42.4	0.0	0.1	119.0	120.0	-17.7	-17.4
KCYN0130	2/1/2020 13:05	47.3	36.8	0.0	15.9	115.0	116.0	-11.6	-11.6
KCYN0131	2/1/2020 12:56	57.7	42.1	0.0	0.2	119.0	120.0	-38.8	-38.8
KCYN0133	2/4/2020 16:33	48.4	40.0	0.0	11.6	126.0	126.0	-27.9	-27.9
KCYN0134	2/4/2020 16:46	45.2	38.4	0.0	16.4	110.0	110.0	-18.4	-18.4
KCYN0135	2/4/2020 16:52	46.9	40.3	0.0	12.8	128.0	129.0	-28.9	-28.9
KCYNLR04	2/8/2020 16:31	49.6	37.0	0.4	13.0	99.0	99.0	-34.6	-31.6
KCYNLR08	2/5/2020 15:19	57.1	38.9	0.0	4.0	82.0	82.0	-45.2	-53.3
KCYNLR11	2/1/2020 16:49	43.7	31.2	4.5	20.6	70.0	70.0	-40.6	-40.4

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58,65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120, 128 and 135. Wells As of February 29, 2020, there are 77 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -March 4, 18, 20, 23 and 25, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCLC0108	3/18/2020 15:22	44.2	36.2	0.0	19.6	88.0	88.0	-24.3	-24.3
KCLC0109	3/18/2020 15:17	55.2	40.5	0.0	4.3	98.0	98.0	-36.0	-36.0
KCLC0110	3/18/2020 15:11	54.4	40.8	0.0	4.8	115.0	116.0	-34.3	-34.3
KCLC0111	3/18/2020 15:41	56.5	42.4	0.0	1.1	102.0	102.0	-33.3	-33.3
KCLC0112	3/18/2020 15:45	52.4	41.3	0.0	6.3	115.0	115.0	-29.5	-29.4
KCLC0139	3/20/2020 16:19	55.3	44.6	0.0	0.1	114.0	114.0	-1.9	-2.9
KCLC0140	3/20/2020 16:24	53.7	43.0	0.0	3.3	108.0	108.0	-1.3	-3.1
KCLC0141	3/20/2020 15:45	47.8	39.1	0.0	13.1	97.0	97.0	-4.7	-4.7
KCLC0142	3/20/2020 14:17	32.1	29.4	0.0	38.5	94.0	95.0	-2.8	-0.1
KCLC0143	3/20/2020 15:58	30.4	36.7	0.0	32.9	71.0	71.0	-0.5	-0.6
KCLC0144	3/23/2020 17:35	49.0	50.9	0.0	0.1	66.0	66.0	-33.5	-33.8
KCLC0145	3/4/2020 16:11	46.9	41.5	0.0	11.6	92.0	93.0	-17.2	-22.3
KCLC0146	Offline for filling								
KCLC0147	3/23/2020 17:04	58.1	40.6	0.0	1.3	89.0	89.0	-25.2	-25.1
KCLC0148	3/23/2020 17:42	54.2	45.7	0.0	0.1	84.0	84.0	-5.4	-2.4
KCLC0149	3/23/2020 17:51	43.2	40.8	2.2	13.8	117.0	117.0	-15.9	-14.4
KCLC0150	Offline for filling								
KCLC0151	3/23/2020 17:07	50.6	38.5	0.4	10.5	103.0	103.0	-0.3	-0.4
KCLC0152	3/18/2020 16:18	56.6	43.3	0.0	0.1	61.0	56.0	1.8	1.8
KCLC0152	3/18/2020 16:19	56.6	43.3	0.0	0.1	61.0	52.0	1.8	1.7
KCYN0014	3/18/2020 15:26	47.3	33.1	0.0	19.6	101.0	102.0	-6.1	-6.3
KCYN0027	3/20/2020 13:28	54.4	39.8	0.0	5.8	113.0	113.0	-9.3	-8.4
KCYN0037	3/20/2020 14:25	54.9	45.0	0.0	0.1	70.0	70.0	0.8	0.8
KCYN0037	3/20/2020 14:28	54.9	45.0	0.0	0.1	70.0	70.0	0.8	0.0
KCYN0048	3/20/2020 11:51	41.4	35.0	0.1	23.5	122.0	121.0	-1.2	-0.7
KCYN0051	3/20/2020 15:53	46.1	40.2	0.0	13.7	118.0	118.0	-23.3	-24.0
KCYN0054	3/20/2020 16:38	37.0	29.1	4.9	29.0	102.0	102.0	-20.9	-21.1
KCYN0056	3/20/2020 16:06	54.2	45.7	0.0	0.1	124.0	124.0	-4.9	-5.0
KCYN0057	3/20/2020 17:19	51.7	41.3	0.0	7.0	124.0	57.0	-1.6	-1.8
KCYN0058	3/20/2020 17:14	52.4	42.6	0.0	5.0	131.0	131.0	-6.3	-6.3
KCYN0062	3/23/2020 14:36	50.1	37.9	0.0	12.0	122.0	122.0	-3.1	-3.1
KCYN0063	3/25/2020 14:42	48.6	38.2	0.0	13.2	117.0	117.0	-1.8	-1.8
KCYN0065	3/20/2020 16:28	55.4	44.5	0.0	0.1	92.0	92.0	-0.5	-0.6
KCYN0066	3/20/2020 11:56	50.5	39.5	0.0	10.0	128.0	128.0	-16.7	-16.6
KCYN0070	3/25/2020 15:02	52.7	40.0	0.0	7.3	115.0	116.0	-3.6	-43.6
KCYN0071	3/20/2020 13:52	48.9	39.0	0.0	12.1	132.0	133.0	-9.0	-9.0
KCYN0072	3/23/2020 14:40	46.3	37.1	0.0	16.6	113.0	113.0	-3.7	-3.6
KCYN0074	3/20/2020 12:38	56.0	42.4	0.0	1.6	133.0	134.0	-41.5	-41.5
KCYN0075	3/20/2020 16:13	55.1	44.8	0.0	0.1	139.0	139.0	-30.1	-30.1
KCYN0076	3/20/2020 11:21	52.3	40.3	0.0	7.4	138.0	139.0	-21.1	-21.1
KCYN0078	3/20/2020 12:30	50.1	39.0	0.0	10.9	134.0	135.0	-24.9	-24.8
KCYN0082	3/23/2020 16:34	50.0	39.9	0.0	10.1	108.0	109.0	-0.8	-0.8
KCYN0083	3/20/2020 14:22	54.8	40.6	0.0	4.6	98.0	100.0	-0.4	-1.3
KCYN0084	3/20/2020 16:02	46.3	36.8	0.0	16.9	122.0	122.0	-1.7	-1.9
KCYN0086	3/18/2020 16:10	57.0	42.9	0.0	0.1	135.0	119.0	-27.5	-27.6
KCYN0087	3/23/2020 16:57	48.1	40.7	0.0	11.2	139.0	139.0	-13.3	-13.3
KCYN0088	3/20/2020 13:36	53.2	39.0	0.0	7.8	112.0	112.0	-37.4	-37.8
KCYN0089	3/23/2020 17:17	53.4	43.6	0.0	3.0	138.0	138.0	-23.2	-23.2
KCYN0090	3/23/2020 16:09	45.7	37.1	0.0	17.2	109.0	109.0	-34.3	-34.3
KCYN0091	3/23/2020 15:35	47.9	38.9	0.0	13.2	136.0	136.0	-23.0	-23.0
KCYN0092	3/20/2020 12:34	50.9	39.1	0.0	10.0	132.0	132.0	-32.7	-32.1
KCYN0093	3/20/2020 12:43	46.9	37.5	0.0	15.6	127.0	127.0	-8.3	-8.3

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -March 4, 18, 20, 23 and 25, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0094	3/23/2020 15:53	46.0	37.7	0.0	16.3	124.0	124.0	-12.1	-12.1
KCYN0095	3/23/2020 15:57	56.6	41.8	0.0	1.6	126.0	126.0	-40.6	-40.4
KCYN0097	3/23/2020 15:25	47.0	36.8	0.0	16.2	122.0	122.0	-14.1	-14.1
KCYN0098	3/23/2020 15:48	47.8	38.2	0.0	14.0	135.0	135.0	-7.3	-7.3
KCYN0099	3/23/2020 15:20	53.4	39.5	0.0	7.1	115.0	115.0	-3.9	-3.9
KCYN0101	3/20/2020 13:47	47.5	36.7	0.0	15.8	101.0	101.0	-1.4	-1.4
KCYN0102	3/23/2020 16:14	50.0	39.4	0.0	10.6	89.0	89.0	-1.4	-1.3
KCYN0103	3/20/2020 13:43	53.8	41.4	0.0	4.8	108.0	112.0	-1.4	-2.9
KCYN0105	3/18/2020 15:06	57.7	42.2	0.0	0.1	100.0	100.0	-29.1	-29.5
KCYN0106	3/18/2020 14:55	19.1	14.1	14.1	52.7	50.0	50.0	-33.1	-33.2
KCYN0106	3/18/2020 15:00	17.7	13.2	14.8	54.3	49.0	49.0	-35.5	-33.2
KCYN0118	3/20/2020 11:38	57.7	42.2	0.0	0.1	120.0	120.0	-28.9	-29.1
KCYN0119	3/20/2020 11:33	48.1	37.8	0.0	14.1	132.0	132.0	-14.2	-14.2
KCYN0120	3/23/2020 17:28	38.7	31.3	4.8	25.2	111.0	111.0	-35.4	-35.0
KCYN0121	3/20/2020 11:43	56.1	42.0	0.0	1.9	118.0	118.0	-29.4	-29.4
KCYN0122	3/20/2020 11:35	57.0	42.9	0.0	0.1	106.0	107.0	-29.5	-29.5
KCYN0123	3/23/2020 16:52	54.2	44.7	0.0	1.1	122.0	122.0	-2.2	-2.1
KCYN0124	3/20/2020 15:49	51.5	42.5	0.0	6.0	93.0	93.0	-0.1	-0.1
KCYN0125	3/20/2020 16:33	55.4	44.5	0.0	0.1	121.0	121.0	-2.4	-2.4
KCYN0126	3/20/2020 17:09	52.4	43.2	0.0	4.4	117.0	117.0	-7.1	-7.0
KCYN0127	3/20/2020 17:31	46.9	39.0	0.0	14.1	116.0	116.0	-1.0	-1.1
KCYN0128	3/20/2020 17:23	50.7	41.0	0.0	8.3	133.0	133.0	-19.9	-19.9
KCYN0129	3/18/2020 16:14	56.5	43.4	0.0	0.1	118.0	118.0	-5.2	-5.3
KCYN0130	3/18/2020 15:31	50.4	37.8	0.0	11.8	115.0	116.0	-10.3	-10.2
KCYN0131	3/18/2020 15:37	57.6	42.3	0.0	0.1	117.0	116.0	-34.0	-34.2
KCYN0133	3/20/2020 12:25	54.9	41.2	0.0	3.9	126.0	127.0	-18.2	-20.6
KCYN0134	3/20/2020 13:11	47.0	39.1	0.0	13.9	108.0	108.0	-12.7	-12.7
KCYN0135	3/20/2020 13:06	52.5	42.6	0.0	4.9	128.0	129.0	-18.9	-16.8
KCYNLR04	3/20/2020 14:09	51.1	37.3	0.0	11.6	99.0	99.0	-30.8	-30.4
KCYNLR08	3/25/2020 14:08	0.3	0.3	22.3	77.1	82.0	82.0	-55.0	-54.8
KCYNLR08	3/25/2020 14:11	0.3	0.3	22.3	77.1	82.0	82.0	-55.0	-54.9
KCYNLR11	3/23/2020 13:56	57.5	39.3	0.0	3.2	61.0	61.0	-35.9	-36.0

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58,65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120, 128

As of March 31, 2020, there are 77 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -April 1, 8, 14, 15, and 16, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCLC0108	4/16/2020 8:44	44.6	35.9	1.1	18.4	90.8	90.8	-25.1	-25.1
KCLC0109	4/16/2020 8:38	56.2	40.6	0.1	3.1	97.6	97.7	-38.8	-38.8
KCLC0110	4/16/2020 8:30	55.3	41.1	0.0	3.6	114.0	113.9	-38.3	-38.2
KCLC0111	4/15/2020 14:56	54.9	41.2	0.0	3.9	110.1	110.1	-36.6	-36.6
KCLC0112	4/15/2020 14:50	50.2	39.2	0.0	10.6	115.9	115.8	-34.4	-34.1
KCLC0139	4/14/2020 14:49	56.0	42.7	0.1	1.2	110.7	113.6	-8.4	-10.1
KCLC0140	4/14/2020 14:26	37.8	35.3	0.1	26.8	110.7	109.8	-6.4	-2.8
KCLC0141	4/14/2020 13:58	41.2	35.7	0.0	23.1	97.5	97.6	-5.3	-3.3
KCLC0142	4/14/2020 13:51	14.5	23.5	0.3	61.7	100.2	98.4	-0.2	-0.1
KCLC0143	4/15/2020 10:05	26.4	32.4	0.0	41.2	105.7	102.5	-0.7	-0.2
KCLC0144	4/15/2020 12:29	57.2	42.4	0.0	0.4	90.2	90.1	-30.4	-30.8
KCLC0145	4/16/2020 9:24	57.3	42.6	0.1	0.0	54.4	54.4	-33.8	-34.1
KCLC0146	4/15/2020 12:07	57.7	42.2	0.0	0.1	87.1	88.1	-1.8	-4.8
KCLC0147	4/15/2020 8:10	56.7	43.3	0.0	0.0	89.3	89.3	-27.0	-26.9
KCLC0148	4/15/2020 12:24	56.3	42.6	0.0	1.1	88.8	88.8	-6.4	-13.5
KCLC0149	4/15/2020 12:16	25.8	28.8	6.3	39.1	110.1	110.3	-15.8	-3.2
KCLC0149	4/15/2020 12:36	30.3	34.1	3.9	31.7	109.7	108.2	-3.2	-3.1
KCLC0150	4/15/2020 8:15	58.5	41.5	0.0	0.0	67.6	67.6	-23.8	-23.7
KCLC0151	4/15/2020 11:51	56.4	43.6	0.0	0.0	88.3	88.4	2.7	2.7
KCLC0152	4/15/2020 7:55	57.9	42.0	0.1	0.0	61.6	61.2	1.7	1.7
KCYN0014	4/16/2020 8:51	39.2	31.0	0.0	29.8	101.2	100.7	-8.6	-7.3
KCYN0027	4/14/2020 12:18	54.9	39.7	0.5	4.9	114.1	114.3	-3.1	-5.4
KCYN0037	4/14/2020 15:15	53.7	41.7	0.3	4.3	99.8	100.1	-4.7	-4.7
KCYN0037	4/14/2020 15:19	53.6	42.0	0.3	4.1	99.8	99.8	-4.6	-4.6
KCYN0048	4/15/2020 14:10	55.6	42.0	0.0	2.4	105.9	109.7	0.2	-0.2
KCYN0048	4/15/2020 14:14	53.7	41.5	0.0	4.8	110.4	110.2	-0.1	-0.1
KCYN0051	4/15/2020 10:16	43.5	37.7	0.0	18.8	118.5	118.0	-27.2	-22.2
KCYN0054	4/14/2020 14:06	57.0	42.0	0.1	0.9	83.5	86.7	-0.1	-0.6
KCYN0056	4/15/2020 10:33	52.3	43.2	0.0	4.5	124.4	124.4	-6.1	-6.1
KCYN0057	4/15/2020 8:59	45.8	39.4	0.0	14.8	127.9	128.2	-2.9	-2.9
KCYN0058	4/15/2020 9:16	45.9	40.6	0.0	13.5	130.9	130.9	-7.3	-6.6
KCYN0062	4/14/2020 8:07	46.1	36.9	0.2	16.8	121.1	121.5	-3.4	-3.1
KCYN0063	4/14/2020 7:55	46.6	36.1	0.0	17.3	116.4	115.9	-2.2	-1.7
KCYN0065	4/14/2020 14:15	36.2	28.8	6.3	28.7	95.2	92.4	-2.4	-0.2
KCYN0065	4/14/2020 14:38	53.6	39.3	0.9	6.2	91.0	91.0	-0.2	-0.1
KCYN0066	4/15/2020 14:21	46.0	36.8	0.0	17.2	129.7	129.7	-19.1	-18.1
KCYN0070	4/14/2020 8:50	46.6	36.2	0.0	17.2	114.8	114.7	-7.8	-6.8
KCYN0071	4/14/2020 12:49	45.4	37.2	0.4	17.0	132.3	132.3	-9.6	-8.1
KCYN0072	4/14/2020 8:15	45.3	35.7	0.0	19.0	113.2	112.3	-4.0	-3.2
KCYN0074	4/14/2020 10:46	56.8	41.0	0.0	2.2	133.4	133.5	-43.1	-42.7
KCYN0075	4/14/2020 15:23	54.6	43.3	0.0	2.1	122.2	122.8	-33.4	-33.4
KCYN0076	4/14/2020 9:49	52.3	40.0	0.6	7.1	139.5	139.5	-23.3	-23.3
KCYN0078	4/14/2020 10:31	48.6	36.6	0.0	14.8	134.4	134.4	-32.0	-31.6
KCYN0082	4/15/2020 10:58	53.0	39.3	0.0	7.7	109.9	110.2	-0.7	-0.8
KCYN0083	4/15/2020 10:53	38.4	33.6	0.0	28.0	111.3	109.5	-2.3	-1.2
KCYN0084	4/15/2020 9:57	43.6	36.0	0.0	20.4	122.4	122.1	-2.2	-2.0
KCYN0086	4/15/2020 8:34	57.0	41.8	0.1	1.1	134.4	134.5	-32.0	-32.2
KCYN0087	4/16/2020 9:57	45.7	39.5	0.1	14.7	143.9	143.5	-11.2	-10.7
KCYN0087	4/16/2020 10:14	CO was 5 ppm							
KCYN0088	4/14/2020 12:56	52.7	38.3	0.1	8.9	112.7	112.7	-38.3	-40.6
KCYN0089	4/14/2020 9:19	55.3	40.1	0.1	4.5	143.2	141.1	-23.3	-23.8
KCYN0089	4/14/2020 9:25	CO was 5 ppm							

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -April 1, 8, 14, 15, and 16, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0090	4/16/2020 12:33	46.2	35.9	0.1	17.8	106.1	105.9	-33.6	-33.9
KCYN0091	4/14/2020 9:35	47.3	38.7	0.0	14.0	134.6	135.0	-23.3	-21.7
KCYN0092	4/14/2020 11:56	51.4	38.5	0.0	10.1	131.7	131.8	-33.8	-34.6
KCYN0093	4/14/2020 11:49	48.7	37.1	0.1	14.1	128.0	128.0	-11.0	-10.9
KCYN0094	4/16/2020 12:19	44.1	36.3	0.1	19.5	124.6	124.5	-12.8	-12.8
KCYN0095	4/14/2020 13:10	56.6	40.5	0.1	2.8	126.1	126.0	-37.9	-40.0
KCYN0097	4/14/2020 9:00	45.6	36.3	0.0	18.1	120.7	120.4	-14.6	-12.6
KCYN0098	4/16/2020 11:59	46.8	37.7	0.1	15.4	135.2	135.2	-7.3	-7.3
KCYN0099	4/14/2020 8:41	41.6	36.2	0.0	22.2	129.1	129.5	-8.8	-5.6
KCYN0101	4/14/2020 12:27	45.7	34.7	0.1	19.5	103.3	103.1	-1.9	-1.3
KCYN0102	4/14/2020 12:33	47.4	36.9	0.1	15.6	94.7	94.3	-0.9	-0.9
KCYN0103	4/14/2020 12:39	42.0	35.4	0.1	22.5	112.3	112.3	-4.1	-4.1
KCYN0105	4/16/2020 8:24	58.0	41.9	0.1	0.0	103.7	103.9	-37.5	-37.8
KCYN0106	4/1/2020 13:43	56.7	42.9	0.2	0.2	63.0	63.0	-27.2	-27.3
KCYN0118	4/15/2020 13:12	57.5	40.8	0.0	1.7	119.4	119.3	-32.1	-32.3
KCYN0119	4/15/2020 13:45	58.3	40.7	0.0	1.0	124.0	124.7	1.4	-0.1
KCYN0120	4/15/2020 13:29	39.9	30.8	5.4	23.9	83.2	83.9	-35.0	-34.9
KCYN0120	4/15/2020 13:35	46.9	37.7	2.3	13.1	83.5	83.3	-35.4	-35.2
KCYN0121	4/15/2020 14:00	55.1	41.4	0.0	3.5	118.1	118.1	-33.7	-33.6
KCYN0122	4/15/2020 13:20	58.1	41.6	0.0	0.3	106.2	97.4	-33.4	-33.7
KCYN0123	4/15/2020 9:08	46.7	42.0	0.0	11.3	122.9	122.9	-4.8	-4.2
KCYN0124	4/15/2020 10:27	36.4	34.0	1.3	28.3	91.1	91.2	-0.6	-0.6
KCYN0125	4/14/2020 14:33	54.8	42.0	0.1	3.1	121.7	121.7	-13.4	-13.4
KCYN0126	4/14/2020 15:07	48.4	40.9	0.1	10.6	116.8	117.0	-9.1	-6.8
KCYN0126	4/14/2020 15:10	48.2	41.2	0.0	10.6	117.0	117.0	-6.7	-7.2
KCYN0127	4/15/2020 9:40	42.1	36.5	0.0	21.4	124.4	123.2	-1.4	-1.1
KCYN0128	4/15/2020 8:52	49.2	40.4	0.0	10.4	133.6	133.6	-20.9	-20.9
KCYN0129	4/15/2020 8:41	58.0	41.9	0.0	0.1	118.3	118.2	-6.2	-5.1
KCYN0130	4/15/2020 14:35	44.6	34.8	0.0	20.6	115.6	116.0	-11.9	-11.3
KCYN0131	4/15/2020 15:03	55.7	40.7	0.0	3.6	108.7	113.0	-38.1	-38.1
KCYN0133	4/16/2020 9:39	55.0	41.2	0.3	3.5	121.7	121.8	-32.9	-32.9
KCYN0134	4/14/2020 13:22	44.7	36.5	0.1	18.7	108.9	107.4	-14.6	-12.4
KCYN0135	4/14/2020 13:28	47.4	39.5	0.1	13.0	128.4	128.4	-27.4	-27.4
KCYNLR04	4/14/2020 13:37	49.7	36.1	1.0	13.2	99.0	99.0	-31.9	-31.7
KCYNLR08	4/8/2020 9:06	59.1	40.5	0.2	0.2	80.0	80.0	-53.0	-53.3
KCYNLR11	4/16/2020 13:13	52.0	36.0	1.9	10.1	79.1	79.1	-36.4	-37.5

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58,65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120,

As of April 30, 2020, there are 76 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report - May 11, 12, 13, 20, and 22, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCLC0108	5/11/2020 10:06	33.9	30.4	3.6	32.1	99.0	99.0	-33.7	-22.3
KCLC0109	5/11/2020 10:16	49.6	40.5	0.0	9.9	104.0	100.0	-47.8	-47.8
KCLC0110	5/11/2020 10:25	48.7	39.3	0.6	11.4	115.0	116.0	-47.5	-47.2
KCLC0111	5/11/2020 9:43	54.3	42.9	0.2	2.6	110.0	110.0	-47.9	-45.9
KCLC0112	5/11/2020 9:39	50.1	42.0	0.0	7.9	119.0	119.0	-42.8	-42.6
KCLC0139	5/13/2020 8:39	54.9	45.0	0.0	0.1	115.0	115.0	-13.8	-13.3
KCLC0140	5/13/2020 8:43	40.9	38.8	0.0	20.3	110.0	110.0	-2.6	-1.9
KCLC0141	5/13/2020 8:23	44.8	38.2	0.0	17.0	98.0	98.0	-3.3	-2.2
KCLC0142	5/12/2020 11:10	22.2	27.6	0.0	50.2	98.0	102.0	-4.3	-2.3
KCLC0142	5/12/2020 11:12	23.2	28.0	0.0	48.8	103.0	102.0	-2.3	-0.3
KCLC0143	5/13/2020 11:05	40.9	36.0	0.0	23.1	105.0	103.0	-0.3	-0.1
KCLC0144	5/11/2020 9:21	54.1	45.8	0.0	0.1	82.0	82.0	-41.2	-41.6
KCLC0145	5/11/2020 9:04	53.0	46.9	0.0	0.1	64.0	64.0	-40.9	-41.3
KCLC0146	5/11/2020 9:10	54.3	45.6	0.0	0.1	90.0	90.0	-7.7	-8.9
KCLC0147	5/11/2020 8:54	54.9	45.0	0.0	0.1	92.0	92.0	-35.5	-35.4
KCLC0148	5/13/2020 9:42	55.0	44.9	0.0	0.1	90.0	91.0	-5.1	-5.5
KCLC0149	5/13/2020 9:47	45.3	45.0	0.1	9.6	109.0	109.0	-3.7	-3.7
KCLC0150	5/11/2020 9:00	55.0	44.8	0.0	0.2	66.0	63.0	-36.4	-38.7
KCLC0151	5/20/2020 9:15	53.2	46.8	0.0	0.0	68.7	68.9	2.4	2.4
KCLC0152	5/20/2020 9:11	56.0	42.6	0.6	0.8	73.2	73.2	0.0	-0.1
KCYN0014	5/11/2020 10:00	39.2	32.0	0.0	28.8	104.0	104.0	-8.2	-7.4
KCYN0027	5/13/2020 12:02	53.1	40.2	0.2	6.5	116.0	116.0	-2.9	-1.8
KCYN0037	5/12/2020 11:26	50.6	40.6	1.2	7.6	95.0	96.0	-11.6	-11.8
KCYN0048	5/11/2020 10:54	54.8	45.1	0.0	0.1	108.0	113.0	-0.2	-0.3
KCYN0051	5/12/2020 11:46	48.6	40.9	0.0	10.5	119.0	119.0	-25.4	-22.0
KCYN0054	5/13/2020 8:29	55.6	41.7	0.4	2.3	86.0	92.0	-0.6	-2.0
KCYN0056	5/12/2020 11:36	53.6	46.3	0.0	0.1	126.0	127.0	-5.9	-5.9
KCYN0057	5/12/2020 12:06	49.3	41.8	0.0	8.9	132.0	133.0	-2.8	-2.5
KCYN0057	5/12/2020 12:08	49.5	41.7	0.0	8.8	132.0	133.0	-2.6	-2.6
KCYN0058	5/13/2020 11:25	47.1	41.3	0.0	11.6	128.0	127.0	-1.3	-1.3
KCYN0062	5/13/2020 7:59	53.3	41.2	0.0	5.5	124.0	124.0	-2.8	-3.1
KCYN0063	5/13/2020 7:51	49.2	39.8	0.0	11.0	119.0	119.0	-1.5	-1.4
KCYN0065	5/13/2020 8:49	55.3	44.6	0.0	0.1	89.0	97.0	-1.4	-2.0
KCYN0066	5/11/2020 10:45	47.7	39.2	0.0	13.1	129.0	130.0	-18.1	-16.7
KCYN0066	5/11/2020 10:47	47.3	39.2	0.0	13.5	129.0	129.0	-14.1	-14.0
KCYN0070	5/13/2020 10:15	47.7	37.9	0.0	14.4	116.0	117.0	-6.6	-5.5
KCYN0071	5/12/2020 9:02	51.7	41.8	0.0	6.5	134.0	135.0	-8.4	-8.4
KCYN0071	5/12/2020 9:04	51.5	42.0	0.0	6.5	134.0	135.0	-8.5	-8.5
KCYN0072	5/13/2020 8:05	54.0	39.3	0.0	6.7	115.0	115.0	-2.4	-2.8
KCYN0074	5/13/2020 10:33	52.9	43.1	0.0	4.0	133.0	134.0	-44.9	-44.5
KCYN0074	5/13/2020 10:35	56.2	43.0	0.0	0.8	134.0	135.0	-44.8	-45.0
KCYN0075	5/20/2020 13:08	52.3	41.8	1.4	4.5	138.9	139.1	-35.5	-34.7
KCYN0076	5/12/2020 9:49	53.6	43.2	0.0	3.2	137.0	138.0	-24.7	-24.8
KCYN0076	5/12/2020 9:54	54.6	43.8	0.0	1.6	138.0	138.0	-27.0	-23.8
KCYN0078	5/12/2020 9:26	47.3	40.6	0.0	12.1	136.0	136.0	-34.5	-34.1
KCYN0078	5/12/2020 9:28	46.9	40.3	0.0	12.8	136.0	136.0	-36.4	-33.9
KCYN0082	5/12/2020 11:17	53.2	41.4	0.0	5.4	111.0	111.0	-0.9	-1.0
KCYN0083	5/13/2020 8:57	46.2	37.3	0.0	16.5	108.0	109.0	-1.2	-1.3
KCYN0084	5/12/2020 11:55	47.4	39.3	0.0	13.3	116.0	116.0	-1.8	-1.7
KCYN0086	5/13/2020 9:20	55.2	42.5	0.4	1.9	137.0	137.0	-34.9	-34.8
KCYN0086	5/13/2020 9:22	55.9	44.0	0.0	0.1	137.0	137.0	-34.7	-34.8
KCYN0087	5/20/2020 13:33	44.6	40.0	0.3	15.1	144.7	144.0	-12.0	-10.7

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report - May 11, 12, 13, 20, and 22, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0087	5/20/2020 13:59	49.9	39.0	1.1	10.0	143.4	143.5	-25.5	-25.5
KCYN0087	5/20/2020 14:03	CO was 0 ppm							
KCYN0088	5/12/2020 8:37	51.8	39.9	0.3	8.0	113.0	114.0	-42.7	-42.9
KCYN0089	5/22/2020 11:02	51.2	37.9	1.5	9.4	143.7	143.8	-25.9	-25.9
KCYN0089	5/22/2020 11:10	CO was 0 ppm							
KCYN0090	5/12/2020 8:25	46.8	38.2	0.0	15.0	108.0	108.0	-33.9	-34.2
KCYN0091	5/12/2020 10:09	47.8	40.9	0.0	11.3	137.0	138.0	-21.0	-20.3
KCYN0091	5/12/2020 10:11	47.0	40.3	0.0	12.7	137.0	137.0	-19.1	-19.1
KCYN0092	5/12/2020 8:09	51.4	40.9	0.0	7.7	134.0	135.0	-42.9	-36.5
KCYN0092	5/12/2020 8:11	51.5	41.1	0.0	7.4	134.0	135.0	-36.2	-36.7
KCYN0093	5/12/2020 9:38	46.1	39.5	0.0	14.4	129.0	130.0	-11.7	-11.5
KCYN0093	5/12/2020 9:40	46.0	39.4	0.0	14.6	129.0	130.0	-15.5	-11.1
KCYN0094	5/12/2020 8:31	44.2	38.1	0.0	17.7	126.0	126.0	-13.8	-12.9
KCYN0095	5/12/2020 8:15	56.6	43.3	0.0	0.1	127.0	127.0	-41.3	-41.2
KCYN0097	5/13/2020 10:09	47.8	38.9	0.0	13.3	122.0	123.0	-11.2	-10.6
KCYN0098	5/12/2020 10:16	45.1	38.4	0.0	16.5	136.0	137.0	-11.7	-7.2
KCYN0098	5/12/2020 10:17	44.6	37.9	0.1	17.4	136.0	136.0	-7.2	-6.5
KCYN0099	5/13/2020 10:20	49.2	39.9	0.0	10.9	132.0	133.0	-5.1	-5.2
KCYN0099	5/13/2020 10:21	49.3	40.1	0.0	10.6	132.0	133.0	-5.8	-5.2
KCYN0101	5/12/2020 8:49	46.9	37.5	0.0	15.6	76.0	75.0	-6.7	-0.7
KCYN0102	5/12/2020 8:53	47.2	39.4	0.0	13.4	73.0	73.0	-1.4	-1.8
KCYN0103	5/20/2020 14:26	36.4	33.9	0.4	29.3	83.0	83.0	-10.3	-10.3
KCYN0105	5/11/2020 10:29	57.0	42.9	0.0	0.1	90.0	90.0	-47.5	-47.6
KCYN0118	5/11/2020 9:26	54.9	43.4	0.0	1.7	121.0	121.0	-39.6	-39.6
KCYN0119	5/20/2020 10:41	53.9	41.5	0.5	4.1	129.8	129.8	-2.1	-2.1
KCYN0120	5/20/2020 10:48	44.8	35.9	4.0	15.3	69.9	69.6	-44.8	-25.8
KCYN0121	5/11/2020 9:35	54.3	43.3	0.0	2.4	120.0	120.0	-42.0	-42.0
KCYN0122	5/11/2020 9:30	55.1	44.8	0.0	0.1	108.0	105.0	-41.8	-42.0
KCYN0123	5/12/2020 12:01	49.4	44.2	0.0	6.4	124.0	125.0	-4.6	-4.3
KCYN0124	5/12/2020 11:42	45.0	39.6	0.0	15.4	86.0	86.0	-4.3	-0.5
KCYN0125	5/20/2020 11:19	55.1	43.1	0.4	1.4	124.3	124.4	-15.5	-15.5
KCYN0126	5/20/2020 11:22	51.2	42.8	0.0	6.0	118.3	118.3	-7.9	-7.9
KCYN0127	5/20/2020 13:13	52.5	40.3	0.0	7.2	121.2	121.2	-1.0	-1.0
KCYN0128	5/13/2020 9:14	51.5	42.1	0.0	6.4	136.0	136.0	-22.7	-22.9
KCYN0128	5/13/2020 9:16	51.3	41.9	0.0	6.8	136.0	137.0	-23.5	-23.5
KCYN0129	5/11/2020 8:11	55.7	44.2	0.0	0.1	121.0	121.0	-10.4	-9.5
KCYN0129	5/11/2020 10:10	42.9	31.8	4.6	20.7	64.0	64.0	-47.3	-46.8
KCYN0130	5/11/2020 9:54	44.8	37.0	0.0	18.2	116.0	117.0	-13.1	-12.0
KCYN0131	5/11/2020 9:47	55.9	44.0	0.0	0.1	122.0	122.0	-49.3	-46.4
KCYN0133	5/13/2020 10:39	50.9	41.0	0.0	8.1	125.0	126.0	-31.9	-31.0
KCYN0134	5/12/2020 10:38	46.6	39.6	0.0	13.8	110.0	110.0	-15.7	-13.6
KCYN0135	5/12/2020 10:43	45.6	40.9	0.4	13.1	131.0	131.0	-31.0	-30.4
KCYN0135	5/12/2020 10:45	47.4	42.3	0.0	10.3	131.0	131.0	-39.8	-30.2
KCYNLR04	5/20/2020 11:01	45.5	33.6	2.8	18.1	99.7	99.8	-34.8	-37.4
KCYNLR08	5/20/2020 12:48	49.8	35.2	2.8	12.2	98.3	99.1	-54.1	-54.3
KCYNLR11	5/20/2020 14:10	15.7	9.9	14.0	60.4	108.3	108.1	-49.1	-49.1
KCYNLR11	5/22/2020 10:52	52.9	34.4	3.2	9.5	79.1	79.1	-49.4	-49.4

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58,65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120, 128

As of May 31, 2020, there are 76 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -June 14, 15, 16, and 24, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)	
KCLC0108	6/15/2020 11:55	41.60	32.50	4.00	21.90	102.90	102.50	-16.70	-11.66	
KCLC0109	6/15/2020 12:33	51.80	39.90	0.00	8.30	82.20	82.10	-46.67	-46.74	
KCLC0110	6/15/2020 12:38	55.40	41.40	0.00	3.20	115.60	115.60	-46.39	-46.42	
KCLC0111	6/15/2020 13:25	56.10	43.30	0.60	0.00	108.90	108.90	-46.48	-46.45	
KCLC0112	6/15/2020 12:52	53.80	42.00	0.00	4.20	119.70	119.70	-42.61	-42.64	
KCLC0139	6/14/2020 13:55	56.30	43.70	0.00	0.00	116.90	117.50	-14.92	-18.27	
KCLC0140	6/14/2020 13:48	44.90	39.50	0.00	15.60	109.80	109.70	-2.04	-1.90	
KCLC0141	6/14/2020 11:48	45.90	38.40	0.00	15.70	97.70	97.70	-2.24	-2.19	
KCLC0142	6/14/2020 11:41	19.50	26.50	0.00	54.00	103.10	102.60	-0.63	-0.49	
KCLC0143	6/14/2020 14:50	40.10	35.90	0.00	24.00	103.50	102.40	-0.08	-0.04	
KCLC0144	6/15/2020 15:14	55.60	44.30	0.10	0.00	92.80	92.90	-38.89	-38.96	
KCLC0145	6/24/2020 14:37	56.40	41.00	0.40	2.20	89.50	89.50	-57.94	-52.88	
KCLC0146	6/24/2020 14:51	56.40	43.40	0.10	0.10	95.10	95.30	-11.06	-14.74	
KCLC0147	6/16/2020 16:13	56.20	43.70	0.00	0.10	92.10	92.10	-35.89	-35.46	
KCLC0148	6/15/2020 15:33	53.10	46.90	0.00	0.00	91.70	91.70	-10.92	-4.84	
KCLC0148	6/16/2020 16:30	54.80	42.70	0.10	2.40	80.60	81.10	-82.98	-73.08	
KCLC0149	6/24/2020 13:15	55.00	45.00	0.00	0.00	92.80	93.00	-11.53	-5.03	
KCLC0150	6/16/2020 16:18	57.50	42.30	0.20	0.00	75.50	75.80	-39.96	-39.96	
KCLC0151	6/16/2020 16:06	55.60	44.30	0.10	0.00	73.30	73.30	2.94	2.96	
KCLC0152	6/16/2020 16:04	56.00	44.00	0.00	0.00	81.00	81.00	1.05	1.07	
KCYN0014	6/15/2020 12:06	51.50	32.00	0.00	16.50	103.90	103.90	-6.78	-6.84	
KCYN0027	6/16/2020 12:03	54.90	41.10	0.30	3.70	115.70	116.50	-6.68	-6.68	
KCYN0037	6/14/2020 14:02	49.80	40.60	0.70	8.90	100.70	100.80	-16.56	-16.61	
KCYN0048	6/15/2020 14:59	47.30	40.50	0.00	12.20	127.30	127.30	-1.34	-1.29	
KCYN0051	6/14/2020 15:50	49.50	38.50	0.00	12.00	118.90	119.00	-20.67	-20.67	
KCYN0054	6/24/2020 13:35	55.50	44.50	0.00	0.00	87.30	93.80	-0.03	-0.73	
KCYN0056	6/14/2020 15:43	55.40	44.60	0.00	0.00	127.00	127.00	-4.87	-4.85	
KCYN0057	6/14/2020 15:22	54.00	42.00	0.00	4.00	132.50	134.00	-2.05	-2.64	
KCYN0058	6/14/2020 16:10	53.90	40.80	0.00	5.30	128.70	129.60	-1.30	-1.83	
KCYN0062	6/16/2020 11:33	49.00	38.80	0.10	12.10	124.80	125.00	-4.06	-4.14	
KCYN0063	6/16/2020 11:42	51.20	40.40	0.00	8.40	118.00	118.10	-1.35	-1.34	
KCYN0065	6/14/2020 13:41	48.40	37.00	2.80	11.80	101.30	102.20	-0.83	-1.29	
KCYN0066	6/15/2020 15:04	58.00	42.00	0.00	0.00	129.90	129.90	-12.50	-13.00	
KCYN0070	6/16/2020 15:20	49.00	37.60	0.00	13.40	116.40	116.40	-5.42	-5.38	
KCYN0071	6/16/2020 13:14	49.60	39.60	0.00	10.80	133.80	133.70	-7.96	-7.94	
KCYN0072	6/16/2020 11:36	45.20	36.30	0.00	18.50	115.10	115.10	-3.26	-2.68	
KCYN0074	6/14/2020 11:00	56.70	43.20	0.10	0.00	134.00	134.10	-43.44	-43.59	
KCYN0075	6/14/2020 16:02	54.30	42.10	0.30	3.30	137.70	138.00	-33.05	-33.57	
KCYN0076	6/15/2020 15:57	44.80	33.90	4.60	16.70	139.90	139.30	-21.77	-18.86	
KCYN0078	6/14/2020 11:16	47.20	39.10	0.20	13.50	134.90	135.00	-32.53	-32.48	
KCYN0082	6/14/2020 14:11	49.10	38.00	0.00	12.90	111.70	111.70	-0.96	-0.94	
KCYN0083	6/14/2020 14:06	44.70	36.00	0.00	19.30	110.20	110.10	-1.48	-1.37	
KCYN0084	6/24/2020 13:54	56.00	41.20	0.00	2.80	118.00	126.70	-10.89	-11.44	
KCYN0086	6/17/2020 16:10	56.50	43.30	0.10	0.10	132.20	134.50	-29.60	-30.07	
KCYN0087	6/24/2020 13:27	45.80	40.40	0.00	13.80	143.70	143.50	-11.24	-11.23	
KCYN0087	6/24/2020 13:30	CO was 10 ppm								
KCYN0088	6/16/2020 12:50	54.00	38.90	0.30	6.80	112.60	112.60	-39.54	-40.00	
KCYN0089	6/15/2020 15:52	57.70	42.30	0.00	0.00	141.20	141.20	-23.53	-23.99	
KCYN0089	6/15/2020 16:00	CO was 10 ppm								
KCYN0090	6/24/2020 14:33	48.10	36.60	0.00	15.30	110.30	110.30	-27.60	-27.60	

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

Wellfield Monitoring Report -June 14, 15, 16, and 24, 2020

Device ID	Date Time	CH <sub>4</sub> % by Volume	CO <sub>2</sub> % by Volume	O <sub>2</sub> % by Volume	Balance % by Volume	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)
KCYN0091	6/16/2020 15:42	51.30	40.60	0.00	8.10	136.60	136.70	-15.67	-15.66
KCYN0092	6/14/2020 10:55	51.50	39.90	0.20	8.40	133.60	133.60	-36.14	-35.50
KCYN0093	6/14/2020 11:07	47.60	38.80	0.00	13.60	128.60	128.70	-9.29	-9.27
KCYN0094	6/16/2020 12:25	51.30	38.60	0.00	10.10	124.40	124.40	-8.45	-8.40
KCYN0095	6/16/2020 12:11	57.40	41.10	0.30	1.20	126.20	126.30	-38.97	-38.15
KCYN0097	6/17/2020 15:55	53.20	39.60	0.10	7.10	122.80	122.80	-8.61	-9.16
KCYN0098	6/16/2020 12:34	51.10	39.40	0.00	9.50	134.80	134.80	-4.40	-4.39
KCYN0099	6/16/2020 15:12	50.60	39.70	0.20	9.50	132.30	132.30	-5.25	-5.24
KCYN0101	6/16/2020 13:04	56.70	39.70	0.00	3.60	103.30	103.20	-0.69	-0.64
KCYN0102	6/16/2020 13:09	51.60	38.50	0.00	9.90	102.50	102.60	-2.01	-1.89
KCYN0103	6/16/2020 12:56	54.20	40.70	0.00	5.10	109.30	113.80	-2.05	-3.28
KCYN0105	6/15/2020 12:45	56.40	43.50	0.10	0.00	113.00	113.10	-43.02	-43.01
KCYN0118	6/15/2020 14:45	56.40	43.60	0.00	0.00	120.70	120.70	-38.90	-38.92
KCYN0119	6/15/2020 14:31	55.70	44.30	0.00	0.00	130.90	130.90	-8.41	-8.69
KCYN0120	6/15/2020 14:25	55.70	41.50	1.20	1.60	82.70	83.80	-37.94	-38.75
KCYN0121	6/15/2020 14:51	57.30	42.60	0.20	-0.10	120.10	120.10	-41.89	-41.88
KCYN0122	6/15/2020 14:42	56.60	43.20	0.20	0.00	105.70	105.70	-40.71	-40.71
KCYN0123	6/14/2020 15:38	53.50	43.60	0.00	2.90	125.30	125.30	-4.81	-6.28
KCYN0124	6/14/2020 14:41	48.00	39.30	0.00	12.70	95.40	95.70	-0.50	-0.52
KCYN0125	6/14/2020 14:22	55.60	43.10	0.00	1.30	78.30	78.40	-14.42	-14.50
KCYN0126	6/14/2020 14:32	51.60	42.40	0.00	6.00	118.30	118.40	-7.12	-8.33
KCYN0127	6/14/2020 15:15	56.00	42.30	0.00	1.70	121.00	121.20	-0.74	-0.74
KCYN0128	6/14/2020 15:25	52.60	44.10	0.00	3.30	135.20	135.20	-21.34	-22.09
KCYN0129	6/15/2020 15:36	54.70	45.30	0.00	0.00	119.40	119.20	-0.57	0.42
KCYN0129	6/17/2020 16:01	56.40	43.60	0.00	0.00	118.00	117.80	3.89	4.39
KCYN0129	6/17/2020 16:03	56.30	43.70	0.00	0.00	117.90	118.00	4.33	4.39
KCYN0130	6/15/2020 13:47	53.50	37.80	0.00	8.70	116.90	116.80	-12.96	-17.10
KCYN0131	6/15/2020 13:36	57.30	42.50	0.10	0.10	85.90	86.00	-46.48	-46.42
KCYN0133	6/14/2020 10:47	51.70	41.30	0.20	6.80	126.90	127.00	-26.92	-26.91
KCYN0134	6/14/2020 11:19	49.40	39.00	0.00	11.60	110.00	110.00	-12.15	-12.12
KCYN0135	6/14/2020 11:25	48.40	41.40	0.10	10.10	129.90	129.90	-28.58	-28.46
KCYNLR04	6/14/2020 11:31	49.50	35.60	1.60	13.30	82.80	83.20	-34.64	-33.46
KCYNLR08	6/24/2020 13:06	58.90	40.60	0.40	0.10	102.00	102.20	-52.71	-52.75
KCYNLR11	6/15/2020 11:48	58.40	40.90	0.70	0.00	92.80	93.00	-46.70	-46.67

\*The following wells are approved to operate at a temperature HOV of 145°F: 37, 45, 51, 57, 58,65, 66, 71, 74, 76, 78, 86, 87, 89, 91, 98, 120, 128 and 135. Wells 56, 75, 76, 87, 89, and 120, are approved to operate at a temperature HOV of 156°F .

As of June 30, 2020, there are 76 vertical wells, 0 horizontal collector, and 3 LCR at KCRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

HOV = Higher Operating Value



## **APPENDIX J**

### **BAAQMD CORRESPONDENCE**



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

July 17, 2020

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105  
Attn: Title V Reports

Re: Kirby Canyon Recycling & Disposal Facility, San Jose, CA, Facility Number A1812  
Section I.F Title V, 30-Day written report to BAAQMD Notice of Violation A-57372,  
Dated June 18, 2020

Dear Sir or Madam:

Waste Management of California, Inc. d/b/a Kirby Canyon Recycling & Disposal Facility (“KCRDF”) is submitting this 30-day written report to the Bay Area Air Quality Management District (BAAQMD) as required under Title V Permit Condition Section I.F for KCRDF to Notice of Violation (“NOV”) Number A-57372 dated June 18, 2020, (see attachment) for alleged temporary flare shutdown events caused by unplanned utility power outages allegedly on February 28, June 10, July 24, July 26, August 1, August 6, September 8, November 11, November 12, November 26, and December 29, 2019 (“NOV Dates”). A signed copy of the NOV is attached. The NOV alleges violation of:

1. Regulation 2, Section 1-307 “...shall not operate any...equipment...for which an authority to construct or permit to operate has been issued, in violation of any permit condition imposed pursuant to Section 2-1-403 [Permit Conditions].” (“2-1-307”)
2. Regulation 1, Section 523.3 “...violation of permit conditions or District regulations to which the source is required to conform...shall be reported to the APCO within 96 hours after such occurrence...” (“1-523.3”)
3. Regulation 8 Section 34-301.1 “...gas collection and emission control systems are operated continuously...” (“8-34-301.1”)

Alleged violations of 2-1-307 and 1-523.3 are predicated on an alleged violation of 8-34-301.1. However, KCRDF was not in violation of 8-34-301.1. For the period October 26, 2019 to November 27, 2019, BAAQMD Hearing Board issued an emergency variance for Public Safety Power Shutoff (“PSPS”) events. The variance stated that “[t]he magnitude and scale of the PSPS event was unforeseeable and the resultant power outage at Kirby Canyon Landfill was unpreventable.” Similarly, the alleged NOV Dates had unforeseeable and unpreventable power outages at KCRDF.

Regulation 8, Rule 34, Section 113 (“8-34-113”) Limited Exemption, Inspection and Maintenance, states that “requirements of Sections 8-34-301...shall not apply to solid waste sites during inspection and maintenance of the landfill gas collection or emission control system...” KCRDF appropriately reported flare downtime events under 8-34-113, as each event required inspection and maintenance during the downtime. These events were reported in KCRDF’s startup and shutdown logs in its semi-annual reports. Startup could begin only after the restoration of power by the utility company and KCRDF’s safety and environmental inspection and maintenance process for flare startup and emission minimization. Further, the exemption in 8-34-113 applies as KCRDF met the requirement that the “gas collection and emission control systems are not shutdown for more than 240 hours in any calendar year.” As KCRDF did not violate 8-34-301.1, it also did not violate 2-1-307 nor 1-523.3.

BAAQMD’s apparent interpretation that 8-34-113 does not apply where inspection and maintenance has occurred simply because an unplanned power shutoff event also occurred leads to a result that may create harm to health, safety and/or the environment. Automatically restarting flares and auxiliary equipment (blower skid, air compressor, condensate injection system, PLC and data logger, etc.) without a safety and environmental inspection and/or maintenance may cause serious health, safety and/or environmental concerns. Similarly, using an automatic backup generator would have the same concerns, with the addition of potential additional emissions associated with the generator. Further, switching between a generator and the power system creates additional downtime, as does refueling or other issues that may be associated with use of a generator.

KCRDF additionally asserts that the downtime events did not: 1) interfere with attainment of the BAAQMD, federal, or state standards; 2) endanger health, safety, or welfare of any person; 3) endanger the environment; 4) increase emissions of toxic air contaminants; 5) cause or contribute to a violation of a SAAQS or NAAQS; 6) interfere with the BAAQMD’s compliance work; nor 7) result in emissions exceeding de minimis levels. Moreover, KCRDF’s downtime events were not the result of equipment malfunction, knowing, willful, intentional, chronic nor committed by a recalcitrant, and did not benefit KCRDF economically nor result in a nuisance. The frequency and duration of weather or utility-related electrical interruptions are outside of KCRDF’s control but in either case, best practice requires inspection and/or maintenance prior to startup and, therefore, is reported as such.

For the above reasons, KCRDF asserts that it did not violate 2-1-307, 1-523.3 nor 8-34-301.1. and respectfully requests the NOV be rescinded.

Despite its objections, at BAAQMD’s request, KCRDF has also focused its efforts toward a solution to reduce power outage downtime hours by reconfiguring the existing electrical panel for transfer switch operation and adding a backup generator to serve as an emergency power source. Subsequent to the PSPS events during 2019, KCRDF has taken the following proactive steps, including initiating the procurement process for a permanent generator (delayed due to the COVID-19 emergency):

- KCRDF hired a certified electrical contractor to review the existing electrical infrastructure at the KCRDF site and rewire the flare electrical system.
- KCRDF initiated procurement of and acquired a rental generator to serve as emergency power source for site activities.
- KCRDF hired a certified electrical contractor to hard wire the generator to the flare electrical circuit.
- KCRDF requested engineering evaluation and proposal to reconfigure the existing panels to connect and its contractor completed electrical panel work.

No other corrective action was necessary nor applicable. The flare was temporarily shut down solely because of an unplanned power outage and not the result of an intentional or negligent failure to maintain and operate, or an equipment malfunction. As soon as the electricity was restored, the flare was inspected and restarted. The shutdown was temporary, only a few hours, and did not result in any emissions.

KCRDF disagrees with the BAAQMD that temporary shutdowns resulting from unplanned power outages are violations of any BAAQMD regulation. KCRDF is committed to operating its landfill in compliance with applicable regulations and requests a meeting with BAAQMD executive staff to discuss Regulation 8-34-301.1. As you may recall, we were in the process of providing comment on a draft amendment to the Regulation in line with our response herein prior to the COVID-19 emergency. If you have any questions or need any additional information, please do not hesitate to contact me at (408) 779-2206.

Sincerely,  
Kirby Canyon Recycling & Disposal Facility

A handwritten signature in blue ink, appearing to read "Enrique Perez". The signature is stylized and somewhat cursive.

Enrique Perez  
District Manager

cc: Erin Phillips, BAAQMD

Attachments: Copy of BAAQMD Notice of Violation A-57372



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**  
375 Beale Street, Suite 600, San Francisco, CA 94105  
(415) 749-5000

# NOTICE OF VIOLATION

No. **A57372**


**ISSUED TO:** Kirby Canyon Recycling and Disposal Facility  P  G  N# A1812  
**ADDRESS:** 910 Coyote Creek Golf Drive  
**CITY:** San Jose **STATE:** CA **ZIP:** 95111  
**PHONE:** (408 ) 960-0769  
 N# Mailing Address on F61

**OCCURRENCE**  
**NAME:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  Same As Above  
**CITY:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_  
**SOURCE:** S# 1 **NAME:** Landfill with Gas Collection System  
**EMISSION PT:** P# \_\_\_\_\_ **NAME:** \_\_\_\_\_  
**DATE:** 2/28/19 - 12/29/19 12 Days **TIME:** - \_\_\_\_\_ HRS

<input type="checkbox"/> REG 2 RULE 1 SEC 301 No Authority to Construct	<input type="checkbox"/> REG 2 RULE 1 SEC 302 No Permit to Operate
<input type="checkbox"/> REG 1 SEC 301 H & S CODE - 41700 Public Nuisance	<input checked="" type="checkbox"/> REG 2 RULE 1 SEC 307 Failure to Meet Permit Condition
<input type="checkbox"/> REG 5 SEC 301 Prohibited Open Burning	<input type="checkbox"/> REG 6 RULE 1 SEC 301 Excessive Visible Emissions
<input checked="" type="checkbox"/> REG 8 RULE 34 SECTION 301.1 CODE	
<input checked="" type="checkbox"/> REG 1 RULE _____ SECTION 523.3 CODE	

**Details:** Min. flare temp P.C. 1437, gas collection not operated continuously, RCA's not reported

**RECIPIENT NAME:** Enrique Perez  
**TITLE:** District Manager

**SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT** X 

**→ WITHIN 10 DAYS, RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT CONTINUED OR RECURRENT VIOLATION. THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY. YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.**

**ISSUED BY:** Erin Phillips **INSP #** 853  
**DATE:** 6/18/20 **TIME:** 1015 **HRS**  MAILED

**PLEASE PRESS HARD**

Continued On Reverse

# INSTRUCTIONS

## PERMIT VIOLATIONS - (REG 2. RULE 1, SECTION 301 AND/OR 302)

Within 30 days, a permit application must be submitted to the District's Permit Division. The permit application must reference the Violation Notice Number Shown on the front of this notice. If either the Violation Notice Number is not referenced or no permit application is received, then this matter will be referred to the District's Legal Department for legal action. Your response does not preclude further legal action.

If there are any questions regarding the submission of a Permit Application, call the Permit Services Division at (415) 749-4990.

## ALL OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation. This violation is subject to substantial penalty. Your response does not preclude further legal action.

A variance should be sought if it is necessary to continue to operate in violation of District Regulations. For information on eligibility for, or filing of, a variance, call (415) 749-5073.



June 28, 2020

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105  
Attn: Title V Reports

Re: Kirby Canyon Recycling & Disposal Facility, San Jose, CA. Facility Number A1812,  
Section I.F Title V, 10-Day written report

Dear Sir or Madam:

Waste Management of California, Inc. d/b/a Kirby Canyon Recycling & Disposal Facility (“KCRDF”) is submitting this 10-day written report to the Bay Area Air Quality Management District (BAAQMD) as required under Title V Permit Condition Section I.F for KCRDF. On June 18, 2020, Erin Phillips, Bay Area Air Quality Management District (BAAQMD) Air Quality Inspector, issued Notice of Violation (“NOV”) Number A-57372, (see attachment) for alleged temporary flare shutdown events caused by unplanned utility power outages allegedly on February 28, June 10, July 24, July 26, August 1, August 6, September 8, November 11, November 12, November 26, and December 29, 2020 (“NOV Dates”). The NOV alleges violation of:

1. Regulation 2, Section 1-307 “...shall not operate any...equipment...for which an authority to construct or permit to operate has been issued, in violation of any permit condition imposed pursuant to Section 2-1-403 [Permit Conditions].” (“2-1-307”)
2. Regulation 1, Section 523.3 “...violation of permit conditions or District regulations to which the source is required to conform...shall be reported to the APCO within 96 hours after such occurrence....” (“1-523.3”)
3. Regulation 8 Section 34-301.1 “...gas collection and emission control systems are operated continuously...” (“8-34-301.1”)

The unplanned power outage shutdowns noted in the NOV did not result in emissions and do not qualify as non-compliance. The downtime recorded for each of the events noted on the NOV was significantly less than 24 hours per event. KCRDF believes that it complied with the Title V permit conditions and safety protocols. KCRDF followed all measures to ensure gas movers and valves were closed during the shutdown events. KCRDF’s downtime events were not the result of equipment malfunction, knowing, willful, intentional, chronic nor committed by a recalcitrant,

and did not benefit KCRDF economically nor result in a nuisance. The frequency and duration of weather or utility-related electrical interruptions are outside of KCRDF's control.

KCRDF is committed to operating its landfill in compliance with applicable regulations and will ensure that compliance is achieved. However, KCRDF disagrees with the BAAQMD that temporary shutdowns resulting from unplanned power outages are violations of any BAAQMD regulation. As required, a 30-day follow-up letter will confirm the contents of this submittal.

If you have any questions or need any additional information please do not hesitate to contact me at (408) 779-2206

Sincerely,

Kirby Canyon Recycling & Disposal Facility

A handwritten signature in blue ink, appearing to read "Enrique Perez". The signature is stylized and somewhat cursive.

Enrique Perez  
District Manager

cc: Erin Phillips, BAAQMD

Attachment: Copy of BAAQMD Notice of Violation A-57372





BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**  
375 Beale Street, Suite 600, San Francisco, CA 94105  
(415) 749-5000

# NOTICE OF VIOLATION

No. **A57372**


**ISSUED TO:** Kirby Canyon Recycling and Disposal Facility  P  G  N# A1812  
**ADDRESS:** 910 Coyote Creek Golf Drive  
**CITY:** San Jose **STATE:** CA **ZIP:** 95111  
**PHONE:** (408 ) 960-0769  
 N# Mailing Address on F61

**OCCURRENCE**  
**NAME:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  Same As Above  
**CITY:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_  
**SOURCE:** S# 1 **NAME:** Landfill with Gas Collection System  
**EMISSION PT:** P# \_\_\_\_\_ **NAME:** \_\_\_\_\_  
**DATE:** 2/28/19 - 12/29/19 12 Days **TIME:** - \_\_\_\_\_ HRS

<input type="checkbox"/> REG 2 RULE 1 SEC 301 No Authority to Construct	<input type="checkbox"/> REG 2 RULE 1 SEC 302 No Permit to Operate
<input type="checkbox"/> REG 1 SEC 301 H & S CODE - 41700 Public Nuisance	<input checked="" type="checkbox"/> REG 2 RULE 1 SEC 307 Failure to Meet Permit Condition
<input type="checkbox"/> REG 5 SEC 301 Prohibited Open Burning	<input type="checkbox"/> REG 6 RULE 1 SEC 301 Excessive Visible Emissions
<input checked="" type="checkbox"/> REG 8 RULE 34 SECTION 301.1 CODE	
<input checked="" type="checkbox"/> REG 1 RULE _____ SECTION 523.3 CODE	

**Details:** Min. flare temp P.C. 1437, gas collection not operated continuously, RCA's not reported

**RECIPIENT NAME:** Enrique Perez  
**TITLE:** District Manager

**SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT** X 

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**ISSUED BY:** Erin Phillips **INSP #** 853  
**DATE:** 6/18/20 **TIME:** 1015 **HRS**  MAILED

**PLEASE PRESS HARD**

Continued On Reverse

# INSTRUCTIONS

## PERMIT VIOLATIONS - (REG 2. RULE 1, SECTION 301 AND/OR 302)

Within 30 days, a permit application must be submitted to the District's Permit Division. The permit application must reference the Violation Notice Number Shown on the front of this notice. If either the Violation Notice Number is not referenced or no permit application is received, then this matter will be referred to the District's Legal Department for legal action. Your response does not preclude further legal action.

If there are any questions regarding the submission of a Permit Application, call the Permit Services Division at (415) 749-4990.

## ALL OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation. This violation is subject to substantial penalty. Your response does not preclude further legal action.

A variance should be sought if it is necessary to continue to operate in violation of District Regulations. For information on eligibility for, or filing of, a variance, call (415) 749-5073.



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

June 28, 2020

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105  
Attn: Title V Reports

Re: Kirby Canyon Recycling & Disposal Facility, San Jose, CA, Facility Number A1812  
10-Day NOV Response to BAAQMD Notice of Violation A-57372, Dated June 18, 2020

Dear Sir or Madam:

Waste Management of California, Inc. d/b/a Kirby Canyon Recycling & Disposal Facility (“KCRDF”) is submitting this 10-day NOV response letter<sup>1</sup> to Notice of Violation (“NOV”) Number A-57372 dated June 18, 2020, (see attachment) for alleged temporary flare shutdown events caused by unplanned utility power outages allegedly on February 28, June 10, July 24, July 26, August 1, August 6, September 8, November 11, November 12, November 26, and December 29, 2020 (“NOV Dates”). A signed copy of the NOV is attached. KCRDF Flare data for these dates is attached. The NOV alleges violation of:

1. Regulation 2, Section 1-307 “...shall not operate any...equipment...for which an authority to construct or permit to operate has been issued, in violation of any permit condition imposed pursuant to Section 2-1-403 [Permit Conditions].” (“2-1-307”)
2. Regulation 1, Section 523.3 “...violation of permit conditions or District regulations to which the source is required to conform...shall be reported to the APCO within 96 hours after such occurrence....” (“1-523.3”)
3. Regulation 8 Section 34-301.1 “...gas collection and emission control systems are operated continuously...” (“8-34-301.1”)

Alleged violations of 2-1-307 and 1-523.3 are predicated on an alleged violation of 8-34-301.1. However, KCRDF was not in violation of 8-34-301.1. For the period October 26, 2019 to November 27, 2019, BAAQMD Hearing Board issued an emergency variance for Public Safety Power Shutoff (“PSPS”) events. The variance stated that “[t]he magnitude and scale of the PSPS event was unforeseeable and the resultant power outage at Kirby Canyon Landfill was unpreventable.” Similarly, the alleged NOV Dates had unforeseeable and unpreventable power outages at KCRDF.

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<sup>1</sup> KCRDF submitted its 10-day Title V letter to BAAQMD on June 28, 2020, under Title V Permit Condition Section I.F.

Regulation 8, Rule 34, Section 113 (“8-34-113”) Limited Exemption, Inspection and Maintenance, states that “requirements of Sections 8-34-301...shall not apply to solid waste sites during inspection and maintenance of the landfill gas collection or emission control system...” KCRDF appropriately reported flare downtime events under 8-34-113, as each event required inspection and maintenance during the downtime. These events were reported in KCRDF’s startup and shutdown logs in its semi-annual reports. Startup could begin only after the restoration of power by the utility company and KCRDF’s safety and environmental inspection and maintenance process for flare startup and emission minimization. Further, the exemption in 8-34-113 applies as KCRDF met the requirement that the “gas collection and emission control systems are not shutdown for more than 240 hours in any calendar year.” As KCRDF did not violate 8-34-301.1, it also did not violate 2-1-307 nor 1-523.3.

BAAQMD’s apparent interpretation that 8-34-113 does not apply where inspection and maintenance has occurred simply because an unplanned power shutoff event also occurred leads to a result that may create harm to health, safety and/or the environment. Automatically restarting flares and auxiliary equipment (blower skid, air compressor, condensate injection system, PLC and data logger, etc.) without a safety and environmental inspection and/or maintenance may cause serious health, safety and/or environmental concerns. Similarly, using an automatic backup generator would have the same concerns, with the addition of potential additional emissions associated with the generator. Further, switching between a generator and the power system creates additional downtime, as does refueling or other issues that may be associated with use of a generator.

KCRDF additionally asserts that the downtime events did not: 1) interfere with attainment of the BAAQMD, federal, or state standards; 2) endanger health, safety, or welfare of any person; 3) endanger the environment; 4) increase emissions of toxic air contaminants; 5) cause or contribute to a violation of a SAAQS or NAAQS; 6) interfere with the BAAQMD’s compliance work; nor 7) result in emissions exceeding de minimis levels. Moreover, KCRDF’s downtime events were not the result of equipment malfunction, knowing, willful, intentional, chronic nor committed by a recalcitrant, and did not benefit KCRDF economically nor result in a nuisance. The frequency and duration of weather or utility-related electrical interruptions are outside of KCRDF’s control but in either case, best practice requires inspection and/or maintenance prior to startup and, therefore, is reported as such.

For the above reasons, KCRDF asserts that it did not violate 2-1-307, 1-523.3 nor 8-34-301.1 and respectfully requests the NOV be rescinded.

Despite its objections, at BAAQMD’s request, KCRDF has also focused its efforts toward a solution to reduce power outage downtime hours by reconfiguring the existing electrical panel for transfer switch operation and adding a backup generator to serve as an emergency power source. Subsequent to the PSPS events during 2019, KCRDF has taken the following proactive steps, including initiating the procurement process for a permanent generator (delayed due to the COVID-19 emergency):

- KCRDF hired a certified electrical contractor to review the existing electrical infrastructure at the KCRDF site and rewire the flare electrical system.
- KCRDF initiated procurement of and acquired a rental generator to serve as emergency power source for site activities.
- KCRDF hired a certified electrical contractor to hard wire the generator to the flare electrical circuit.
- KCRDF requested engineering evaluation and proposal to reconfigure the existing panels to connect and its contractor completed electrical panel work.

KCRDF is committed to operating its landfill in compliance with applicable regulations and requests a meeting with BAAQMD executive staff to discuss Regulation 8-34-301.1. As you may recall, we were in the process of providing comment on a draft amendment to the Regulation in line with our response herein prior to the COVID-19 emergency. We may also supplement this response in the future. If you have any questions or need any additional information, please do not hesitate to contact me at (408) 779-2206.

Sincerely,  
Kirby Canyon Recycling & Disposal Facility

A handwritten signature in blue ink, appearing to read "Enrique Perez".

Enrique Perez  
District Manager

cc: Erin Phillips, BAAQMD

Attachments: Copy of BAAQMD Notice of Violation A-57372  
KCRDF Flare Data



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**  
375 Beale Street, Suite 600, San Francisco, CA 94105  
(415) 749-5000

# NOTICE OF VIOLATION

No. **A57372**


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**PHONE:** (408 ) 960-0769  
 N# Mailing Address on F61

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**ADDRESS:** \_\_\_\_\_  Same As Above  
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**RECIPIENT NAME:** Enrique Perez  
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Continued On Reverse

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KCRDF Flare Data for Periods of Shutdown

2.28.2019



## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/02/28	16:10:00	1665	1684	2083	2196
2019/02/28	16:12:00	1665	1683	2072	2178
2019/02/28	16:14:00	1671	1681	2090	2234
2019/02/28	16:16:00	1659	1688	2077	2201
2019/02/28	16:18:00	1671	1689	2090	2188
2019/02/28	16:20:00	1662	1683	2065	2178
2019/02/28	16:22:00	1664	1686	2083	2206
2019/02/28	16:24:00	1671	1677	2092	2182
2019/02/28	16:26:00	1671	1683	2080	2213
2019/02/28	16:28:00	1662	1687	2074	2195
2019/02/28	16:30:00	1661	1689	2100	2201
2019/02/28	16:32:00	1661	1685	2097	2166
2019/02/28	16:34:00	1666	1678	2072	2195
2019/02/28	16:36:00	1668	1689	2047	2207
2019/02/28	16:38:00	1665	1686	2097	2203
2019/02/28	16:40:00	1229	1583	-393	-1
2019/02/28	16:42:00	861	1229	-2	-1
2019/02/28	16:44:00	656	861	-2	-1
2019/02/28	16:46:00	528	656	-2	-1
2019/02/28	16:48:00	433	528	-2	-1
2019/02/28	16:50:00	363	433	-1	-1
2019/02/28	16:52:00	307	363	-1	80
2019/02/28	16:54:00	261	307	-1	52
2019/02/28	16:56:00	225	261	-1	-1
2019/02/28	16:58:00	196	225	-1	-1
2019/02/28	17:00:00	175	196	-1	-1
2019/02/28	17:02:00	160	175	-1	108
2019/02/28	17:04:00	149	160	-1	49
2019/02/28	17:06:00	140	149	-1	-1
2019/02/28	17:08:00	132	141	-1	-1
2019/02/28	17:10:00	125	132	-1	-1
2019/02/28	17:12:00	122	423	1	3406
2019/02/28	17:14:00	423	963	1	2916
2019/02/28	17:16:00	724	929	-1	49
2019/02/28	17:18:00	574	724	-1	51
2019/02/28	17:20:00	459	574	49	51
2019/02/28	17:22:00	376	459	-1	51
2019/02/28	17:24:00	348	632	49	3389
2019/02/28	17:26:00	632	1275	2504	2925
2019/02/28	17:28:00	1275	1541	2438	2557
2019/02/28	17:30:00	1541	1602	2364	2514
2019/02/28	17:32:00	1602	1627	2321	2421
2019/02/28	17:34:00	1626	1642	2313	2467
2019/02/28	17:36:00	1630	1642	2305	2439
2019/02/28	17:38:00	1626	1636	2291	2422
2019/02/28	17:40:00	1630	1638	2285	2384

2019/02/28	17:42:00	1628	1635	2299	2402
2019/02/28	17:44:00	1626	1651	2273	2422
2019/02/28	17:46:00	1626	1642	2280	2376
2019/02/28	17:48:00	1630	1640	2257	2372
2019/02/28	17:50:00	1620	1644	2218	2360
2019/02/28	17:52:00	1626	1642	2208	2364
2019/02/28	17:54:00	1625	1636	2230	2326
2019/02/28	17:56:00	1629	1635	2193	2344
2019/02/28	17:58:00	1629	1646	2218	2331
2019/02/28	18:00:00	1629	1647	2212	2325

KCRDF Flare Data for Periods of Shutdown

6.10.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/06/10	19:10:00	1667	1673	2591	2625
2019/06/10	19:12:00	1669	1681	2578	2624
2019/06/10	19:14:00	1668	1686	2584	2621
2019/06/10	19:16:00	1664	1685	2588	2623
2019/06/10	19:18:00	1664	1687	2583	2624
2019/06/10	19:20:00	1668	1681	2586	2624
2019/06/10	19:22:00	1661	1678	2579	2634
2019/06/10	19:24:00	1667	1686	2581	2626
2019/06/10	19:26:00	1666	1685	2586	2621
2019/06/10	19:28:00	1669	1675	2579	2624
2019/06/10	19:30:00	1670	1675	2588	2622
2019/06/10	19:32:00	1671	1684	2588	2621
2019/06/10	19:34:00	1666	1673	2587	2623
2019/06/10	19:36:00	1668	1686	2579	2629
2019/06/10	19:38:00	1666	1683	2581	2622
2019/06/10	19:40:00				
2019/06/10	19:42:00				
2019/06/10	19:44:00				
2019/06/10	19:46:00				
2019/06/10	19:48:00				
2019/06/10	19:50:00				
2019/06/10	19:52:00				
2019/06/10	19:54:00				
2019/06/10	19:56:00				
2019/06/10	19:58:00				
2019/06/10	20:00:00				
2019/06/10	20:02:00				
2019/06/10	20:04:00				
2019/06/10	20:06:00				
2019/06/10	20:08:00				
2019/06/10	20:10:00				
2019/06/10	20:12:00				
2019/06/10	20:14:00				
2019/06/10	20:16:00				
2019/06/10	20:18:00				
2019/06/10	20:20:00				
2019/06/10	20:22:00				
2019/06/10	20:24:00				
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2019/06/10	20:48:00
2019/06/10	20:50:00
2019/06/10	20:52:00
2019/06/10	20:54:00
2019/06/10	20:56:00
2019/06/10	20:58:00
2019/06/10	21:00:00
2019/06/10	21:02:00
2019/06/10	21:04:00
2019/06/10	21:06:00
2019/06/10	21:08:00
2019/06/10	21:10:00
2019/06/10	21:12:00
2019/06/10	21:14:00
2019/06/10	21:16:00
2019/06/10	21:18:00
2019/06/10	21:20:00
2019/06/10	21:22:00
2019/06/10	21:24:00
2019/06/10	21:26:00
2019/06/10	21:28:00
2019/06/10	21:30:00
2019/06/10	21:32:00
2019/06/10	21:34:00
2019/06/10	21:36:00
2019/06/10	21:38:00
2019/06/10	21:40:00
2019/06/10	21:42:00
2019/06/10	21:44:00
2019/06/10	21:46:00
2019/06/10	21:48:00
2019/06/10	21:50:00
2019/06/10	21:52:00
2019/06/10	21:54:00
2019/06/10	21:56:00
2019/06/10	21:58:00
2019/06/10	22:00:00
2019/06/10	22:02:00
2019/06/10	22:04:00
2019/06/10	22:06:00
2019/06/10	22:08:00
2019/06/10	22:10:00
2019/06/10	22:12:00
2019/06/10	22:14:00
2019/06/10	22:16:00
2019/06/10	22:18:00
2019/06/10	22:20:00

2019/06/10	22:22:00				
2019/06/10	22:24:00	84	85	-405	51
2019/06/10	22:26:00	85	85	-1	0
2019/06/10	22:28:00	85	85	-1	105
2019/06/10	22:30:00	85	86	-1	195
2019/06/10	22:32:00	85	86	-1	-1
2019/06/10	22:34:00	85	86	-1	-1
2019/06/10	22:36:00	85	85	-1	-1
2019/06/10	22:38:00	84	85	-2	-1
2019/06/10	22:40:00	84	85	-1	-1
2019/06/10	22:42:00	84	84	-1	-1
2019/06/10	22:44:00	82	84	-2	-1
2019/06/10	22:46:00	82	84	-2	-1
2019/06/10	22:48:00	82	83	-1	-1
2019/06/10	22:50:00	82	345	-1	3414
2019/06/10	22:52:00	345	1775	3050	3239
2019/06/10	22:54:00	1549	1712	2960	3092
2019/06/10	22:56:00	1616	1642	2902	3000
2019/06/10	22:58:00	1642	1669	2836	2964
2019/06/10	23:00:00	1655	1673	2829	2897
2019/06/10	23:02:00	1658	1679	2798	2840
2019/06/10	23:04:00	1659	1672	2777	2829
2019/06/10	23:06:00	1671	1686	2769	2807
2019/06/10	23:08:00	1664	1678	2763	2787
2019/06/10	23:10:00	1676	1681	2744	2782
2019/06/10	23:12:00	1671	1677	2741	2787
2019/06/10	23:14:00	1658	1681	2734	2772
2019/06/10	23:16:00	1663	1681	2706	2764
2019/06/10	23:18:00	1659	1684	2713	2757
2019/06/10	23:20:00	1662	1677	2708	2757
2019/06/10	23:22:00	1676	1684	2705	2749
2019/06/10	23:24:00	1657	1683	2692	2747
2019/06/10	23:26:00	1673	1684	2702	2742
2019/06/10	23:28:00	1658	1673	2688	2742
2019/06/10	23:30:00	1669	1686	2685	2737

KCRDF Flare Data for Periods of Shutdown

7.24.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/07/24	16:40:00	1600	1606	1649	1690
2019/07/24	16:42:00	1600	1605	1635	1696
2019/07/24	16:44:00	1589	1601	1631	1702
2019/07/24	16:46:00	1584	1591	1628	1689
2019/07/24	16:48:00	1577	1585	1631	1694
2019/07/24	16:50:00	1581	1592	1628	1691
2019/07/24	16:52:00	1580	1592	1641	1689
2019/07/24	16:54:00	1580	1604	1639	1689
2019/07/24	16:56:00	1589	1599	1633	1684
2019/07/24	16:58:00	1589	1601	1640	1697
2019/07/24	17:00:00	1577	1594	1626	1692
2019/07/24	17:02:00	1576	1586	1639	1701
2019/07/24	17:04:00	1573	1586	1631	1683
2019/07/24	17:06:00	1575	1584	1636	1686
2019/07/24	17:08:00	1575	1580	1636	1703
2019/07/24	17:10:00	1575	1582	1636	1692
2019/07/24	17:12:00	1574	1577	1641	1687
2019/07/24	17:14:00	1574	1587	1630	1686
2019/07/24	17:16:00				
2019/07/24	17:18:00				
2019/07/24	17:20:00				
2019/07/24	17:22:00				
2019/07/24	17:24:00				
2019/07/24	17:26:00				
2019/07/24	17:28:00				
2019/07/24	17:30:00				
2019/07/24	17:32:00				
2019/07/24	17:34:00				
2019/07/24	17:36:00				
2019/07/24	17:38:00				
2019/07/24	17:40:00				
2019/07/24	17:42:00				
2019/07/24	17:44:00	224	240	-394	55
2019/07/24	17:46:00	207	224	-3	49
2019/07/24	17:48:00	191	207	47	278
2019/07/24	17:50:00	178	191	-3	49
2019/07/24	17:52:00	166	178	-3	48
2019/07/24	17:54:00	156	166	-3	47
2019/07/24	17:56:00	147	156	46	49
2019/07/24	17:58:00	140	147	46	49
2019/07/24	18:00:00	135	140	-3	47
2019/07/24	18:02:00	130	135	46	47
2019/07/24	18:04:00	127	131	-3	47
2019/07/24	18:06:00	123	127	-3	47
2019/07/24	18:08:00	120	123	-3	48



2019/07/24	18:10:00	118	121	-3	47
2019/07/24	18:12:00	116	118	-4	47
2019/07/24	18:14:00	113	116	-3	-3
2019/07/24	18:16:00	113	114	-3	-3
2019/07/24	18:18:00	110	113	-4	-3
2019/07/24	18:20:00	110	111	-3	-3
2019/07/24	18:22:00	108	110	-4	-3
2019/07/24	18:24:00	108	109	-3	-3
2019/07/24	18:26:00	106	108	-4	-3
2019/07/24	18:28:00	106	107	-4	-3
2019/07/24	18:30:00	105	106	-4	-3
2019/07/24	18:32:00	106	106	-4	-3
2019/07/24	18:34:00	104	106	-4	-3
2019/07/24	18:36:00	104	104	-3	-3
2019/07/24	18:38:00	103	104	-4	-3
2019/07/24	18:40:00	103	104	-4	-3
2019/07/24	18:42:00	103	104	-4	-3
2019/07/24	18:44:00	103	103	-3	-1
2019/07/24	18:46:00	101	103	-3	-3
2019/07/24	18:48:00	101	103	-3	-3
2019/07/24	18:50:00	101	102	-3	-3
2019/07/24	18:52:00	101	102	-3	-3
2019/07/24	18:54:00	101	101	-3	-3
2019/07/24	18:56:00	101	101	-3	-3
2019/07/24	18:58:00	99	101	-3	-3
2019/07/24	19:00:00	99	101	-3	-3
2019/07/24	19:02:00	99	99	-3	-3
2019/07/24	19:04:00	99	99	-3	-3
2019/07/24	19:06:00	99	99	-3	-3
2019/07/24	19:08:00	98	99	-3	-3
2019/07/24	19:10:00	98	99	-3	-3
2019/07/24	19:12:00	98	99	-3	-3
2019/07/24	19:14:00	98	99	-3	-3
2019/07/24	19:16:00	98	99	-3	-3
2019/07/24	19:18:00	98	99	-3	-3
2019/07/24	19:20:00	98	98	-3	-3
2019/07/24	19:22:00	98	98	-3	-3
2019/07/24	19:24:00	98	98	-3	-3
2019/07/24	19:26:00	96	98	-3	-3
2019/07/24	19:28:00	96	98	-3	-3
2019/07/24	19:30:00	96	98	-3	-3
2019/07/24	19:32:00	96	97	-4	-3
2019/07/24	19:34:00	96	97	-3	-3
2019/07/24	19:36:00	96	97	-3	-3
2019/07/24	19:38:00	96	97	-3	-3
2019/07/24	19:40:00	96	96	-3	-3
2019/07/24	19:42:00	95	96	-3	-3
2019/07/24	19:44:00	95	96	-4	-3
2019/07/24	19:46:00	95	96	-3	-3
2019/07/24	19:48:00	94	96	-3	-3
2019/07/24	19:50:00	94	96	-3	186

2019/07/24	19:52:00	94	337	186	2125
2019/07/24	19:54:00	337	931	1874	1982
2019/07/24	19:56:00	931	1284	1937	2015
2019/07/24	19:58:00	1284	1504	1894	1975
2019/07/24	20:00:00	1504	1604	1857	1929
2019/07/24	20:02:00	1604	1639	1852	1932
2019/07/24	20:04:00	1638	1663	1844	1904
2019/07/24	20:06:00	1658	1682	1829	1900
2019/07/24	20:08:00	1658	1683	1809	1899
2019/07/24	20:10:00	1668	1673	1791	1852
2019/07/24	20:12:00	1666	1689	1762	1844
2019/07/24	20:14:00	1659	1686	1777	1841
2019/07/24	20:16:00	1662	1688	1769	1824
2019/07/24	20:18:00	1661	1681	1773	1829
2019/07/24	20:20:00	1661	1686	1761	1824
2019/07/24	20:22:00	1661	1686	1758	1826
2019/07/24	20:24:00	1661	1684	1762	1815
2019/07/24	20:26:00	1663	1688	1767	1820
2019/07/24	20:28:00	1661	1685	1743	1817
2019/07/24	20:30:00	1666	1684	1742	1810

KCRDF Flare Data for Periods of Shutdown

7.26.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/07/26	02:00:00	1667	1687	1734	1784
2019/07/26	02:02:00	1660	1677	1733	1783
2019/07/26	02:04:00	1676	1679	1741	1789
2019/07/26	02:06:00	1674	1680	1735	1784
2019/07/26	02:08:00	1667	1684	1725	1791
2019/07/26	02:10:00	1659	1684	1720	1784
2019/07/26	02:12:00	1664	1677	1731	1774
2019/07/26	02:14:00	1670	1677	1730	1784
2019/07/26	02:16:00	1662	1693	1720	1771
2019/07/26	02:18:00	1665	1684	1725	1796
2019/07/26	02:20:00	1662	1683	1718	1781
2019/07/26	02:22:00	1664	1684	1733	1783
2019/07/26	02:24:00	1624	1667	1304	1767
2019/07/26	02:26:00	1426	1624	1090	1309
2019/07/26	02:28:00	1306	1426	1011	1107
2019/07/26	02:30:00	1238	1306	994	1030
2019/07/26	02:32:00	1192	1238	984	1021
2019/07/26	02:34:00	1173	1192	994	1025
2019/07/26	02:36:00	1123	1173	55	1034
2019/07/26	02:38:00	897	1123	-1	55
2019/07/26	02:40:00	732	897	-1	51
2019/07/26	02:42:00	612	732	-1	51
2019/07/26	02:44:00	524	612	-1	52
2019/07/26	02:46:00	456	524	-1	51
2019/07/26	02:48:00	404	456	-1	51
2019/07/26	02:50:00	360	404	-1	51
2019/07/26	02:52:00	323	360	-1	53
2019/07/26	02:54:00	291	323	-1	51
2019/07/26	02:56:00	258	292	-1	51
2019/07/26	02:58:00	229	258	-1	1107
2019/07/26	03:00:00	228	301	1083	1193
2019/07/26	03:02:00	301	526	1156	1205
2019/07/26	03:04:00	526	845	1152	1202
2019/07/26	03:06:00	845	1149	1173	1217
2019/07/26	03:08:00	1149	1243	55	1210
2019/07/26	03:10:00	928	1202	-1	55
2019/07/26	03:12:00	740	928	-1	51
2019/07/26	03:14:00	612	740	-1	51
2019/07/26	03:16:00	518	612	-1	49
2019/07/26	03:18:00	445	518	-1	49
2019/07/26	03:20:00	389	445	-1	49
2019/07/26	03:22:00	344	389	-1	51
2019/07/26	03:24:00	306	344	-1	50
2019/07/26	03:26:00	268	306	-1	50
2019/07/26	03:28:00	245	268	-1	1229

2019/07/26	03:30:00	249	406	1202	1244
2019/07/26	03:32:00	406	632	1204	1239
2019/07/26	03:34:00	632	1026	1225	1267
2019/07/26	03:36:00	1026	1262	1233	1272
2019/07/26	03:38:00	1140	1294	50	1255
2019/07/26	03:40:00	875	1140	-1	53
2019/07/26	03:42:00	701	875	-1	51
2019/07/26	03:44:00	581	701	-1	51
2019/07/26	03:46:00	493	581	-1	51
2019/07/26	03:48:00	415	493	-1	51
2019/07/26	03:50:00	350	415	-1	51
2019/07/26	03:52:00	299	350	-1	51
2019/07/26	03:54:00	257	299	-1	51
2019/07/26	03:56:00	224	258	-1	51
2019/07/26	03:58:00	198	224	-1	50
2019/07/26	04:00:00	177	198	-1	50
2019/07/26	04:02:00	160	177	-1	51
2019/07/26	04:04:00	146	160	-1	49
2019/07/26	04:06:00	134	146	-1	50
2019/07/26	04:08:00	124	134	-1	50
2019/07/26	04:10:00	116	124	-1	50
2019/07/26	04:12:00	109	116	-1	51
2019/07/26	04:14:00	103	109	-1	49
2019/07/26	04:16:00	98	103	-1	53
2019/07/26	04:18:00	94	99	-1	51
2019/07/26	04:20:00	90	94	-1	50
2019/07/26	04:22:00	87	90	-1	50
2019/07/26	04:24:00	84	87	-1	51
2019/07/26	04:26:00	81	84	-1	51
2019/07/26	04:28:00	79	81	-1	51
2019/07/26	04:30:00	77	79	0	50
2019/07/26	04:32:00	75	77	0	53
2019/07/26	04:34:00	73	75	0	51
2019/07/26	04:36:00	72	73	-1	53
2019/07/26	04:38:00	70	72	-1	51
2019/07/26	04:40:00	69	70	-1	53
2019/07/26	04:42:00	69	69	-1	51
2019/07/26	04:44:00	68	69	-1	53
2019/07/26	04:46:00	67	68	0	54
2019/07/26	04:48:00	67	68	-1	54
2019/07/26	04:50:00	66	67	0	53
2019/07/26	04:52:00	65	66	49	55
2019/07/26	04:54:00	65	65	49	55
2019/07/26	04:56:00	64	65	0	56
2019/07/26	04:58:00	64	64	49	54
2019/07/26	05:00:00	63	64	49	55
2019/07/26	05:02:00	63	63	0	55
2019/07/26	05:04:00	63	63	49	55
2019/07/26	05:06:00	62	63	51	54
2019/07/26	05:08:00	62	63	0	55
2019/07/26	05:10:00	62	63	49	56

2019/07/26	05:12:00	61	63	51	56
2019/07/26	05:14:00	61	63	0	56
2019/07/26	05:16:00	61	61	51	57
2019/07/26	05:18:00	61	61	53	57
2019/07/26	05:20:00	61	61	54	57
2019/07/26	05:22:00	60	61	49	57
2019/07/26	05:24:00	60	61	0	56
2019/07/26	05:26:00	60	61	49	55
2019/07/26	05:28:00	60	60	53	58
2019/07/26	05:30:00	60	61	54	58
2019/07/26	05:32:00	60	60	54	58
2019/07/26	05:34:00	60	60	51	57
2019/07/26	05:36:00	59	61	49	57
2019/07/26	05:38:00	59	60	51	57
2019/07/26	05:40:00	59	60	53	57
2019/07/26	05:42:00	59	59	53	57
2019/07/26	05:44:00	59	59	54	58
2019/07/26	05:46:00	59	59	54	57
2019/07/26	05:48:00	58	59	54	58
2019/07/26	05:50:00	58	59	56	58
2019/07/26	05:52:00	58	59	56	57
2019/07/26	05:54:00	58	58	53	57
2019/07/26	05:56:00	58	58	54	57
2019/07/26	05:58:00	58	58	54	58
2019/07/26	06:00:00	58	58	54	58
2019/07/26	06:02:00	58	58	56	58
2019/07/26	06:04:00	58	58	56	58
2019/07/26	06:06:00	58	58	56	58
2019/07/26	06:08:00	58	58	56	58
2019/07/26	06:10:00	58	58	54	57
2019/07/26	06:12:00	58	58	56	58
2019/07/26	06:14:00	58	58	54	57
2019/07/26	06:16:00	58	58	56	58
2019/07/26	06:18:00	58	58	56	58
2019/07/26	06:20:00	58	58	54	57
2019/07/26	06:22:00	58	58	54	58
2019/07/26	06:24:00	58	58	56	58
2019/07/26	06:26:00	58	58	54	58
2019/07/26	06:28:00	57	58	56	58
2019/07/26	06:30:00	58	58	56	58
2019/07/26	06:32:00	58	58	56	58
2019/07/26	06:34:00	58	58	56	58
2019/07/26	06:36:00	57	58	56	58
2019/07/26	06:38:00	57	58	54	58
2019/07/26	06:40:00	57	58	56	58
2019/07/26	06:42:00	57	58	58	58
2019/07/26	06:44:00	57	58	56	58
2019/07/26	06:46:00	57	58	56	58
2019/07/26	06:48:00	57	58	58	58
2019/07/26	06:50:00	57	58	56	58
2019/07/26	06:52:00	57	58	56	58

2019/07/26	06:54:00	57	58	58	58
2019/07/26	06:56:00	57	58	58	58
2019/07/26	06:58:00	57	58	56	58
2019/07/26	07:00:00	57	58	58	58
2019/07/26	07:02:00	57	58	58	58
2019/07/26	07:04:00	57	58	58	58
2019/07/26	07:06:00	57	58	56	58
2019/07/26	07:08:00	57	58	58	58
2019/07/26	07:10:00	57	58	58	58
2019/07/26	07:12:00	57	58	58	58
2019/07/26	07:14:00	57	58	56	58
2019/07/26	07:16:00	57	58	58	58
2019/07/26	07:18:00	57	58	58	58
2019/07/26	07:20:00	57	58	58	58
2019/07/26	07:22:00	57	58	58	58
2019/07/26	07:24:00	57	58	57	58
2019/07/26	07:26:00	57	58	56	58
2019/07/26	07:28:00	57	58	56	58
2019/07/26	07:30:00	57	58	58	58
2019/07/26	07:32:00	57	58	58	58
2019/07/26	07:34:00	57	58	58	58
2019/07/26	07:36:00	57	58	56	58
2019/07/26	07:38:00	57	58	56	58
2019/07/26	07:40:00	56	58	56	58
2019/07/26	07:42:00	56	58	56	58
2019/07/26	07:44:00	56	58	56	58
2019/07/26	07:46:00	56	58	56	58
2019/07/26	07:48:00	56	58	56	58
2019/07/26	07:50:00	56	58	56	57
2019/07/26	07:52:00	56	58	56	57
2019/07/26	07:54:00	57	58	56	58
2019/07/26	07:56:00	57	58	56	58
2019/07/26	07:58:00	57	58	56	58
2019/07/26	08:00:00	57	58	56	57
2019/07/26	08:02:00	57	58	56	57
2019/07/26	08:04:00	56	58	56	57
2019/07/26	08:06:00	56	58	56	57
2019/07/26	08:08:00	56	56	56	57
2019/07/26	08:10:00	56	56	56	57
2019/07/26	08:12:00	56	56	56	57
2019/07/26	08:14:00	56	56	56	57
2019/07/26	08:16:00	56	56	56	57
2019/07/26	08:18:00	56	58	56	57
2019/07/26	08:20:00	56	58	56	57
2019/07/26	08:22:00	56	58	56	57
2019/07/26	08:24:00	57	58	56	57
2019/07/26	08:26:00	57	58	56	57
2019/07/26	08:28:00	57	58	56	57
2019/07/26	08:30:00	57	58	56	57
2019/07/26	08:32:00	57	58	56	57
2019/07/26	08:34:00	57	58	56	57

2019/07/26	08:36:00	57	58	56	57
2019/07/26	08:38:00	57	58	56	57
2019/07/26	08:40:00	57	58	56	57
2019/07/26	08:42:00	57	58	56	57
2019/07/26	08:44:00	57	58	56	57
2019/07/26	08:46:00	57	58	54	57
2019/07/26	08:48:00	57	58	54	57
2019/07/26	08:50:00	57	58	54	57
2019/07/26	08:52:00	57	58	54	57
2019/07/26	08:54:00	57	59	54	1118
2019/07/26	08:56:00	59	206	1118	1287
2019/07/26	08:58:00	206	528	1254	1284
2019/07/26	09:00:00	528	1000	1265	1370
2019/07/26	09:02:00	1000	1311	1332	1378
2019/07/26	09:04:00	1311	1451	84	1373
2019/07/26	09:06:00	1033	1412	-1	84
2019/07/26	09:08:00	800	1033	49	51
2019/07/26	09:10:00	650	800	49	51
2019/07/26	09:12:00	544	650	49	50
2019/07/26	09:14:00	466	545	49	50
2019/07/26	09:16:00	404	466	-1	50
2019/07/26	09:18:00	355	404	-1	50
2019/07/26	09:20:00	314	355	-1	50
2019/07/26	09:22:00	275	314	-1	50
2019/07/26	09:24:00	236	275	49	280
2019/07/26	09:26:00	205	236	-1	327
2019/07/26	09:28:00	179	205	-1	0
2019/07/26	09:30:00	159	179	-1	0
2019/07/26	09:32:00	144	159	-1	0
2019/07/26	09:34:00	132	144	-1	0
2019/07/26	09:36:00	121	133	-1	0
2019/07/26	09:38:00	112	121	-1	0
2019/07/26	09:40:00	105	112	-1	0
2019/07/26	09:42:00	99	105	-1	0
2019/07/26	09:44:00	94	99	-1	0
2019/07/26	09:46:00	89	94	-1	0
2019/07/26	09:48:00	86	89	-1	0
2019/07/26	09:50:00	83	87	-1	0
2019/07/26	09:52:00	80	83	-1	0
2019/07/26	09:54:00	78	80	-1	0
2019/07/26	09:56:00	76	78	-1	0
2019/07/26	09:58:00	74	76	-1	0
2019/07/26	10:00:00	73	75	-1	0
2019/07/26	10:02:00	72	73	-1	0
2019/07/26	10:04:00	71	72	-1	0
2019/07/26	10:06:00	70	71	-1	0
2019/07/26	10:08:00	68	70	-1	0
2019/07/26	10:10:00	68	69	-1	0
2019/07/26	10:12:00	68	68	-1	49
2019/07/26	10:14:00	67	68	-1	49
2019/07/26	10:16:00	67	88	-1	1361



2019/07/26	10:18:00	88	397	1361	1407
2019/07/26	10:20:00	397	810	1356	1391
2019/07/26	10:22:00	810	1130	1365	1424
2019/07/26	10:24:00	1130	1399	1379	1413
2019/07/26	10:26:00	1320	1513	50	1427
2019/07/26	10:28:00	909	1320	49	50
2019/07/26	10:30:00	687	909	49	51
2019/07/26	10:32:00	539	687	50	51
2019/07/26	10:34:00	440	539	50	51
2019/07/26	10:36:00	359	440	50	51
2019/07/26	10:38:00	304	359	50	1430
2019/07/26	10:40:00	302	350	1397	1481
2019/07/26	10:42:00	350	1084	1390	1440
2019/07/26	10:44:00	1084	1523	1400	1449
2019/07/26	10:46:00	1523	1599	1398	1441
2019/07/26	10:48:00	1599	1814	1406	3648
2019/07/26	10:50:00	1609	1715	2430	2694
2019/07/26	10:52:00	1659	1684	2518	2617
2019/07/26	10:54:00	1676	1681	2514	2620
2019/07/26	10:56:00	1655	1677	2484	2596
2019/07/26	10:58:00	1659	1684	2465	2529
2019/07/26	11:00:00	1660	1681	2455	2545
2019/07/26	11:02:00	1662	1670	2423	2521
2019/07/26	11:04:00	1664	1688	2418	2511
2019/07/26	11:06:00	1662	1684	2404	2509
2019/07/26	11:08:00	1660	1686	2383	2475
2019/07/26	11:10:00	1657	1684	2398	2459
2019/07/26	11:12:00	1662	1684	2376	2477
2019/07/26	11:14:00	1662	1688	2361	2454
2019/07/26	11:16:00	1663	1683	2359	2474
2019/07/26	11:18:00	1671	1683	2360	2462
2019/07/26	11:20:00	1660	1681	2330	2470

KCRDF Flare Data for Periods of Shutdown

8.1.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Tag	Flare		Flare		
		Unit	F	MIN	MAX	MIN	MAX
		sec					
2019/08/01	16:20:00	0.000	1660	1683	2057	2178	
2019/08/01	16:22:00	0.000	1673	1683	2042	2155	
2019/08/01	16:24:00	0.000	1673	1678	2077	2166	
2019/08/01	16:26:00	0.000	1667	1677	2062	2147	
2019/08/01	16:28:00	0.000	1662	1685	2052	2180	
2019/08/01	16:30:00	0.000	1659	1687	2035	2157	
2019/08/01	16:32:00	0.000	1659	1684	2068	2160	
2019/08/01	16:34:00	0.000	1666	1684	2058	2172	
2019/08/01	16:36:00	0.000	1665	1684	2049	2145	
2019/08/01	16:38:00	0.000	1663	1680	2036	2167	
2019/08/01	16:40:00	0.000	1670	1680	2024	2173	
2019/08/01	16:42:00	0.000	1669	1676	2029	2155	
2019/08/01	16:44:00	0.000	1659	1691	2033	2160	
2019/08/01	16:46:00	0.000	1658	1681	2031	2185	
2019/08/01	16:48:00	0.000	1659	1684	2062	2155	
2019/08/01	16:50:00	0.000	1661	1689	2051	2159	
2019/08/01	16:52:00	0.000	1659	1688	2065	2157	
2019/08/01	16:54:00	0.000	1662	1689	2047	2147	
2019/08/01	16:56:00	0.000	1663	1689	2053	2154	
2019/08/01	16:58:00	0.000					
2019/08/01	17:00:00	0.000					
2019/08/01	17:02:00	0.000					
2019/08/01	17:04:00	0.000					
2019/08/01	17:06:00	0.000					
2019/08/01	17:08:00	0.000					
2019/08/01	17:10:00	0.000					
2019/08/01	17:12:00	0.000	390	416	-399	49	
2019/08/01	17:14:00	0.000	354	399	-1	-1	
2019/08/01	17:16:00	0.000	309	354	-1	-1	
2019/08/01	17:18:00	0.000	268	309	-1	140	
2019/08/01	17:20:00	0.000	234	268	-2	62	
2019/08/01	17:22:00	0.000	207	234	-2	-1	
2019/08/01	17:24:00	0.000	185	207	-2	-1	
2019/08/01	17:26:00	0.000	167	185	-2	-1	
2019/08/01	17:28:00	0.000	161	334	-2	3036	
2019/08/01	17:30:00	0.000	334	1118	2269	2681	
2019/08/01	17:32:00	0.000	1118	1475	2143	2426	
2019/08/01	17:34:00	0.000	1475	1626	2135	2312	
2019/08/01	17:36:00	0.000	1626	1664	2158	2272	
2019/08/01	17:38:00	0.000	1654	1681	2156	2285	
2019/08/01	17:40:00	0.000	1659	1679	2160	2281	
2019/08/01	17:42:00	0.000	1649	1680	2157	2272	
2019/08/01	17:44:00	0.000	1660	1685	2149	2251	
2019/08/01	17:46:00	0.000	1661	1693	2146	2266	
2019/08/01	17:48:00	0.000	1666	1686	2157	2273	
2019/08/01	17:50:00	0.000	1666	1674	2145	2282	

2019/08/01	17:52:00	0.000	1666	1671	2139	2264
2019/08/01	17:54:00	0.000	1669	1693	2142	2259
2019/08/01	17:56:00	0.000	1661	1688	2152	2253
2019/08/01	17:58:00	0.000	1665	1682	2112	2259
2019/08/01	18:00:00	0.000	1659	1683	2133	2254

KCRDF Flare Data for Periods of Shutdown

8.6.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/08/06	13:00:00	1659	1684	1932	2077
2019/08/06	13:02:00	1657	1680	1938	2071
2019/08/06	13:04:00	1669	1684	1930	2073
2019/08/06	13:06:00	1659	1685	1943	2054
2019/08/06	13:08:00	1665	1681	1966	2078
2019/08/06	13:10:00	1664	1689	1920	2071
2019/08/06	13:12:00	1665	1684	1973	2102
2019/08/06	13:14:00	1666	1681	1945	2061
2019/08/06	13:16:00	1661	1686	1956	2060
2019/08/06	13:18:00	1658	1682	1964	2074
2019/08/06	13:20:00	1669	1686	1975	2065
2019/08/06	13:22:00	1657	1685	1969	2090
2019/08/06	13:24:00	1664	1681	1987	2071
2019/08/06	13:26:00	1664	1688	1966	2068
2019/08/06	13:28:00	1671	1686	1979	2054
2019/08/06	13:30:00	1662	1686	1960	2077
2019/08/06	13:32:00	1467	1678	-4	2083
2019/08/06	13:34:00	1079	1469	-4	-3
2019/08/06	13:36:00	857	1079	-4	-3
2019/08/06	13:38:00	711	857	-4	-3
2019/08/06	13:40:00	604	711	-3	-3
2019/08/06	13:42:00	525	604	-3	-3
2019/08/06	13:44:00	462	525	-3	-3
2019/08/06	13:46:00	413	462	-3	-3
2019/08/06	13:48:00	372	413	-3	-3
2019/08/06	13:50:00	339	372	-3	-3
2019/08/06	13:52:00	310	339	-3	-3
2019/08/06	13:54:00	286	310	-3	-3
2019/08/06	13:56:00	258	286	-3	-3
2019/08/06	13:58:00	228	258	-3	-3
2019/08/06	14:00:00	217	366	-3	3042
2019/08/06	14:02:00	366	1280	2240	2565
2019/08/06	14:04:00	1280	1541	2109	2338
2019/08/06	14:06:00	1541	1671	2104	2237
2019/08/06	14:08:00	1646	1671	2094	2253
2019/08/06	14:10:00	1646	1681	2113	2223
2019/08/06	14:12:00	1662	1689	2127	2272
2019/08/06	14:14:00	1662	1685	2112	2232
2019/08/06	14:16:00	1660	1682	2117	2216
2019/08/06	14:18:00	1675	1682	2099	2214
2019/08/06	14:20:00	1660	1685	2103	2241
2019/08/06	14:22:00	1662	1685	2116	2235
2019/08/06	14:24:00	1658	1682	2110	2206
2019/08/06	14:26:00	1666	1683	2105	2199
2019/08/06	14:28:00	1664	1677	2093	2200
2019/08/06	14:30:00	1669	1677	2104	2192

KCRDF Flare Data for Periods of Shutdown

9.8.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Tag	Flare		Flare	
		Unit	F	MAX	SCFM	MAX
		sec	MIN		MIN	
2019/09/08	08:12:00	0.000	1664	1684	1842	1962
2019/09/08	08:14:00	0.000	1662	1686	1823	1950
2019/09/08	08:16:00	0.000	1664	1687	1842	1975
2019/09/08	08:18:00	0.000	1674	1687	1839	1959
2019/09/08	08:20:00	0.000	1671	1676	1803	1949
2019/09/08	08:22:00	0.000	1667	1672	1841	1972
2019/09/08	08:24:00	0.000	1666	1674	1811	1977
2019/09/08	08:26:00	0.000	1662	1689	1846	1967
2019/09/08	08:28:00	0.000	1662	1680	1815	1972
2019/09/08	08:30:00	0.000	1672	1679	1831	1972
2019/09/08	08:32:00	0.000	1669	1677	1818	1982
2019/09/08	08:34:00	0.000	1669	1674	1812	1968
2019/09/08	08:36:00	0.000	1673	1688	1818	1963
2019/09/08	08:38:00	0.000	1662	1684	1826	1943
2019/09/08	08:40:00	0.000	1662	1688	1834	1962
2019/09/08	08:42:00	0.000	1664	1686	1841	1973
2019/09/08	08:44:00	0.000	1664	1686	1826	1985
2019/09/08	08:46:00	0.000	1660	1684	1825	1960
2019/09/08	08:48:00	0.000	1604	1684	220	1973
2019/09/08	08:50:00	0.000	1074	1604	-1	220
2019/09/08	08:52:00	0.000	807	1074	-1	-1
2019/09/08	08:54:00	0.000	639	807	-1	-1
2019/09/08	08:56:00	0.000	520	639	-1	-1
2019/09/08	08:58:00	0.000	434	520	-1	0
2019/09/08	09:00:00	0.000	368	434	-1	0
2019/09/08	09:02:00	0.000	320	368	-1	0
2019/09/08	09:04:00	0.000	284	320	-1	0
2019/09/08	09:06:00	0.000	255	284	-1	0
2019/09/08	09:08:00	0.000	230	255	-1	0
2019/09/08	09:10:00	0.000	208	230	-1	0
2019/09/08	09:12:00	0.000	188	208	-1	0
2019/09/08	09:14:00	0.000	171	188	-1	0
2019/09/08	09:16:00	0.000	157	172	-1	0
2019/09/08	09:18:00	0.000	146	157	-1	0
2019/09/08	09:20:00	0.000	138	146	-1	0
2019/09/08	09:22:00	0.000	130	138	-1	0
2019/09/08	09:24:00	0.000	123	130	-1	0
2019/09/08	09:26:00	0.000	116	123	-1	0
2019/09/08	09:28:00	0.000	110	116	-1	0
2019/09/08	09:30:00	0.000	106	110	-1	0
2019/09/08	09:32:00	0.000	101	106	-1	0
2019/09/08	09:34:00	0.000	98	101	-1	0
2019/09/08	09:36:00	0.000	95	98	-1	0
2019/09/08	09:38:00	0.000	92	95	-1	-1
2019/09/08	09:40:00	0.000	90	92	-1	-1



2019/09/08	09:42:00	0.000	88	90	-1	0
2019/09/08	09:44:00	0.000	86	88	-1	-1
2019/09/08	09:46:00	0.000	85	87	-1	-1
2019/09/08	09:48:00	0.000	83	85	-1	-1
2019/09/08	09:50:00	0.000	82	83	-1	-1
2019/09/08	09:52:00	0.000	81	82	-1	-1
2019/09/08	09:54:00	0.000	80	81	-1	-1
2019/09/08	09:56:00	0.000	79	80	-1	-1
2019/09/08	09:58:00	0.000	78	79	-1	-1
2019/09/08	10:00:00	0.000	78	78	-1	-1
2019/09/08	10:02:00	0.000	77	78	-1	-1
2019/09/08	10:04:00	0.000	77	77	-1	-1
2019/09/08	10:06:00	0.000	76	77	-1	-1
2019/09/08	10:08:00	0.000	75	76	-1	-1
2019/09/08	10:10:00	0.000	75	76	-1	-1
2019/09/08	10:12:00	0.000	75	75	-2	-1
2019/09/08	10:14:00	0.000	74	75	-2	-1
2019/09/08	10:16:00	0.000	74	74	-2	-1
2019/09/08	10:18:00	0.000	73	75	-2	-1
2019/09/08	10:20:00	0.000	73	74	-2	-1
2019/09/08	10:22:00	0.000	73	73	-2	-1
2019/09/08	10:24:00	0.000	73	73	-2	-1
2019/09/08	10:26:00	0.000	73	73	-2	-1
2019/09/08	10:28:00	0.000	73	73	-2	-1
2019/09/08	10:30:00	0.000	72	73	-2	-1
2019/09/08	10:32:00	0.000	72	73	-2	-1
2019/09/08	10:34:00	0.000	72	72	-2	-1
2019/09/08	10:36:00	0.000	72	72	-2	-1
2019/09/08	10:38:00	0.000	72	72	-2	-1
2019/09/08	10:40:00	0.000	72	72	-2	-1
2019/09/08	10:42:00	0.000	72	72	-2	-1
2019/09/08	10:44:00	0.000	72	72	-2	-1
2019/09/08	10:46:00	0.000	72	72	-2	-1
2019/09/08	10:48:00	0.000	72	72	-2	-1
2019/09/08	10:50:00	0.000	72	72	-2	-1
2019/09/08	10:52:00	0.000	72	72	-2	-1
2019/09/08	10:54:00	0.000	72	72	-2	-2
2019/09/08	10:56:00	0.000	72	72	-2	-1
2019/09/08	10:58:00	0.000	72	72	-2	-2
2019/09/08	11:00:00	0.000	72	72	-2	-2
2019/09/08	11:02:00	0.000	72	72	-2	-2
2019/09/08	11:04:00	0.000	72	72	-2	-2
2019/09/08	11:06:00	0.000	72	72	-3	-2
2019/09/08	11:08:00	0.000	72	72	-3	-2
2019/09/08	11:10:00	0.000	72	72	-3	-2
2019/09/08	11:12:00	0.000	72	72	-2	-2
2019/09/08	11:14:00	0.000	72	72	-2	-2
2019/09/08	11:16:00	0.000	72	72	-2	-2
2019/09/08	11:18:00	0.000	72	72	-2	-2
2019/09/08	11:20:00	0.000	71	72	-2	-2
2019/09/08	11:22:00	0.000	70	72	-2	-2

2019/09/08	11:24:00	0.000	70	72	-2	-2
2019/09/08	11:26:00	0.000	70	72	-2	-1
2019/09/08	11:28:00	0.000	70	71	-2	-1
2019/09/08	11:30:00	0.000	70	71	-2	-1
2019/09/08	11:32:00	0.000	70	72	-2	-2
2019/09/08	11:34:00	0.000	70	72	-2	-2
2019/09/08	11:36:00	0.000	70	71	-2	-1
2019/09/08	11:38:00	0.000	70	71	-2	-1
2019/09/08	11:40:00	0.000	70	71	-2	-1
2019/09/08	11:42:00	0.000	70	71	-2	-1
2019/09/08	11:44:00	0.000	70	71	-2	-1
2019/09/08	11:46:00	0.000	70	71	-2	-1
2019/09/08	11:48:00	0.000	70	71	-2	-1
2019/09/08	11:50:00	0.000	70	71	-2	-1
2019/09/08	11:52:00	0.000	70	71	-2	-1
2019/09/08	11:54:00	0.000	70	71	-2	-1
2019/09/08	11:56:00	0.000	70	71	-2	-1
2019/09/08	11:58:00	0.000	70	70	-2	-1
2019/09/08	12:00:00	0.000	70	70	-2	-1
2019/09/08	12:02:00	0.000	70	70	-2	-1
2019/09/08	12:04:00	0.000	70	70	-2	-1
2019/09/08	12:06:00	0.000	70	70	-2	-1
2019/09/08	12:08:00	0.000	70	70	-2	-1
2019/09/08	12:10:00	0.000	70	70	-2	-1
2019/09/08	12:12:00	0.000	70	70	-2	-1
2019/09/08	12:14:00	0.000	70	70	-2	-1
2019/09/08	12:16:00	0.000	70	70	-2	-1
2019/09/08	12:18:00	0.000	70	71	-2	-1
2019/09/08	12:20:00	0.000	70	71	-2	-1
2019/09/08	12:22:00	0.000	70	71	-2	-1
2019/09/08	12:24:00	0.000	70	71	-2	-1
2019/09/08	12:26:00	0.000	70	71	-2	-1
2019/09/08	12:28:00	0.000	70	71	-2	-1
2019/09/08	12:30:00	0.000	70	71	-2	-1
2019/09/08	12:32:00	0.000	70	71	-2	-1
2019/09/08	12:34:00	0.000	70	71	-2	-1
2019/09/08	12:36:00	0.000	70	71	-2	-1
2019/09/08	12:38:00	0.000	70	71	-2	-1
2019/09/08	12:40:00	0.000	70	71	-2	-1
2019/09/08	12:42:00	0.000	70	71	-2	-1
2019/09/08	12:44:00	0.000	70	71	-2	-1
2019/09/08	12:46:00	0.000	70	71	-2	-1
2019/09/08	12:48:00	0.000	70	71	-2	-1
2019/09/08	12:50:00	0.000	70	72	-2	-1
2019/09/08	12:52:00	0.000	70	71	-2	-1
2019/09/08	12:54:00	0.000	70	72	-2	-1
2019/09/08	12:56:00	0.000	70	72	-2	-1
2019/09/08	12:58:00	0.000	70	72	-2	-1
2019/09/08	13:00:00	0.000	70	72	-2	-1
2019/09/08	13:02:00	0.000	72	72	-2	-1
2019/09/08	13:04:00	0.000	72	72	-2	-1

2019/09/08	13:06:00	0.000	72	72	-2	-1
2019/09/08	13:08:00	0.000	72	72	-2	-1
2019/09/08	13:10:00	0.000	72	72	-2	-1
2019/09/08	13:12:00	0.000	72	72	-2	-1
2019/09/08	13:14:00	0.000	72	72	-2	-1
2019/09/08	13:16:00	0.000	72	72	-2	-1
2019/09/08	13:18:00	0.000	72	72	-2	-1
2019/09/08	13:20:00	0.000	72	72	-2	-1
2019/09/08	13:22:00	0.000	72	73	-2	-1
2019/09/08	13:24:00	0.000	72	73	-2	-1
2019/09/08	13:26:00	0.000	72	73	-2	-1
2019/09/08	13:28:00	0.000	72	73	-2	-1
2019/09/08	13:30:00	0.000	72	73	-2	-2
2019/09/08	13:32:00	0.000	72	74	-2	-1
2019/09/08	13:34:00	0.000	72	74	-2	-1
2019/09/08	13:36:00	0.000	74	74	-2	-1
2019/09/08	13:38:00	0.000	74	74	-2	-1
2019/09/08	13:40:00	0.000	74	74	-2	-2
2019/09/08	13:42:00	0.000	74	74	-2	0
2019/09/08	13:44:00	0.000	74	74	-2	-1
2019/09/08	13:46:00	0.000	74	74	-2	-1
2019/09/08	13:48:00	0.000	74	74	-2	-1
2019/09/08	13:50:00	0.000	74	74	-2	-1
2019/09/08	13:52:00	0.000	74	74	-2	-1
2019/09/08	13:54:00	0.000	74	74	-2	-1
2019/09/08	13:56:00	0.000	74	75	-2	-1
2019/09/08	13:58:00	0.000	74	75	-2	-2
2019/09/08	14:00:00	0.000	74	75	-2	-2
2019/09/08	14:02:00	0.000	75	75	-2	-1
2019/09/08	14:04:00	0.000	75	75	-2	-2
2019/09/08	14:06:00	0.000	74	75	-2	-1
2019/09/08	14:08:00	0.000	75	75	-2	-2
2019/09/08	14:10:00	0.000	75	75	-2	-2
2019/09/08	14:12:00	0.000	75	75	-4	-1
2019/09/08	14:14:00	0.000	75	75	-2	-2
2019/09/08	14:16:00	0.000	75	75	-2	-1
2019/09/08	14:18:00	0.000	75	75	-2	-2
2019/09/08	14:20:00	0.000	75	75	-2	-2
2019/09/08	14:22:00	0.000	75	75	-2	-2
2019/09/08	14:24:00	0.000	75	75	-2	-2
2019/09/08	14:26:00	0.000	75	75	-2	-2
2019/09/08	14:28:00	0.000	75	75	-2	-2
2019/09/08	14:30:00	0.000	75	75	-2	-1
2019/09/08	14:32:00	0.000	75	75	-2	-2
2019/09/08	14:34:00	0.000	75	75	-2	-2
2019/09/08	14:36:00	0.000	74	76	-2	-2
2019/09/08	14:38:00	0.000	75	76	-2	-2
2019/09/08	14:40:00	0.000	75	76	-2	-2
2019/09/08	14:42:00	0.000	75	76	-2	-2
2019/09/08	14:44:00	0.000	75	76	-2	-1
2019/09/08	14:46:00	0.000	75	76	-2	-2

2019/09/08	14:48:00	0.000	75	76	-3	-2
2019/09/08	14:50:00	0.000	75	76	-3	-2
2019/09/08	14:52:00	0.000	75	76	-2	0
2019/09/08	14:54:00	0.000	75	76	-3	-2
2019/09/08	14:56:00	0.000	75	77	-2	-2
2019/09/08	14:58:00	0.000	75	77	-2	-2
2019/09/08	15:00:00	0.000	77	77	-2	-2
2019/09/08	15:02:00	0.000	77	77	-3	-2
2019/09/08	15:04:00	0.000	77	77	-3	-2
2019/09/08	15:06:00	0.000	77	77	-3	-2
2019/09/08	15:08:00	0.000	77	77	-2	-2
2019/09/08	15:10:00	0.000	77	77	-3	-2
2019/09/08	15:12:00	0.000	77	77	-3	-2
2019/09/08	15:14:00	0.000	77	78	-2	-2
2019/09/08	15:16:00	0.000	77	78	-3	-2
2019/09/08	15:18:00	0.000	77	78	-3	-2
2019/09/08	15:20:00	0.000	77	78	-3	-2
2019/09/08	15:22:00	0.000	77	78	-3	-2
2019/09/08	15:24:00	0.000	77	78	-3	-2
2019/09/08	15:26:00	0.000	77	78	-3	-2
2019/09/08	15:28:00	0.000	77	78	-3	-2
2019/09/08	15:30:00	0.000	77	78	-3	-2
2019/09/08	15:32:00	0.000	77	78	-3	-2
2019/09/08	15:34:00	0.000	77	78	-3	-2
2019/09/08	15:36:00	0.000	77	78	-3	-2
2019/09/08	15:38:00	0.000	77	78	-3	-2
2019/09/08	15:40:00	0.000	77	78	-3	-2
2019/09/08	15:42:00	0.000	77	78	-3	-2
2019/09/08	15:44:00	0.000	77	78	-3	-2
2019/09/08	15:46:00	0.000	77	78	-3	-2
2019/09/08	15:48:00	0.000	77	78	-3	-2
2019/09/08	15:50:00	0.000	77	78	-3	-2
2019/09/08	15:52:00	0.000	77	78	-3	-2
2019/09/08	15:54:00	0.000	77	78	-2	-2
2019/09/08	15:56:00	0.000	77	78	-2	-2
2019/09/08	15:58:00	0.000	77	78	-2	-1
2019/09/08	16:00:00	0.000	77	78	-2	-1
2019/09/08	16:02:00	0.000	77	78	-2	-2
2019/09/08	16:04:00	0.000	77	77	-2	-1
2019/09/08	16:06:00	0.000	77	77	-2	-1
2019/09/08	16:08:00	0.000	77	77	-2	-1
2019/09/08	16:10:00	0.000	77	78	-2	-1
2019/09/08	16:12:00	0.000	77	78	-2	-1
2019/09/08	16:14:00	0.000	77	78	-2	-1
2019/09/08	16:16:00	0.000	77	78	-2	-1
2019/09/08	16:18:00	0.000	77	78	-2	-1
2019/09/08	16:20:00	0.000	77	78	-2	-1
2019/09/08	16:22:00	0.000	77	78	-2	-1
2019/09/08	16:24:00	0.000	77	78	-2	-1
2019/09/08	16:26:00	0.000	77	78	-2	-1
2019/09/08	16:28:00	0.000	77	78	-2	-1

2019/09/08	16:30:00	0.000	77	78	-2	-1
2019/09/08	16:32:00	0.000	77	78	-2	-1
2019/09/08	16:34:00	0.000	77	78	-2	-1
2019/09/08	16:36:00	0.000	77	78	-2	-1
2019/09/08	16:38:00	0.000	77	78	-2	-1
2019/09/08	16:40:00	0.000	77	78	-2	-1
2019/09/08	16:42:00	0.000	77	538	-2	3038
2019/09/08	16:44:00	0.000	538	1379	2481	2624
2019/09/08	16:46:00	0.000	1379	1468	2358	2531
2019/09/08	16:48:00	0.000	1468	1616	2355	2496
2019/09/08	16:50:00	0.000	1616	1655	2307	2434
2019/09/08	16:52:00	0.000	1647	1672	2289	2406
2019/09/08	16:54:00	0.000	1657	1688	2245	2388
2019/09/08	16:56:00	0.000	1664	1685	2245	2356
2019/09/08	16:58:00	0.000	1661	1684	2250	2358
2019/09/08	17:00:00	0.000	1658	1688	2227	2351
2019/09/08	17:02:00	0.000	1661	1686	2230	2316
2019/09/08	17:04:00	0.000	1661	1683	2252	2328
2019/09/08	17:06:00	0.000	1638	1684	2202	2354
2019/09/08	17:08:00	0.000	1642	1684	2212	2326
2019/09/08	17:10:00	0.000	1659	1688	2195	2316
2019/09/08	17:12:00	0.000	1659	1686	2198	2306
2019/09/08	17:14:00	0.000	1659	1680	2215	2315
2019/09/08	17:16:00	0.000	1671	1683	2204	2310
2019/09/08	17:18:00	0.000	1664	1680	2187	2329
2019/09/08	17:20:00	0.000	1665	1680	2217	2319

KCRDF Flare Data for Periods of Shutdown

11.11.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/11/11	16:50:00	1659	1686	1907	2033
2019/11/11	16:52:00	1663	1686	1900	2025
2019/11/11	16:54:00	1662	1681	1904	2024
2019/11/11	16:56:00	1671	1678	1936	2023
2019/11/11	16:58:00	1666	1673	1885	2041
2019/11/11	17:00:00	1668	1683	1914	2023
2019/11/11	17:02:00	1668	1671	1916	2032
2019/11/11	17:04:00	1663	1688	1905	2034
2019/11/11	17:06:00	1664	1684	1877	2031
2019/11/11	17:08:00	1663	1684	1874	2021
2019/11/11	17:10:00	1661	1685	1890	2040
2019/11/11	17:12:00	1662	1686	1880	2037
2019/11/11	17:14:00	1663	1685	1900	2035
2019/11/11	17:16:00	1660	1686	1890	2029
2019/11/11	17:18:00	1661	1686	1900	2031
2019/11/11	17:20:00	1661	1683	1907	2044
2019/11/11	17:22:00	1669	1681	1913	2028
2019/11/11	17:24:00	1463	1678	54	2051
2019/11/11	17:26:00	1018	1463	-3	54
2019/11/11	17:28:00	782	1018	-3	-2
2019/11/11	17:30:00	630	782	-3	-2
2019/11/11	17:32:00	519	630	-2	-2
2019/11/11	17:34:00	441	519	-2	48
2019/11/11	17:36:00	380	441	48	48
2019/11/11	17:38:00	332	380	48	48
2019/11/11	17:40:00	294	332	48	48
2019/11/11	17:42:00	263	294	48	48
2019/11/11	17:44:00	237	263	-2	48
2019/11/11	17:46:00	214	237	-2	48
2019/11/11	17:48:00	197	215	-2	48
2019/11/11	17:50:00	182	197	-2	48
2019/11/11	17:52:00	169	182	-2	49
2019/11/11	17:54:00	159	169	-2	48
2019/11/11	17:56:00	149	159	-2	48
2019/11/11	17:58:00	141	149	-2	48
2019/11/11	18:00:00	135	141	48	48
2019/11/11	18:02:00	128	135	48	50
2019/11/11	18:04:00	123	129	48	50
2019/11/11	18:06:00	120	124	-2	50
2019/11/11	18:08:00	116	120	-2	50
2019/11/11	18:10:00	112	116	-2	50
2019/11/11	18:12:00	109	112	-2	50
2019/11/11	18:14:00	106	109	-2	50
2019/11/11	18:16:00	104	106	-2	50
2019/11/11	18:18:00	101	104	-2	50

2019/11/11	18:20:00	99	101	-2	50
2019/11/11	18:22:00	96	99	-2	50
2019/11/11	18:24:00	96	97	-2	50
2019/11/11	18:26:00	94	96	-2	50
2019/11/11	18:28:00	92	94	-1	50
2019/11/11	18:30:00	92	93	-2	50
2019/11/11	18:32:00	91	92	-1	50
2019/11/11	18:34:00	89	91	-1	50
2019/11/11	18:36:00	89	90	-1	50
2019/11/11	18:38:00	87	89	-1	50
2019/11/11	18:40:00	87	88	-1	50
2019/11/11	18:42:00	86	87	-1	50
2019/11/11	18:44:00	85	86	-1	50
2019/11/11	18:46:00	84	85	-1	52
2019/11/11	18:48:00	84	85	-1	52
2019/11/11	18:50:00	82	84	-1	52
2019/11/11	18:52:00	82	83	-1	52
2019/11/11	18:54:00	82	83	-1	52
2019/11/11	18:56:00	82	82	-1	52
2019/11/11	18:58:00	80	82	-1	52
2019/11/11	19:00:00	80	81	-1	52
2019/11/11	19:02:00	80	81	-1	52
2019/11/11	19:04:00	79	80	-1	52
2019/11/11	19:06:00	79	80	-1	52
2019/11/11	19:08:00	79	79	-1	52
2019/11/11	19:10:00	77	79	-1	52
2019/11/11	19:12:00	77	78	-1	52
2019/11/11	19:14:00	77	78	-1	52
2019/11/11	19:16:00	77	78	-1	52
2019/11/11	19:18:00	77	77	-1	52
2019/11/11	19:20:00	75	77	-1	52
2019/11/11	19:22:00	75	77	-1	53
2019/11/11	19:24:00	75	76	-1	52
2019/11/11	19:26:00	75	76	-1	52
2019/11/11	19:28:00	75	76	-1	52
2019/11/11	19:30:00	75	76	-1	52
2019/11/11	19:32:00	75	76	-1	52
2019/11/11	19:34:00	75	75	-1	52
2019/11/11	19:36:00	75	75	-1	52
2019/11/11	19:38:00	74	75	-1	51
2019/11/11	19:40:00	74	75	-1	52
2019/11/11	19:42:00	74	74	-1	52
2019/11/11	19:44:00	74	74	-1	52
2019/11/11	19:46:00	73	74	-1	52
2019/11/11	19:48:00	73	74	-1	52
2019/11/11	19:50:00	72	73	-1	54
2019/11/11	19:52:00	72	73	-1	52
2019/11/11	19:54:00	72	73	-1	52
2019/11/11	19:56:00	72	72	-1	51
2019/11/11	19:58:00	72	72	-1	52
2019/11/11	20:00:00	71	72	-1	51



2019/11/11	20:02:00	70	72	-1	52
2019/11/11	20:04:00	70	72	-1	52
2019/11/11	20:06:00	71	71	-1	52
2019/11/11	20:08:00	70	71	-1	52
2019/11/11	20:10:00	70	71	-1	52
2019/11/11	20:12:00	70	71	-1	52
2019/11/11	20:14:00	70	71	-1	51
2019/11/11	20:16:00	70	70	-1	52
2019/11/11	20:18:00	70	70	-1	52
2019/11/11	20:20:00	68	70	-1	52
2019/11/11	20:22:00	68	70	-1	52
2019/11/11	20:24:00	68	69	-1	49
2019/11/11	20:26:00	68	69	-1	51
2019/11/11	20:28:00	68	69	-1	51
2019/11/11	20:30:00	68	69	-1	54
2019/11/11	20:32:00	68	69	-1	52
2019/11/11	20:34:00	68	69	-1	53
2019/11/11	20:36:00	68	69	-1	51
2019/11/11	20:38:00	68	68	-1	-1
2019/11/11	20:40:00	68	68	-1	54
2019/11/11	20:42:00	68	68	-1	53
2019/11/11	20:44:00	68	68	-1	51
2019/11/11	20:46:00	68	68	-1	-1
2019/11/11	20:48:00	68	68	-1	51
2019/11/11	20:50:00	68	68	-1	0
2019/11/11	20:52:00	68	68	-1	51
2019/11/11	20:54:00	68	68	-1	49
2019/11/11	20:56:00	68	68	-1	49
2019/11/11	20:58:00	68	68	-1	0
2019/11/11	21:00:00	67	68	-1	51
2019/11/11	21:02:00	67	68	-1	51
2019/11/11	21:04:00	67	67	-1	49
2019/11/11	21:06:00	67	67	-1	53
2019/11/11	21:08:00	67	67	-1	51
2019/11/11	21:10:00	67	67	-1	53
2019/11/11	21:12:00	66	67	-1	49
2019/11/11	21:14:00	66	67	-1	0
2019/11/11	21:16:00	65	67	-1	0
2019/11/11	21:18:00	65	66	-1	0
2019/11/11	21:20:00	65	66	-1	51
2019/11/11	21:22:00	65	66	-1	0
2019/11/11	21:24:00	65	66	-1	0
2019/11/11	21:26:00	65	66	-1	0
2019/11/11	21:28:00	66	66	-1	0
2019/11/11	21:30:00	65	66	-1	0
2019/11/11	21:32:00	65	66	-1	0
2019/11/11	21:34:00	65	66	-1	0
2019/11/11	21:36:00	65	66	-1	0
2019/11/11	21:38:00	65	66	-1	0
2019/11/11	21:40:00	65	66	-1	0
2019/11/11	21:42:00	65	66	-1	0

2019/11/11	21:44:00	65	66	-1	0
2019/11/11	21:46:00	65	66	-1	0
2019/11/11	21:48:00	65	66	-1	0
2019/11/11	21:50:00	65	66	-1	0
2019/11/11	21:52:00	65	65	-1	0
2019/11/11	21:54:00	65	65	-1	0
2019/11/11	21:56:00	65	65	-1	0
2019/11/11	21:58:00	65	65	-1	0
2019/11/11	22:00:00	65	65	-1	0
2019/11/11	22:02:00	65	65	-1	0
2019/11/11	22:04:00	64	65	-1	0
2019/11/11	22:06:00	64	65	-1	0
2019/11/11	22:08:00	64	64	-1	0
2019/11/11	22:10:00	63	64	-1	49
2019/11/11	22:12:00	63	64	-1	0
2019/11/11	22:14:00	63	64	-1	0
2019/11/11	22:16:00	63	64	-1	0
2019/11/11	22:18:00	64	64	-1	0
2019/11/11	22:20:00	63	64	-1	0
2019/11/11	22:22:00	63	64	-1	0
2019/11/11	22:24:00	63	64	-1	0
2019/11/11	22:26:00	63	64	-1	0
2019/11/11	22:28:00	63	64	-1	0
2019/11/11	22:30:00	63	64	-1	0
2019/11/11	22:32:00	63	63	-1	0
2019/11/11	22:34:00	63	63	-1	0
2019/11/11	22:36:00	63	63	-1	0
2019/11/11	22:38:00	63	63	-1	0
2019/11/11	22:40:00	63	63	-1	0
2019/11/11	22:42:00	63	63	-1	0
2019/11/11	22:44:00	63	63	-1	0
2019/11/11	22:46:00	63	63	-1	0
2019/11/11	22:48:00	63	63	-1	0
2019/11/11	22:50:00	63	63	-1	0
2019/11/11	22:52:00	63	63	-1	0
2019/11/11	22:54:00	63	63	-1	0
2019/11/11	22:56:00	63	63	-1	0
2019/11/11	22:58:00	62	63	-1	0
2019/11/11	23:00:00	62	63	-1	0
2019/11/11	23:02:00	62	63	-1	0
2019/11/11	23:04:00	62	63	-1	0
2019/11/11	23:06:00	62	63	-1	0
2019/11/11	23:08:00	62	62	-1	0
2019/11/11	23:10:00	62	62	-1	0
2019/11/11	23:12:00	62	62	-1	0
2019/11/11	23:14:00	62	62	-1	0
2019/11/11	23:16:00	62	63	-1	0
2019/11/11	23:18:00	62	62	-1	0
2019/11/11	23:20:00	62	62	-1	0
2019/11/11	23:22:00	62	63	-1	0
2019/11/11	23:24:00	62	62	-1	0

KCRDF Flare Data for Periods of Shutdown

11.12.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM		
		MIN	MAX	MIN	MAX	
2019/11/12	07:00:00		54	55	0	0
2019/11/12	07:02:00		54	56	0	0
2019/11/12	07:04:00		55	56	0	0
2019/11/12	07:06:00		55	56	0	0
2019/11/12	07:08:00		55	56	0	0
2019/11/12	07:10:00		55	56	0	0
2019/11/12	07:12:00		55	56	0	0
2019/11/12	07:14:00		55	56	-1	0
2019/11/12	07:16:00		55	56	0	0
2019/11/12	07:18:00		55	56	0	0
2019/11/12	07:20:00		55	56	0	0
2019/11/12	07:22:00		56	56	0	0
2019/11/12	07:24:00		56	56	0	0
2019/11/12	07:26:00		56	56	0	0
2019/11/12	07:28:00		56	56	0	0
2019/11/12	07:30:00		56	56	0	0
2019/11/12	07:32:00		55	56	-1	0
2019/11/12	07:34:00		55	56	-1	0
2019/11/12	07:36:00		55	56	0	0
2019/11/12	07:38:00		55	56	-1	0
2019/11/12	07:40:00		55	56	0	0
2019/11/12	07:42:00		55	56	-1	0
2019/11/12	07:44:00		55	56	-1	0
2019/11/12	07:46:00		55	56	-1	0
2019/11/12	07:48:00		56	383	-1	3743
2019/11/12	07:50:00		383	1305	2444	2737
2019/11/12	07:52:00		1305	1521	2376	2514
2019/11/12	07:54:00		1521	1629	2332	2432
2019/11/12	07:56:00		1629	1659	2314	2455
2019/11/12	07:58:00		1655	1684	2324	2408
2019/11/12	08:00:00		1662	1681	2268	2420
2019/11/12	08:02:00		1662	1675	2284	2376
2019/11/12	08:04:00		1669	1676	2272	2374
2019/11/12	08:06:00		1669	1674	2240	2356
2019/11/12	08:08:00		1665	1689	2255	2363
2019/11/12	08:10:00		1666	1689	2229	2346
2019/11/12	08:12:00		1665	1676	2248	2351
2019/11/12	08:14:00		1664	1688	2265	2349
2019/11/12	08:16:00		1667	1683	2241	2344
2019/11/12	08:18:00		1660	1683	2215	2333
2019/11/12	08:20:00		1659	1691	2215	2339
2019/11/12	08:22:00		1659	1688	2197	2299
2019/11/12	08:24:00		1662	1687	2205	2337
2019/11/12	08:26:00		1662	1684	2208	2339
2019/11/12	08:28:00		1665	1686	2225	2331
2019/11/12	08:30:00		1660	1679	2210	2306

2019/11/12	08:32:00	1662	1684	2203	2318
2019/11/12	08:34:00	1665	1684	2205	2311
2019/11/12	08:36:00	1659	1681	2187	2342
2019/11/12	08:38:00	1667	1684	2243	2336
2019/11/12	08:40:00	1666	1683	2218	2326

KCRDF Flare Data for Periods of Shutdown

11.26.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/11/26	17:00:00	1670	1677	2037	2198
2019/11/26	17:02:00	1666	1684	2028	2172
2019/11/26	17:04:00	1662	1686	2046	2155
2019/11/26	17:06:00	1662	1687	2047	2173
2019/11/26	17:08:00	1662	1684	2054	2198
2019/11/26	17:10:00	1662	1679	2047	2188
2019/11/26	17:12:00	1671	1681	2029	2185
2019/11/26	17:14:00	1664	1686	2024	2177
2019/11/26	17:16:00	1660	1686	2057	2178
2019/11/26	17:18:00	1660	1689	2044	2153
2019/11/26	17:20:00	1662	1687	2051	2170
2019/11/26	17:22:00	1659	1689	2023	2150
2019/11/26	17:24:00	1662	1686	2053	2140
2019/11/26	17:26:00	1662	1684	2047	2173
2019/11/26	17:28:00	1671	1678	2048	2144
2019/11/26	17:30:00	1664	1681	2038	2172
2019/11/26	17:32:00	1660	1684	2038	2159
2019/11/26	17:34:00	1662	1684	2059	2160
2019/11/26	17:36:00				
2019/11/26	17:38:00				
2019/11/26	17:40:00				
2019/11/26	17:42:00				
2019/11/26	17:44:00				
2019/11/26	17:46:00				
2019/11/26	17:48:00				
2019/11/26	17:50:00				
2019/11/26	17:52:00				
2019/11/26	17:54:00				
2019/11/26	17:56:00				
2019/11/26	17:58:00				
2019/11/26	18:00:00				
2019/11/26	18:02:00				
2019/11/26	18:04:00				
2019/11/26	18:06:00				
2019/11/26	18:08:00				
2019/11/26	18:10:00				
2019/11/26	18:12:00				
2019/11/26	18:14:00				
2019/11/26	18:16:00				
2019/11/26	18:18:00				
2019/11/26	18:20:00				
2019/11/26	18:22:00				
2019/11/26	18:24:00				
2019/11/26	18:26:00				
2019/11/26	18:28:00				

2019/11/26	18:30:00
2019/11/26	18:32:00
2019/11/26	18:34:00
2019/11/26	18:36:00
2019/11/26	18:38:00
2019/11/26	18:40:00
2019/11/26	18:42:00
2019/11/26	18:44:00
2019/11/26	18:46:00
2019/11/26	18:48:00
2019/11/26	18:50:00
2019/11/26	18:52:00
2019/11/26	18:54:00
2019/11/26	18:56:00
2019/11/26	18:58:00
2019/11/26	19:00:00
2019/11/26	19:02:00
2019/11/26	19:04:00
2019/11/26	19:06:00
2019/11/26	19:08:00
2019/11/26	19:10:00
2019/11/26	19:12:00
2019/11/26	19:14:00
2019/11/26	19:16:00
2019/11/26	19:18:00
2019/11/26	19:20:00
2019/11/26	19:22:00
2019/11/26	19:24:00
2019/11/26	19:26:00
2019/11/26	19:28:00
2019/11/26	19:30:00
2019/11/26	19:32:00
2019/11/26	19:34:00
2019/11/26	19:36:00
2019/11/26	19:38:00
2019/11/26	19:40:00
2019/11/26	19:42:00
2019/11/26	19:44:00
2019/11/26	19:46:00
2019/11/26	19:48:00
2019/11/26	19:50:00
2019/11/26	19:52:00
2019/11/26	19:54:00
2019/11/26	19:56:00
2019/11/26	19:58:00
2019/11/26	20:00:00
2019/11/26	20:02:00
2019/11/26	20:04:00
2019/11/26	20:06:00
2019/11/26	20:08:00
2019/11/26	20:10:00



2019/11/26	20:12:00
2019/11/26	20:14:00
2019/11/26	20:16:00
2019/11/26	20:18:00
2019/11/26	20:20:00
2019/11/26	20:22:00
2019/11/26	20:24:00
2019/11/26	20:26:00
2019/11/26	20:28:00
2019/11/26	20:30:00
2019/11/26	20:32:00
2019/11/26	20:34:00
2019/11/26	20:36:00
2019/11/26	20:38:00
2019/11/26	20:40:00
2019/11/26	20:42:00
2019/11/26	20:44:00
2019/11/26	20:46:00
2019/11/26	20:48:00
2019/11/26	20:50:00
2019/11/26	20:52:00
2019/11/26	20:54:00
2019/11/26	20:56:00
2019/11/26	20:58:00
2019/11/26	21:00:00
2019/11/26	21:02:00
2019/11/26	21:04:00
2019/11/26	21:06:00
2019/11/26	21:08:00
2019/11/26	21:10:00
2019/11/26	21:12:00
2019/11/26	21:14:00
2019/11/26	21:16:00
2019/11/26	21:18:00
2019/11/26	21:20:00
2019/11/26	21:22:00
2019/11/26	21:24:00
2019/11/26	21:26:00
2019/11/26	21:28:00
2019/11/26	21:30:00
2019/11/26	21:32:00
2019/11/26	21:34:00
2019/11/26	21:36:00
2019/11/26	21:38:00
2019/11/26	21:40:00
2019/11/26	21:42:00
2019/11/26	21:44:00
2019/11/26	21:46:00
2019/11/26	21:48:00
2019/11/26	21:50:00
2019/11/26	21:52:00

2019/11/26	21:54:00
2019/11/26	21:56:00
2019/11/26	21:58:00
2019/11/26	22:00:00
2019/11/26	22:02:00
2019/11/26	22:04:00
2019/11/26	22:06:00
2019/11/26	22:08:00
2019/11/26	22:10:00
2019/11/26	22:12:00
2019/11/26	22:14:00
2019/11/26	22:16:00
2019/11/26	22:18:00
2019/11/26	22:20:00
2019/11/26	22:22:00
2019/11/26	22:24:00
2019/11/26	22:26:00
2019/11/26	22:28:00
2019/11/26	22:30:00
2019/11/26	22:32:00
2019/11/26	22:34:00
2019/11/26	22:36:00
2019/11/26	22:38:00
2019/11/26	22:40:00
2019/11/26	22:42:00
2019/11/26	22:44:00
2019/11/26	22:46:00
2019/11/26	22:48:00
2019/11/26	22:50:00
2019/11/26	22:52:00
2019/11/26	22:54:00
2019/11/26	22:56:00
2019/11/26	22:58:00
2019/11/26	23:00:00
2019/11/26	23:02:00
2019/11/26	23:04:00
2019/11/26	23:06:00
2019/11/26	23:08:00
2019/11/26	23:10:00
2019/11/26	23:12:00
2019/11/26	23:14:00
2019/11/26	23:16:00
2019/11/26	23:18:00
2019/11/26	23:20:00
2019/11/26	23:22:00
2019/11/26	23:24:00
2019/11/26	23:26:00
2019/11/26	23:28:00
2019/11/26	23:30:00
2019/11/26	23:32:00
2019/11/26	23:34:00

2019/11/26	23:36:00
2019/11/26	23:38:00
2019/11/26	23:40:00
2019/11/26	23:42:00
2019/11/26	23:44:00
2019/11/26	23:46:00
2019/11/26	23:48:00
2019/11/26	23:50:00
2019/11/26	23:52:00
2019/11/26	23:54:00
2019/11/26	23:56:00
2019/11/26	23:58:00

# Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/11/27	00:00:00				
2019/11/27	00:02:00				
2019/11/27	00:04:00				
2019/11/27	00:06:00				
2019/11/27	00:08:00				
2019/11/27	00:10:00				
2019/11/27	00:12:00				
2019/11/27	00:14:00				
2019/11/27	00:16:00				
2019/11/27	00:18:00				
2019/11/27	00:20:00				
2019/11/27	00:22:00				
2019/11/27	00:24:00				
2019/11/27	00:26:00				
2019/11/27	00:28:00				
2019/11/27	00:30:00				
2019/11/27	00:32:00				
2019/11/27	00:34:00				
2019/11/27	00:36:00				
2019/11/27	00:38:00				
2019/11/27	00:40:00				
2019/11/27	00:42:00				
2019/11/27	00:44:00				
2019/11/27	00:46:00				
2019/11/27	00:48:00				
2019/11/27	00:50:00				
2019/11/27	00:52:00				
2019/11/27	00:54:00				
2019/11/27	00:56:00				
2019/11/27	00:58:00				
2019/11/27	01:00:00				
2019/11/27	01:02:00				
2019/11/27	01:04:00				
2019/11/27	01:06:00				
2019/11/27	01:08:00				
2019/11/27	01:10:00				
2019/11/27	01:12:00				
2019/11/27	01:14:00				
2019/11/27	01:16:00				
2019/11/27	01:18:00				
2019/11/27	01:20:00				
2019/11/27	01:22:00				
2019/11/27	01:24:00				
2019/11/27	01:26:00				
2019/11/27	01:28:00				

2019/11/27	01:30:00	44	45	-423	66
2019/11/27	01:32:00	44	46	1	2
2019/11/27	01:34:00	46	46	1	1
2019/11/27	01:36:00	46	50	1	2486
2019/11/27	01:38:00	50	845	2486	3842
2019/11/27	01:40:00	845	1321	2483	2598
2019/11/27	01:42:00	1319	1463	2430	2542
2019/11/27	01:44:00	1463	1570	2408	2485
2019/11/27	01:46:00	1570	1641	2429	2542
2019/11/27	01:48:00	1641	1658	2405	2540
2019/11/27	01:50:00	1648	1658	2403	2470
2019/11/27	01:52:00	1656	1682	2383	2468
2019/11/27	01:54:00	1657	1681	2366	2456
2019/11/27	01:56:00	1662	1673	2368	2453
2019/11/27	01:58:00	1648	1690	2324	2443
2019/11/27	02:00:00	1661	1685	2345	2423
2019/11/27	02:02:00	1662	1679	2329	2451
2019/11/27	02:04:00	1647	1682	2309	2431
2019/11/27	02:06:00	1659	1684	2295	2413
2019/11/27	02:08:00	1665	1682	2317	2415
2019/11/27	02:10:00	1663	1678	2318	2411

KCRDF Flare Data for Periods of Shutdown

12.29.2019

## Kirby Canyon Recycling and Disposal Facility

Date	Time	Flare F		Flare SCFM	
		MIN	MAX	MIN	MAX
2019/12/29	16:30:00	1660	1681	2282	2384
2019/12/29	16:32:00	1662	1686	2291	2404
2019/12/29	16:34:00	1660	1686	2273	2390
2019/12/29	16:36:00	1666	1684	2288	2376
2019/12/29	16:38:00	1666	1684	2293	2380
2019/12/29	16:40:00	1662	1677	2288	2377
2019/12/29	16:42:00	1671	1679	2259	2398
2019/12/29	16:44:00	1672	1674	2296	2390
2019/12/29	16:46:00	1667	1672	2296	2370
2019/12/29	16:48:00	1672	1686	2289	2396
2019/12/29	16:50:00	1660	1686	2270	2383
2019/12/29	16:52:00	1660	1684	2282	2374
2019/12/29	16:54:00	1662	1688	2283	2418
2019/12/29	16:56:00	1666	1686	2280	2382
2019/12/29	16:58:00	1666	1683	2299	2385
2019/12/29	17:00:00	1662	1688	2298	2395
2019/12/29	17:02:00	1431	1687	-1	2381
2019/12/29	17:04:00	983	1431	-1	0
2019/12/29	17:06:00	756	983	-1	0
2019/12/29	17:08:00	616	756	-1	0
2019/12/29	17:10:00	504	616	-1	0
2019/12/29	17:12:00	422	504	-1	0
2019/12/29	17:14:00	356	422	-1	0
2019/12/29	17:16:00	304	356	0	0
2019/12/29	17:18:00	263	304	0	0
2019/12/29	17:20:00	231	263	0	0
2019/12/29	17:22:00	207	231	-1	0
2019/12/29	17:24:00	189	207	0	0
2019/12/29	17:26:00	173	189	0	0
2019/12/29	17:28:00	158	173	0	0
2019/12/29	17:30:00	146	158	0	0
2019/12/29	17:32:00	135	146	0	0
2019/12/29	17:34:00	125	135	0	0
2019/12/29	17:36:00	116	125	0	0
2019/12/29	17:38:00	108	116	0	0
2019/12/29	17:40:00	102	108	0	0
2019/12/29	17:42:00	96	102	0	0
2019/12/29	17:44:00	92	96	0	0
2019/12/29	17:46:00	88	92	0	0
2019/12/29	17:48:00	85	88	0	0
2019/12/29	17:50:00	82	85	0	0
2019/12/29	17:52:00	79	82	0	0
2019/12/29	17:54:00	76	79	0	0
2019/12/29	17:56:00	74	76	0	0
2019/12/29	17:58:00	72	74	0	0
2019/12/29	18:00:00	70	72	0	0

2019/12/29	18:02:00	68	70	0	0
2019/12/29	18:04:00	67	69	0	0
2019/12/29	18:06:00	66	67	0	0
2019/12/29	18:08:00	65	66	0	0
2019/12/29	18:10:00	64	65	0	0
2019/12/29	18:12:00	64	65	0	0
2019/12/29	18:14:00	63	64	0	0
2019/12/29	18:16:00	62	63	0	0
2019/12/29	18:18:00	61	63	0	0
2019/12/29	18:20:00	60	61	0	0
2019/12/29	18:22:00	60	61	0	0
2019/12/29	18:24:00	59	60	0	0
2019/12/29	18:26:00	58	59	0	0
2019/12/29	18:28:00	57	58	0	0
2019/12/29	18:30:00	57	58	0	0
2019/12/29	18:32:00	56	57	0	0
2019/12/29	18:34:00	56	56	0	0
2019/12/29	18:36:00	55	56	0	0
2019/12/29	18:38:00	55	56	0	0
2019/12/29	18:40:00	55	55	0	0
2019/12/29	18:42:00	55	56	0	0
2019/12/29	18:44:00	55	56	0	0
2019/12/29	18:46:00	54	56	0	0
2019/12/29	18:48:00	54	55	0	0
2019/12/29	18:50:00	54	54	0	0
2019/12/29	18:52:00	54	54	0	0
2019/12/29	18:54:00	54	54	0	0
2019/12/29	18:56:00	53	54	0	0
2019/12/29	18:58:00	53	54	0	0
2019/12/29	19:00:00	53	53	0	0
2019/12/29	19:02:00	53	53	0	0
2019/12/29	19:04:00	53	53	0	0
2019/12/29	19:06:00	53	53	0	0
2019/12/29	19:08:00	52	53	0	0
2019/12/29	19:10:00	52	53	0	0
2019/12/29	19:12:00	52	52	0	0
2019/12/29	19:14:00	51	52	0	0
2019/12/29	19:16:00	51	51	0	0
2019/12/29	19:18:00	51	51	0	0
2019/12/29	19:20:00	51	51	0	0
2019/12/29	19:22:00	51	51	0	0
2019/12/29	19:24:00	50	51	0	0
2019/12/29	19:26:00	51	51	0	0
2019/12/29	19:28:00	51	51	0	0
2019/12/29	19:30:00	51	51	0	0
2019/12/29	19:32:00	51	51	0	0
2019/12/29	19:34:00	51	51	0	0
2019/12/29	19:36:00	51	51	0	0
2019/12/29	19:38:00	51	51	0	0
2019/12/29	19:40:00	50	51	0	0
2019/12/29	19:42:00	50	51	0	0
2019/12/29	19:44:00	50	51	0	0



2019/12/29	19:46:00	50	51	0	0
2019/12/29	19:48:00	50	51	0	0
2019/12/29	19:50:00	50	50	0	0
2019/12/29	19:52:00	50	51	0	0
2019/12/29	19:54:00	50	50	0	0
2019/12/29	19:56:00	50	51	0	0
2019/12/29	19:58:00	50	50	0	0
2019/12/29	20:00:00	50	51	0	0
2019/12/29	20:02:00	50	51	0	0
2019/12/29	20:04:00	50	51	0	0
2019/12/29	20:06:00	50	51	0	0
2019/12/29	20:08:00	50	51	0	0
2019/12/29	20:10:00	50	51	0	0
2019/12/29	20:12:00	50	50	0	0
2019/12/29	20:14:00	50	51	0	0
2019/12/29	20:16:00	50	51	0	0
2019/12/29	20:18:00	50	50	0	0
2019/12/29	20:20:00	50	50	0	0
2019/12/29	20:22:00	50	51	0	0
2019/12/29	20:24:00	50	50	0	0
2019/12/29	20:26:00	50	51	0	0
2019/12/29	20:28:00	50	51	0	0
2019/12/29	20:30:00	50	51	0	0
2019/12/29	20:32:00	50	51	0	0
2019/12/29	20:34:00	50	51	0	0
2019/12/29	20:36:00	50	50	0	0
2019/12/29	20:38:00	50	51	0	0
2019/12/29	20:40:00	50	51	0	0
2019/12/29	20:42:00	50	50	0	0
2019/12/29	20:44:00	50	50	0	0
2019/12/29	20:46:00	50	50	0	0
2019/12/29	20:48:00	50	50	0	0
2019/12/29	20:50:00	50	50	0	0
2019/12/29	20:52:00	50	50	0	0
2019/12/29	20:54:00	50	50	0	0
2019/12/29	20:56:00	50	50	0	0
2019/12/29	20:58:00	50	50	0	0
2019/12/29	21:00:00	49	50	0	0
2019/12/29	21:02:00	50	50	0	0
2019/12/29	21:04:00	49	50	0	0
2019/12/29	21:06:00	49	50	0	0
2019/12/29	21:08:00	49	50	0	0
2019/12/29	21:10:00	49	50	0	0
2019/12/29	21:12:00	49	50	0	0
2019/12/29	21:14:00	49	49	0	0
2019/12/29	21:16:00	49	49	0	0
2019/12/29	21:18:00	49	50	0	0
2019/12/29	21:20:00	49	49	0	0
2019/12/29	21:22:00	49	49	0	0
2019/12/29	21:24:00	49	49	0	0
2019/12/29	21:26:00	49	49	0	0
2019/12/29	21:28:00	49	49	0	0

2019/12/29	21:30:00	49	49	0	0
2019/12/29	21:32:00	49	49	0	0
2019/12/29	21:34:00	49	50	0	0
2019/12/29	21:36:00	49	49	0	0
2019/12/29	21:38:00	49	49	0	0
2019/12/29	21:40:00	49	49	0	0
2019/12/29	21:42:00	49	49	0	0
2019/12/29	21:44:00	49	50	0	0
2019/12/29	21:46:00	49	50	0	0
2019/12/29	21:48:00	49	50	0	0
2019/12/29	21:50:00	49	50	0	0
2019/12/29	21:52:00	49	49	0	0
2019/12/29	21:54:00	49	49	0	0
2019/12/29	21:56:00	49	49	0	0
2019/12/29	21:58:00	49	49	0	0
2019/12/29	22:00:00	49	49	0	0
2019/12/29	22:02:00	49	49	0	0
2019/12/29	22:04:00	49	49	0	0
2019/12/29	22:06:00	49	49	0	0
2019/12/29	22:08:00	49	49	0	0
2019/12/29	22:10:00	49	49	0	0
2019/12/29	22:12:00	49	49	0	0
2019/12/29	22:14:00	49	49	0	0
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2019/12/29	22:18:00	49	49	0	0
2019/12/29	22:20:00	49	49	0	0
2019/12/29	22:22:00	49	49	0	0
2019/12/29	22:24:00	49	49	0	0
2019/12/29	22:26:00	49	49	0	0
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2019/12/29	22:32:00	49	49	0	0
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2019/12/29	22:36:00	49	49	0	0
2019/12/29	22:38:00	49	49	0	0
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2019/12/29	22:44:00	49	49	0	0
2019/12/29	22:46:00	49	49	0	0
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2019/12/29	22:54:00	49	49	0	0
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2019/12/29	23:02:00	49	49	0	0
2019/12/29	23:04:00	49	49	0	0
2019/12/29	23:06:00	49	49	0	0
2019/12/29	23:08:00	49	49	0	0
2019/12/29	23:10:00	49	49	0	0
2019/12/29	23:12:00	49	49	0	0

2019/12/29	23:14:00	49	49	0	0
2019/12/29	23:16:00	49	49	0	0
2019/12/29	23:18:00	49	49	0	0
2019/12/29	23:20:00	49	49	0	0
2019/12/29	23:22:00	49	49	0	0
2019/12/29	23:24:00	49	49	0	0
2019/12/29	23:26:00	49	49	0	0
2019/12/29	23:28:00	49	49	0	0
2019/12/29	23:30:00	49	49	0	0
2019/12/29	23:32:00	49	49	0	0
2019/12/29	23:34:00	49	49	0	0
2019/12/29	23:36:00	49	49	0	0
2019/12/29	23:38:00	49	49	0	0
2019/12/29	23:40:00	49	49	0	0
2019/12/29	23:42:00	49	49	0	0
2019/12/29	23:44:00	49	49	0	0
2019/12/29	23:46:00	49	49	0	0
2019/12/29	23:48:00	49	49	0	0
2019/12/29	23:50:00	49	49	0	0
2019/12/29	23:52:00	49	49	0	0
2019/12/29	23:54:00	49	49	0	0
2019/12/29	23:56:00	48	49	0	0
2019/12/29	23:58:00	49	49	0	0
2019/12/30	00:00:00	48	49	0	0
2019/12/30	00:02:00	48	49	0	0
2019/12/30	00:04:00	48	49	0	0
2019/12/30	00:06:00	48	49	0	0
2019/12/30	00:08:00	48	49	0	0
2019/12/30	00:10:00	48	49	0	0
2019/12/30	00:12:00	48	49	0	0
2019/12/30	00:14:00	48	49	0	0
2019/12/30	00:16:00	48	49	0	0
2019/12/30	00:18:00	48	49	0	0
2019/12/30	00:20:00	48	49	0	0
2019/12/30	00:22:00	48	49	0	0
2019/12/30	00:24:00	48	49	0	0
2019/12/30	00:26:00				
2019/12/30	00:28:00				
2019/12/30	00:30:00	48	48	-413	-380
2019/12/30	00:32:00	48	49	-390	62
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2019/12/30	00:36:00	49	58	0	3154
2019/12/30	00:38:00	58	1108	-429	4123
2019/12/30	00:40:00	1108	1407	2743	2885
2019/12/30	00:42:00	1354	1376	2714	2823
2019/12/30	00:44:00	1376	1428	2712	2824
2019/12/30	00:46:00	1364	1453	53	2799
2019/12/30	00:48:00	998	1364	-1	54
2019/12/30	00:50:00	774	998	-2	0
2019/12/30	00:52:00	629	774	-2	0
2019/12/30	00:54:00	529	629	-1	0
2019/12/30	00:56:00	454	529	0	0

2019/12/30	00:58:00	396	454	0	0
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2019/12/30	01:02:00	295	348	0	0
2019/12/30	01:04:00	251	295	0	1680
2019/12/30	01:06:00	251	1351	1680	3478
2019/12/30	01:08:00	1351	1508	2812	2930
2019/12/30	01:10:00	1508	1635	2765	2891
2019/12/30	01:12:00	1635	1672	2764	2851
2019/12/30	01:14:00	1662	1672	2700	2822
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2019/12/30	01:20:00	1671	1681	2627	2700
2019/12/30	01:22:00	1672	1680	2617	2710
2019/12/30	01:24:00	1660	1687	2608	2687
2019/12/30	01:26:00	1660	1687	2596	2699
2019/12/30	01:28:00	1665	1684	2604	2677
2019/12/30	01:30:00	1664	1683	2574	2667
2019/12/30	01:32:00	1659	1683	2584	2660
2019/12/30	01:34:00	1671	1683	2556	2649
2019/12/30	01:36:00	1669	1672	2584	2646
2019/12/30	01:38:00	1667	1671	2557	2667
2019/12/30	01:40:00	1669	1677	2564	2664

## Phadnis, Rajan

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**From:** Raymond Salalila <RSalalila@baaqmd.gov>  
**Sent:** Tuesday, June 30, 2020 7:56 AM  
**To:** Phadnis, Rajan  
**Cc:** Azevedo, Becky; Winter, Michael; Patrick Wenzinger; Erin Phillips; Loi Chau  
**Subject:** RE: KCRDF construction notification 06.19.2020

Hello Rajan,

Thank you for submitting KCRDF's Construction Plan.

The "AFFECTED LFG COMPONENTS" section of KCRDF's Construction Plan, states, "KCRDF will conduct landfill GCCS construction activities in compliance with Rule 8-34-117".

The Gas Collection System (GCS) Components Limited Exemption is needed since the Construction Plan includes the connection of components to the existing GCCS. By stating the above, KCRDF acknowledges that GCCS construction activities must comply with sections 117.1 through 117.6 of the GCS Limited Exemption, if applicable. This includes, but is not limited to, ensuring that the lesser of no more than 5 gas wells, or 10 percent of the gas collection wells of the GCCS, are shut down at any time (Reg. 8-34-117.4), and that no gas collection well may be down for more than 24 hours (Reg. 8-34-117.5).

No further information is needed at this time and KCRDF's Construction Plan has been determined to meet the minimum reporting requirements of Reg. 8-34-118.1. You may be contacted by your assigned Air District Inspector and/or Permit Engineer to verify facility compliance with the Construction Plan.

Please contact me if you have any questions.

Thank you,

### Raymond Salalila

Air Quality Specialist  
Compliance and Enforcement Division  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600, San Francisco, CA 94105-2097  
Tel: 415.749.4704 Cell: 415.760.1094  
[rsalalila@baaqmd.gov](mailto:rsalalila@baaqmd.gov)



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**From:** Raymond Salalila  
**Sent:** Wednesday, June 24, 2020 7:24 AM  
**To:** Phadnis, Rajan <rphadnis@wm.com>  
**Cc:** Azevedo, Becky <Razevedo@wm.com>; Winter, Michael <mwinter@wm.com>; Hansen Rodriguez

<HRodriguez@baaqmd.gov>; Patrick Wenzinger <pwenzinger@baaqmd.gov>; Loi Chau <lchau@baaqmd.gov>

**Subject:** RE: KCRDF construction notification 06.19.2020

Hello Rajan,

As Loi indicated, I am currently handling Regulation 8-34-118 construction activities notifications to the Air District. Please address future submittals to me.

KCRDF's notification for Limited Exemption for Construction Activities under Reg. 8-34-118 has been received and will be reviewed by Compliance & Enforcement Staff. I will let you know if any additional information is required to meet the minimum reporting requirements of Reg. 8-34-118, and/or any other applicable limited exemptions. Please let me know if you have any questions.

Thank you,

## Raymond Salalila

Air Quality Specialist

Compliance and Enforcement Division

Bay Area Air Quality Management District

375 Beale Street, Suite 600, San Francisco, CA 94105-2097

Tel: 415.749.4704 Cell: 415.760.1094

[rsalalila@baaqmd.gov](mailto:rsalalila@baaqmd.gov)



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**From:** Loi Chau <[lchau@baaqmd.gov](mailto:lchau@baaqmd.gov)>

**Sent:** Tuesday, June 23, 2020 3:17 PM

**To:** Phadnis, Rajan <[rphadnis@wm.com](mailto:rphadnis@wm.com)>

**Cc:** Azevedo, Becky <[Razevedo@wm.com](mailto:Razevedo@wm.com)>; Winter, Michael <[mwinter@wm.com](mailto:mwinter@wm.com)>; Raymond Salalila <[RSalalila@baaqmd.gov](mailto:RSalalila@baaqmd.gov)>; Peter Nelson <[PNelson@baaqmd.gov](mailto:PNelson@baaqmd.gov)>

**Subject:** RE: KCRDF construction notification 06.19.2020

Good Afternoon Rajan,

All construction notifications will be review by Raymond Salalila in our Compliance and Enforcement Division. He will be in contact with you if he has any questions.

Regards,

Loi Chau

Air Quality Engineer

Bay Area Air Quality Management District | Engineering Division

375 Beale Street, Suite 600 | San Francisco, CA 94105

☎ 415.749.8683 | 📠 415.749.4992

[lchau@baaqmd.gov](mailto:lchau@baaqmd.gov) | [www.baaqmd.gov](http://www.baaqmd.gov)

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**From:** Phadnis, Rajan <[rphadnis@wm.com](mailto:rphadnis@wm.com)>

**Sent:** Friday, June 19, 2020 4:33 PM

**To:** Loi Chau <[lchau@baaqmd.gov](mailto:lchau@baaqmd.gov)>

**Cc:** Azevedo, Becky <[Razevedo@wm.com](mailto:Razevedo@wm.com)>; Phadnis, Rajan <[rphadnis@wm.com](mailto:rphadnis@wm.com)>; Winter, Michael <[mwinter@wm.com](mailto:mwinter@wm.com)>

**Subject:** KCRDF construction notification 06.19.2020

Hi Loi,

Attached please find the construction notification for Kirby Canyon Recycling and Disposal Facility- A1812.

Thank you,  
Rajan Phadnis  
Waste Management  
EP Specialist

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**Recycling is a good thing. Please recycle any printed emails.**



**Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive, San Jose, CA 95037**

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June 19, 2020

Loi Chau  
Permit Engineer  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105

Re: Kirby Canyon Recycling & Disposal Facility  
Facility Number A1812  
Request for Limited Exemption (for construction activities) from Regulation 8, Rule 34  
(Solid Waste Disposal Sites), Section 303 (Landfill Surface Requirements)

Dear Ms. Chau:

This letter requests a limited exemption from the requirements of Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 303 (Landfill Surface Requirements) during landfill construction activities to be conducted from June 29, 2020 through September 30, 2020, at the Kirby Canyon Recycling & Disposal Facility (KCRDF) Landfill in San Jose, California. This notification is submitted pursuant to Regulation 8, Rule 34, Section 118, "Limited Exemptions for Construction Activities." The work consists of installation and repair of landfill gas (LFG) piping and laterals to improve the existing LFG collection efficiency and for leachate repair work on the existing leachate drainage system to maintain compliance with Regulation 8, Rule 34, and is to be performed during the period of June 29, 2020 through September 30, 2020.

The construction work will include excavation and installation of new piping and laterals that will connect to existing LFG extraction wells and to the gas collection and control system (GCCS); and excavation of the affected areas to remove previously placed waste to improve the flow of liquids. The affected areas will then be backfilled. The work for this project includes installation and repair of piping, excavation and backfilling. This letter also transmits the BAAQMD-required construction plan (work plan) for the proposed work. The work plan contains information required pursuant to Regulation 8, Rule 34, Section 118.1 and AB-32 §95470(a)(1)(I) and (J) and includes:

- Description of actions being taken;
- Description of landfill areas affected;
- Description of LFG components affected;
- Map showing the above areas and components;
- Reason requiring the action;
- Construction schedule; and
- Description of air quality mitigation measures planned.

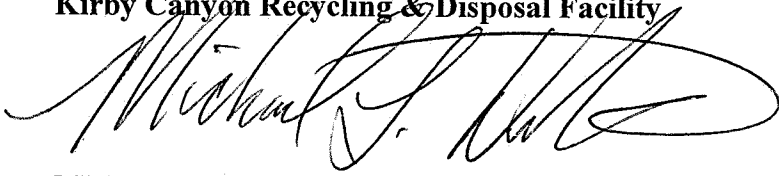


No significant interruption of the current site LFG extraction and control operations is anticipated due to the work. The construction crew will mobilize to the site on or around June 29, 2020. We anticipate construction activities to conclude by September 30, 2020.

Unless notified otherwise, KCRDF will proceed in accordance with the attached work plan. We deem submittal of this plan as approval by the BAAQMD to take necessary action to ensure compliance with regulations, which may include taking additional LFG extraction wells offline for an extended period of time pursuant to Regulation 8, Rule 34, Section 118. Please do not hesitate to contact me at (408) 960-0770 with any questions.

Sincerely,

**Kirby Canyon Recycling & Disposal Facility**

A handwritten signature in black ink, appearing to read "Michael L. Winter", written over the typed name below.

**Michael L. Winter**

District Engineer

Cc: Enrique Perez, KCRDF  
Bill Louis, WM

# BAAQMD RULE 8-34-118 CONSTRUCTION PLAN

## Kirby Canyon Recycling & Disposal Facility

### CONSTRUCTION FOR INSTALLATION OF LFG PIPING AND LEACHATE DRAINAGE SYSTEM REPAIRS

June 29, 2020 through September 30, 2020

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#### INTRODUCTION

This Construction Work Plan is submitted pursuant to Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 118: Limited Exemptions for Construction Activities. To obtain an exemption from BAAQMD Regulation 8, Rule 34, Section 303: Landfill Surface Requirements, the operator shall submit a construction plan in writing to the Air Pollution Control Officer (APCO) prior to beginning any construction activities.

Section 303 requires maintaining the concentration of organic compounds and methane below 500 parts per million by volume (ppmv) at all points on the landfill surface. Section 118 provides an exemption from the surface emission standard for “....*areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the express purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal systems.*”

- Description of actions being taken;
- Description of landfill areas affected;
- Description of landfill gas (LFG) components affected;
- Map showing the affected areas and components;
- Reason requiring the action;
- Construction schedule;
- Description of air quality mitigation measures planned; and
- Recordkeeping requirements.

#### ACTIONS BEING TAKEN

The work consists of excavation and installation of new piping and laterals that will connect to existing LFG extraction wells and to the GCCS; and excavation, repair, and backfilling of the affected areas at the existing leachate drainage system.

#### AFFECTED LANDFILL AREAS

The construction activities will occur in the area shown on the attached figure.

#### AFFECTED LFG COMPONENTS

KCRDF will conduct landfill GCCS construction activities in compliance with the Rule 8-34-117.

Please see below for list of proposed GCCS repairs and installations:

- Installation of 6” piping and connection of laterals from Well LC142 to 83
- Installation of 6” piping and connection of laterals from Well 37 to 56
- Installation of piping and connection of laterals from 6” road crossing to the west to Well 151
- Installation of 6” piping and connection of laterals from Well 119 to Well 152 to well 149
- Installation of a 6” piping from Well 122 (or nearby) to Well 147
- Installation of a 6” piping from Well 118 to Well 144 to Well 150- final construction will depend on grades
- Installing piping to buried 8” pipe above Well 14 to 8” header by Well 14
- Installation of 6” piping from Well 132 to 8” to the NW part of the header

It is anticipated that the construction will have no significant impact on the routine operation of the existing GCCS. Installation of new LFG extraction laterals is independent of the ongoing operations of the GCCS. When connecting LFG extraction wells, isolation valves installed within the existing GCCS piping network will be used to minimize the number of existing LFG extraction wells offline at any given time while the newly installed LFG laterals are connected to the GCCS.

**REASONS FOR ACTIONS**

The proposed construction work is intended to:

- Increase LFG collection efficiency by installation of new LFG laterals and piping on existing wells;
- Increase LFG collection efficiency to further reduce the potential surface emissions;
- Improvement of existing leachate drainage system

**CONSTRUCTION SCHEDULE**

The anticipated construction period will be between June 29, 2020 through September 30, 2020, and is summarized in the table below:

**Table 1 - Preliminary Construction Schedule**

<b>Task</b>	<b>Project Duration</b>
Mobilize crew, equipment, and materials to site	Week 1
Installation of laterals and piping, excavation and backfilling	Up to 13 weeks
Clean-up and demobilize crew and materials	Week 1

**AIR QUALITY MITIGATION MEASURES**

Emission of raw LFG will be minimized during construction. We anticipate minimal interruption of the overall site LFG extraction and control operations during the work. Installation of laterals and piping is independent of ongoing operations of the existing GCCS. Air quality mitigation will be provided during the installation and connection of piping to existing GCCS piping network. These mitigation measures are presented below and are designed to meet both the requirements of 8-34 Section 118 and §95470(a)(1)(I).

Due to the minimal amount of excavation planned for this work, air quality impacts are also anticipated to be minimal. Air quality mitigation will be provided during the following work tasks:

- Installation of LFG piping;
- Excavation and backfill of pipe trenches; and
- Connection of new laterals to existing piping

During excavation through waste and soil cover, air emission will be controlled by implementing the following measures:

- Minimizing the installation time for each component;
- Minimizing the quantity of open borings or trench excavations at any one time;
- Relocating excavated refuse to the designated waste disposal area immediately and covering the relocated waste daily by no later than the end of each day; and
- Excavations will not be left open overnight or for periods greater than 8 hours

During connection to the existing LFG piping, and installation of laterals and piping, air emissions will be controlled by implementing the following measures:

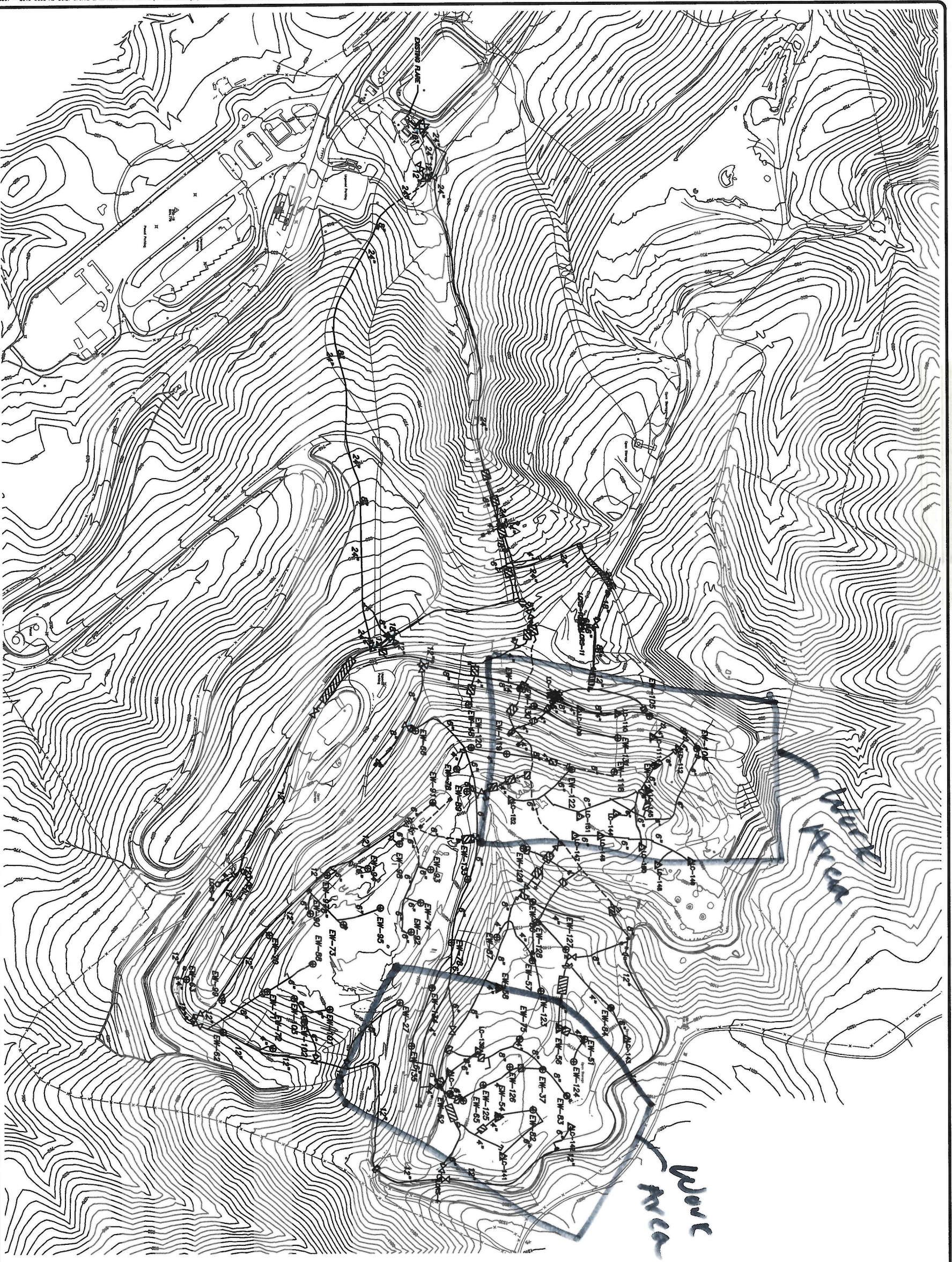
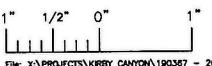
- Capping or blind flanging of all pipes and collector openings, which will remain sealed until time of connection to a vacuum source;
- Using isolation valves;
- Minimizing installation time for making each connection; and
- Minimizing the amount of open pipe during each installation, by using flange joints and flexible couplings.

## **RECORDKEEPING**

The following records will be retained during the project:

- Construction start and end dates, projected and actual installation dates, and projected shut down times for individual gas collection system components.
- GCCS downtime and individual well shutdown times will be documented in accordance with the KCRDF's Startup, Shutdown, and Malfunction (SSM) Plan.
- Mitigation measures taken to minimize methane emissions and other potential air quality impacts will be documented.

Attachments: Figure 1 – Gas Collection and Control System layout



REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

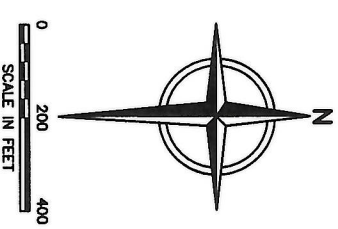


KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
 SAN JOSE, CALIFORNIA  
 2019 GCCS IMPROVEMENTS  
 AS-BUILT SITE PLAN

SHEET NO. **1**  
 PROJECT NO. 190357

**PRELIMINARY AS-BUILT**

- NOTES:**
1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: MARCH 29, 2019.
  2. SUPPLEMENTAL 2016 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY DATA PROVIDED BY WALKER ASSOCIATES, DATE OF SURVEY: JULY 19, 2017. FIELD RECORD DRAWINGS WELL SCHEDULE DATED: JULY 13, 2016.
  3. 2017 GCCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: OCTOBER 11, 2017.
  4. 2019 GCCS AS-BUILT SURVEYS PROVIDED BY F3 AND ASSOCIATES, INC. DATED: AUGUST 19, 2019 AND DECEMBER 30, 2019.
  5. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM DATED: JANUARY 27, 2020.



**LEGEND**

— 100'	EXISTING 10' CONTOUR
— 12"	EXISTING ABOVEGROUND PIPING
— 12"	EXISTING BELOWGROUND PIPING
— — — —	EXISTING HORIZONTAL COLLECTOR
⊙ EW-3	EXISTING LFG EXTRACTION WELL
Δ LC-108	EXISTING LOCAL CONTROL WELL
⊙	EXISTING REMOTE WELLHEAD
○ WP ⊙ EW-H15	EXISTING PROBE
○ WP ⊙ P-18	EXISTING HORIZONTAL COLLECTOR WELLHEAD
⊕	EXISTING CONTROL VALVE
— —	EXISTING BLIND FLANGE
— —	EXISTING FLANGE CONNECTION
— —	EXISTING REDUCER FITTING
— —	EXISTING ROAD CROSSING
▨	EXISTING CONDENSATE SUMP
○	EXISTING RISER
— —	EXISTING CAP ON EXISTING PIPE



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

April 2, 2020

Ms. Loi Chau  
Air Quality Engineer  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

Subject: Decommissioning Notification for One Vertical Well  
Facility Number A1812  
Kirby Canyon Recycling & Disposal Facility, San Jose, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the decommissioning of one vertical landfill gas (LFG) well 106 on April 1, 2020, at the Kirby Canyon Recycling & Disposal Facility (KCRDF), pursuant to Title V Permit Condition Number 1437 Part 6, as modified by Application Number 27673.

As stated in the most recent well Startup notification letter submitted on January 10, 2020, there were 77 vertical LFG collection wells, 0 horizontal collectors and 3 LCRS connected to the GCCS at the KCRDF. After the completion of these well actions, the KCRDF current GCCS component count and remaining permitted actions per Application Number 27673 are listed in the following table:

Well Action Per Application #27673	Vertical Decommissioning Actions	Vertical Installation Actions	Vertical Replacement Actions	Horizontal Decommissioning Actions		Horizontal Installation Actions	
	VW	VW	VW	HC	LCRS	HC	LCRS
Permitted Actions	40	50	103	5	8	2	15
Actions Performed	22	37	0	3	0	0	0
Remaining Actions	18	13	103	2	8	2	15
<b>Current Active Well Count</b>	<b>76 vertical LFG wells, 0 HC and 3 LCRS</b>						

HC= Horizontal Trench Collectors; LCRS= Leachate Cleanout Riser; VW= Vertical Wells

If you have any questions or need any additional information please do not hesitate to contact me at (408) 960-0769.

Sincerely,

Kirby Canyon Recycling & Disposal Facility



Becky Azevedo  
Technical Manager

cc: Bill Louis, KCRDF  
Mike Winter, KCRDF



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

February 7, 2020

Ms. Loi Chau  
Air Quality Engineer  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

Re: Facility Number A1812 – Kirby Canyon Recycling & Disposal Facility  
Notification Requesting to Add Well 92 to List of Approved Higher Operating Value Wells

Dear Ms. Chau:

The Kirby Canyon Recycling & Disposal Facility (KCRDF), owned and operated by Waste Management of California, Inc., is subject to the Federal New Source Performance Standards/Emission Guidelines (NSPS/EG) for municipal solid waste (MSW) landfills (40 Code of Federal Regulations [CFR], Part 60, Subparts WWW and Cc) and the Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34.

This notification is being made pursuant to KCRDF Permit to Operate (PTO) Condition 1437 Parts (18)(f), which states that within 30 days of adding a component to the list of Approved Higher Operating Value (HOV) wells, the owner/operator shall notify the District in writing that the operator is requesting to add the component to the existing list. KCRDF believes that it has satisfied all requirements listed under PTO Condition 1437 Parts 18(d) and 18e(iii) to include Well 92 to the list of alternative temperature limit wells.

A review of recent monitoring data for vertical landfill gas (LFG) well 92 indicate an elevated operating temperature, and recent oxygen monitoring shows negligible oxygen has been detected at the well. Upon first discovering the elevated temperatures, KCRDF personnel monitored well 92 for carbon monoxide (CO), which is an early indicator of subsurface fire. Typically, CO concentrations of greater than 1,000 parts per million by volume (ppmv) will indicate a subsurface fire, with CO concentrations greater than 500 ppmv being of concern. The initial two readings at well 92 indicated CO readings of 5 and 0 ppmv. Subsequent monitoring reading at the well 92 indicated CO reading of 10 ppmv. Wellhead temperatures during these monitoring events were less than 140°F. Methane concentrations at Well 92 do not appear to be affected by operation at higher temperatures.

See attached table for recent monitoring data for well 92 including CO monitoring results.

KCRDF considers well 92 added to the HOV list for a temperature of 145°F as of February 4, 2020. Should the temperature measured at Well 92 during routine monitoring exceed 145°F, KCRDF will consider it an exceedance and will track the deviation in accordance with the NSPS/EG and BAAQMD requirements.



If you have any questions or need any additional information please do not hesitate to contact me at (408) 960-0769.

Sincerely,

Kirby Canyon Recycling & Disposal Facility

A handwritten signature in black ink, appearing to read "Becky Azevedo". The signature is written in a cursive style with a large initial "B".

Becky Azevedo  
Technical Manager

cc: Bill Louis, KCRDF  
Mike Winter, KCRDF

Enclosures: Well 92 Historical Monitoring Data  
KCRDF GCCS Map

## Well 92 - Historical Monitoring Data

**Table 1. Well 92 Historical Monitoring Data**

Device Name	Date Time	CH4 (Methane)(%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen)(%)	Balance Gas(%)	Initial Temperature(oF)	Adjusted Temperature(oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
KCYN0092	9/17/2019 15:49	49.4	37.8	0.0	12.8	121.4	120.1	-39.2	-38.2
KCYN0092	10/5/2019 14:27	47.6	37.2	0.7	14.5	129.3	129.3	-40.4	-38.8
KCYN0092	11/19/2019 14:31	45.7	37.2	1.1	16.0	124.0	124.0	-41.3	-35.2
KCYN0092	12/11/2019 10:54	50.9	38.9	0.1	10.1	129.5	129.5	-37.2	-38.1
KCYN0092	1/17/2020 13:38	CO was 5ppm							
KCYN0092	1/17/2020 19:27	49.9	38.3	0.0	11.8	131.0	132.0	-37.4	-36.5
KCYN0092	1/20/2020 14:57	CO was 0ppm							
KCYN0092	1/20/2020 18:42	49.7	38.7	0.0	11.6	128.0	130.0	-34.1	-34.1
KCYN0092	1/20/2020 18:43	49.7	38.7	0.0	11.6	128.0	128.0	-34.1	-34.3
KCYN0092	2/4/2020 16:00	49.5	38.5	0.0	12.0	132.0	132.0	-35.1	-34.5
KCYN0092	2/4/2020 16:14	CO was 0ppm							

## KCRDF GCCS Map

**LEGEND**

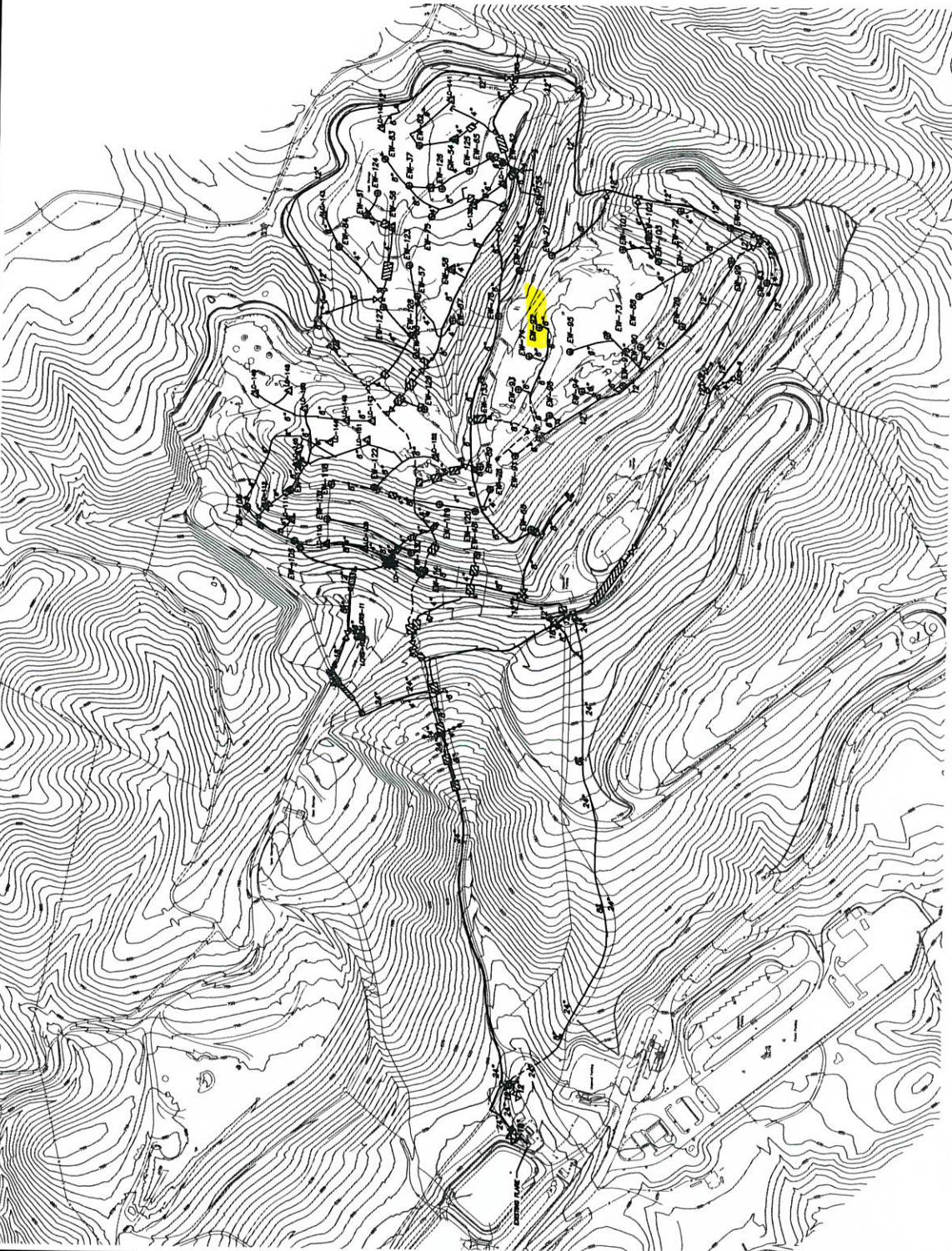
- 100' ——— EXISTING 10' CONTOUR
- 12" ——— EXISTING ABOVEGROUND PIPING
- 12" - - - - EXISTING BELOWGROUND PIPING
- - - - EXISTING HORIZONTAL COLLECTOR
- ⊙ EP-3 EXISTING LPS EXTRACTION WELL
- △ LC-108 EXISTING LOCAL CONTROL WELL
- ⊙ EXISTING REMOTE WELLHEAD
- ⊙ EP-04 ⊙ EP-18 EXISTING PROBE
- ⊙ EP-115 EXISTING HORIZONTAL COLLECTOR WELLHEAD
- ⊙ EXISTING CONTROL VALVE
- ⊙ EXISTING BLIND FLANGE
- ⊙ EXISTING FLANGE CONNECTION
- ⊙ EXISTING REDUCER FITTING
- ⊙ EXISTING ROAD CROSSING
- ⊙ EXISTING CONDENSATE SUMP
- ⊙ EXISTING RISER
- ⊙ EXISTING CAP ON EXISTING PIPE



**NOTES:**

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MAUER ASSOCIATES. DATE OF PHOTOGRAPH: MARCH 28, 2019.
2. SUPPLEMENTAL 2019 GCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARKUPS AND PER RECORD DRAWINGS WELL SCHEDULE DATED: JULY 13, 2018. DATE: OCTOBER 11, 2017.
3. 2017 GCS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATE: AUGUST 19, 2019 AND DECEMBER 30, 2019.
4. 2019 GCS AS-BUILT SURVEYS PROVIDED BY F3 AND ASSOCIATES, INC. DATE: AUGUST 19, 2019 AND DECEMBER 30, 2019.
5. SUPPLEMENTAL 2019 GCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM. DATED: JANUARY 27, 2020.

*Well 92 location*



**PRELIMINARY AS-BUILT**

SHEET NO. **1**

PROJECT NO. **100001**

KIRBY CANYON RECYCLING AND DISPOSAL FACILITY  
SAN JOSE, CALIFORNIA

2019 GCS IMPROVEMENTS  
AS-BUILT SITE PLAN

**TETRA TECH**

REV.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	DATE OF SCALE
1	JAN, 2020				

**WM**  
WASTE MANAGEMENT

1" = 100'

1/2" = 0'



January 10, 2020

Ms. Loi Chau  
Air Quality Engineer  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

Subject: Startup Notification Letter for Fourteen New Vertical Wells  
Facility Number A1812  
Kirby Canyon Recycling & Disposal Facility, San Jose, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the startup of fourteen vertical landfill gas (LFG) wells in December 2019 and January 2020 at the Kirby Canyon Recycling & Disposal Facility (KCRDF), pursuant to Title V Permit Condition Number 1437 Part 6, as modified by Application Number 27673. The affected collectors and respective startup/shutdown dates are listed in the following table:

<b>Well ID</b>	<b>Well Action Type</b>	<b>Applicable Date</b>
Well 139	Startup	12/23/2019; 9:02
Well 140	Startup	12/23/2019; 9:06
Well 141	Startup	12/23/2019; 8:33
Well 142	Startup	12/23/2019; 9:17
Well 143	Startup	12/23/2019; 10:52
Well 144	Startup	12/23/2019; 9:50
Well 145	Startup	12/23/2019; 10:00
Well 146	Startup	12/23/2019; 9:45
Well 147	Startup	1/10/2020; 10:16
Well 148	Startup	12/23/2019; 10:09
Well 149	Startup	12/23/2019; 10:16
Well 150	Startup	12/23/2019; 9:56
Well 151	Startup	1/10/2020; 9:45
Well 152	Startup	12/23/2019; 10:11

As stated in the most recent Well Decommissioning Notification Letter submitted on September 12, 2019, there were 63 vertical LFG collection wells, 0 horizontal collectors and 3 LCRS connected to the GCCS at the KCRDF. After the completion of these well actions, the KCRDF current GCCS component count and remaining permitted actions per Application Number 27673 are listed in the following table:

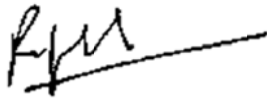
Well Action Per Application #27673	Vertical Decommissioning Actions	Vertical Installation Actions	Vertical Replacement Actions	Horizontal Decommissioning Actions		Horizontal Installation Actions	
	VW	VW	VW	HC	LCRS	HC	LCRS
Permitted Actions	40	50	103	5	8	2	15
Actions Performed	21	37	0	3	0	0	0
Remaining Actions	19	13	103	2	8	2	15
<b>Current Active Well Count</b>	<b>77 vertical LFG wells, 0 HC and 3 LCRS</b>						

HC= Horizontal Trench Collectors; LCRS= Leachate Cleanout Riser; VW= Vertical Wells

If you have any questions or need any additional information please do not hesitate to contact me at (408) 960-0769.

Sincerely,

Kirby Canyon Recycling & Disposal Facility



Rajan Phadnis  
Environmental Protection Specialist

cc: Bill Louis, KCRDF  
Mike Winter, KCRDF



910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

October 15, 2019

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105  
Attn: Title V Reports

Re: Title V 10-Day Written Report for Delay to Notify the BAAQMD  
Facility Number A1812, Kirby Canyon Recycling & Disposal Facility, San Jose, CA.

Dear Sir or Madam:

The Kirby Canyon Recycling & Disposal Facility (KCRDF) is submitting this 10-day written report to the Bay Area Air Quality Management District (BAAQMD) as required under Title V Permit Condition Section I.F for Monitoring Reports.

The KCRDF Title V Permit Requirement Condition 1437 (2)(b), states that *“The owner/operator shall provide verbal notification to the Compliance and Enforcement Division of the owner/operator’s intention to accept contaminated soil at the facility at least 24 hours in advance of receiving the contaminated soil. The owner/operator shall provide an estimate of the amount of contaminated soil to be received, the degree of contamination (range and average VOC Content), and the type or source of contamination.”* This 10-day written report is being submitted for delay to notify the BAAQMD prior to acceptance of contaminated soil. KCRDF is submitting the required notification as part of this written report (see attached).

On October 7, 2019, during routine monthly (for September 2019) soil data review and discussion, it was discovered that KCRDF had not notified the BAAQMD prior to accepting contaminated soil at the facility. The delay to notify the BAAQMD was due to an inadvertent lapse in communication between the customer and the site. The soil was accepted at the site on September 24, 2019.

As required, KCRDF will submit a 30-day follow-up written report and provide additional details as appropriate. KCRDF is committed to operating its landfill in compliance with all applicable regulations.



If you have any questions or need any additional information please do not hesitate to contact me at (408) 323-6300.

Sincerely,

Kirby Canyon Recycling & Disposal Facility



Neil J. Wise  
District Operations Manager

Attachment: KCRDF 24 hour notification dated October 15, 2019.

cc: Becky Azevedo, KCRDF



910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

October 15, 2019

Mr. Jeffrey Gove  
Bay Area Air Quality Management District Office  
Compliance and Enforcement Division  
375 Beale Street, Suite 600  
San Francisco, CA 94105

**RE: Kirby Canyon Recycling & Disposal Facility #A1812, Permit Condition # 1437**

Dear Mr. Gove:

As required per the above listed permit condition, this letter serves as the 24 hour notification for the intent to accept a volatile organic compound (VOC) contaminated waste stream for disposal at the Kirby Canyon Landfill.

WM Profile Number: 641000CA

Estimated quantity of contaminated soil: 80 Cubic Yards

Degree of contamination:

VOC range of material: 99.7 ppm

Average VOC content: 99.7 ppm

Type or source of the contamination: Soil from excavation to inspect natural gas pipeline

Date of soil Acceptance: September 24, 2019

If you have further questions concerning this matter, please contact me at (669) 232-5365.

Sincerely,

Sergio Avila  
Landfill Operations Manager  
Kirby Canyon Recycling & Disposal Facility



910 Coyote Creek Golf Drive  
P.O. Box 1870  
Morgan Hill, CA 95037  
(408) 779-2206  
(408) 779-5165 Fax

October 29, 2019

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105  
Attn: Title V Reports

Re: Title V 30-Day Follow-up Written Report for Delayed 24-hour Notification  
Facility Number A1812, Kirby Canyon Recycling & Disposal Facility, San Jose, CA.

Dear Sir or Madam:

The Kirby Canyon Recycling & Disposal Facility (KCRDF) is submitting this 30-day follow-up written report to the Bay Area Air Quality Management District (BAAQMD) as required under Title V Permit Condition Section I.F for Monitoring Reports.

On October 7, 2019, during routine soil data review, it was discovered that KCRDF had not notified the BAAQMD prior to accepting contaminated soil at the facility in September 2019. The delay to notify the BAAQMD was due to an inadvertent lapse in communication between the customer and the site. The soil was accepted at the site on September 24, 2019.

This letter serves as the 30-day follow-up written report including corrective and preventative actions taken by KCRDF. Upon discovery of the delayed 24-hour notification the KCRDF immediately took the following actions:

10/7/2019: During routine soil data review, it was discovered that KCRDF had not notified the BAAQMD prior to accepting contaminated soil at the facility on September 24, 2019.

10/8/2019: Corrective action items were discussed and began implementation

10/10/2019: Completed corrective action items including upgraded coding, upgraded notification process and initiated site training.

10/15/2019: Submitted 10-day written report (BAAQMD received on 10/16/2019).

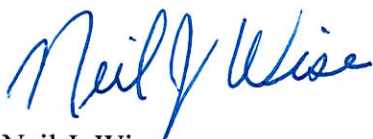
10/22/2019: Completed site employee training.

KCRDF is committed to operating its landfill in compliance with applicable regulations.

If you have any questions or need any additional information please do not hesitate to contact me at (408) 323-6300.

Sincerely,

Kirby Canyon Recycling & Disposal Facility



Neil J. Wise  
District Operations Manager

cc: Becky Azevedo, KCRDF

## **APPENDIX K**

### **WELLFIELD DEVIATION LOG**

KIRBY CANYON RECYCLING & DISPOSAL FACILITY  
WELLFIELD DEVIATION REPORT  
Reporting Period: From January 1 2020 through June 30, 2020

REPORT PREPARED BY: Rajan Phadnis  
UPDATED DATE: July 1, 2020  
LFG MONITORING DEVICE: GEM  
MODEL: 2000  
DATE LAST CALIBRATED: DAILY

Well ID	Date and Time	CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	Balance	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)	Comments	Duration of Exceedance As of the End of Reporting Period (Days)
		(%)	(%)	(%)	(%)	(°F)	(°F)	("WC)	("WC)		
KCLC0152	1/20/2020 18:32	55.2	44.7	0.0	0.1	60.0	60.0	0.2	0.3	NSPS/EG CAI;Dec. Flow/Vac.;Fully Closed	
KCLC0152	1/20/2020 18:32	55.2	44.7	0.0	0.1	60.0	50.0	0.2	0.4	NSPS/EG CAI;Fully Closed	
KCLC0152	2/4/2020 15:42	56.6	43.3	0.0	0.1	90.0	91.0	-3.4	-3.5	NSPS/EG CAI;Fully Open	15
Comments:Well 152 had pressure exceedance during the monitoring event in January 2020. Adjustments wer made and exceedance was cleared.											
KCYN0092	1/17/2020 13:38	CO was 5 ppm									
KCYN0092	1/17/2020 19:27	49.9	38.3	0.0	11.8	131.0	132.0	-37.4	-36.5	Inc. Flow/Vac.	
KCYN0092	1/20/2020 14:57	CO was 0 ppm									
KCYN0092	1/20/2020 18:42	49.7	38.7	0.0	11.6	128.0	130.0	-34.1	-34.1	NSPS/EG CAI;Surging	
KCYN0092	2/4/2020 16:00	49.5	38.5	0.0	12.0	132.0	132.0	-35.1	-34.5	NSPS/EG CAI;Surging;No Adj. Made	
KCYN0092	2/4/2020 16:14	CO was 0 ppm									
Comments:Well 92 had temperature exceedance during the monitoring event in January and February 2020. CO reading was below 100 ppm. HOV letter was submitted on February 7, 2020 and Well 92 was added to the list of HOV wells.											
KCYN0037	3/20/2020 14:25	54.9	45.0	0.0	0.1	70.0	70.0	0.8	0.8	NSPS/EG CAI;Dec. Flow/Vac.	
KCYN0037	3/20/2020 14:28	54.9	45.0	0.0	0.1	70.0	70.0	0.8	0.0	NSPS/EG CAI;Adjusted for Odor/SEM	
KCYN0037	4/14/2020 15:15	53.7	41.7	0.3	4.3	99.8	100.1	-4.7	-4.7	Surging;No Adj. Made	25
Comments: Well 37 had pressure exceedance during the monitoring event in March 2020. Adjustements were made and exceedance was cleared.											
KCYN0106	3/18/2020 14:55	19.1	14.1	14.1	52.7	50.00	50.00	-33.1	-33.2	NSPS/EG CAI;Surging	
KCYN0106	3/18/2020 15:00	17.7	13.2	14.8	54.3	49.00	49.00	-35.5	-33.2	NSPS/EG CAI;Dec. Flow/Vac.;Barely Open	
KCYN0106	4/1/2020 13:43	56.7	42.9	0.2	0.2	63.0	63.0	-27.2	-27.3	Barely Open;Surging	14
Comments:Well 106 had oxygen exceedance during the monitoring event in March 2020. Exceedance was cleared during April 2020. Well was decommissioned on April 1, 2020.											
KCYNLR08	3/25/2020 14:08	0.3	0.3	22.3	77.1	82.0	82.0	-55.0	-54.8	NSPS/EG CAI;Adjusted for Odor/SEM	
KCYNLR08	3/25/2020 14:11	0.3	0.3	22.3	77.1	82.0	82.0	-55.0	-54.9	NSPS/EG CAI;Surging;Adjusted for Odor/SEM	
KCYNLR08	4/8/2020 9:06	59.1	40.5	0.2	0.2	80.0	80.0	-53.0	-53.3	Surging	14
Comments:LR08 had oxygen exceedance during the monitoring event in March 2020. Exceedance was cleared during April 2020.											

KIRBY CANYON RECYCLING & DISPOSAL FACILITY  
WELLFIELD DEVIATION REPORT  
Reporting Period: From January 1 2020 through June 30, 2020

REPORT PREPARED BY: Rajan Phadnis  
UPDATED DATE: July 1, 2020  
LFG MONITORING DEVICE: GEM  
MODEL: 2000  
DATE LAST CALIBRATED: DAILY

Well ID	Date and Time	CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	Balance	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)	Comments	Duration of Exceedance As of the End of Reporting Period (Days)
		(%)	(%)	(%)	(%)	(°F)	(°F)	("WC)	("WC)		(Days)
KCLC0149	4/15/2020 12:16	25.8	28.8	6.3	39.1	110.1	110.3	-15.8	-3.2	NSPS/EG CAI;Dec. Flow/Vac.	
KCLC0149	4/15/2020 12:36	30.3	34.1	3.9	31.7	109.7	108.2	-3.2	-3.1		<1
Comments:Well 149 had oxygen exceedance during the monitoring event in April 2020. Adjustments were made and exceedance was corrected.											
KCLC0152	3/18/2020 16:18	56.6	43.3	0.00	0.10	61.00	56.00	1.8	1.8	NSPS/EG CAI;Fully Open;Dec. Flow/Vac.	
KCLC0152	4/15/2020 7:55	57.9	42.0	0.1	0.0	61.6	61.2	1.7	1.7	NSPS/EG CAI;Inc. Flow/Vac.	
KCLC0152	5/20/2020 9:11	56.0	42.6	0.6	0.8	73.2	73.2	0.0	-0.1	NSPS/EG CAI	
KCLC0152	6/16/2020 16:04	56.00	44.00	0.00	0.00	81.0	81.0	1.1	1.1	NSPS/EG CAI	>104
Comments:Well 152 had pressure exceedance during the monitoring event in March through June 2020. New lateral was installed and exceedance was cleared during July 2020 monthly monitoring event.											
KCYN0048	4/15/2020 14:10	55.6	42.0	0.0	2.4	105.9	109.7	0.2	-0.2	NSPS/EG CAI;Inc. Flow/Vac.	<1
Comments:Well 48 had pressure exceedance during the monitoring event in April 2020. Adjustments were made and exceedance was corrected.											
KCYN0065	4/14/2020 14:15	36	29	6.3	28.7	95.2	92.4	-2.4	-0.2	NSPS/EG CAI;Dec. Flow/Vac.	
KCYN0065	4/14/2020 14:38	54	39	0.9	6.2	91.0	91.0	-0.2	-0.1	No Adj. Made	<1
Comments:Well 65 had oxygen exceedance during the initial monitoring event in April 2020.											
KCYN0120	4/15/2020 13:29	39.9	30.8	5.4	23.9	83.2	83.9	-35.0	-34.9	NSPS/EG CAI;Dec. Flow/Vac.;Surging	
KCYN0120	4/15/2020 13:35	46.9	37.7	2.3	13.1	83.5	83.3	-35.4	-35.2	Surging;No Adj. Made	<1
Comments:Well 120 had oxygen exceedance during the initial monitoring event in April 2020.											
KCYN0119	4/15/2020 13:45	58.3	40.7	0.0	1.0	124.0	124.7	1.4	-0.1	NSPS/EG CAI;Inc. Flow/Vac.	<1
Comments:Well 119 had pressure exceedance during the monitoring event in April 2020. Adjustments were made and exceedance was corrected.											
KCLC0151	4/15/2020 11:51	56.4	43.6	0.0	0.0	88.3	88.4	2.7	2.7	NSPS/EG CAI;Fully Open;Inc. Flow/Vac.	
KCLC0151	5/20/2020 9:15	53.2	46.8	0.0	0.0	68.7	68.9	2.4	2.4	NSPS/EG CAI	
KCLC0151	6/16/2020 16:06	55.60	44.30	0.10	0.00	73.3	73.3	2.9	3.0	NSPS/EG CAI;Barely Open	>76
Comments:Well 151 had pressure exceedance during the monitoring events in April through June 2020. New lateral was installed and exceedance was cleared during July 2020 monthly monitoring event.											
KCYNLR11	5/20/2020 14:10	15.7	9.9	14.0	60.4	108.3	108.1	-49.1	-49.1	NSPS/EG CAI;Fully Open;Surging	
KCYNLR11	5/22/2020 10:52	52.9	34.4	3.2	9.5	79.1	79.1	-49.4	-49.4	NSPS/EG CAI;Fully Open	2

KIRBY CANYON RECYCLING & DISPOSAL FACILITY  
WELLFIELD DEVIATION REPORT  
Reporting Period: From January 1 2020 through June 30, 2020

REPORT PREPARED BY: Rajan Phadnis  
UPDATED DATE: July 1, 2020  
LFG MONITORING DEVICE: GEM  
MODEL: 2000  
DATE LAST CALIBRATED: DAILY

Well ID	Date and Time	CH <sub>4</sub>	CO <sub>2</sub>	O <sub>2</sub>	Balance	Initial Temperature (degrees F)	Adjusted Temperature (degrees F)	Initial Pressure (in. w.c.)	Adjusted Pressure (in. w.c.)	Comments	Duration of Exceedance As of the End of Reporting Period (Days)
		(%)	(%)	(%)	(%)	(°F)	(°F)	("WC)	("WC)		(Days)
Comments:LR11 had oxygen exceedance during initial monitoring event in May 2020. Adjustments were made and exceedance was corrected.											
KCYN0129	6/17/2020 16:01	56.4	43.6	0.00	0.00	118.0	117.8	3.9	4.4	NSPS/EG CAI;Fully Open;Surging	
KCYN0129	6/17/2020 16:03	56.3	43.7	0.00	0.00	117.9	118.0	4.3	4.4	NSPS/EG CAI;Fully Open;Surging	>13
Comments:Well 129 had pressure exceedance during the monitoring event in June 2020. New lateral was installed and exceedance was cleared during July 2020 monthly monitoring event.											

EG CAI= Emissions Guidelines Corrective Action Initiated



## **APPENDIX L**

### **MONTHLY LANDFILL GAS FLOW RATES**

**MONTHLY LFG Input to Flare (A-12)**

January 1 2020 through June 30, 2020

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY, San Jose, CA**

Month	Total Available Runtime (hours)	Total Downtime (hours)	Total Runtime (hours)	Average Flow (scfm)	CH <sub>4</sub> (%)*	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Total Heat Input (MMBTU)
<b>January-20</b>	744.00	18.43	725.57	2,326	50.9	101,179,101	51,449,725	52,119
<b>February-20</b>	696.00	15.07	680.93	2,311	50.9	94,416,389	48,010,875	48,635
<b>March 2020<sup>2</sup></b>	743.00	1.83	741.17	2,270	50.9	100,933,682	51,324,929	51,992
<b>April-20</b>	720.00	1.60	718.40	2,218	50.4	96,162,570	48,898,811	49,149
<b>May-20</b>	744.00	2.03	741.97	2,052	50.4	91,442,343	42,639,565	43,194
<b>June-20</b>	720.00	5.33	714.67	2,064	46.6	88,570,275	41,300,319	41,837
<b>January 1-June 30, 2020 Totals/Avg</b>	<b>4,367.00</b>	<b>44.30</b>	<b>4,322.70</b>	<b>2,207</b>	<b>50.0</b>	<b>572,704,360</b>	<b>283,624,224</b>	<b>286,926</b>
<b>2019-2020-Totals/Avg</b>	<b>8,784.00</b>	<b>155.99</b>	<b>8,628.01</b>	<b>2,146</b>	<b>50.4</b>	<b>1,106,701,499</b>	<b>555,162,570</b>	<b>561,994</b>

**NOTES:**

<sup>1</sup>There were 721 hours in November 2019, due to Daylight Saving Time.

<sup>2</sup>There were 743 hours in March 2020, due to Daylight Saving Time.

\*Methane content determined from March 13, 2019 and March 4, 2020 source test.

The annual heat input rate for the A-12 Flare shall not exceed 1,087,700 MMBTU and 2,980 MMBTU per day (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

<b>MONTHLY LFG Input to Flare (A-12)</b>		
<b>KIRBY CANYON RECYCLING &amp; DISPOSAL FACILITY, San Jose, CA</b>		
MONTHLY LFG Heat Input: 2019-2020		
<b>Month</b>	<b>Monthly Total Heat Input (MMBTU)</b>	<b>12-Month Total Heat Input (MMBTU)</b>
July-19	50,089	554,679
August-19	46,430	556,435
September-19	44,834	558,775
October-19	42,540	557,987
November-19	42,784	555,673
December-19	48,392	559,693
January-20	52,119	567,986
February-20	48,635	577,049
March-20	51,992	583,205
April-20	49,149	585,256
May-20	43,194	575,959
June-20	41,837	561,994
MMBTU= million British thermal units		

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: January-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
1/1/2020	24.00	50.9	2,359	3,396,971	1,727,365	1,013.0	1,750
1/2/2020	23.87	50.9	2,349	3,363,085	1,710,134	1,013.0	1,732
1/3/2020	14.20	50.9	2,461	2,096,402	1,066,024	1,013.0	1,080
1/4/2020	24.00	50.9	2,372	3,416,375	1,737,232	1,013.0	1,760
1/5/2020	24.00	50.9	2,353	3,388,553	1,723,084	1,013.0	1,745
1/6/2020	24.00	50.9	2,351	3,385,496	1,721,530	1,013.0	1,744
1/7/2020	24.00	50.9	2,333	3,359,563	1,708,343	1,013.0	1,731
1/8/2020	24.00	50.9	2,318	3,338,217	1,697,488	1,013.0	1,720
1/9/2020	16.27	50.9	2,362	2,305,356	1,172,277	1,013.0	1,188
1/10/2020	23.23	50.9	2,356	3,283,701	1,669,767	1,013.0	1,691
1/11/2020	24.00	50.9	2,354	3,389,968	1,723,804	1,013.0	1,746
1/12/2020	24.00	50.9	2,334	3,361,676	1,709,417	1,013.0	1,732
1/13/2020	24.00	50.9	2,330	3,354,509	1,705,773	1,013.0	1,728
1/14/2020	24.00	50.9	2,297	3,308,227	1,682,238	1,013.0	1,704
1/15/2020	24.00	50.9	2,228	3,208,645	1,631,601	1,013.0	1,653
1/16/2020	24.00	50.9	2,198	3,165,618	1,609,722	1,013.0	1,631
1/17/2020	24.00	50.9	2,252	3,243,557	1,649,354	1,013.0	1,671
1/18/2020	24.00	50.9	2,340	3,370,011	1,713,656	1,013.0	1,736
1/19/2020	24.00	50.9	2,335	3,361,919	1,709,541	1,013.0	1,732
1/20/2020	24.00	50.9	2,326	3,349,412	1,703,181	1,013.0	1,725
1/21/2020	24.00	50.9	2,326	3,349,278	1,703,113	1,013.0	1,725
1/22/2020	24.00	50.9	2,340	3,370,124	1,713,713	1,013.0	1,736
1/23/2020	24.00	50.9	2,343	3,374,139	1,715,755	1,013.0	1,738
1/24/2020	24.00	50.9	2,325	3,348,429	1,702,681	1,013.0	1,725
1/25/2020	24.00	50.9	2,320	3,340,092	1,698,442	1,013.0	1,721
1/26/2020	24.00	50.9	2,304	3,318,228	1,687,324	1,013.0	1,709
1/27/2020	24.00	50.9	2,294	3,303,528	1,679,849	1,013.0	1,702
1/28/2020	24.00	50.9	2,296	3,306,785	1,681,505	1,013.0	1,703
1/29/2020	24.00	50.9	2,302	3,315,368	1,685,870	1,013.0	1,708
1/30/2020	24.00	50.9	2,320	3,340,939	1,698,872	1,013.0	1,721
1/31/2020	24.00	50.9	2,337	3,364,930	1,711,072	1,013.0	1,733
<b>Totals/ Average:</b>	<b>725.57</b>	<b>50.9</b>	<b>2,326</b>	<b>101,179,101</b>	<b>51,449,725</b>	1,013.0	<b>52,119</b>
						<b>Maximum</b>	<b>1,760</b>

**NOTES:**

\*Starting May 7, 2019, Methane content determined from the March 13, 2019, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: February-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
2/1/2020	24.00	50.9	2,330	3,354,948	1,705,996	1,013.0	1,728
2/2/2020	24.00	50.9	2,284	3,288,542	1,672,229	1,013.0	1,694
2/3/2020	24.00	50.9	2,265	3,261,971	1,658,717	1,013.0	1,680
2/4/2020	24.00	50.9	2,261	3,256,396	1,655,882	1,013.0	1,677
2/5/2020	24.00	50.9	2,278	3,280,680	1,668,231	1,013.0	1,690
2/6/2020	21.10	50.9	2,324	2,941,665	1,495,841	1,013.0	1,515
2/7/2020	21.73	50.9	2,323	3,029,190	1,540,348	1,013.0	1,560
2/8/2020	24.00	50.9	2,311	3,328,303	1,692,447	1,013.0	1,714
2/9/2020	20.77	50.9	2,324	2,895,816	1,472,527	1,013.0	1,492
2/10/2020	20.50	50.9	2,346	2,885,511	1,467,287	1,013.0	1,486
2/11/2020	21.43	50.9	2,363	3,039,108	1,545,391	1,013.0	1,565
2/12/2020	23.70	50.9	2,340	3,326,787	1,691,676	1,013.0	1,714
2/13/2020	24.00	50.9	2,326	3,349,339	1,703,144	1,013.0	1,725
2/14/2020	24.00	50.9	2,318	3,337,978	1,697,367	1,013.0	1,719
2/15/2020	24.00	50.9	2,308	3,323,521	1,690,015	1,013.0	1,712
2/16/2020	24.00	50.9	2,307	3,322,052	1,689,268	1,013.0	1,711
2/17/2020	24.00	50.9	2,306	3,321,024	1,688,746	1,013.0	1,711
2/18/2020	24.00	50.9	2,311	3,327,790	1,692,186	1,013.0	1,714
2/19/2020	24.00	50.9	2,305	3,318,742	1,687,585	1,013.0	1,710
2/20/2020	24.00	50.9	2,309	3,324,466	1,690,496	1,013.0	1,712
2/21/2020	24.00	50.9	2,303	3,316,926	1,686,662	1,013.0	1,709
2/22/2020	24.00	50.9	2,299	3,311,178	1,683,739	1,013.0	1,706
2/23/2020	24.00	50.9	2,295	3,305,504	1,680,854	1,013.0	1,703
2/24/2020	23.70	50.9	2,320	3,299,409	1,677,754	1,013.0	1,700
2/25/2020	24.00	50.9	2,319	3,339,002	1,697,888	1,013.0	1,720
2/26/2020	24.00	50.9	2,323	3,345,172	1,701,025	1,013.0	1,723
2/27/2020	24.00	50.9	2,322	3,344,124	1,700,492	1,013.0	1,723
2/28/2020	24.00	50.9	2,324	3,346,812	1,701,859	1,013.0	1,724
2/29/2020	24.00	50.9	2,288	3,294,433	1,675,224	1,013.0	1,697
<b>Totals/ Average:</b>	<b>680.93</b>	<b>50.9</b>	<b>2,311</b>	<b>94,416,389</b>	<b>48,010,875</b>	1,013.0	<b>48,635</b>
						<b>Maximum</b>	<b>1,728</b>

**NOTES:**

\*Starting May 7, 2019, Methane content determined from the March 13, 2019, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: March-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
3/1/2020	24.00	50.9	2,276	3,277,125	1,666,423	1,013.0	1,688
3/2/2020	24.00	50.9	2,280	3,282,482	1,669,147	1,013.0	1,691
3/3/2020	24.00	50.9	2,274	3,274,490	1,665,083	1,013.0	1,687
3/4/2020	24.00	50.9	2,259	3,253,468	1,654,393	1,013.0	1,676
3/5/2020	24.00	50.9	2,258	3,252,164	1,653,730	1,013.0	1,675
3/6/2020	24.00	50.9	2,200	3,168,312	1,611,091	1,013.0	1,632
3/7/2020	24.00	50.9	2,157	3,106,552	1,579,686	1,013.0	1,600
3/8/2020	23.00	50.9	2,164	2,986,095	1,518,434	1,013.0	1,538
3/9/2020	24.00	50.9	2,185	3,146,026	1,599,759	1,013.0	1,621
3/10/2020	24.00	50.9	2,178	3,136,616	1,594,974	1,013.0	1,616
3/11/2020	24.00	50.9	2,198	3,164,581	1,609,194	1,013.0	1,630
3/12/2020	24.00	50.9	2,202	3,170,357	1,612,131	1,013.0	1,633
3/13/2020	24.00	50.9	2,174	3,130,155	1,591,689	1,013.0	1,612
3/14/2020	24.00	50.9	2,169	3,123,987	1,588,552	1,013.0	1,609
3/15/2020	24.00	50.9	2,162	3,113,446	1,583,192	1,013.0	1,604
3/16/2020	24.00	50.9	2,240	3,226,198	1,640,527	1,013.0	1,662
3/17/2020	22.57	50.9	2,280	3,087,782	1,570,142	1,013.0	1,591
3/18/2020	23.60	50.9	2,297	3,252,142	1,653,719	1,013.0	1,675
3/19/2020	24.00	50.9	2,303	3,316,939	1,686,668	1,013.0	1,709
3/20/2020	24.00	50.9	2,328	3,351,858	1,704,425	1,013.0	1,727
3/21/2020	24.00	50.9	2,338	3,367,439	1,712,348	1,013.0	1,735
3/22/2020	24.00	50.9	2,339	3,368,536	1,712,906	1,013.0	1,735
3/23/2020	24.00	50.9	2,326	3,349,563	1,703,258	1,013.0	1,725
3/24/2020	24.00	50.9	2,334	3,360,722	1,708,932	1,013.0	1,731
3/25/2020	24.00	50.9	2,321	3,342,522	1,699,677	1,013.0	1,722
3/26/2020	24.00	50.9	2,312	3,329,596	1,693,105	1,013.0	1,715
3/27/2020	24.00	50.9	2,317	3,336,046	1,696,384	1,013.0	1,718
3/28/2020	24.00	50.9	2,355	3,391,911	1,724,792	1,013.0	1,747
3/29/2020	24.00	50.9	2,362	3,400,580	1,729,200	1,013.0	1,752
3/30/2020	24.00	50.9	2,377	3,423,067	1,740,635	1,013.0	1,763
3/31/2020	24.00	50.9	2,391	3,442,925	1,750,733	1,013.0	1,773
<b>Totals/ Average:</b>	<b>741.17</b>	<b>50.9</b>	<b>2,270</b>	<b>100,933,682</b>	<b>51,324,929</b>	1,013.0	<b>51,992</b>
						<b>Maximum</b>	<b>1,773</b>

**NOTES:**

\*Starting May 7, 2019, Methane content determined from the March 13, 2019, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: April-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
4/1/2020	24.00	50.9	2,380	3,427,722	1,743,002	1,013.0	1,766
4/2/2020	24.00	50.9	2,372	3,416,224	1,737,155	1,013.0	1,760
4/3/2020	22.40	50.9	2,498	3,357,931	1,707,513	1,013.0	1,730
4/4/2020	24.00	50.9	2,484	3,577,647	1,819,239	1,013.0	1,843
4/5/2020	24.00	50.9	2,289	3,296,395	1,676,222	1,013.0	1,698
4/6/2020	24.00	50.9	2,282	3,286,433	1,671,156	1,013.0	1,693
4/7/2020	24.00	50.9	2,301	3,313,786	1,685,065	1,013.0	1,707
4/8/2020	24.00	50.9	2,308	3,323,402	1,689,955	1,013.0	1,712
4/9/2020	24.00	50.9	2,307	3,322,756	1,689,626	1,013.0	1,712
4/10/2020	24.00	50.9	2,315	3,333,230	1,694,952	1,013.0	1,717
4/11/2020	24.00	50.9	2,322	3,343,648	1,700,250	1,013.0	1,722
4/12/2020	24.00	50.9	2,309	3,324,672	1,690,601	1,013.0	1,713
4/13/2020	24.00	50.9	2,302	3,314,561	1,685,459	1,013.0	1,707
4/14/2020	24.00	50.9	2,274	3,274,961	1,665,323	1,013.0	1,687
4/15/2020	24.00	50.9	2,226	3,205,440	1,629,971	1,013.0	1,651
4/16/2020	24.00	50.9	2,167	3,120,335	1,586,695	1,013.0	1,607
4/17/2020	24.00	50.9	2,153	3,100,860	1,576,792	1,013.0	1,597
4/18/2020	24.00	50.9	2,155	3,102,929	1,577,844	1,013.0	1,598
4/19/2020	24.00	50.9	2,166	3,119,277	1,586,157	1,013.0	1,607
4/20/2020	24.00	50.9	2,158	3,107,603	1,580,221	1,013.0	1,601
4/21/2020	24.00	50.9	2,158	3,107,662	1,580,251	1,013.0	1,601
4/22/2020	24.00	50.9	2,148	3,092,926	1,572,758	1,013.0	1,593
4/23/2020	24.00	50.9	2,123	3,057,388	1,554,686	1,013.0	1,575
4/24/2020	24.00	50.9	2,127	3,063,181	1,557,632	1,013.0	1,578
4/25/2020	24.00	50.9	2,130	3,067,308	1,559,731	1,013.0	1,580
4/26/2020	24.00	50.9	2,117	3,048,854	1,550,347	1,013.0	1,571
4/27/2020	24.00	50.9	2,113	3,042,995	1,547,368	1,013.0	1,567
4/28/2020	24.00	46.6	2,097	3,020,125	1,408,284	1,013.0	1,427
4/29/2020	24.00	46.6	2,080	2,994,819	1,396,484	1,013.0	1,415
4/30/2020	24.00	46.6	2,082	2,997,500	1,397,734	1,013.0	1,416
<b>Totals/ Average:</b>	<b>718.40</b>	<b>50.4</b>	<b>2,218</b>	<b>96,162,570</b>	<b>48,518,472</b>	1,013.0	<b>49,149</b>
						<b>Maximum</b>	<b>1,843</b>

**NOTES:**

\*Starting May 7, 2019, Methane content determined from the March 13, 2019, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: May-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
5/1/2020	24.00	46.6	2,083	2,999,092	1,398,477	1,013.0	1,417
5/2/2020	24.00	46.6	2,082	2,998,377	1,398,143	1,013.0	1,416
5/3/2020	24.00	46.6	2,081	2,996,170	1,397,114	1,013.0	1,415
5/4/2020	24.00	46.6	2,086	3,003,802	1,400,673	1,013.0	1,419
5/5/2020	24.00	46.6	2,081	2,996,212	1,397,134	1,013.0	1,415
5/6/2020	24.00	46.6	2,085	3,002,009	1,399,837	1,013.0	1,418
5/7/2020	24.00	46.6	2,097	3,020,095	1,408,270	1,013.0	1,427
5/8/2020	22.77	46.6	2,137	2,919,490	1,361,358	1,013.0	1,379
5/9/2020	23.60	46.6	2,139	3,028,957	1,412,403	1,013.0	1,431
5/10/2020	24.00	46.6	2,112	3,040,625	1,417,843	1,013.0	1,436
5/11/2020	24.00	46.6	2,088	3,006,197	1,401,790	1,013.0	1,420
5/12/2020	24.00	46.6	2,056	2,960,226	1,380,353	1,013.0	1,398
5/13/2020	24.00	46.6	2,040	2,937,067	1,369,554	1,013.0	1,387
5/14/2020	24.00	46.6	2,049	2,949,938	1,375,556	1,013.0	1,393
5/15/2020	24.00	46.6	2,049	2,950,076	1,375,620	1,013.0	1,394
5/16/2020	24.00	46.6	2,063	2,970,870	1,385,317	1,013.0	1,403
5/17/2020	24.00	46.6	2,047	2,947,047	1,374,208	1,013.0	1,392
5/18/2020	24.00	46.6	2,023	2,913,230	1,358,439	1,013.0	1,376
5/19/2020	24.00	46.6	1,988	2,862,730	1,334,891	1,013.0	1,352
5/20/2020	24.00	46.6	2,004	2,885,724	1,345,613	1,013.0	1,363
5/21/2020	24.00	46.6	2,022	2,911,702	1,357,727	1,013.0	1,375
5/22/2020	24.00	46.6	2,009	2,893,462	1,349,221	1,013.0	1,367
5/23/2020	24.00	46.6	2,002	2,883,255	1,344,462	1,013.0	1,362
5/24/2020	24.00	46.6	2,022	2,910,985	1,357,392	1,013.0	1,375
5/25/2020	24.00	46.6	2,037	2,933,765	1,368,015	1,013.0	1,386
5/26/2020	24.00	46.6	2,051	2,953,159	1,377,058	1,013.0	1,395
5/27/2020	23.60	46.6	2,055	2,909,927	1,356,899	1,013.0	1,375
5/28/2020	24.00	46.6	2,046	2,946,925	1,374,151	1,013.0	1,392
5/29/2020	24.00	46.6	2,017	2,905,109	1,354,652	1,013.0	1,372
5/30/2020	24.00	46.6	2,012	2,896,803	1,350,779	1,013.0	1,368
5/31/2020	24.00	46.6	2,020	2,909,317	1,356,615	1,013.0	1,374
<b>Totals/ Average:</b>	<b>741.97</b>	<b>46.6</b>	<b>2,052</b>	<b>91,442,343</b>	<b>42,639,565</b>	1,013.0	<b>43,194</b>
						<b>Maximum</b>	<b>1,436</b>

**NOTES:**

\*Starting May 2020, Methane content determined from the March 4, 2020, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**  
**San Jose, CA**

Heat Input Rate  
A-12 Flare

MONTH: June-20

Date	Runtime (hours)	CH <sub>4</sub> (%)*	Average Flow (scfm)	Total LFG Volume (scf)	Total CH <sub>4</sub> Volume (scf)	Heating Value of CH <sub>4</sub> (BTU/scf)	Heat Input (MMBTU)/Day
6/1/2020	24.00	46.6	2,029	2,922,330	1,362,682	1,013.0	1,380
6/2/2020	24.00	46.6	2,046	2,946,061	1,373,748	1,013.0	1,392
6/3/2020	24.00	46.6	2,074	2,985,908	1,392,329	1,013.0	1,410
6/4/2020	24.00	46.6	2,058	2,964,214	1,382,213	1,013.0	1,400
6/5/2020	24.00	46.6	2,012	2,897,136	1,350,935	1,013.0	1,368
6/6/2020	24.00	46.6	2,005	2,886,924	1,346,173	1,013.0	1,364
6/7/2020	24.00	46.6	2,000	2,879,436	1,342,681	1,013.0	1,360
6/8/2020	24.00	46.6	2,031	2,925,197	1,364,019	1,013.0	1,382
6/9/2020	21.53	46.6	2,090	2,700,290	1,259,145	1,013.0	1,276
6/10/2020	22.77	46.6	2,118	2,893,818	1,349,387	1,013.0	1,367
6/11/2020	22.57	46.6	2,095	2,837,276	1,323,022	1,013.0	1,340
6/12/2020	24.00	46.6	2,030	2,923,429	1,363,195	1,013.0	1,381
6/13/2020	24.00	46.6	2,019	2,907,384	1,355,713	1,013.0	1,373
6/14/2020	24.00	46.6	2,046	2,946,079	1,373,757	1,013.0	1,392
6/15/2020	24.00	46.6	2,077	2,990,923	1,394,667	1,013.0	1,413
6/16/2020	24.00	46.6	2,094	3,014,700	1,405,755	1,013.0	1,424
6/17/2020	24.00	46.6	2,108	3,035,500	1,415,454	1,013.0	1,434
6/18/2020	24.00	46.6	2,128	3,064,531	1,428,991	1,013.0	1,448
6/19/2020	24.00	46.6	2,104	3,029,271	1,412,549	1,013.0	1,431
6/20/2020	24.00	46.6	2,096	3,018,001	1,407,294	1,013.0	1,426
6/21/2020	24.00	46.6	2,099	3,023,091	1,409,667	1,013.0	1,428
6/22/2020	24.00	46.6	2,099	3,022,036	1,409,175	1,013.0	1,427
6/23/2020	24.00	46.6	2,103	3,027,601	1,411,770	1,013.0	1,430
6/24/2020	24.00	46.6	2,095	3,016,770	1,406,720	1,013.0	1,425
6/25/2020	24.00	46.6	2,067	2,976,479	1,387,932	1,013.0	1,406
6/26/2020	24.00	46.6	2,062	2,969,903	1,384,866	1,013.0	1,403
6/27/2020	24.00	46.6	2,048	2,948,610	1,374,937	1,013.0	1,393
6/28/2020	24.00	46.6	2,021	2,910,124	1,356,991	1,013.0	1,375
6/29/2020	24.00	46.6	2,026	2,917,885	1,360,610	1,013.0	1,378
6/30/2020	23.80	46.6	2,093	2,989,368	1,393,942	1,013.0	1,412
<b>Totals/ Average:</b>	<b>714.67</b>	<b>46.6</b>	<b>2,064</b>	<b>88,570,275</b>	<b>41,300,319</b>	1,013.0	<b>41,837</b>
						<b>Maximum</b>	<b>1,448</b>

**NOTES:**

\*Starting May 2020, Methane content determined from the March 4, 2020, A-12 Source Test is used.

The daily heat input rate for the A-12 Flare shall not exceed 3,576 MMBTU (Title V Permit A1812 Condition 1437 Part 8).

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH<sub>4</sub>= methane

**APPENDIX M**  
**MONTHLY CONDENSATE INJECTION LOGS**

<b>KIRBY CANYON RECYCLING &amp; DISPOSAL FACILITY</b>			
<b>CONDENSATE INJECTION TOTALS: 2019-2020</b>			
<b>Title V Permit A1812, Condition Number 1437 Part 14</b>			
<b>Month</b>	<b>Average Condensate Injection Rate (gpm)</b>	<b>Monthly Condensate Injection Throughput (gallons)</b>	<b>Condensate Injection Throughput 12-Month Total (gallons)</b>
July-19	2.3	65,405	1,012,978
August-19	2.4	51,971	990,935
September-19	2.4	48,947	973,624
October-19	1.6	50,116	950,044
November-19	2.2	50,103	907,321
December-19	2.1	73,269	865,803
January-20	2.1	77,427	860,372
February-20	2.5	90,691	868,280
March-20	2.3	96,514	863,047
April-20	2.3	88,798	861,053
May-20	2.2	80,028	848,299
June-20	1.2	46,650	819,919
<b>NOTES:</b>			
gpm= gallons per minute			
Pursuant to Title V Permit A1812, Condition Number 1437 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.			
Pursuant to Title V Permit A1812, Condition Number 1437 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.			

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

CONDENSATE INJECTION (A-12 Flare)

January-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/01/01	00:00:00	2020/01/01	16:36:00	996	2.1	2066
2020/01/01	19:52:00	2020/01/01	23:58:00	248	2.2	539
2020/01/02	00:00:00	2020/01/02	23:52:00	1432	2.1	3052
2020/01/03	11:34:00	2020/01/03	23:58:00	746	2.1	1570
2020/01/04	00:00:00	2020/01/04	07:18:00	438	2.1	903
2020/01/04	10:40:00	2020/01/04	23:58:00	800	2.1	1704
2020/01/05	00:00:00	2020/01/05	14:44:00	884	2.1	1838
2020/01/05	18:20:00	2020/01/05	23:58:00	340	2.1	728
2020/01/06	00:00:00	2020/01/06	23:58:00	1440	2.1	3006
2020/01/07	00:00:00	2020/01/07	14:50:00	890	2.0	1821
2020/01/07	18:26:00	2020/01/07	23:58:00	334	2.2	719
2020/01/08	00:00:00	2020/01/08	23:58:00	1440	2.1	3039
2020/01/09	00:00:00	2020/01/09	06:44:00	404	2.1	840
2020/01/09	16:34:00	2020/01/09	23:58:00	446	2.1	949
2020/01/10	00:00:00	2020/01/10	14:54:00	894	2.1	1851
2020/01/13	09:50:00	2020/01/13	23:58:00	850	2.1	1781
2020/01/14	00:00:00	2020/01/14	23:58:00	1440	2.1	2969
2020/01/15	00:00:00	2020/01/15	23:58:00	1440	1.9	2777
2020/01/16	00:00:00	2020/01/16	23:58:00	1440	1.7	2388
2020/01/17	00:00:00	2020/01/17	23:58:00	1440	1.7	2431
2020/01/18	00:00:00	2020/01/18	23:58:00	1440	1.7	2459
2020/01/19	00:00:00	2020/01/19	23:58:00	1440	1.8	2583
2020/01/20	00:00:00	2020/01/20	23:58:00	1440	2.1	2960
2020/01/21	00:00:00	2020/01/21	23:58:00	1440	2.1	2987
2020/01/22	00:00:00	2020/01/22	23:58:00	1440	2.1	3051
2020/01/23	00:00:00	2020/01/23	16:56:00	1016	2.1	2150
2020/01/23	20:20:00	2020/01/23	23:58:00	220	2.2	485
2020/01/24	00:00:00	2020/01/24	23:58:00	1440	2.2	3110
2020/01/25	00:00:00	2020/01/25	15:50:00	950	2.2	2043
2020/01/25	19:56:00	2020/01/25	23:58:00	244	2.3	556
2020/01/26	00:00:00	2020/01/26	23:58:00	1440	2.2	3156
2020/01/27	00:00:00	2020/01/27	17:32:00	1052	2.1	2244
2020/01/27	21:02:00	2020/01/27	23:58:00	178	2.3	403
2020/01/28	00:00:00	2020/01/28	23:58:00	1440	2.2	3175
2020/01/29	00:00:00	2020/01/29	23:58:00	1440	2.2	3142
2020/01/30	00:00:00	2020/01/30	20:36:00	1236	2.2	2695
2020/01/30	23:50:00	2020/01/30	23:58:00	10	2.3	23
2020/01/31	00:00:00	2020/01/31	23:58:00	1440	2.2	3234
<b>Totals</b>				<b>37,648</b>	<b>2.1</b>	<b>77,427</b>
				<b>Maximum GPM</b>	<b>2.3</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

CONDENSATE INJECTION (A-12 Flare)

February-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/02/01	00:00:00	2020/02/01	23:58:00	1,440	2.2	3,239
2020/02/02	00:00:00	2020/02/02	15:34:00	934	2.2	2,045
2020/02/02	18:58:00	2020/02/02	23:58:00	302	2.3	687
2020/02/03	00:00:00	2020/02/03	23:58:00	1,440	2.2	3,166
2020/02/04	00:00:00	2020/02/04	23:58:00	1,440	2.2	3,151
2020/02/05	00:00:00	2020/02/05	23:58:00	1,440	2.2	3,170
2020/02/06	00:00:00	2020/02/06	09:52:00	592	2.2	1,309
2020/02/06	11:54:00	2020/02/06	14:32:00	158	2.2	342
2020/02/06	15:36:00	2020/02/06	23:58:00	504	2.3	1,138
2020/02/07	00:00:00	2020/02/07	15:08:00	908	2.2	2,026
2020/02/07	17:30:00	2020/02/07	23:58:00	390	2.3	888
2020/02/08	00:00:00	2020/02/08	23:58:00	1,440	2.2	3,220
2020/02/09	00:00:00	2020/02/09	12:56:00	776	2.2	1,716
2020/02/09	16:22:00	2020/02/09	23:58:00	458	2.3	1,053
2020/02/10	00:00:00	2020/02/10	11:06:00	666	2.3	1,513
2020/02/10	14:36:00	2020/02/10	23:58:00	564	2.3	1,285
2020/02/11	00:00:00	2020/02/11	09:22:00	562	2.3	1,272
2020/02/11	12:04:00	2020/02/11	23:58:00	716	2.3	1,634
2020/02/12	00:00:00	2020/02/12	15:12:00	912	2.3	2,070
2020/02/12	15:38:00	2020/02/12	23:58:00	502	2.3	1,168
2020/02/13	00:00:00	2020/02/13	23:58:00	1,440	2.3	3,286
2020/02/14	00:00:00	2020/02/14	23:58:00	1,440	2.3	3,284
2020/02/15	00:00:00	2020/02/15	23:58:00	1,440	2.3	3,272
2020/02/16	00:00:00	2020/02/16	23:58:00	1,440	2.3	3,253
2020/02/17	00:00:00	2020/02/17	23:58:00	1,440	2.3	3,255
2020/02/18	00:00:00	2020/02/18	23:58:00	1,440	2.3	3,270
2020/02/19	00:00:00	2020/02/19	23:58:00	1,440	2.3	3,263
2020/02/20	00:00:00	2020/02/20	23:58:00	1,440	2.5	3,572
2020/02/21	00:00:00	2020/02/21	00:48:00	48	3.0	144
2020/02/21	04:08:00	2020/02/21	21:04:00	1,016	3.1	3,156
2020/02/22	00:26:00	2020/02/22	09:50:00	564	3.1	1,770
2020/02/22	13:14:00	2020/02/22	19:28:00	374	3.1	1,168
2020/02/22	23:02:00	2020/02/22	23:58:00	58	3.1	182
2020/02/23	00:00:00	2020/02/23	08:22:00	502	3.1	1,544
2020/02/23	11:58:00	2020/02/23	18:38:00	400	3.2	1,274
2020/02/23	22:02:00	2020/02/23	23:58:00	118	3.2	380
2020/02/24	00:00:00	2020/02/24	08:18:00	498	3.1	1,564
2020/02/24	11:50:00	2020/02/24	23:34:00	704	3.2	2,233
2020/02/25	02:54:00	2020/02/25	12:50:00	596	3.1	1,868
2020/02/25	16:52:00	2020/02/25	22:14:00	322	3.2	1,031
2020/02/26	01:42:00	2020/02/26	10:40:00	538	3.2	1,705
2020/02/26	14:10:00	2020/02/26	18:40:00	270	3.3	883
2020/02/26	22:44:00	2020/02/26	23:58:00	76	3.3	250
2020/02/27	00:00:00	2020/02/27	07:22:00	442	3.2	1,405
2020/02/27	10:50:00	2020/02/27	16:44:00	354	3.2	1,129
2020/02/27	21:22:00	2020/02/27	23:58:00	158	3.3	528
2020/02/28	00:00:00	2020/02/28	04:26:00	266	3.3	869
2020/02/28	07:56:00	2020/02/28	14:44:00	408	3.1	1,275
2020/02/28	20:02:00	2020/02/28	23:58:00	238	3.2	766
2020/02/29	00:00:00	2020/02/29	03:14:00	194	3.1	606
2020/02/29	06:38:00	2020/02/29	14:18:00	460	3.1	1,429
2020/02/29	18:42:00	2020/02/29	23:58:00	318	3.1	986
<b>Totals</b>				<b>36,586</b>	<b>2.5</b>	<b>90,691</b>
				<b>Maximum GPM</b>	<b>3.3</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.

# KIRBY CANYON RECYCLING & DISPOSAL FACILITY

CONDENSATE INJECTION (A-12 Flare)

March-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/03/01	00:00:00	2020/03/01	04:10:00	250	3.0	747
2020/03/01	07:20:00	2020/03/01	15:30:00	490	3.0	1,487
2020/03/01	19:12:00	2020/03/01	23:58:00	288	3.1	898
2020/03/02	00:00:00	2020/03/02	04:52:00	292	3.0	891
2020/03/02	08:02:00	2020/03/02	18:44:00	642	2.7	1,758
2020/03/02	22:36:00	2020/03/02	23:58:00	84	2.1	174
2020/03/03	00:00:00	2020/03/03	11:12:00	672	2.0	1,342
2020/03/03	12:16:00	2020/03/03	23:58:00	704	2.2	1,567
2020/03/04	00:00:00	2020/03/04	11:52:00	712	2.0	1,421
2020/03/04	15:02:00	2020/03/04	23:58:00	538	2.3	1,248
2020/03/05	00:00:00	2020/02/05	23:58:00	1,440	2.2	3,233
2020/03/06	00:00:00	2020/03/06	23:58:00	1,440	2.3	3,287
2020/03/07	00:00:00	2020/03/07	23:58:00	1,440	2.2	3,201
2020/03/08	00:00:00	2020/03/08	01:58:00	120	2.2	266
2020/03/08	03:00:00	2020/03/08	23:58:00	1,260	2.2	2,802
2020/03/09	00:00:00	2020/03/09	23:58:00	1,440	2.3	3,273
2020/03/10	00:00:00	2020/03/10	23:58:00	1,440	2.3	3,318
2020/03/11	00:00:00	2020/03/11	23:58:00	1,440	2.3	3,349
2020/03/12	00:00:00	2020/03/12	23:58:00	1,440	2.3	3,364
2020/03/13	00:00:00	2020/03/13	18:26:00	1,106	2.3	2,516
2020/03/13	22:12:00	2020/03/13	23:58:00	108	2.4	254
2020/03/14	00:00:00	2020/03/14	23:58:00	1,440	2.3	3,271
2020/03/15	00:00:00	2020/03/15	23:58:00	1,440	2.2	3,178
2020/03/16	00:00:00	2020/03/16	23:58:00	1,440	2.2	3,147
2020/03/17	00:00:00	2020/03/17	16:02:00	962	2.2	2,099
2020/03/17	18:48:00	2020/03/17	23:58:00	312	2.3	712
2020/03/18	00:00:00	2020/03/18	08:44:00	524	2.2	1,172
2020/03/18	09:20:00	2020/03/18	23:58:00	880	2.2	1,959
2020/03/19	00:00:00	2020/03/19	23:58:00	1,440	2.2	3,215
2020/03/20	00:00:00	2020/03/20	19:54:00	1,194	2.2	2,667
2020/03/21	00:04:00	2020/03/21	23:58:00	1,436	2.3	3,301
2020/03/22	00:00:00	2020/03/22	23:58:00	1,440	2.3	3,287
2020/03/23	00:00:00	2020/03/23	23:58:00	1,440	2.3	3,245
2020/03/24	00:00:00	2020/03/24	23:58:00	1,440	2.2	3,195
2020/03/25	00:00:00	2020/03/25	23:58:00	1,440	2.2	3,172
2020/03/26	00:00:00	2020/03/26	23:58:00	1,440	2.2	3,143
2020/03/27	00:00:00	2020/03/27	23:58:00	1,440	2.2	3,181
2020/03/28	00:00:00	2020/03/28	23:58:00	1,440	2.2	3,163
2020/03/29	00:00:00	2020/03/29	23:58:00	1,440	2.2	3,203
2020/03/30	00:00:00	2020/03/30	15:04:00	904	2.2	2,016
2020/03/30	20:28:00	2020/03/30	23:58:00	212	2.4	508
2020/03/31	00:00:00	2020/03/31	23:58:00	1,440	2.3	3,286
<b>Totals</b>				<b>42,490</b>	<b>2.3</b>	<b>96,514</b>
				<b>Maximum GPM</b>	<b>3.1</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

CONDENSATE INJECTION (A-12 Flare)

April-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/04/01	00:00:00	2020/04/01	16:42:00	1,002	2.2	2,191
2020/04/01	21:42:00	2020/04/01	23:58:00	138	2.4	326
2020/04/02	00:00:00	2020/04/02	23:58:00	1,440	2.3	3,287
2020/04/03	00:00:00	2020/04/03	09:04:00	544	2.2	1,200
2020/04/03	11:36:00	2020/04/03	20:38:00	542	2.3	1,254
2020/04/04	01:38:00	2020/04/04	17:14:00	936	2.3	2,125
2020/04/04	21:48:00	2020/04/04	23:58:00	132	2.4	310
2020/04/05	00:00:00	2020/04/05	23:58:00	1,440	2.3	3,269
2020/04/06	00:00:00	2020/04/06	23:58:00	1,440	2.2	3,227
2020/04/07	00:00:00	2020/04/07	23:58:00	1,440	2.2	3,204
2020/04/08	00:00:00	2020/04/08	23:58:00	1,440	2.2	3,177
2020/04/09	00:00:00	2020/04/09	23:58:00	1,440	2.2	3,169
2020/04/10	00:00:00	2020/04/10	23:58:00	1,440	2.2	3,184
2020/04/11	00:00:00	2020/04/11	23:58:00	1,440	2.2	3,176
2020/04/12	00:00:00	2020/04/12	23:58:00	1,440	2.2	3,193
2020/04/13	00:00:00	2020/04/13	23:58:00	1,440	2.2	3,224
2020/04/14	00:00:00	2020/04/14	23:58:00	1,440	2.3	3,272
2020/04/15	00:00:00	2020/04/15	23:58:00	1,440	2.3	3,279
2020/04/16	00:00:00	2020/04/16	23:58:00	1,440	2.3	3,279
2020/04/17	00:00:00	2020/04/17	23:58:00	1,440	2.2	3,225
2020/04/18	00:00:00	2020/04/18	15:04:00	904	2.2	2,004
2020/04/18	20:12:00	2020/04/18	23:58:00	228	2.4	539
2020/04/19	00:00:00	2020/04/19	19:20:00	1,160	2.3	2,621
2020/04/19	23:50:00	2020/04/19	23:58:00	10	2.4	24
2020/04/20	00:00:00	2020/04/20	21:02:00	1,262	2.3	2,932
2020/04/21	00:52:00	2020/04/21	21:46:00	1,254	2.3	2,866
2020/04/22	01:48:00	2020/04/22	23:58:00	1,332	2.3	3,073
2020/04/23	00:00:00	2020/04/23	04:12:00	252	2.3	576
2020/04/23	08:00:00	2020/04/23	23:58:00	960	2.3	2,239
2020/04/24	00:00:00	2020/04/24	13:20:00	800	2.3	1,810
2020/04/24	18:34:00	2020/04/24	23:58:00	326	2.4	781
2020/04/25	00:00:00	2020/04/25	15:52:00	952	2.3	2,183
2020/04/25	21:22:00	2020/04/25	23:58:00	158	2.4	377
2020/04/26	00:00:00	2020/04/26	18:14:00	1,094	2.3	2,539
2020/04/26	23:20:00	2020/04/26	23:58:00	40	2.4	95
2020/04/27	00:00:00	2020/04/27	20:26:00	1,226	2.3	2,805
2020/04/28	00:52:00	2020/04/28	19:54:00	1,142	2.3	2,634
2020/04/29	00:32:00	2020/04/29	21:50:00	1,278	2.3	3,000
2020/04/30	01:42:00	2020/04/30	23:58:00	1,338	2.3	3,130
<b>Totals</b>				<b>39,170</b>	<b>2.3</b>	<b>88,798</b>
				<b>Maximum GPM</b>	<b>2.4</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.

**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

**CONDENSATE INJECTION (A-12 Flare)**

May-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/05/01	00:00:00	2020/05/01	01:08:00	68	2.3	156
2020/05/01	04:54:00	2020/05/01	23:58:00	1,146	2.3	2,672
2020/05/02	00:00:00	2020/05/02	07:56:00	476	2.3	1,088
2020/05/02	11:52:00	2020/05/02	23:58:00	728	2.4	1,752
2020/05/03	00:00:00	2020/05/03	10:24:00	624	2.3	1,435
2020/05/03	14:20:00	2020/05/03	23:58:00	580	2.4	1,402
2020/05/04	00:00:00	2020/05/04	15:36:00	936	2.3	2,145
2020/05/04	21:28:00	2020/05/04	23:58:00	152	2.5	381
2020/05/05	00:00:00	2020/05/05	20:50:00	1,250	2.4	2,997
2020/05/06	01:08:00	2020/05/06	23:58:00	1,372	2.4	3,279
2020/05/07	00:00:00	2020/05/07	09:42:00	582	2.3	1,359
2020/05/07	12:12:00	2020/05/07	23:58:00	708	2.5	1,804
2020/05/08	00:00:00	2020/05/08	17:58:00	1,078	2.5	2,655
2020/05/08	19:24:00	2020/05/08	23:58:00	276	2.6	713
2020/05/09	00:00:00	2020/05/09	05:50:00	350	2.5	866
2020/05/09	08:38:00	2020/05/09	17:36:00	538	2.4	1,282
2020/05/09	23:40:00	2020/05/09	23:58:00	20	2.2	44
2020/05/10	00:00:00	2020/05/10	16:54:00	1,014	2.2	2,191
2020/05/10	23:02:00	2020/05/10	23:58:00	58	2.0	118
2020/05/11	00:00:00	2020/05/11	17:44:00	1,064	2.0	2,142
2020/05/11	22:58:00	2020/05/11	23:58:00	62	2.1	127
2020/05/12	00:00:00	2020/05/12	18:08:00	1,088	2.0	2,203
2020/05/12	22:28:00	2020/05/12	23:58:00	92	2.1	189
2020/05/13	00:00:00	2020/05/13	20:20:00	1,220	2.0	2,471
2020/05/14	00:22:00	2020/05/14	19:22:00	1,140	2.0	2,336
2020/05/15	00:08:00	2020/05/15	23:58:00	1,432	2.1	2,966
2020/05/16	00:00:00	2020/05/16	23:58:00	1,440	2.1	3,086
2020/05/17	00:00:00	2020/05/17	11:22:00	682	2.1	1,464
2020/05/17	16:12:00	2020/05/17	23:58:00	468	2.2	1,029
2020/05/18	00:00:00	2020/05/18	16:20:00	980	2.2	2,110
2020/05/18	21:52:00	2020/05/18	23:58:00	128	2.2	287
2020/05/19	00:00:00	2020/05/19	23:58:00	1,440	2.2	3,174
2020/05/20	00:00:00	2020/05/20	23:58:00	1,440	2.2	3,185
2020/05/21	00:00:00	2020/05/21	23:58:00	1,440	2.2	3,166
2020/05/22	00:00:00	2020/05/22	09:16:00	556	2.1	1,191
2020/05/22	13:32:00	2020/05/22	23:58:00	628	2.3	1,430
2020/05/23	00:00:00	2020/05/23	21:04:00	1,264	2.2	2,744
2020/05/24	01:40:00	2020/05/24	18:22:00	1,002	2.2	2,181
2020/05/25	00:54:00	2020/05/25	16:22:00	928	2.2	2,070
2020/05/26	00:58:00	2020/05/26	20:50:00	1,192	2.3	2,730
2020/05/27	02:52:00	2020/05/27	15:36:00	764	2.3	1,722
2020/05/28	00:42:00	2020/05/28	15:36:00	894	1.8	1,569
2020/05/29	00:12:00	2020/05/29	16:40:00	988	1.7	1,703
2020/05/29	23:18:00	2020/05/29	23:58:00	42	1.8	77
2020/05/30	00:00:00	2020/05/30	16:18:00	978	1.8	1,788
2020/05/30	21:48:00	2020/05/30	23:58:00	132	2.0	270
2020/05/31	00:00:00	2020/05/31	14:28:00	868	2.1	1,806
2020/05/31	20:26:00	2020/05/31	23:58:00	214	2.2	473
<b>Totals</b>				<b>36,522</b>	<b>2.2</b>	<b>80,028</b>
				<b>Maximum GPM</b>	<b>2.6</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.



**KIRBY CANYON RECYCLING & DISPOSAL FACILITY**

CONDENSATE INJECTION (A-12 Flare)

June-20

Start Date	Start Time	End Date	End Time	Total Injection Time (min.)	Average GPM	Total Gallons
2020/06/01	00:00:00	2020/06/01	07:50:00	470	2.3	1,091
2020/06/01	11:10:00	2020/06/01	23:58:00	770	1.8	1,383
2020/06/02	00:00:00	2020/06/02	23:58:00	1,440	1.6	2,314
2020/06/03	00:00:00	2020/06/03	20:46:00	1,246	1.5	1,864
2020/06/04	02:48:00	2020/06/04	21:30:00	1,122	1.5	1,738
2020/06/05	02:12:00	2020/06/05	23:58:00	1,308	1.3	1,683
2020/06/06	00:00:00	2020/06/06	23:58:00	1,440	1.1	1,558
2020/06/07	00:00:00	2020/06/07	23:58:00	1,440	1.0	1,418
2020/06/08	00:00:00	2020/06/08	23:58:00	1,440	0.9	1,306
2020/06/09	00:00:00	2020/06/09	18:02:00	1,082	0.9	973
2020/06/09	20:38:00	2020/06/09	23:58:00	202	1.3	269
2020/06/10	00:00:00	2020/06/10	09:04:00	544	1.2	674
2020/06/10	10:42:00	2020/06/10	23:58:00	798	2.2	1,790
2020/06/11	00:00:00	2020/06/11	09:12:00	552	2.2	1,235
2020/06/11	09:22:00	2020/06/11	09:26:00	4	0.5	2
2020/06/11	10:50:00	2020/06/11	18:00:00	430	2.5	1,068
2020/06/12	00:12:00	2020/06/12	07:30:00	438	2.5	1,084
2020/06/12	11:34:00	2020/06/12	17:06:00	332	2.5	819
2020/06/12	23:12:00	2020/06/12	23:58:00	48	1.7	83
2020/06/13	00:00:00	2020/06/13	06:50:00	410	2.7	1,124
2020/06/13	10:58:00	2020/06/13	16:10:00	312	2.7	845
2020/06/13	22:18:00	2020/06/13	23:58:00	102	2.6	268
2020/06/14	00:00:00	2020/06/14	04:18:00	258	2.9	738
2020/06/15	11:34:00	2020/06/15	23:58:00	746	2.8	2,077
2020/06/16	00:00:00	2020/06/16	23:58:00	1,440	1.4	2,012
2020/06/17	00:00:00	2020/06/17	23:58:00	1,440	1.4	2,034
2020/06/18	00:00:00	2020/06/18	23:58:00	1,440	1.2	1,772
2020/06/19	00:00:00	2020/06/19	23:58:00	1,440	0.8	1,174
2020/06/20	00:00:00	2020/06/20	23:58:00	1,440	0.6	849
2020/06/21	00:00:00	2020/06/21	23:58:00	1,440	0.6	864
2020/06/22	00:00:00	2020/06/22	23:58:00	1,440	0.7	953
2020/06/23	00:00:00	2020/06/23	23:58:00	1,440	0.7	1,037
2020/06/24	00:00:00	2020/06/24	23:58:00	1,440	0.7	1,077
2020/06/25	00:00:00	2020/06/25	23:58:00	1,440	0.8	1,134
2020/06/26	00:00:00	2020/06/26	23:58:00	1,440	0.8	1,192
2020/06/27	00:00:00	2020/06/27	23:58:00	1,440	0.8	1,179
2020/06/28	00:00:00	2020/06/28	23:58:00	1,440	0.8	1,172
2020/06/29	00:00:00	2020/06/29	23:58:00	1,440	0.8	1,168
2020/06/30	12:06:00	2020/06/30	12:16:00	10	1.0	10
2020/06/30	12:44:00	2020/06/30	23:58:00	676	2.4	1,619
<b>Totals</b>				<b>37,780</b>	<b>1.2</b>	<b>46,650</b>
				<b>Maximum GPM</b>	<b>2.9</b>	

gpm= gallons per minute

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the landfill gas condensate injection rate shall not exceed 5 gpm.

Pursuant to Title V Permit A1812, Condition Number 25301 Part 14, the total landfill gas condensate injection throughput shall not exceed 2,000,000 gallons during any consecutive 12-month period.

## **APPENDIX N**

### **GAS MIGRATION MONITORING REPORTS**



WASTE MANAGEMENT  
910 Coyote Creek Golf Drive  
San Jose, CA 95037

July 15, 2020

Ms. Becky Azevedo  
Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive  
San Jose, CA 95037

**Re: Second Quarter 2020 Perimeter gas and Methane in Structure Monitoring Report  
Kirby Canyon Recycling & Disposal Facility**

Dear Ms. Azevedo:

This report for the “Kirby Canyon Recycling and Disposal Facility (KCRDF) Landfill” contains the results of the Second Quarter 2020 Perimeter Gas and Methane in Structure Monitoring conducted at the KCRDF. All monitoring was conducted by KCRDF personnel.

## **REGULATORY REQUIREMENTS**

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

## **MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]**

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A). Results for both probes and structures are summarized in Table 1. Field data are presented in Attachment B.

No exceedances of Subtitle D (40 CFR 258.23) and California Code of Regulations (CCR) Title 27, Division 2, Section 20919.5 were detected during any of the monitoring events.

Results for probes and are summarized in Table 1. All other Field data sheets are presented in Attachment B.

Ms. Becky Azevedo  
 Date: March 31, 2020

### Kirby Canyon Recycling and Disposal Facility Perimeter Gas Monitoring Probe Results

Analyst: Markus Bernard Date: 6/12/2020  
 Instrument: Gem 5000 Serial #: G502469  
 Atmospheric Temperature (Deg F): 81  
 Barometric Pressure: 29 Inch of HG  
 Wind Speed: 3 mph Wind Direction: N  
 Weather Condition: Clear

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP01A	5/14/2020 15:07	0	0	Yes	Yes	
KIRBP01B	5/14/2020 15:12	0	0.04	Yes	Yes	
KIRBP02A	5/14/2020 15:23	0	0.04	Yes	Yes	
KIRBP02B	5/14/2020 15:26	0	0.03	Yes	Yes	
KIRBP03A	5/20/2020 16:04	0	0.01	Yes	Yes	
KIRBP03B	5/20/2020 16:08	0	0.03	Yes	Yes	
KIRBP04A	5/20/2020 15:55	0	0.02	Yes	Yes	
KIRBP04B	5/20/2020 16:00	0	0.04	Yes	Yes	
KIRBP05A	5/20/2020 15:49	0	0.04	Yes	Yes	
KIRBP05B	5/20/2020 15:51	0	0.01	Yes	Yes	
KIRBP06A	5/20/2020 15:38	0	0.04	Yes	Yes	
KIRBP06B	5/20/2020 15:41	0	0.04	Yes	Yes	
KIRBP07A	5/20/2020 15:30	0	0.06	Yes	Yes	
KIRBP07B	5/20/2020 15:33	0	0.01	Yes	Yes	
KIRBP08A	5/20/2020 15:16	0	0.05	Yes	Yes	
KIRBP08B	5/20/2020 15:19	0	0.04	Yes	Yes	

Ms. Becky Azevedo  
 Date: March 31, 2020

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP09A	5/20/2020 14:56	0	0.03	Yes	Yes	
KIRBP09B	5/20/2020 15:00	0	0.01	Yes	Yes	
KIRBP10A	6/12/2020 9:47	0	0.01	Yes	Yes	
KIRBP10B	6/12/2020 9:50	0	0.03	Yes	Yes	
KIRBP11A	6/12/2020 9:39	0	0	Yes	Yes	
KIRBP11B	6/12/2020 9:42	0	0.01	Yes	Yes	
KIRBP12A	5/14/2020 14:56	0	0	Yes	Yes	
KIRBP12A	5/14/2020 14:58	0	0	Yes	Yes	
KIRBP14A	5/14/2020 13:42	0	0.01	Yes	Yes	
KIRBP14B	5/14/2020 13:45	0	0	Yes	Yes	
KIRBP015	5/14/2020 13:31	0	0.02	Yes	Yes	

ND = No detection

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

- (1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.
- (2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH<sub>4</sub> = 12,500 ppm CH<sub>4</sub>

**Immediately notify compliance personnel of any readings in excess of 5 percent methane.**

### STRUCTURE FID MONITORING DATA

**Analyst:** MB

**Date:** 6/8/2020

**Instrument:** FID

**Serial #:** 0928538411

Monitored Location	Time	PPM	Comments
Scale House	10:20 AM	0	
Admin Building	10:30 AM	0	
Operations Break Trailer	10:45 AM	0	

ND = No detection

**Immediately notify compliance personnel of any readings in excess of 1.25 percent methane**

Ms. Becky Azevedo  
Date: March 31, 2020

## **MONITORING EQUIPMENT AND METHODOLOGY [TITLE 27 §20934(a)(4)]**

### **Perimeter Gas Monitoring**

The facility conducted the required monitoring using a CES-Landtec GEM-2000 gas analyzer (GEM). The monitoring was conducted by Marcus Bernard on May 12 and 20, 2020 and June 12, 2020. The static pressure of each probe was monitored using the GEM's internal pressure transducers and the probes were monitored to determine methane concentration.

### **Facility Structures**

Marcus Bernard used a TVA 1000 to monitor buildings and structures to check for the presence of methane on June 8, 2020. The instrument was calibrated on June 8, 2020 using 500 ppm methane standard.

### **Combustible Methane Gas Monitor Calibration**

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. The most recent calibration was conducted by Marcus Bernard on June 23, 2020.

## **GENERAL WEATHER CONDITIONS [TITLE 27 §20934(a)(3)]**

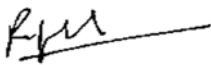
General weather conditions during the time of monitoring are presented in Table 3.

**Table 3 General Weather Conditions**

<b>Description</b>	<b>May 14, 2020</b>	<b>May 20, 2020</b>	<b>June 12, 2020</b>
<b>General conditions</b>	Mostly Cloudy	Fair	Partly Cloudy
<b>Avg Wind Speed (mph)</b>	16	10	10
<b>Wind Direction</b>	N/NNW	N/WNW	NW/NNW
<b>Barometric Pressure, (Inches of Hg)</b>	30.07	30.09	30.06
<b>Average Ambient (Temperature Deg F)</b>	63	61	64

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 875-9338.

Thank you,  
**Waste Management,**

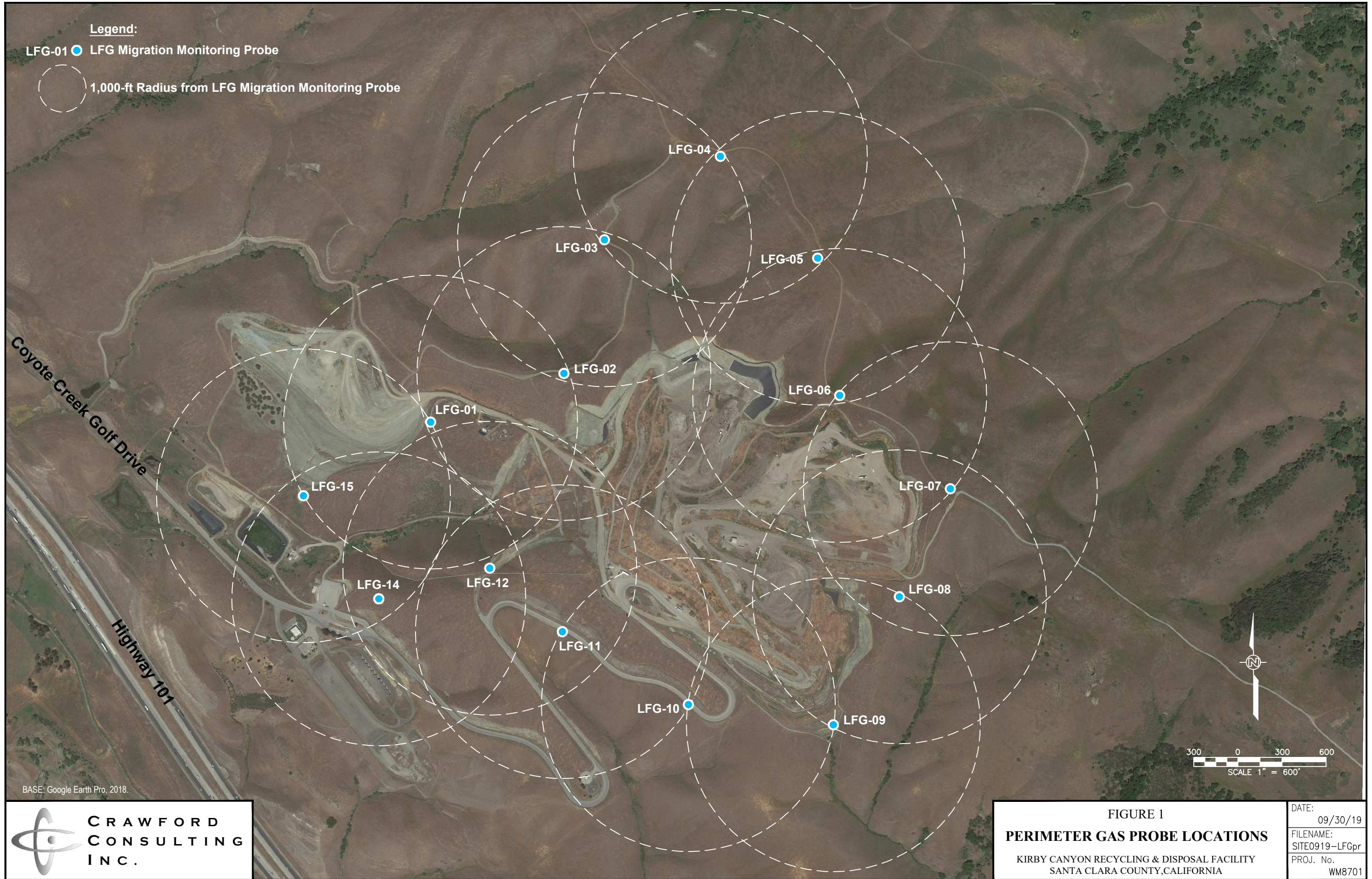


Rajan Phadnis  
EP Air Specialist- Northern California-Nevada

Attachments: Perimeter Gas Probe Location Map  
KCRDF Field Data

**ATTACHMENT A**

**SITE MAP**



**FIGURE 1  
PERIMETER GAS PROBE LOCATIONS**

KIRBY CANYON RECYCLING & DISPOSAL FACILITY  
SANTA CLARA COUNTY, CALIFORNIA

DATE:	09/30/19
FILENAME:	SITE0919-LFGpr
PROJ. No.	WM8701



**ATTACHMENT B**

**FIELD DATA**

**Kirby Canyon Recycling and Disposal Facility  
Perimeter Gas Monitoring Probe Results**

Analyst: Markus Bernard Date: 6/12/2020  
 Instrument: Gem 5000 Serial #: G502469  
 Atmospheric Temperature (Deg F): 81  
 Barometric Pressure: 29 Inch of HG  
 Wind Speed: 3 mph Wind Direction: N  
 Weather Condition: Clear

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP01A	3:07 PM 5/14/20	0	0.00	Yes	Yes	
KIRBP01B	3:12 PM 5/14/20	0	0.04	Yes	Yes	
KIRBP02A	3:23 PM 5/14/20	0	0.04	Yes	Yes	
KIRBP02B	3:26 PM 5/14/20	0	0.03	Yes	Yes	
KIRBP03A	4:04PM 5/20/20	0	0.01	Yes	Yes	
KIRBP03B	4:08 PM 5/20/20	0	0.03	Yes	Yes	
KIRBP04A	3:55 PM 5/20/20	0	0.02	Yes	Yes	
KIRBP04B	4:00PM 5/20/20	0	0.04	Yes	Yes	
KIRBP05A	3:49 PM 5/20/20	0	0.04	Yes	Yes	
KIRBP05B	3:49 PM 5/20/20	0	0.01	Yes	Yes	
KIRBP06A	3:38 PM 5/20/20	0	0.04	Yes	Yes	
KIRBP06B	3:41 PM 5/20/20	0	0.04	Yes	Yes	
KIRBP07A	3:30 PM 5/20/20	0	0.06	Yes	Yes	
KIRBP07B	3:33 PM 5/20/20	0	0.01	Yes	Yes	
KIRBP08A	3:16 PM 5/20/20	0	0.05	Yes	Yes	
KIRBP08B	3:19 PM 5/20/20	0	0.04	Yes	Yes	
KIRBP09A	2:56 PM 5/20/20	0	0.03	Yes	Yes	
KIRBP09B	3:00PM 5/20/20	0	0.01	Yes	Yes	
KIRBP10A	9:47 AM 6/12/20	0	0.01	Yes	Yes	

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP10B	9:50 AM 6/12/20	0	0.03	Ok	Ok	
KIRBP011A	9:39 AM 6/12/20	0	0.00	Ok	Ok	
KIRBP011B	9:42 AM 6/12/20	0	0.01	Ok	Ok	
KIRBP12A	2:56 PM 5/14/20	0	.03	Ok	Ok	
KIRBP12B	2:58 PM 5/14/20	0	.02	Ok	Ok	
KIRBP14A	1:42 PM 5/14/20	0	.00	Ok	Ok	
KIRBP14B	1:45 PM 5/14/20	0	.00	Ok	Ok	
KIRBP15	1:31 PM 5/14/20	0	.00	Ok	Ok	

ND = No detection

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH<sub>4</sub> = 12,500 ppm CH<sub>4</sub>

**Immediately notify compliance personnel of any readings in excess of 5 percent methane.**

### STRUCTURE FID MONITORING DATA

Analyst: Markus Bernard

Date: 6/8/2020

Instrument: FID

Serial #: 0928538411

Monitored Location	Time	PPM	Comments
Scale House	10:20 AM	0	
Admin Building	10:30 AM	0	
Operations Break Trailer	10:45 AM	0	

ND = No detection

**Immediately notify compliance personnel of any readings in excess of 1.25 percent methane.**



## GAS DETECTOR CALIBRATION RECORD

LOCATION: KIRBY CANYON RECYCLING AND DISPOSAL FACILITY

MANUFACTURER & MODEL NUMBER: Sierra Monitor Corporation Model # 2001

CALIBRATED BY / INSTRUMENT USED: / Cal System Model# 26

CALIBRATION GAS EXPIRATION DATE: September 27, 2021

Location	DATE CALIBRATED	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED / COMMENTS ON MONITOR CONDITION
Main Office	6-23-20	1500700087GAM	YES	Good Condition
Scale House	6-23-20	1500700088GAM	YES	Good Condition
Break Trailer	6-23-20	1500700089GAM	YES	Good Condition

\*\* This form must be retained for 12 months after completion.

# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Date: 6-8-20

Time: 8:15 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.

Stable Reading = 499 ppm

3. Adjust meter to read 500 ppm.

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 2 ppm (a)
2. Downwind Reading (highest in 30 seconds): 1 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{1.5} \text{ ppm}$$

Performed by: Markus Bernard

# CALIBRATION PRECISION TEST RECORD

Date: 3/23/2020

Expiration Date (3 months): 6/23/2020

Time: 10:00 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 2 ppm (c)

Meter Reading for Calibration Gas: 500 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 2 ppm (e)

Meter Reading for Calibration Gas: 500 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

0.004 % (must be < than 10%)

Performed by: M. Bernard

# RESPONSE TIME TEST RECORD

Date: 3/23/20

Expiration Date (3 months): 06/23/20

Time: 10:00 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 500 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 500 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 496 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 5 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{5} \text{ seconds (must be less than 30 seconds)}$$

Performed by: M. Bernard



WASTE MANAGEMENT  
910 Coyote Creek Golf Drive  
San Jose, CA 95037

March 31, 2020

Ms. Becky Azevedo  
Kirby Canyon Recycling & Disposal Facility  
910 Coyote Creek Golf Drive  
San Jose, CA 95037

**Re: First Quarter 2020 Perimeter gas and Methane in Structure Monitoring Report  
Kirby Canyon Recycling & Disposal Facility**

Dear Ms. Azevedo:

This report for the “Kirby Canyon Recycling and Disposal Facility (KCRDF) Landfill” contains the results of the First Quarter 2020 Perimeter Gas and Methane in Structure Monitoring conducted at the KCRDF. All monitoring was conducted by KCRDF personnel.

**REGULATORY REQUIREMENTS**

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

**MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]**

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A). Results for both probes and structures are summarized in Table 1. Field data are presented in Attachment B.

No exceedances of Subtitle D (40 CFR 258.23) and California Code of Regulations (CCR) Title 27, Division 2, Section 20919.5 were detected during any of the monitoring events.

Results for probes and are summarized in Table 1. All other Field data sheets are presented in Attachment B.



Ms. Becky Azevedo  
 Date: March 31, 2020

### Kirby Canyon Recycling and Disposal Facility Perimeter Gas Monitoring Probe Results

Analyst: Markus Bernard Date: 1/30/2020  
 Instrument: Gem 2000 Serial #: GM11977  
 Atmospheric Temperature (Deg F): 56  
 Barometric Pressure: 29 Inch of HG  
 Wind Speed: 2 mph Wind Direction: N  
 Weather Condition: Clear

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP01A	1/29/20 5:19 PM	0	.09	Ok	Ok	
KIRBP01B	1/29/20 5:20 PM	0	.00	Ok	Ok	
KIRBP02A	1/29/20 5:27	0	.00	Ok	Ok	
KIRBP02B	1/29/20 5:29	0	.02	Ok	Ok	
KIRBP03A	4:03 PM	0	.07	Ok	Ok	
KIRBP03B	4:05 PM	0	.21	Ok	Ok	
KIRBP04A	3:49 PM	0	.06	Ok	Ok	
KIRBP04B	3:51 PM	0	.05	Ok	Ok	
KIRBP05A	3:38 PM	0	.04	Ok	Ok	
KIRBP05B	3:41 PM	0	.04	Ok	Ok	
KIRBP06A	3:31 PM	0	.02	Ok	Ok	
KIRBP06B	3:33 PM	0	.03	Ok	Ok	
KIRBP07A	3:23 PM	0	.03	Ok	Ok	
KIRBP07B	3:25 PM	0	.04	Ok	Ok	
KIRBP08A	2:36 PM	0	.06	Ok	Ok	
KIRBP08B	2:38 PM	0	.06	Ok	Ok	
KIRBP09A	2:21 PM	0	.03	Ok	Ok	

Ms. Becky Azevedo  
 Date: March 31, 2020

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP09B	2:23 PM	0	.02	Ok	Ok	
KIRBP10A	2:10 PM	0	.05	Ok	Ok	
KIRBP10B	2:13 PM	0	.07	Ok	Ok	
KIRBP011A	2:03 PM	0	.01	Ok	Ok	
KIRBP011B	2:05 PM	0	.02	Ok	Ok	
KIRBP12A	1/29/20 5:08 PM	0	.09	Ok	Ok	
KIRBP12B	1/29/20 5:11 PM	0	.08	Ok	Ok	
KIRBP14A	5:10 PM	0	.12	Ok	Ok	
KIRBP14B	5:12 PM	0	.13	Ok	Ok	
KIRBP15	5:19 PM	0	.10	Ok	Ok	

ND = No detection

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

- (1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.
- (2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH<sub>4</sub> = 12,500 ppm CH<sub>4</sub>

**Immediately notify compliance personnel of any readings in excess of 5 percent methane.**

### STRUCTURE FID MONITORING DATA

Analyst: MB

Date: 03/27/2020

Instrument: FID

Serial #: 0928538411

Monitored Location	Time	PPM	Comments
Scale House	10:30 AM	0	
Admin Building	10:15 AM	0	
Operations Break Trailer	10:25 AM	0	

ND = No detection

**Immediately notify compliance personnel of any readings in excess of 1.25 percent methane**

Ms. Becky Azevedo  
Date: March 31, 2020

## **MONITORING EQUIPMENT AND METHODOLOGY [TITLE 27 §20934(a)(4)]**

### **Perimeter Gas Monitoring**

The facility conducted the required monitoring using a CES-Landtec GEM-2000 gas analyzer (GEM). The monitoring was conducted by Marcus Bernard on January 29 and 30, 2020. The static pressure of each probe was monitored using the GEM's internal pressure transducers and the probes were monitored to determine methane concentration.

### **Facility Structures**

Marcus Bernard used a TVA 1000 to monitor buildings and structures to check for the presence of methane on March 27, 2020. The instrument was calibrated on March 27, 2020 using 500 ppm methane standard.

### **Combustible Methane Gas Monitor Calibration**

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. The most recent calibration was conducted by Marcus Bernard on March 27, 2020.

## **GENERAL WEATHER CONDITIONS [TITLE 27 §20934(a)(3)]**

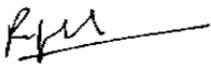
General weather conditions during the time of monitoring are presented in Table 3.

**Table 3 General Weather Conditions**

<b>Description</b>	<b>January 29, 2020</b>	<b>January 30, 2020</b>
<b>General conditions</b>	Partly Cloudy	Partly Cloudy
<b>Wind Speed (mph)</b>	14	14
<b>Wind Direction</b>	NNW	NW/NNW
<b>Barometric Pressure, (Inches of Hg)</b>	30.24	30.23
<b>Average Ambient (Temperature Deg F)</b>	54	53

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 875-9338.

Thank you,  
**Waste Management,**



Rajan Phadnis  
EP Air Specialist- Northern California-Nevada

Attachments: Perimeter Gas Probe Location Map  
KCRDF Field Data

**ATTACHMENT A**

**SITE MAP**



**FIGURE 1  
PERIMETER GAS PROBE LOCATIONS**

KIRBY CANYON RECYCLING & DISPOSAL FACILITY  
SANTA CLARA COUNTY, CALIFORNIA

DATE:	09/30/19
FILENAME:	SITE0919-LFGpr
PROJ. No.	WM8701

**ATTACHMENT B**

**FIELD DATA**

## Kirby Canyon Recycling and Disposal Facility Perimeter Gas Monitoring Probe Results

Analyst: Markus Bernard Date: 1/30/2020

Instrument: Gem 2000 Serial #: GM11977

Atmospheric Temperature (Deg F): 56

Barometric Pressure: 29 Inch of HG

Wind Speed: 2 mph Wind Direction: N

Weather Condition: Clear

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP01A	1/29/20 5:19 PM	0	.09	Ok	Ok	
KIRBP01B	1/29/20 5:20 PM	0	.00	Ok	Ok	
KIRBP02A	1/29/20 5:27	0	.00	Ok	Ok	
KIRBP02B	1/29/20 5:29	0	.02	Ok	Ok	
KIRBP03A	4:03 PM	0	.07	Ok	Ok	
KIRBP03B	4:05 PM	0	.21	Ok	Ok	
KIRBP04A	3:49 PM	0	.06	Ok	Ok	
KIRBP04B	3:51 PM	0	.05	Ok	Ok	
KIRBP05A	3:38 PM	0	.04	Ok	Ok	
KIRBP05B	3:41 PM	0	.04	Ok	Ok	
KIRBP06A	3:31 PM	0	.02	Ok	Ok	
KIRBP06B	3:33 PM	0	.03	Ok	Ok	
KIRBP07A	3:23 PM	0	.03	Ok	Ok	
KIRBP07B	3:25 PM	0	.04	Ok	Ok	
KIRBP08A	2:36 PM	0	.06	Ok	Ok	
KIRBP08B	2:38 PM	0	.06	Ok	Ok	
KIRBP09A	2:21 PM	0	.03	Ok	Ok	
KIRBP09B	2:23 PM	0	.02	Ok	Ok	
KIRBP10A	2:10 PM	0	.05	Ok	Ok	

Probe ID	Time	CH <sub>4</sub> (%)	Probe Pressure (in-H <sub>2</sub> O)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
KIRBP10B	2:13 PM	0	.07	Ok	Ok	
KIRBP011A	2:03 PM	0	.01	Ok	Ok	
KIRBP011B	2:05 PM	0	.02	Ok	Ok	
KIRBP12A	1/29/20 5:08 PM	0	.09	Ok	Ok	
KIRBP12B	1/29/20 5:11 PM	0	.08	Ok	Ok	
KIRBP14A	5:10 PM	0	.12	Ok	Ok	
KIRBP14B	5:12 PM	0	.13	Ok	Ok	
KIRBP15	5:19 PM	0	.10	Ok	Ok	

ND = No detection

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH<sub>4</sub> = 12,500 ppm CH<sub>4</sub>

**Immediately notify compliance personnel of any readings in excess of 5 percent methane.**

### STRUCTURE FID MONITORING DATA

Analyst: Markus Bernard

Date: 03/27/2020

Instrument: FID

Serial #: 0928538411

Monitored Location	Time	PPM	Comments
Scale House	10:30 AM	0	
Admin Building	10:15 AM	0	
Operations Break Trailer	10:25 AM	0	

ND = No detection

**Immediately notify compliance personnel of any readings in excess of 1.25 percent methane.**





## GAS DETECTOR CALIBRATION RECORD

**LOCATION:** KIRBY CANYON RECYCLING AND DISPOSAL FACILITY

**MANUFACTURER & MODEL NUMBER:** Sierra Monitor Corporation Model # 2001

**CALIBRATED BY / INSTRUMENT USED:** / Cal System Model# 26

**CALIBRATION GAS EXPIRATION DATE:** September 27, 2021

Location	DATE CALIBRATED	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED / COMMENTS ON MONITOR CONDITION
Main Office	3-27-20	1500700087GAM	YES	Good Condition
Scale House	3-27-20	1500700088GAM	YES	Good Condition
Break Trailer	3-27-20	1500700089GAM	YES	Good Condition

\*\* This form must be retained for 12 months after completion.

# CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Kirby Date: 3/27/20

Time: 10:15 AM \_\_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 S/N: 0928538411

## Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.  
Stable Reading = 499 ppm
3. Adjust meter to read 500 ppm.

## Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 1 ppm (a)
2. Downwind Reading (highest in 30 seconds): 2 ppm (b)

Calculate Background Value:

$$\frac{(a) + (b)}{2} \quad \text{Background} = \underline{1.5} \text{ ppm}$$

Performed by: Markus Bernard

# CALIBRATION PRECISION TEST RECORD

Date: 2/19/20

Expiration Date (3 months): 5/19/20

Time: 10:30 AM        PM

Instrument Make: Thermo Scientific Model: TVA 1000 B S/N: 0928538411

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 499 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (b)| + |(500) - (d)| + |(500) - (f)|\}}{3} \times \frac{1}{500} \times 100$$

1 % (must be < than 10%)

Performed By: Markus Bernard

# RESPONSE TIME TEST RECORD

Date: 2/19/2020

Expiration Date (3 months): 5/19/2020

Time: 10:30 AM \_\_\_\_ PM

Instrument Make: Thermo Scientific Model: TVA 1000 B S/N: 0928538411

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 499 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 496 ppm  
90% of the Stabilized Reading: 450 ppm  
Time to Reach 90% of Stabilized Reading after  
switching from Zero Air to Calibration Gas: 3 seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{3} \text{ seconds (must be less than 30 seconds)}$$

Performed By: Markus Bernard

## **APPENDIX O**

### **A-12 FLARE PERFORMANCE TEST SUMMARY OF RESULTS**

# **Kirby Canyon Recycling and Disposal Facility**

**BAAQMD Facility # A1812**

## **Annual Compliance Emissions Test Report #20077 Landfill Gas Flare- Source A-12**

**Located at:**

910 Coyote Creek Golf Drive  
San Jose, CA 95037

**Prepared For:**

SCS Engineers  
Dave Bearden  
3117 Fite Circle Suite 108  
Sacramento, CA 95827  
(916) 361-1297  
dbearden@scsengineers.com

**For Submittal To:**

Attn: Gloria Espena/Marco Hernandez  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
gespena@baaqmd.gov/mhernandez@baaqmd.gov  
sourcetest@baaqmd.gov

**Testing Performed On:**

March 4<sup>th</sup>, 2020

**Final Report Submitted On:**

April 27<sup>th</sup>, 2020

**Performed and Reported by:**

Blue Sky Environmental, Inc.  
624 San Gabriel Avenue  
Albany, CA 94706  
bluesky@blueskyenvironmental.com  
Office (510) 525 1261 / Mobile (510) 508-3469

REVIEW AND CERTIFICATION

Team Leader:

The work performed herein was conducted under my supervision, and I certify that: a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program; b) that the sampling and analytical procedures and data presented in the report are authentic and accurate; c) that all testing details and conclusions are accurate and valid, and; d) that the production rate and/or heat input rate during the source test are reported accurately.

If this report is submitted for Compliance purposes it should only be reproduced in its entirety. If there are any questions concerning this report, please contact me at (925) 338-4875.



---

Chuck Arrivas, QSTI  
Project Manager

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SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc was contracted to perform the annual emissions testing on the A-12 Landfill Gas Flare at Kirby Canyon Recycling and Disposal Facility (KCRDF), 910 Coyote Creek Golf Drive, San Jose, California. This report presents the results of the test program. Table 1 summarizes the source test information. Table 2 summarizes the results compared to the emission limits. The flare met all compliance emission criteria.

Table 1. Source Test Information

<b>Test Location:</b>	Kirby Canyon Recycling and Disposal Facility 910 Coyote Creek Golf Drive, San Jose, CA 95037
<b>Source Contact:</b>	Rebecca Azevedo (408) 779-2206
<b>Source Tested:</b>	Enclosed Landfill Gas Flare (A-12)
<b>Source Test Date:</b>	March 4 <sup>th</sup> , 2020
<b>Test Objective:</b>	Determine Compliance with Regulation 8, Rule 34 and Permit to Operate 1812, Condition 1437, Part 10, 11, 12, 13 and Part 20d
<b>Test Performed By:</b>	Blue Sky Environmental, Inc. 624 San Gabriel Ave., Albany, CA 94706 Chuck Arrivas (925) 338-4875 Email: <a href="mailto:carrivas@blueskyenvironmental.com">carrivas@blueskyenvironmental.com</a>
<b>Test Parameters:</b>	<b>Landfill Gas</b> O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , THC, CH <sub>4</sub> , NMOC, HHV, F-Factor, Sulfur & VOC Species, Volumetric Flow Rate <b>Flare Emissions</b> THC, CH <sub>4</sub> , NMOC, NO <sub>x</sub> , CO, O <sub>2</sub> , SO <sub>2</sub> , Volumetric Flow Rate.

Table 2. Compliance Summary

<b>A <u>Condensate On</u></b>	<b>Average Test Result</b>	<b>Permit Limit</b>	<b>Compliance Status</b>
NO <sub>x</sub> , lbs/MMBTU	0.045	0.06	In Compliance
CO, lbs/MMBTU	0.003	0.3	In Compliance
SO <sub>2</sub> , ppmvd	27.4	300	In Compliance
NMOC, (ppmvd @ 3% O <sub>2</sub> as CH <sub>4</sub> )	1.0	30	In Compliance
CH <sub>4</sub> Removal Efficiency (AB32)	>99.998%	99	In Compliance
<b>B <u>Condensate Off</u></b>			
NO <sub>x</sub> , lbs/MMBTU	0.037	0.06	In Compliance
CO, lbs/MMBTU	0.004	0.3	In Compliance
SO <sub>2</sub> , ppmvd	27.2	300	In Compliance
NMOC, (ppmvd @ 3% O <sub>2</sub> as CH <sub>4</sub> )	1.0	30	In Compliance
CH <sub>4</sub> Removal Efficiency (AB32)	>99.998%	99	In Compliance

## SECTION 2. SOURCE TEST PROGRAM

### 2.1. Overview

The annual source test was conducted to demonstrate that the A-12 landfill gas flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Permit to Operate #1812 and Regulation 8 Rule 34. Testing was also performed to demonstrate compliance with the California Landfill Methane Gas Rule under AB32 for Flare performance. This Flare was previously tested on March 13<sup>th</sup>, 2019.

### 2.2. Pollutants Tested

The following EPA and ASTM sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O <sub>2</sub> and CO <sub>2</sub> , Stack Gas Molecular Weight
EPA Method 4 part 16	Moisture
EPA 7E	NO <sub>x</sub> Emissions & NO <sub>2</sub> Converter Efficiency
EPA 10	CO Emissions
EPA Method 18	CH <sub>4</sub> Emissions
EPA Method 19	Calculation of Stack Gas Flow Rate
EPA 25A	THC Emissions
EPA 25C	LFG Gas analysis for NMOC by GC
EPA TO-15	AP-42 Table 2.4-1 VOC Species
ASTM D-1945/3588	LFG Gas analysis for BTU and F-Factor
ASTM D-5504	SO <sub>2</sub> , Sulfur Species, H <sub>2</sub> S and TRS

### 2.3. Test Date(s)

Testing was conducted on March 4<sup>th</sup>, 2020.

### 2.4. Sampling and Observing Personnel

Chuck Arrivas and Kurt Mussatti representing Blue Sky Environmental, Inc, performed testing.

Dave Bearden of SCS Engineers was present to operate and oversee the Flare operation and assist in coordinating testing and the collection of process data during testing.

The BAAQMD was notified of the test in a plan submitted by SCS Engineers on February 12<sup>th</sup>, 2020. A Source Test Protocol acknowledgement was requested and received by Blue Sky Environmental (NST # 5843) on February 13<sup>th</sup>, 2020 but no agency observers were present to witness the testing. Copies of the source test protocol and BAAQMD NST acknowledgement can be found in Appendix I.

### 2.5. Source/Process Description

The enclosed landfill gas flare consists of a 124 million British Thermal Units per hour (MMBtu/hr) multiple nozzle burner manufactured by LFG Specialties, Inc. The flare shell is approximately 50 feet high and approximately 12.5 feet in diameter. The inside diameter is 11 feet 6 inches (138").

The flare setpoint was established at 1,605°F. Methane quality is typically about 46 - 52%, however it was closer to 46% during this test. Landfill gas condensate is collected and periodically injected into the flare via one vertical nozzle positioned near the burner.

## **2.6. Source Operating Conditions**

The flare operating temperature and the landfill gas flow rate records are recorded on the Yokogawa and the data is contained in Appendix-F.

The flare was operated at an average temperature of 1,599°F. The average landfill gas flow rate was 2,243 standard cubic feet per minute (scfm) for Condensate On to 2,306 scfm for Condensate Off.

The condensate injection rates are recorded on the Yokogawa at approximately 1.54 gallons per minute.

The landfill gas methane content for Condensate On averaged 46.4% and Condensate Off averaged 46.8%. O<sub>2</sub> ranged from 1.6% to 1.9%.

## **SECTION 3. SAMPLING AND ANALYSIS PROCEDURES**

### **3.1. Port location**

The A-12 Flare sampling was conducted in the 11.5 feet (138”) inside diameter (ID) stack, via ports approximately 45 feet above grade, accessed by a 60 foot boom-lift. Two of the four, 4-inch flange ports are available approximately 4 stack diameters downstream from the burners and approximately 1 stack diameter upstream from the exit.

### **3.2. Point description/Labeling – ports/stack**

Blue Sky Environmental conducted two perpendicular 8-point traverses per EPA Method 1 and found O<sub>2</sub> stratification about 10%, therefore subsequent CEM sampling was conducted with 8-point traverses per port to achieve the required (EPA Method 1) representative sampling of the emissions. The traverse points for the 138 inch diameter exhaust stack with 8 inch ports were 12.4, 22.5, 34.8, 52.6, 101.4, 119.2, 131.5, and 141.6 inches.

### **3.3. Sample train description**

Sampling system diagrams are included in the Appendix H. Additional descriptive information is included in the following section.

### **3.4. Sampling procedure description**

Three, 30-minute minimum test runs were performed with the Condensate Injection On, and repeated with the Condensate Injection Off.

### **3.5. Instrumentation and Analytical Procedures**

**Sampling & Traverse Points Selection by EPA Method 1.** This method is used to determine the duct or stack area and appropriate traverse points that represent equal areas of the duct for sampling and velocity measurements.

**Stack Gas Molecular Weight by EPA Method 3/3A.** This method is used to determine the molecular weight of the stack gas. Measurements of gas constituents %O<sub>2</sub> and %CO<sub>2</sub> were obtained from the CEMS system.

**Stack Gas Moisture by EPA Method 4-16.4** is an acceptable alternative to EPA Method 4 for the determination of moisture using F-factors. In this case the mole fraction of the moisture in the ambient air is calculated using equations in EPA Method 4-16.4 from 1) the measured ambient relative humidity, ambient temperature and barometric pressure, 2) the mole fraction from free water in the fuel, calculated from the moisture % in the fuel which is determined by the analytical lab to be the balance after all the major gaseous components have been summed, and 3) the mole fraction from the hydrogen in the fuel. To determine the moisture in the fuel, the raw fuel analysis before normalization to 100% is referenced.

**EPA Method 19 (gas)** was used to determine stack gas volumetric flow rates using oxygen based F-factors. F-factors are ratios of combustion gas volumes generated from heat input. The heating value of the fuel in Btu per cubic foot is determined from analysis of the fuel gas samples using ASTM D1946/3588 gas chromatography analytical procedures. Total fuel consumption was measured by CARB Method 1, 2, 3 and 4. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates were used to determine emission rates.

**EPA Method 3A (O<sub>2</sub>, CO<sub>2</sub>), 10 (CO) and 7E (NO<sub>x</sub>)** are continuous monitoring techniques using instrumental analyzers. Sampling is performed by extracting exhaust flue gas from the stack, conditioning the sample and analyzing it by continuous monitoring gas analyzers in a CEM test van. The sampling system consists of a stainless steel sample probe, Teflon sample line, glass-fiber particulate filter, glass moisture-knockout condensers in ice, followed by thermoelectric coolers (optional), Teflon sample transfer tubing, diaphragm pump and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI was provided to each analyzer to avoid pressure variable response differences. The entire sampling system was leak checked prior to and at the end of the sampling program.

The sampling and analytical system (for EPA Methods) was checked for linearity with zero, mid (40-60%) and high span (80-100%) calibrations, and is checked for system bias at the beginning and end of each run. System bias is determined by introducing calibration gas to the probe and pulling it through the entire sampling system. Individual test run calibrations usually use the calibration gas that most closely matches the stack gas effluent. Along with the Sampling System Bias, the Zero and Calibration Drift values were determined for each test. Methods 3A, 7E and 10 all defer to EPA Method 7E for the calculations of effluent concentration, Span, Calibration Gas, Analyzer Calibration Error (Linearity), Sampling System Bias, Zero Drift, Calibration Drift and Response Time. In addition, the NO<sub>x</sub> analyzer NO<sub>2</sub> to NO conversion efficiency check defers to EPA Method 20 section 5.6 for the criteria and procedure.

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DPR3000 strip chart recorder supported by a Data Acquisition System (DAS).

**EPA Method 25C/18: Sampling for Total Hydrocarbons, Methane and Non-Methane Hydrocarbons.** EPA Method 25A/18 (FID/GC Method) employs a heated TECO 55C FID with GC column, heated Teflon sample gas transfer lines to provide a continuous sample to the heated FID/GC Hydrocarbon Analyzer. Heated lines were used if necessary to avoid moisture or hydrocarbon condensation. Methane is determined by the calibrated GC method in the TECO 55C NMHC/CH<sub>4</sub>/THC Analyzer. Calibration gases are selected to fall within 25-35%, 45-55% and 80-90% of Range for Methane, Total Hydrocarbon and Non-Methane Hydrocarbons.

Calibrations are performed through the probe and entire sample system. The system linearity check was performed prior to testing and during testing and calibration drift checks were performed after every run. All data was corrected according to EPA Method 25A. In some cases where the drift exceeded 3%, the system was re-calibrated and the average was calculated with and without the recalibration values. Both sets of values are reported in the calculation section of the appendices, but only the highest values of the two methods were used in the Tabulated results.

**ASTM D1945/3588** gas chromatography analytical procedures. Total fuel consumption for each source is monitored by a dedicated fuel gas meter. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates were used to determine emission rates.

**ASTM Method 5504: Sampling for H<sub>2</sub>S and Sulfur species in fuels.** Sampling consisted of pre-evacuated 6-Liter SILCO SUMMA canisters with pre-set flow controllers set to integrate over the desired test duration. The SILCO canisters have a silanized (glass) lining that permits longer holding times (up to 72 hours) for reactive sulfur compounds. The flow controller, valve and canister are designed so that no sample contacts stainless steel components that can remove hydrogen sulfide. The flow controllers consisted of capillary orifice tubing designed to sample for pre-set durations such as 1-hr, 2-hrs and 4-hrs. The samples were analyzed for 20 sulfur compounds by ASTM Method D-5504 GC/SCD (gas chromatography/sulfur chemiluminescent detector).

**TO-15** is the analytical strategy for Compendium Method TO-15 involves using a high resolution gas chromatograph (GC) coupled to a mass spectrometer. Mass spectra for individual peaks in the total ion chromatogram are examined with respect to the fragmentation pattern of ions corresponding to various VOCs including the intensity of primary and secondary ions. The fragmentation pattern is compared with stored spectra taken under similar conditions, in order to identify the compound. For any given compound, the intensity of the primary fragment is compared with the system response to the primary fragment for known amounts of the compound. This establishes the compound concentration that exists in the sample.

**System Performance Criteria**

Instrument Linearity	≤2% Full Scale
Instrument Bias	≤5% Full Scale
System Response Time	≤ 2 minutes
NO <sub>x</sub> Converter Efficiency (EPA 7E)	≥ 90%
Instrument Zero Drift	≤ 3% Full Scale
Instrument Span Drift	≤ 3% Full Scale

Concurrent with the exhaust sampling, Blue Sky collected a total of six samples in SILCO SUMMA canisters of the LFG for analysis. The samples were integrated into 10L Tedlar bags then immediately transferred into the SILCO canisters. This approach reduces the risk of plugging up a SUMMA canister orifice, and maintains the steady integration rate of the sample that can be occur when the SUMMA canister vacuum drops below approximately 5 " Hg. The samples were collected and analyzed for EPA AP-42 Table 2.4-1 Compounds, using TO-15, ASTM 1945 and 25C. The samples were also analyzed for ASTM 5504 Sulfur Species (incl. H<sub>2</sub>S and TRS).

The inlet volumetric flow rate was continuously measured and recorded by the LFG Flowmeter.

### **3.6. Instrumentation and Analytical procedures**

The following continuous emissions analyzers were used:

<b>Instrumentation</b>	<b>Parameter</b>	<b>Principle</b>
TECO 42i	NO <sub>x</sub>	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfish RS-55	THC	FID
Fuji ZRH	CO <sub>2</sub>	IR
Servomex 1440	O <sub>2</sub>	Paramagnetic

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of DPR or Omega 3 channel strip chart recorders, which can be supported by a Data Acquisition System (DAS).

The data logger produces time stamped data in an excel format that is then used to report the averages and calibration values.

### **3.7. Comments: Limitations and Data Qualifications**

The measured emissions meet the Permit required limits, no deviations from the protocol or abnormalities during the test were observed.

Blue Sky Environmental has reviewed this report for accuracy, and concluded that the test procedures followed historically accepted standards of practice and are accurately described and documented. The review included the following items:

- Review of the general text
- Review of calculations
- Review of CEMS data
- Review of supporting documentation

The services described in this report were performed in a manner consistent with the generally accepted professional testing principles and practices. No other warranty, expressed or implied, is made. These services were performed in a manner consistent with our agreement with our client. The report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions contained in this report pertain to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and operating parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations, subsequent to this, and do not warranty the accuracy of information supplied by others.

**SECTION 4. APPENDICES**

- A.           **Tabulated Results**
- B.           **Calculations**
- C.           **Laboratory Reports**
- D.           **Field Data Sheets**
- E.           **Strip Charts**
- F.           **Process Information**
- G.           **Calibration Certifications and Quality Assurance Records**
- H.           **Sample Train Configuration and Stack Diagrams**
- I.           **Related Correspondence (Source Test Plan and Related Emails)**
- J.           **Permit to Operate**
- K.           **Flare Flow Meter Calibration Document**



**A**  
**Tabulated Results**

**TABLE #1**

**Kirby Canyon Recycling & Disposal Facility  
Flare A-12  
1,599°F  
Condensate On**

<b>RUN</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>AVERAGE</b>	<b>LIMITS</b>
Test Date	3/4/20	3/4/20	3/4/20		
Test Time	908-0951	1006-1047	1102-1143		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,600	1,599	1,599	1,599	
Condensate Injection, gpm	1.57	1.54	1.52	1.54	
Fuel Flow Rate, SCFM	2,235	2,240	2,253	2,243	
Fuel Heat Input, MMBTU/Hr	64.9	66.9	67.5	66.5	
Exhaust Flow Rate, DSCFM (Method 19)	23,303	23,052	23,434	23,263	
Oxygen, O <sub>2</sub> , %	12.02	11.86	11.93	11.94	
Carbon Dioxide, CO <sub>2</sub> , %	7.91	8.24	8.19	8.11	
Water Vapor, H <sub>2</sub> O, %	5.0	4.9	4.8	4.9	
NO, ppm	17.7	18.7	18.0	18.1	
NO <sub>2</sub> , ppm	<1.0	<1.0	<1.0	<1.0	
NO <sub>2</sub> /NO	<0.06	<0.05	<0.06	<0.06	
NO <sub>x</sub> , ppm	17.8	18.6	18.2	18.2	
NO <sub>x</sub> , ppm @ 15% O <sub>2</sub>	11.8	12.1	11.9	12.0	
NO <sub>x</sub> , ppm @ 15% O <sub>2</sub>	11.8	12.1	11.9	12.0	
NO <sub>x</sub> , lbs/hr	2.96	3.06	3.04	3.02	
<b>NO<sub>x</sub>, lbs/MMBTU</b>	<b>0.046</b>	<b>0.046</b>	<b>0.045</b>	<b>0.045</b>	<b>0.06</b>
CO, ppm	3.4	1.5	1.7	2.2	
CO, ppm @ 15% O <sub>2</sub>	2.2	1.0	1.1	1.4	
CO, lbs/hr	0.34	0.15	0.17	0.22	
<b>CO, lbs/MMBTU</b>	<b>0.005</b>	<b>0.002</b>	<b>0.003</b>	<b>0.003</b>	<b>0.30</b>
TRS as H <sub>2</sub> S, ppm in Fuel	235	307	311	284	
<b>SO<sub>2</sub>, ppm (Calculated)</b>	<b>22.5</b>	<b>29.8</b>	<b>29.9</b>	<b>27.4</b>	<b>300</b>
THC, ppm (25A) wet	1.65	<1.0	<1.0	<1.2	
THC, ppm dry	1.73	<1.05	<1.05	<1.28	
THC, lbs/hr as CH <sub>4</sub>	0.10	<0.060	<0.061	<0.074	
CH <sub>4</sub> , ppm (M18)	0.7	1.5	1.1	1.1	
CH <sub>4</sub> , lbs/hr	0.040	0.086	0.064	0.063	
TNMHC, ppm as CH <sub>4</sub> (M18)	0.5	0.5	0.5	0.5	
TNMHC, lbs/hr as CH <sub>4</sub>	0.029	0.029	0.029	0.029	
TNMHC, ppm as Hexane (C <sub>6</sub> H <sub>14</sub> ) @ 3% O <sub>2</sub>	0.17	0.17	0.17	0.17	
<b>TNMHC, ppm @ 3% O<sub>2</sub> as CH<sub>4</sub></b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>30</b>
INLET TNMOC (Method 25C)	1,136	1,046	1,223	1,135	
INLET NMOC lbs/hr as CH <sub>4</sub>	6.3	5.8	6.8	6.3	
<b>NMOC Removal Efficiency</b>	<b>99.54%</b>	<b>99.51%</b>	<b>99.57%</b>	<b>99.54%</b>	<b>98</b>
INLET CH <sub>4</sub> , ppm	462,000	465,000	466,000	464,333	
INLET CH <sub>4</sub> lbs/hr	2,563.3	2,585.7	2,606.3	2,585	
<b>CH<sub>4</sub> Removal Efficiency</b>	<b>&gt;99.998%</b>	<b>&gt;99.997%</b>	<b>&gt;99.998%</b>	<b>&gt;99.998%</b>	<b>99</b>
INLET THC (TOC) ppm as CH <sub>4</sub>	463,136	466,046	467,223	465,468	
INLET THC (TOC) lbs/hr as CH <sub>4</sub>	2,570	2,591	2,613	2,591	
THC (TOC) Removal Efficiency	99.996%	99.998%	99.998%	99.997%	

< Value = 2% of Analyzer Range

**WHERE,**

ppm = Parts Per Million Concentration  
 Lbs/hr = Pound Per Hour Emission Rate  
 Tstd. = Standard Temp. (°R = °F+460)  
 MW = Molecular Weight  
 DSCFM = Dry Standard Cubic Feet Per Minute  
 NO<sub>x</sub> = Oxides of Nitrogen as NO<sub>2</sub> (MW = 46)  
 CO = Carbon Monoxide (MW = 28)  
 TOC = THC = Total Organic Carbon as Methane including CH<sub>4</sub> (MW = 16)  
 THC = Total Hydrocarbons as Methane (MW = 16)  
 NMOC = Total Non-Methane Organic Carbon as Methane (MW = 16)  
 SO<sub>2</sub> = Sulfur Dioxide as SO<sub>2</sub> (MW = 64.1)

**CALCULATIONS,**

PPM @ 15% O<sub>2</sub> = ppm \* 5.9 / (20.9 - %O<sub>2</sub>)  
 PPM @ 3% O<sub>2</sub> = ppm \* 17.9 / (20.9 - %O<sub>2</sub>)  
 Lbs/hr = ppm x 8.223 E-05 x DSCFM x MW / Tstd. °R  
 Lbs/day = Lbs/hr \* 24  
 Removal Efficiency = (inlet lbs/hr- outlet lbs/hr) / inlet lbs/hr  
 SO<sub>2</sub> emission ppm = H2S in fuel \* Fuel Flow/Stack Gas Flow

TABLE #2

Kirby Canyon Recycling & Disposal Facility

Landfill Gas Characterization

RUN		R1-LFG-CON	R2-LFG-CON	R3-LFG-CON	AVERAGE	
Test Date		3/4/20	3/4/20	3/4/20	-	
Acrylonitrile	ppb	<48.7	<48.0	<48.0	<48.2	
Benzene	ppb	375	437	437	416	
Benzyl Chloride	Chloromethylbenzene	ppb	<24.3	<24.0	<24.0	<24.1
Carbon Tetrachloride		ppb	<24.3	<24.0	<24.0	<24.1
Chlorobenzene		ppb	<24.3	<24.0	72.6	<40.3
Chloroethane		ppb	107	121	114	114
Chloroform		ppb	<24.3	<24.0	<24.0	<24.1
1,1 Dichloroethane	Ethylidene Dichloride	ppb	<24.3	<24.0	<24.0	<24.1
1,1 Dichloroethene	Vinylidene Chloride	ppb	<24.3	<24.0	<24.0	<24.1
1,2 Dichloroethane	Ethylene Dichloride	ppb	98.0	113	110	107
1,4 Dichlorobenzene		ppb	<24.3	<24.0	52.7	<33.7
Ethylbenzene		ppb	732	1,260	1,290	1,094
Ethylene Dibromide	1,2 Dibromoethane	ppb	<24.3	<24.0	<24.0	<24.1
Fluorotrichloromethane	Trichlorofluoromethane	ppb	39.5	41.5	39.9	40.3
Hexane		ppb	236	209	200	215
Isopropyl Alcohol	IPA	ppb	10,800	12,200	13,300	12,100
Methyl Alcohol	Methanol	ppb	16,700	18,900	21,300	18,967
Methyl Ethyl Ketone (MEK)	2-Butanone	ppb	10,900	12,100	12,700	11,900
Methylene Chloride		ppb	75.0	81.8	77.4	78.1
Methyl isobutyl ketone (MiBK)		ppb	434	601	627	554
Methyl tert Butyl Ether	MTBE	ppb	27.8	<24.0	<24.0	<25.3
Perchloroethylene	Tetrachloroethylene	ppb	27.4	45.0	47.2	39.9
Styrene		ppb	48.2	122	141	103.7
Toluene		ppb	3,160	4,430	4,520	4,037
1,1,1 Trichloroethane		ppb	<24.3	<24.0	<24.0	<24.1
1,1,2,2 Tetrachloroethane		ppb	<24.3	<24.0	<24.0	<24.1
Trichloroethylene	Trichloroethene	ppb	35.6	44.3	47.2	42.4
Vinyl Chloride		ppb	<24.3	<24.0	28.3	25.5
Xylenes		ppb	1,505	2,960	3,206	2,557
Carbon Disulfide		ppm	0.115	<0.096	<0.096	<0.102
Carbonyl Sulfide		ppm	<0.097	<0.096	<0.096	<0.096
Dimethyl Sulfide		ppm	2.07	2.06	1.97	2.03
Ethyl Mercaptan		ppm	0.103	0.106	0.121	0.110
Methyl Mercaptan		ppm	2.29	2.91	3.10	2.77
Hydrogen Sulfide		ppm	228	299	302	276
TRS as H2S		ppm	235	307	311	284

**TABLE #3**

**Kirby Canyon Recycling & Disposal Facility  
Flare A-12  
1,599°F  
Condensate Off**

<b>RUN</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>AVERAGE</b>	<b>LIMITS</b>
Test Date	3/4/20	3/4/20	3/4/20		
Test Time	1214-1255	1312-1353	1410-1453		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,599	1,599	1,599	1,599	
Condensate Injection, gpm	0.00	0.00	0.00	0.00	
Fuel Flow Rate, SCFM	2,286	2,308	2,325	2,306	
Fuel Heat Input, MMBTU/Hr	66.4	69.0	69.7	68.4	
Exhaust Flow Rate, DSCFM (Method 19)	23,868	23,632	24,144	23,881	
Oxygen, O <sub>2</sub> , %	11.92	11.75	11.87	11.85	
Carbon Dioxide, CO <sub>2</sub> , %	8.21	8.32	8.28	8.27	
Water Vapor, H <sub>2</sub> O, %	4.8	4.8	4.7	4.8	
NO, ppm	14.7	15.3	14.8	14.9	
NO <sub>2</sub> , ppm	<1.0	<1.0	<1.0	<1.0	
NO <sub>2</sub> /NO	<0.07	<0.07	<0.07	<0.07	
NO <sub>x</sub> , ppm	14.5	15.1	14.7	14.8	
NO <sub>x</sub> , ppm @ 15% O <sub>2</sub>	9.5	9.8	9.6	9.6	
NO <sub>x</sub> , ppm @ 15% O <sub>2</sub>	9.5	9.8	9.6	9.6	
NO <sub>x</sub> , lbs/hr	2.47	2.55	2.53	2.52	
<b>NO<sub>x</sub>, lbs/MMBTU</b>	<b>0.037</b>	<b>0.037</b>	<b>0.036</b>	<b>0.037</b>	<b>0.06</b>
CO, ppm	3.0	2.7	2.4	2.7	
CO, ppm @ 15% O <sub>2</sub>	2.0	1.8	1.6	1.8	
CO, lbs/hr	0.31	0.28	0.25	0.28	
<b>CO, lbs/MMBTU</b>	<b>0.005</b>	<b>0.004</b>	<b>0.004</b>	<b>0.004</b>	<b>0.30</b>
TRS as H <sub>2</sub> S, ppm in Fuel	198	361	285	281	
<b>SO<sub>2</sub>, ppm</b>	<b>19.0</b>	<b>35.3</b>	<b>27.4</b>	<b>27.2</b>	<b>300</b>
THC, ppm (25A) wet	1.97	3.81	<1.0	<2.3	
THC, ppm dry	2.07	4.00	<1.05	<2.37	
THC, lbs/hr as CH <sub>4</sub>	0.12	0.23	<0.063	<0.140	
CH <sub>4</sub> , ppm (M18)	1.0	1.0	0.6	0.9	
CH <sub>4</sub> , lbs/hr	0.059	0.059	0.036	0.051	
TNMHC, ppm as CH <sub>4</sub> (M18)	0.50	0.50	0.50	0.50	
TNMHC, lbs/hr as CH <sub>4</sub>	0.03	0.03	0.03	0.03	
TNMHC, ppm as Hexane (C <sub>6</sub> H <sub>14</sub> ) @ 3% O <sub>2</sub>	0.2	0.2	0.2	0.2	
<b>TNMHC, ppm @ 3% O<sub>2</sub> as CH<sub>4</sub></b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>30</b>
INLET TNMOC (Method 25C)	1,308	1,393	1,395	1,365	
INLET NMOC lbs/hr as CH <sub>4</sub>	7.4	8.0	8.1	7.8	
<b>NMOC Removal Efficiency</b>	<b>99.60%</b>	<b>99.63%</b>	<b>99.63%</b>	<b>99.62%</b>	<b>98</b>
INLET CH <sub>4</sub> , ppm	468,000	469,000	468,000	468,333	
INLET CH <sub>4</sub> lbs/hr	2,655.8	2,687.1	2,701.1	2,681	
<b>CH<sub>4</sub> Removal Efficiency</b>	<b>&gt;99.998%</b>	<b>&gt;99.998%</b>	<b>&gt;99.999%</b>	<b>&gt;99.998%</b>	<b>99</b>
INLET THC (TOC) ppm as CH <sub>4</sub>	469,308	470,393	469,395	469,699	
INLET THC (TOC) lbs/hr as CH <sub>4</sub>	2,663	2,695	2,709	2,689	
THC (TOC) Removal Efficiency	99.995%	99.991%	99.998%	99.995%	

< Value = 2% of Analyzer Range

**WHERE,**

ppm = Parts Per Million Concentration  
 Lbs/hr = Pound Per Hour Emission Rate  
 Tstd. = Standard Temp. (°R = °F+460)  
 MW = Molecular Weight  
 DSCFM = Dry Standard Cubic Feet Per Minute  
 NO<sub>x</sub> = Oxides of Nitrogen as NO<sub>2</sub> (MW = 46)  
 CO = Carbon Monoxide (MW = 28)  
 TOC = THC = Total Organic Carbon as Methane including CH<sub>4</sub> (MW = 16)  
 THC = Total Hydrocarbons as Methane (MW = 16)  
 NMOC = Total Non-Methane Organic Carbon as Methane (MW = 16)  
 SO<sub>2</sub> = Sulfur Dioxide as SO<sub>2</sub> (MW = 64.1)

**CALCULATIONS,**

PPM @ 15% O<sub>2</sub> = ppm \* 5.9 / (20.9 - %O<sub>2</sub>)  
 PPM @ 3% O<sub>2</sub> = ppm \* 17.9 / (20.9 - %O<sub>2</sub>)  
 Lbs/hr = ppm x 8.223 E-05 x DSCFM x MW / Tstd. °R  
 Lbs/day = Lbs/hr \* 24  
 Removal Efficiency = (inlet lbs/hr- outlet lbs/hr) / inlet lbs/hr  
 SO<sub>2</sub> emission ppm = H2S in fuel \* Fuel Flow/Stack Gas Flow

TABLE #4

## Kirby Canyon Recycling &amp; Disposal Facility

## Landfill Gas Characterization

RUN		R1-LFG-COFF	R2-LFG-COFF	R3-LFG-COFF	AVERAGE	
Test Date		3/4/20	3/4/20	3/4/20	-	
Acrylonitrile	ppb	<48.2	<49.5	<44.9	<47.5	
Benzene	ppb	437	428	414	426	
Benzyl Chloride	Chloromethylbenzene	ppb	<24.1	<24.7	<22.5	<23.8
Carbon Tetrachloride	ppb	<24.1	<24.7	<22.5	<23.8	
Chlorobenzene	ppb	85.6	81.1	80.5	82.4	
Chloroethane	ppb	114	123	118	118	
Chloroform	ppb	<24.1	<24.7	<22.5	<23.8	
1,1 Dichloroethane	Ethylidene Dichloride	ppb	<24.1	<24.7	<22.5	<23.8
1,1 Dichloroethene	Vinylidene Chloride	ppb	<24.1	<24.7	<22.5	<23.8
1,2 Dichloroethane	Ethylene Dichloride	ppb	111	109	106	109
1,4 Dichlorobenzene	ppb	69.4	75.6	75.6	73.5	
Ethylbenzene	ppb	1,370	1,380	1,320	1,357	
Ethylene Dibromide	1,2 Dibromoethane	ppb	<24.1	<24.7	<22.5	<23.8
Fluorotrichloromethane	Trichlorofluoromethane	ppb	39.9	39.2	39.7	39.6
Hexane	ppb	208	209	203	207	
Isopropyl Alcohol	IPA	ppb	14,000	13,300	13,500	13,600
Methyl Alcohol	Methanol	ppb	21,900	21,600	21,900	21,800
Methyl Ethyl Ketone (MEK)	2-Butanone	ppb	13,200	12,800	13,000	13,000
Methylene Chloride	ppb	80.4	81.3	79.5	80.4	
Methyl isobutyl ketone (MiBK)			635	654	604	631
Methyl tert Butyl Ether	MTBE	ppb	<24.1	<24.7	<22.5	23.77
Perchloroethylene	Tetrachloroethylene	ppb	50.2	50.6	50.2	50.3
Styrene	ppb	155	155	158	156	
Toluene	ppb	4,660	4,560	4,620	4,613	
1,1,1 Trichloroethane	ppb	<24.1	<24.7	<22.5	<23.8	
1,1,2,2 Tetrachloroethane	ppb	<24.1	<24.7	<22.5	<23.8	
Trichloroethylene	Trichloroethene	ppb	44.5	43.2	44.3	44.0
Vinyl Chloride	ppb	27.9	28.7	29.1	28.6	
Xylenes	ppb	3,470	3,110	3,356	3,312	
Carbon Disulfide	ppm	0.135	0.123	0.120	0.126	
Carbonyl Sulfide	ppm	<0.096	<0.099	<0.090	<0.095	
Dimethyl Sulfide	ppm	2.07	2.08	2.12	2.09	
Ethyl Mercaptan	ppm	0.122	0.152	0.140	0.138	
Methyl Mercaptan	ppm	2.80	3.32	3.08	3.07	
Hydrogen Sulfide	ppm	190	352	276	273	
TRS as H2S	ppm	198	361	285	281	

**APPENDIX P**

**A-12 FLARE 12-MONTH SULFUR DIOXIDE EMISSIONS LOG**

**12-MONTH CONSECUTIVE SO<sub>x</sub> Emission Rate (Tons/Year) :2019-2020**  
**Kirby Canyon Recycling & Disposal Facility**  
**Plant #1812, Condition 1437 Item 20**

<b>Month</b>	<b>SO<sub>2</sub> (Tons/Month)</b>	<b>SO<sub>2</sub> (12- Months Tons)</b>
July-19	3.15	37.0
August-19	2.78	36.8
September-19	2.81	36.6
October-19	2.75	36.5
November-19	2.74	36.1
December-19	2.98	36.1
January-20	3.20	36.4
February-20	3.18	36.6
March-20	3.12	36.7
April-20	3.05	36.5
May-20	2.82	36.1
June-20	2.82	35.4

Pursuant to Title V Permit A1812, Condition Number 25301 Part 20, the Sulfur dioxide emissions from Flare A-12 shall not exceed 300 ppmv of SO<sub>2</sub> and sulfur dioxide emissions from A-12 shall not exceed 94.9 tons per year.

To demonstrate compliance with above limits, the site will conduct annual testing of total TRS at the landfill gas main header. The most recent TRS value will be used to calculate the monthly SO<sub>2</sub> emissions in tons.

Appendix P includes table with SO<sub>2</sub> 12-month tons during the reporting period. The sulfur dioxide emissions from A-12 did not exceed 94.9 tons per year.