Tri-Cities Recycling and Recovery Facility
7010 Auto Mall Parkway, Fremont, CA 94538

November 23, 2020

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale St., Ste 600
San Francisco, CA 94105
Attn: Title V Reports
compliance@baaqmd.gov

Director of Enforcement Division
TRI & Air Section (ENF-2-1)
USEPA Region 9
75 Hawthorne Street
San Francisco, CA 94105
r9.aeo@epa.gov

SUBJECT: Combined Title V Semi-Annual and Partial 8-34 Annual Report
40 CFR 63 Subpart AAAA Semi-Annual Report
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway, Fremont, CA 94538
Plant Number A2246

TV Tracking #: 100

1. ☐ RECEIVED IN ENFORCEMENT: 11/23/2020

Dear Sir or Madam:

The Tri-Cities Recycling and Disposal Facility (TCRDF) is pleased to submit the attached Combined Title V Semi-Annual and Partial 8-34 Annual Report for the period of May 1, 2020 to October 31, 2020 to the Bay Area Air Quality Management District (BAAQMD) and the United States Environmental Protection Agency (USEPA), Region IX. As required by 40 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 8366, Part 19 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,

Patrick Madej

Patrick Madej
District Manager

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 Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538
Plant Number A2246
May 1, 2020 to October 31, 2020

Prepared for
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538

For Submittal to:
The Bay Area Air Quality Management District
375 Beale St., Ste 600
San Francisco, California 94105

and

USEPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Prepared by

Waste Management of Alameda County, Inc.
172 98th Ave
Oakland, California 94603

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1 INTRODUCTION

1.1 PURPOSE

This document is a Title V Combined Semi-Annual and Partial 8-34 Annual Report for the Tri-Cities Recycling and Disposal Facility (TCRDF), a Waste Management of Alameda County, Inc. (WMAC) facility, pursuant to Title V Permit Condition Number 8366, Part 19. This Combined Report satisfies the requirements of Bay Area Air Quality Management District's (BAAQMD) Regulation 8, Rule 34, Section 411 and Title 40 Code of Federal Regulations (CFR) Part 60 Subpart WWW, New Source Performance Standards (NSPS) for municipal solid waste (MSW) landfills (40 CFR §60.757[f]), the TCRDF Title V Standard Condition I.F, and covers compliance activities conducted from May 1, 2020 to October 31, 2020. This Combined Report also includes the semi-annual report of Start-up, Shutdown, Malfunction (SSM) Plan activities, pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AAAA for landfills.

Section 2 of this report contains the elements required to satisfy both BAAQMD Regulation 8-34-411 and 40 CFR §60.757(f). A summary of results from the February 11, 2020 Performance Test Report that meets the requirements of both BAAQMD Regulation 8-34-413 and 40 CFR §60.758(g) is included in Appendix L. Section 4 of this Combined Report includes the semi-annual report of the SSM Plan activities, pursuant to NESHAP, 40 CFR Part 63, Subpart AAAA for landfills.

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 TCRDF. Records are maintained at this location for a minimum of five years.

1.3 REPORT PREPARATION

This Combined Report has been prepared by WMAC and was based on WMAC's review of information pertaining to the site operations.

2 SEMI-ANNUAL MONITORING REPORT

In accordance with Title V Permit Standard Condition I.F and Condition 8366, Part 19, BAAQMD Regulation 8-34-411, and 40 CFR §60.757(f) in the NSPS, this Report is a Combined Title V Semi-Annual and Partial 8-34 Annual Report that is required to be submitted by TCRDF. 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 May 1, 2020 to October 31, 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, 8-34-505, 8-34-510	Testing performed to satisfy any of the requirements of this Rule.	Sections 2.4 & 2.10 Appendices E & G
8-34-501.5	Monthly landfill gas flow rates and well concentration readings for facilities subject to 8-34-404.	Sections 2.5 & 2.11 Appendix J
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 (ppm_v), 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.	Sections 2.6 & 2.7, Appendix F
8-34-501.7	Annual waste acceptance rate and current amount of waste in place.	Section 2.8,
8-34-501.8	Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the GCCS Design Plan.	Section 2.9
8-34-501.9, 8-34-505, §60.757(f)(1)	For operations subject to Section 8-34-505, records of all monitoring dates and any excesses of the limits stated in Section 8-34-305 that are discovered by the operator, including well identification number, the measured excess, the action taken to repair the excess, and the date of repair.	Section 2.10, Appendices G & H

Table 2-1 Semi-Annual Report Requirements (continued)

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-501.10, 8-34-508, §60.757(f)(1)	Continuous gas flow rate records for any site subject to Section 8-34-508.	Section 2.11, Appendices D & I
8-34-501.11, 8-34-509	For operations subject to Section 8-34-509, records of key emission control system operating parameters.	Section 2.2.2
8-34-501.12	The records required above shall be made available and retained for a period of five years.	Section 1.2
§60.757(f)(2)	Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.	Section 2.2.1
§60.757(f)(6)	The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), (c)(4) of §60.755.	Section 2.12
§60.10 (d)(5)(i)	Startup, Shutdown, Malfunction Events	Section 4, Appendices B & C

2.1 COLLECTION SYSTEM OPERATION (BAAQMD 8-34-501.1 & §60.757(F)(4))

Appendix A contains a map dated February 2, 2017 of TCRDF's GCCS. No wells were added to or removed from the collection system during the reporting period.

Appendix B includes all collection system downtimes and the reason for the shutdowns. The information contained in Section 2.1.2 and Appendix C 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 gas (LFG) collection system was not shut down for more than five (5) days on any one occasion. Pursuant to BAAQMD Regulation 8-34-113, Limited Exemption, Inspection and Maintenance, the total downtime is summarized below:

Table 2-2 Collection System Downtime

PERIOD	DOWNTIME (HOURS)
January 1, 2020 – October 31, 2020	15.97
May 1, 2020 - October 31, 2020	0.00

A Flare SSM Log that lists dates, times, and lengths of shutdowns for the reporting period is included in Appendix B.

2.1.2 WELL DISCONNECTION LOG

During the reporting period, zero (0) wellfield SSM events occurred. In addition, zero wells (out of a possible 3) remain disconnected at the end of the reporting period, pursuant to BAAQMD Regulation 8-32-116.2 (Limited Exemption, Well Raising).

A Wellfield SSM Log that lists dates, times, and lengths of disconnections for the reporting period is included in Appendix C.

2.2 EMISSION CONTROL DEVICE DOWNTIME (BAAQMD 8-34-501.2 & §60.757(F)(3))

The emission control system consists of the A-3 Enclosed Flare. No bypassing of the control system or emissions of raw LFG occurred. A Flare SSM Log for the A-3 Flare is included in Appendix B. Total downtime is summarized in the following table:

Table 2-3 Flare A-3 Downtime

PERIOD	DOWNTIME (HOURS)
January 1, 2020 – October 31, 2020	15.97
May 1, 2020 - October 31, 2020	0.00

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

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

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

BAAQMD Regulations 8-34-501.11 and 8-34-509 are not applicable to the A-3 Flare because the A-3 Flare is subject to continuous temperature monitoring as required by BAAQMD Regulation 8-34-507 and §60.757(f)(1).

2.3 TEMPERATURE MONITORING RESULTS (BAAQMD 8-34-501.3, 8-34-507, & §60.757(F)(1))

The combustion zone temperature of the flare is monitored with thermocouples and recorded with a Yokogawa paperless chart recorder. There were no continuous recorder device SSM events during the reporting period. As shown in Appendix D, there were no periods of missing temperature data for the flares during the reporting period.

Title V Permit Condition Number 8366 Part 6 states that the minimum combustion zone temperature, averaged over a 3-hour period, shall be equal to the average combustion zone temperature determined during the most recent complying source test minus 50°F, provided that the minimum combustion zone temperature is not less than 1,450°F. Pursuant to Part 6, the following temperature limits applied during the reporting period:

Table 2-4 Applicable 3-Hour Temperature Limits

Source Test Date	Source Test Report Submitted	Average Temperature During Test (°F)	3-hr Minimum Temperature (°F)
2/11/2020	3/16/2020	1,594	1,544

2.4 MONTHLY COVER INTEGRITY MONITORING (BAAQMD 8-34-501.4)

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

- May 20, 2020
- June 30, 2020
- July 29, 2020
- August 26, 2020
- September 29, 2020
- October 30, 2020

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

The TCRDF 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))

The TCRDF is a closed landfill as defined by 8-34-223. As of the First Quarter 2016 event completed March 1, 2016, the Site has achieved three consecutive quarters with no Surface Emissions Monitoring (SEM) exceedances. Therefore, the TCRDF may now reduce the frequency of SEM events to annually. The 2020 annual SEM occurred during the previous reporting period on February 14 and 17, 2020. The next SEM event is due by March 31, 2020. Any exceedance detected during annual monitoring will require the Site to revert to quarterly monitoring.

2.7 COMPONENT LEAK TESTING (BAAQMD 8-34-501.6 & 8-34-503)

Quarterly Component Leak Testing using FIDs, pursuant to 8-34-503, occurred during the reporting period on the following date:

- Second Quarter 2020 – April 8, 2020
- Third Quarter 2020 – August 10, 2020

No component leaks were discovered during either test event. Quarterly LFG Component Leak Check logs are presented in Appendix F.

2.8 WASTE ACCEPTANCE RECORDS (BAAQMD 8-34-501.7)

The TCRDF is closed and all final closure documentation has been received. No degradable waste was accepted during the reporting period. The total waste in place is 12.78 million tons.

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

TCRDF does not have non-degradable waste areas that are excluded from the collection system. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable.

2.10 WELLHEAD MONITORING DATA (BAAQMD 8-34-501.4 & 8-34-505)

Wellhead monitoring was performed on a monthly basis pursuant to 8-34-505. The wellhead concentration readings for the reporting period are included in Appendix G. Each well was monitored in accordance with the following requirements:

- 8-34-305.1 - Each wellhead shall operate under a vacuum.
- 8-34-305.2 - The LFG temperature in each wellhead shall be less than 55 degrees Celsius (°C) (131°F).
- 8-34-305.4 - The oxygen (O_2) concentration in each wellhead shall be less than 5 percent by volume.

The wellhead monitoring was performed on the following dates:

- May 6, 8, 15, and 20, 2020
- June 3 and 10, 2020
- July 15 and 29, 2020
- August 12, 2020
- September 9, 2020
- October 13 and 27, 2020

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

Wellfield deviations from BAAQMD Regulation 8-34-305 during the reporting period are summarized in Table 2-5. The Wellfield Deviation Log is attached in Appendix H.

Table 2-5 Wellfield Deviation Summary

Well ID	Exceedance Date	Exceedance Value	Re-monitoring Date	Compliance Date and Reading	Days in Exceedance
No well exceedances during the reporting period.					

2.11 GAS FLOW MONITORING RESULTS (BAAQMD 8-34-501.10, 8-34-508, & §60.757(F)(1))

Flow is measured using a Kurz flow meter installed on March 12, 2015. The LFG flow is displayed and digitally recorded with a General Electric data panel and Yokogawa Digital Recorder, which records flow every two minutes. The flow data readings are saved to a compact flash card. 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 at least every 15 minutes. The flow records for the flare are available for review at the TCRDF. As shown in Appendix D, no flare temperature or flow deviations occurred from May 1, 2020 to October 31, 2020.

Title V Permit Condition Number 8366, Part 11 limits daily heat input to 1,800 Million British thermal units (MMBTU) per day and annual heat input to 657,000 MMBTU. Table 2-6 below is a summary of the total LFG flow for the reporting period of May 1, 2020 to October 31, 2020. Monthly and daily flow rates are presented in Appendix I.

Table 2-6 LFG Input to A-3 Flare

Emission Control Device	Average Flow (scfm)	Average CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heat Input (MMBtu)	Max Daily Heat Input (MMBtu)
A-3 Flare	1,035	47.77	274,113,333	130,934,893	132,637	735

(1) The methane content was determined from the February 11, 2020 source test.

2.12 COMPLIANCE WITH §60.757(F)(6)

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

At the end of the reporting period, the GCCS consisted of thirty-eight (38) vertical LFG collection wells. No wells were added to or removed from the collection system during the reporting period.

2.13 COMPLIANCE WITH TITLE V PERMIT CONDITION 8366, PART 12

Title V Condition Number 8366, Part 12 requires annual monitoring for hydrogen sulfide using a Draeger tube. The 2020 Annual sample concentration was 100 ppm_v (collected July 15, 2020). Data from the monitoring event is presented in Appendix K.

2.14 COMPLIANCE WITH TITLE V PERMIT CONDITION 2593 FOR S-24

Daily records were maintained and totaled as required by Condition 2593 Part 4. Concrete accepted at S-24 did not exceed 150,000 tons during any consecutive 12-month period. Combined concrete and asphalt accepted and removed from the site did not exceed 2,500 tons in any day.

3 PERFORMANCE TEST REPORT

In accordance with BAAQMD Regulation 8-34-413 and 40 CFR §60.757(g) in the NSPS, a Performance Test Report is required to be submitted for 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 L
§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 J

3.1 FLARE COMPLIANCE DEMONSTRATION TEST RESULTS (BAAQMD 8-34-412)

The most recent A-3 Flare Annual Compliance Demonstration Test was conducted on February 11, 2020. The Source Test Report was submitted to the BAAQMD on March 16, 2020.

Table 3-3 shows the results of the A-3 2020 Flare Compliance Demonstration Test, averaged from three test runs. A summary of the results from the February 11, 2020 Compliance Demonstration Test in Appendix L.

Table 3-2 A-3 Flare Compliance Demonstration Test Results

Condition	Flare Average Results	Applicable Limit	Compliance Status
NOx, lbs/MMBTU	0.043	< 0.06	In Compliance
CO, lbs/MMBTU	0.003	<0.30	In Compliance
NMOC (ppm_v @ 3% O_2)	< 1.0	< 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 February 2, 2017 of the LFG collection system 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."

In general, the sufficient capacities of the GCCS components are based on establishing, maintaining, and documenting that the surface emissions of non-methane organic compounds (NMOCs) and subsurface LFG migration are controlled within compliance limits. Over the monitoring period covered by this Combined Report, the sufficiency of the GCCS components was based as follows:

- The existing GCCS has historically provided LFG wells and collectors spaced in accordance with standard industry practices. The installed collector density during the reporting period appears to be more than adequate for controlling surface emissions and subsurface LFG migration, based on continuous compliance and operational experience.
- The total capacity of the LFG mover equipment exceeds 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 landfill.

The landfill operator conducts routine monitoring in accordance with NSPS requirements. If the TCRDF GCCS does not meet the measures of performance set forth in the NSPS, the GCCS will be adjusted or modified, as required.

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."

The Site is now closed; therefore peak generation has already occurred. LFG generation will decline over time. The existing GCCS conveyance piping has sufficient capacity to handle all current and future LFG flow rates based on well vacuum data, LFG generation estimates, and surface emissions monitoring.

Compliance with 40 CFR §60.757(g)(2) is demonstrated by performing SEM. Refer to Section 2.6, Surface Emissions Monitoring for information pertaining to the SEM results.

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."

No segregated areas or accumulations of asbestos or non-degradable material are documented for the TCRDF 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."

No non-productive areas have 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 present gas mover equipment capacity is adequate to move the current LFG flow rate. The current A-3 Flare has a capacity of 2,500 scfm at 50 percent methane. Since the Site is now closed, peak generation has already occurred; therefore the current equipment is capable of moving the maximum flow rate over the remaining life of the landfill.

3.7 COMPLIANCE WITH §60.757(G)(6)

"The provisions for the control of off-site migration."

There have been no significant LFG migration occurrences at the TCRDF. The most recent Perimeter Gas Migration Monitoring Plan (PGMMP) was updated in January 2012 to include a variance from probe monitoring requirements and recent changes to building monitoring locations. Buildings on-site at the TCRDF are monitored quarterly for LFG migration.

Quarterly Methane-In-Structure Monitoring occurred on the following dates:

- Second Quarter 2020 – May 28, 2020
- Third Quarter 2020 – August 10, 2020

All in-structure locations were in compliance with no detections above the 1.25 percent methane limit. The Methane-In-Structure Survey Reports are included in Appendix J.

Demonstrating Compliance with §60.757(g)(6)

"The provisions for the control of off-site migration."

The landfill operator will continue monitoring in accordance with the existing plan as discussed above. If the GCCS at the TCRDF does not meet the measures of performance set forth in the NSPS, the GCCS will be adjusted or modified in accordance with the NSPS requirements.

4 STARTUP, SHUTDOWN, MALFUNCTION (SSM) REPORT

SSM Report for the GCCS at the Tri-Cities Recycling and Disposal Facility

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

NESHAP 40 CFR Part 63, AAAA became effective on January 16, 2004. Those SSM events that occurred during the NSPS semi-annual reporting period (May 1, 2020 to October 31, 2020) are reported in this section. The following information is included as required:

- During the reporting period, 0 flare SSM events occurred. The cause, time and duration of each event are presented in the Flare SSM Log, which is contained in Appendix B.
- During the reporting period, 0 wellfield SSM events occurred to allow for active filling, repairs, and well raising. The time and duration of each event are presented in the Wellfield SSM Log, which is contained in Appendix C.
- During the reporting period, 0 recorder SSM events occurred.
- In all, 0 events were consistent with the standard operating procedures contained in the SSM Plan.
- No exceedances of any applicable emission limitation in the landfill's 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.***

Patrick Madej

Signature of Responsible Official

November 23, 2020

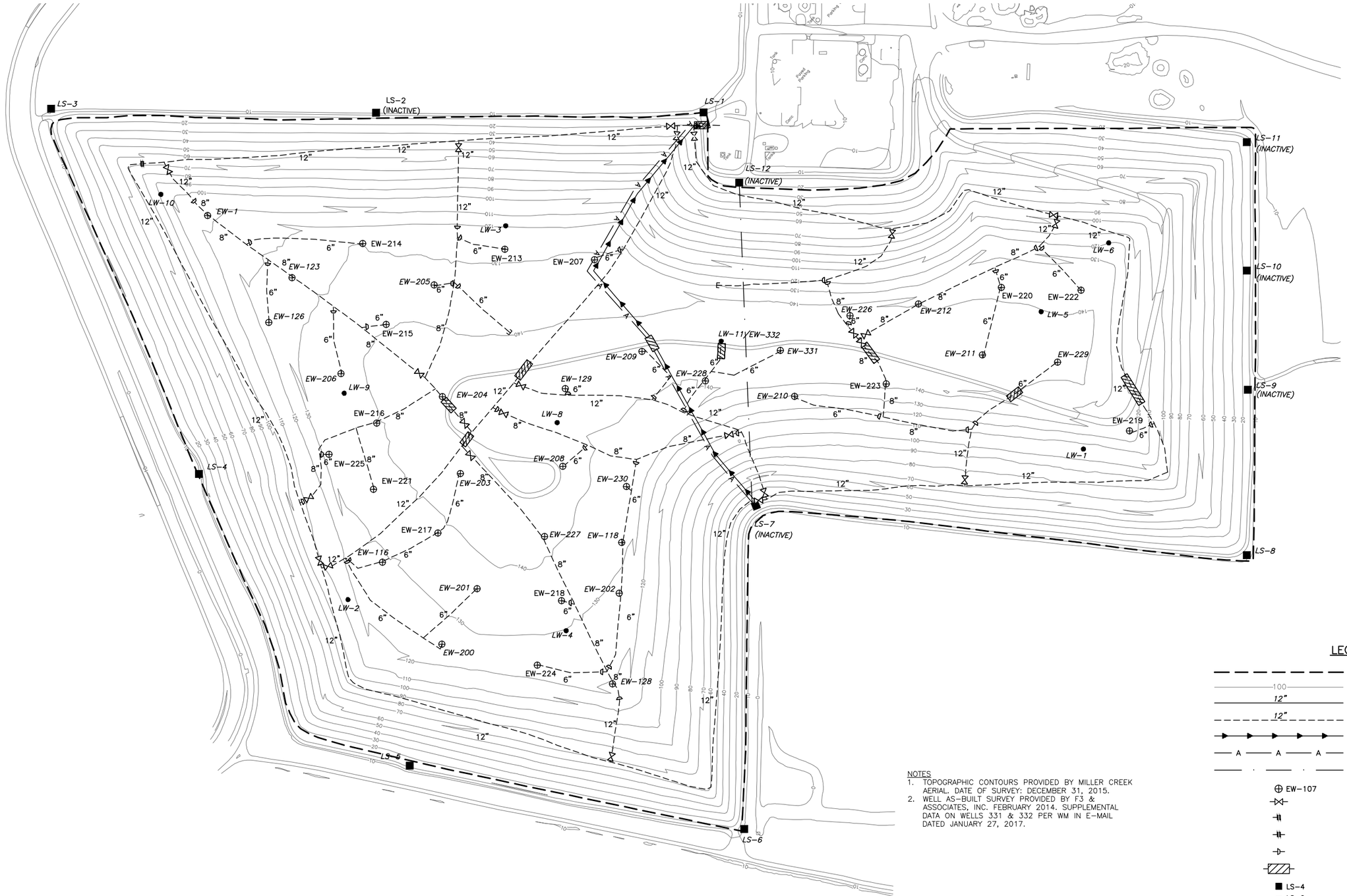
Date

Patrick Madej

Name of Responsible Official

APPENDIX A

SITE MAP



LEGEND

- EXISTING SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING LFG HEADER – ABOVE GROUND
- EXISTING LFG HEADER – BELOW GROUND
- EXISTING CONDENSATE FORCE MAIN
- EXISTING AIR FORCE MAIN
- EXISTING HORIZONTAL COLLECTOR
- EW-107 — EXISTING LFG EXTRACTION WELL
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER
- EXISTING ROAD CROSSING
- LS-4 — EXISTING LEACHATE SUMP
- LS-2 (INACTIVE) — INDICATES CURRENTLY INACTIVE LEACHATE SUMP
- LW-1 — EXISTING LEACHATE LEVEL MONITORING WELL

NOTES
1. TOPOGRAPHIC CONTOURS PROVIDED BY MILLER CREEK AERIAL. DATE OF SURVEY: DECEMBER 31, 2015.
2. WELL AS-BUILT SURVEY PROVIDED BY F3 & ASSOCIATES, INC. FEBRUARY 2014. SUPPLEMENTAL DATA ON WELLS 331 & 332 PER WM IN E-MAIL DATED JANUARY 27, 2017.

Update on 6/16/2017 - EW-331and EW-332 decommissioned

1" 1/2" 0" 1"

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 02/02/17
DRAWN BY RAW
DESIGNED BY
CHECKED BY JAB
APPROVED BY

cornerstone
A TETRA TECH COMPANY

TRI-CITIES RECYCLING AND DISPOSAL FACILITY
FREMONT, CALIFORNIA

GCCS AS-BUILT SITE PLAN

SHEET NO. 1

PROJECT NO. 170138

APPENDIX B

FLARE SSM LOG

TRI-CITIES RECYCLING AND DISPOSAL FACILITY
CONTROL DEVICE DOWNTIME LOG

Event No.	Check Applicable Event	Device	(1) Event Start Date/Time	(2) Event End Date/Time	(3) Duration (Hrs)	Downtime (Hrs)	(4) Cause or Reason	(5) Applicable Regulation	(6) Type of Event	(7) Procedures Used (a),(b)	(8) Did Steps Taken Vary From (7)	(9) Did Event Cause Any Emission Limit Exceedance?	(10) Describe Emission Standard(s) Exceeded (b)	Completed By	(11) Date Entry Completed
1	x Startup x Shutdown Malfunction	A-3 Flare	1/8/20 15:22 1/8/20 16:44	1/8/20 15:24 1/8/20 16:46	0.03 0.03	1.37	Manual shutdown for flare station maintenance	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	x Manual (Go to 7) Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) x No Yes (Go to 9) x No	Yes (Go to 10) No Yes (Go to 10) No		Mike Chan	1/8/2020
2	x Startup x Shutdown Malfunction	A-3 Flare	2/10/20 7:44 2/10/20 8:26	2/10/20 7:46 2/10/20 8:28	0.03 0.03	0.70	Manual shutdown for flare station maintenance	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	x Manual (Go to 7) Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) x No Yes (Go to 9) x No	Yes (Go to 10) No Yes (Go to 10) No		Mike Chan	2/10/2020
3	x Startup x Shutdown Malfunction	A-3 Flare	2/10/20 8:36 2/10/20 8:50	2/10/20 8:38 2/10/20 8:52	0.03 0.03	0.23	Manual shutdown for flare station maintenance	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	x Manual (Go to 7) Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) x No Yes (Go to 9) x No	Yes (Go to 10) No Yes (Go to 10) No		Mike Chan	2/10/2020
4	x Startup x Shutdown Malfunction	A-3 Flare	3/7/20 13:16 3/7/20 16:06	3/7/20 13:18 3/7/20 16:08	0.03 0.03	2.83	Low compressor pressure shutdown. System inspected and restarted.	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	Manual (Go to 7) x Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) No Yes (Go to 9) x No	Yes (Go to 10) x No Yes (Go to 10) No		Mike Chan	3/7/2020
5	x Startup x Shutdown Malfunction	A-3 Flare	3/19/20 11:50 3/19/20 12:22	3/19/20 11:52 3/19/20 12:24	0.03 0.03	0.53	Manual shutdown for flare station maintenance.	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	x Manual (Go to 7) Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) x No Yes (Go to 9) x No	Yes (Go to 10) No Yes (Go to 10) No		Mike Chan	3/19/2020
6	x Startup x Shutdown Malfunction	A-3 Flare	4/7/20 6:48 4/7/20 15:34	4/7/20 6:50 4/7/20 15:36	0.03 0.03	8.77	Power outage. System inspected, maintenance performed, and restarted.	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	Manual (Go to 7) x Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) No Yes (Go to 9) x No	Yes (Go to 10) x No Yes (Go to 10) No		Mike Chan	4/7/2020
7	x Startup x Shutdown Malfunction	A-3 Flare	4/18/20 7:28 4/18/20 9:00	4/18/20 7:30 4/18/20 9:02	0.03 0.03	1.53	Low temperature alarm shutdown. System inspected and restarted.	x 113: Inspection/Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	Manual (Go to 7) x Automatic (Go to 9) x Manual (Go to 7) Automatic (Go to 9)	Procedures 1 to 3 Procedures 1 to 4	Yes (Go to 9) No Yes (Go to 9) x No	Yes (Go to 10) x No Yes (Go to 10) No		Mike Chan	4/18/2020
No flare SSM events in May 2020															
No flare SSM events in June 2020															
No flare SSM events in July 2020															
No flare SSM events in August 2020															
No flare SSM events in September 2020															

TRI-CITIES RECYCLING AND DISPOSAL FACILITY
CONTROL DEVICE DOWNTIME LOG

Event No.	Check Applicable Event	Device	(1) Event Start Date/Time	(2) Event End Date/Time	(3) Duration (Hrs)	Downtime (Hrs)	(4) Cause or Reason	(5) Applicable Regulation	(6) Type of Event	(7) Procedures Used (a),(b)	(8) Did Steps Taken Vary From (7)	(9) Did Event Cause Any Emission Limit Exceedance?	(10) Describe Emission Standard(s) Exceeded (b)	Completed By	(11) Date Entry Completed
No flare SSM events in October 2020															

(a) **STANDARD OPERATING PROCEDURES**

Shutdown

Procedure No.	Procedure
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

Procedure No.	
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
LFG Collection and Control System				
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 piping -Leaks at wellheads, valves, flanges, Test -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
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 arrestor 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 occured. Follow up in writing to the agency within 7 working days after the end of the event.

APPENDIX C

WELLFIELD SSM LOG

TRI-CITIES RECYCLING & DISPOSAL FACILITY

COLLECTION SYSTEM DOWNTIME LOG

Event No.	Check Applicable Event	Device	(1) Event Start Date/Time	(2) Event End Date/Time	(3) Duration (Hrs)	Downtime (Hrs)	(4) Cause or Reason	(5) Applicable Regulation	(6) Type of Event	(7) Procedures Used (a),(b)	(8) Did Steps Taken Vary From (7)	(9) Did Event Cause Any Emission Limit Exceedance?	(10) Describe Emission Standard(s) Exceeded (b)	Completed By	(11) Date Entry Completed
No Well SSM Events in May 2020															
No Well SSM Events in June 2020															
No Well SSM Events in July 2020															
No Well SSM Events in August 2020															
No Well SSM Events in September 2020															
No Well SSM Events in October 2020															

(a) **STANDARD OPERATING PROCEDURES**

Shutdown

Procedure No.	Procedure
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

Procedure No.	
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
LFG Collection and Control System				
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 piping -Leaks at wellheads, valves, flanges, Test ports, seals, couplings, etc. -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
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 arrestor 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 occured. Follow up in writing to the agency within 7 working days after the end of the event.

APPENDIX D

FLARE TEMPERATURE AND FLOW DEVIATION REPORT

TRI-CITIES RECYCLING & DISPOSAL FACILITY, Fremont, CA
TEMPERATURE & FLOW DEVIATION REPORT
May 1, 2020 - October 31, 2020

REPORT PREPARED BY: Mike Chan **DATE:** November 19, 2020
TEMPERATURE SENSING DEVICE: Thermocouple **MODEL:** Thermo-Electric

START DATE TIME	END DATE TIME	DURATION (Hours)	TEMPERATURE (°F) / FLOW (SCFM)	CAUSE	EXPLANATION	ACTION TAKEN
No Deviations were reported in May 2020						
No Deviations were reported in June 2020						
No Deviations were reported in July 2020						
No Deviations were reported in August 2020						
No Deviations were reported in September 2020						
No Deviations were reported in October 2020						

COMMENTS: 1) The A-3 Flare 3-hour average combustion zone temperature did not drop below the 1,552°F (3/22/19 - 3/15/20) and 1,544°F (3/16/20 - present) limits established during the February 6, 2019 and February 11, 2020 source tests pursuant to 40 CFR §60.758(c)(1)(i).

scfm - standard cubic feet per minute °F - Degrees Fahrenheit

APPENDIX E

COVER INTEGRITY RESULTS

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: May 28, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: June 30, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: July 29, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: August 26, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: September 29, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

OPERATIONS AND MAINTENANCE SITE INSPECTION REPORT
Monthly Cover Monitoring

LOCATION: Tri-Cities Recycling and Disposal Facility
INSPECTION DATE: October 30, 2020
TECHNICIAN: Matthew Frame

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		X	
Dead vegetation	X		Bushses are green, grasses are brown
Erosion on cap system		X	
Erosion on side slopes		X	
Ponding of water on cap		X	
Surface cracking		X	
Storm water down drains clear	X		
Storm water ditches inspected	X		
Acceptable vegetation	X		
Exposed waste		X	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		

APPENDIX F

SURFACE EMISSIONS/COMPONENT LEAK CHECK MONITORING REPORTS

WASTE MANAGEMENT
172 98th Avenue
Oakland, CA 94603
(510) 430-8509

June 17, 2020

Mr. Patrick Madej
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538

Re: Second Quarter 2020 Surface Emissions and Component Leak Monitoring Report for Tri-Cities Recycling and Disposal Facility

Dear Mr. Madej:

This monitoring report for "Tri-Cities Recycling and Disposal Facility (TCRDF)" contains the results of the Second Quarter 2020 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. All monitoring was performed by SCS Engineers (SCS).

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

- 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).

- CCR Title 17, Subchapter 10, Article 4, Subarticle 6, §95464.

TCRDF 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 according to the methods outlined in the July 1, 2016 ACO.

PROCEDURES

General

The surface of the TCRDF disposal area has been divided into one-hundred-and-nine (109), 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 TCRDF 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.

The monitoring probe was positioned 2 inches above the ground surface. While walking, the wand tip of the flame ionization detector (FID) was held within 2 inches of the landfill surface while traversing the grid. Per the approved alternative request, the wand tip of the FID was held at 2 inches of vegetation in areas where the landfill surface is covered with low-lying vegetation such as grasses while traversing the grid.

Monitoring Path

The TCRDF completed four consecutive instantaneous and integrated monitoring events with no exceedances. Pursuant to §95471(c)(1)(B)1., sites that complete four consecutive integrated and instantaneous monitoring events with no exceedances may increase the walking pattern spacing from a 25-foot spacing to a 100-foot spacing. In the event that an integrated or instantaneous exceedance cannot be remediated within 10 calendar days or an exceedance is observed during a compliance inspection, the TCRDF will be required to revert to 25-foot spacing.

Combined Instantaneous and Integrated Surface Emissions Monitoring

The instantaneous and integrated SEM were performed simultaneously by SCS using Landtec SEM-500 flame ionization detectors (FID), calibrated to 500 parts per million by volume (ppm_v) methane. The devices meet or exceed all guidelines set forth in the CCR Title 17 §95471(a) and the United States Environmental Protection Agency (USEPA) Method 21 requirements.

SCS personnel walked the surface of the landfill on a grid by grid basis. After completing 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_v (areas of concern) or 500 ppm_v (exceedances) for instantaneous were recorded, flagged, and marked on an SEM Map. 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.

The combined monitoring was conducted in accordance with the requirements of CCR Title 17 §95471(c)(2). Grids with results greater than 25 ppm_v were recorded, marked on the SEM map, and flagged for remediation. Any grids with integrated concentrations greater than 25 ppm_v are subject to the following corrective action and re-monitoring timeline:

- 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 10-day re-monitoring event shows the exceedance is corrected, all re-monitoring requirements have been completed.
- If 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 initial exceedance.

Component Leak Monitoring Procedures

SCS monitored the exposed LFG components under positive pressure (pipes, well heads, valves, blowers, and other mechanical appurtenances). All component leaks measured within 0.5 inches exceeding the compliance limit of 500 ppm_v per requirements outlined in pursuant to §Section 95464(b)(1)(B) and 1,000 ppm per requirements outlined in BAAQMD 8-34-303 were recorded. Component leaks are subject to the following timelines:

- 500-999 ppm_v leaks are subject to a 10-day repair and re-monitoring deadline from §95469(b)(3).

- Leaks at or above 1000 ppm_v are subject a 7-day repair and re-monitoring deadline from BAAQMD 8-34-301.2.

SECOND QUARTER 2020 SEM AND COMPONENT LEAK RESULTS

Reduction of SEM Frequency

The TCRDF has completed four consecutive instantaneous and integrated monitoring events with no exceedances. Pursuant to §95469(2)(C), any closed or inactive areas of active MSW landfills with no integrated exceedances for four consecutive quarters may reduce the frequency of integrated and instantaneous SEM to an annual basis. In the event that an exceedance cannot be remediated within 10 calendar days or an exceedance is observed during a compliance inspection, the TCRDF will be required to revert to quarterly monitoring. The next SEM event is due by March 31, 2021.

Pursuant to 8-34-506, landfills that are closed as defined in 8-34-223 with no exceedances in three consecutive quarters may reduce the frequency of instantaneous SEM to an annual basis. Any exceedance detected during annual monitoring will require the site to revert to quarterly monitoring.

Component Leak Monitoring Results

Component leak monitoring was conducted per the applicable requirements on April 8, 2020. There were no leaks detected above 500 ppm_v. Results are summarized in Attachment A.

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 500 ppm_v in air 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 B.

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) 613-2852.

Thank you,
Waste Management

Michael Chan
Environmental Protection Air Specialist

Attachment A –Component Leak Monitoring Event Records

- Component Leak Exceedances and Monitoring Logs

Attachment B –Calibration Records

- Instrument and Gas Calibration Records

Attachment A

Component Leak Monitoring Event Records

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

2020 QUARTER: 2

LANDFILL NAME: Tri-Cities Recycling and Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
April 8, 2020: No Exceedances								

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

2020 QUARTER: 2

LANDFILL NAME: **Tri-Cities Recycling and Disposal Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
April 8, 2020: No Exceedances								

Attachment B

Calibration Records

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 4-8-20 Site Name: Tri Cities

Inspector(s): Ryan Heslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 3 MPH Wind Direction: S Barometric Pressure: 29.8 "Hg

Air Temperature: 56 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	1	501	1	3
2	1	499	1	3
3	3	502	2	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 110032
Counters Observed for the Zero= 3412

Trial 2:
Counts Observed for the Span= 111328
Counters Observed for the Zero= 3498

Trial 3:
Counts Observed for the Span= 110508
Counters Observed for the Zero= 3423

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.7 ppm

Downwind Location Description: Entrance Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Post

Date: 4-8-20 Site Name: Tri Cities

Inspector(s): Ryan Haslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 3 MPH Wind Direction: N Barometric Pressure: 29.8 "Hg

Air Temperature: 57 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	2	497	3	5
2	2	501	1	2
3	3	500	0	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 114012
Counters Observed for the Zero= 3127

Trial 2:
Counts Observed for the Span= 115011
Counters Observed for the Zero= 3094

Trial 3:
Counts Observed for the Span= 114733
Counters Observed for the Zero= 3112

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Field Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

22 Albiston Way
Auburn, ME 04210
800-292-6218
207-777-6218
Fax 207-777-6215
www.specair.com

Date: 11/25/2019

Certificate of Analysis

Customer:
QED EVIRONMENTAL SYSTEMS

Order #: 1666448
Purchase Order #: 134463

Results are reported in mole percent, unless otherwise indicated. Mixes are prepared via partial pressure methods, or gravimetrically, using high load high sensitivity electronic scales. Prior to use, scales are verified for accuracy using applicable NIST traceable weights; analyses are calibrated against reference materials traceable to NIST weights and/or NIST gas reference materials.

Cylinder Size: 105L **CGA Connection:** C10 **Fill Pressure:** 1000 PSI

Analysis: Air Batch Analysis **Lot #:** 4932903

Component(s):	Requested Concentration(s):	Actual Concentration(s):
Oxygen	19.5%-23.5%	20.8%
Moisture	< 3 PPM	1.2 PPM
THC	< 0.1 PPM	< 0.1 PPM
CO/CO2	< 1 PPM	< 1 PPM

Expiration Date: 11/2022

Comments: MEETS OR EXCEEDS ULTRA ZERO GRADE AIR

Approved By:

Ron Abbott

CGAIR-0
AIR: ULTRA ZERO GRADE
CGAIR-0

SpecAir Specialty Gases
A DIVISION OF MAINEOXY

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Auburn, ME 04210
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207-777-6218
Fax 207-777-6215
www.specair.com

Date: 03/25/2020

Certificate of Analysis

Customer:
QED EVIRONMENTAL SYSTEMS

Order #: 1736278
Purchase Order #: 135856

Cylinder Size: 105L **CGA Connection:** C10 **Fill Pressure:** 1000 PSI

Analysis: Certified Batch Analysis **Lot #:** 4008501

Component(s):	Requested Concentration(s):	Actual Concentration(s):
Methane	500 PPM	495 PPM
Air	BALANCE	BALANCE

Expiration Date: 03/2023

Comments: MIX MADE USING DIGITAL BALANCES CALIBRATED TO NIST TRACEABLE WEIGHTS / ACCURACY: +/- 5%
METHOD OF PREPARATION: GRAVIMETRIC / PRESSURE TRANSFILLING
ANALYTICAL PRINCIPLE: GC (TCD)

Approved By:

Ron Abbott

Part #
CGCH4-500

QTY
1

Tuesday, March 31, 2020
FGA - R101 / O / 27

• Results are reported in mole percent, unless otherwise indicated. Mixes are prepared via parti[illegible]gh load high sensitivity electronic scales. Prior to use, scales are verified for accuracy using applicable NIST traceable weights; analyses are calibrated against reference materials traceable to NIST weights and/or NIST gas reference materials.
• The information contained herein has been prepared at your request by qualified experts. While we believe that the information is accurate within the limits of the analytical methods employed, and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any particular purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability arising out of the use of the information contained herein exceed the fee established for providing such information.
• This certifies that the instruments used for this analysis have been calibrated in compliance with the specifications in the order using SI/NIST traceable standards. When a statement of conformity is made, accept/reject decisions consider the measurement uncertainty and the specification tolerance. When the measurand and uncertainty are reported, measurement uncertainties are declared in the analytical results and the analytical results are not adjusted to consider measurement uncertainties.

WASTE MANAGEMENT
172 98th Avenue
Oakland, CA 94603
(510) 430-8509

September 11, 2020

Mr. Patrick Madej
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538

Re: Third Quarter 2020 Surface Emissions and Component Leak Monitoring Report for Tri-Cities Recycling and Disposal Facility

Dear Mr. Madej:

This monitoring report for "Tri-Cities Recycling and Disposal Facility (TCRDF)" contains the results of the Third Quarter 2020 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. All monitoring was performed by SCS Engineers (SCS).

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

- 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).
- CCR Title 17, Subchapter 10, Article 4, Subarticle 6, §95464.

TCRDF 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 according to the methods outlined in the July 1, 2016 ACO.

PROCEDURES

General

The surface of the TCRDF disposal area has been divided into one-hundred-and-nine (109), 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 TCRDF 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.

The monitoring probe was positioned 2 inches above the ground surface. While walking, the wand tip of the flame ionization detector (FID) was held within 2 inches of the landfill surface while traversing the grid. Per the approved alternative request, the wand tip of the FID was held at 2 inches of vegetation in areas where the landfill surface is covered with low-lying vegetation such as grasses while traversing the grid.

Monitoring Path

The TCRDF completed four consecutive instantaneous and integrated monitoring events with no exceedances. Pursuant to §95471(c)(1)(B)1., sites that complete four consecutive integrated and instantaneous monitoring events with no exceedances may increase the walking pattern spacing from a 25-foot spacing to a 100-foot spacing. In the event that an integrated or instantaneous exceedance cannot be remediated within 10 calendar days or an exceedance is observed during a compliance inspection, the TCRDF will be required to revert to 25-foot spacing.

Combined Instantaneous and Integrated Surface Emissions Monitoring

The instantaneous and integrated SEM were performed simultaneously by SCS using Landtec SEM-500 flame ionization detectors (FID), calibrated to 500 parts per million by volume (ppm_v) methane. The devices meet or exceed all guidelines set forth in the CCR Title 17 §95471(a) and the United States Environmental Protection Agency (USEPA) Method 21 requirements.

SCS personnel walked the surface of the landfill on a grid by grid basis. After completing 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_v (areas of concern) or 500 ppm_v (exceedances) for instantaneous were recorded, flagged, and marked on an SEM Map. 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.

The combined monitoring was conducted in accordance with the requirements of CCR Title 17 §95471(c)(2). Grids with results greater than 25 ppm_v were recorded, marked on the SEM map, and flagged for remediation. Any grids with integrated concentrations greater than 25 ppm_v are subject to the following corrective action and re-monitoring timeline:

- 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 10-day re-monitoring event shows the exceedance is corrected, all re-monitoring requirements have been completed.
- If 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 initial exceedance.

Component Leak Monitoring Procedures

SCS monitored the exposed LFG components under positive pressure (pipes, well heads, valves, blowers, and other mechanical appurtenances). All component leaks measured within 0.5 inches exceeding the compliance limit of 500 ppm_v per requirements outlined in pursuant to §Section 95464(b)(1)(B) and 1,000 ppm per requirements outlined in BAAQMD 8-34-303 were recorded. Component leaks are subject to the following timelines:

- 500-999 ppm_v leaks are subject to a 10-day repair and re-monitoring deadline from §95469(b)(3).

- Leaks at or above 1000 ppm_v are subject a 7-day repair and re-monitoring deadline from BAAQMD 8-34-301.2.

THIRD QUARTER 2020 SEM AND COMPONENT LEAK RESULTS

Reduction of SEM Frequency

The TCRDF has completed four consecutive instantaneous and integrated monitoring events with no exceedances. Pursuant to §95469(2)(C), any closed or inactive areas of active MSW landfills with no integrated exceedances for four consecutive quarters may reduce the frequency of integrated and instantaneous SEM to an annual basis. In the event that an exceedance cannot be remediated within 10 calendar days or an exceedance is observed during a compliance inspection, the TCRDF will be required to revert to quarterly monitoring. The next SEM event is due by March 31, 2021.

Pursuant to 8-34-506, landfills that are closed as defined in 8-34-223 with no exceedances in three consecutive quarters may reduce the frequency of instantaneous SEM to an annual basis. Any exceedance detected during annual monitoring will require the site to revert to quarterly monitoring.

Component Leak Monitoring Results

Component leak monitoring was conducted per the applicable requirements on August 10, 2020. There were no leaks detected above 500 ppm_v. Results are summarized in Attachment A.

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 500 ppm_v in air 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 B.

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) 613-2852.

Thank you,
Waste Management

Michael Chan
Environmental Protection Air Specialist

Attachment A –Component Leak Monitoring Event Records

- Component Leak Exceedances and Monitoring Logs

Attachment B –Calibration Records

- Instrument and Gas Calibration Records

Attachment A

Component Leak Monitoring Event Records

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

2020 QUARTER: 3

LANDFILL NAME: Tri-Cities Recycling and Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
August 10, 2020: No Exceedances								

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

2020 QUARTER: 3

LANDFILL NAME: **Tri-Cities Recycling and Disposal Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
August 10, 2020: No Exceedances								

Attachment B

Calibration Records

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Don Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 71 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1220 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	2	499	1	2
2	1	501	1	1
3	3	502	2	1

Average Difference: 1,3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1,3 /500 x 100%

= %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 136782
Counters Observed for the Zero= 2658

Trial 2:
Counts Observed for the Span= 136571
Counters Observed for the Zero= 2647

Trial 3:
Counts Observed for the Span= 136463
Counters Observed for the Zero= 2628

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1,1 ppm

Downwind Location Description: Flare Reading: 1,3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Don Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 93 °F General Weather Conditions: sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1220 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	1	501	1	1
2	3	501	1	2
3	2	502	2	1

Average Difference: 1,3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1,3 /500 x 100%

= 99,7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 135857
Counters Observed for the Zero= 2681

Trial 2:
Counts Observed for the Span= 135726
Counters Observed for the Zero= 2674

Trial 3:
Counts Observed for the Span= 135482
Counters Observed for the Zero= 2653

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1,1 ppm

Downwind Location Description: Plant Reading: 1,3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Ryan Haslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 71 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	3	501	1	1
2	2	502	2	2
3	1	501	1	1

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 135921
Counters Observed for the Zero= 2693

Trial 2:
Counts Observed for the Span= 135815
Counters Observed for the Zero= 2682

Trial 3:
Counts Observed for the Span= 135712
Counters Observed for the Zero= 2671

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: entrance Reading: 1.1 ppm

Downwind Location Description: Flare Reading: 1.3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

post

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Ryan Haslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 73 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	2	502	2	1
2	1	~~501~~	1	1
3	3	501	1	2

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 136728
Counters Observed for the Zero= 2681

Trial 2:
Counts Observed for the Span= 136517
Counters Observed for the Zero= 2672

Trial 3:
Counts Observed for the Span= 136482
Counters Observed for the Zero= 2647

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: entrance Reading: 1.1 ppm

Downwind Location Description: Plant Reading: 1.3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

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Date: 11/25/2019

Certificate of Analysis

Customer:
QED EVIRONMENTAL SYSTEMS

Order #: 1666448
Purchase Order #: 134463

Results are reported in mole percent, unless otherwise indicated. Mixes are prepared via partial pressure methods, or gravimetrically, using high load high sensitivity electronic scales. Prior to use, scales are verified for accuracy using applicable NIST traceable weights; analyses are calibrated against reference materials traceable to NIST weights and/or NIST gas reference materials.

Cylinder Size: 105L **CGA Connection:** C10 **Fill Pressure:** 1000 PSI

Analysis: Air Batch Analysis **Lot #:** 4932903

Component(s):	Requested Concentration(s):	Actual Concentration(s):
Oxygen	19.5%-23.5%	20.8%
Moisture	< 3 PPM	1.2 PPM
THC	< 0.1 PPM	< 0.1 PPM
CO/CO2	< 1 PPM	< 1 PPM

Expiration Date: 11/2022

Comments: MEETS OR EXCEEDS ULTRA ZERO GRADE AIR

Approved By:

Ron Abbott

CGAIR-0
AIR: ULTRA ZERO GRADE
CGAIR-0

SpecAir Specialty Gases
A DIVISION OF MAINEOXY

22 Albiston Way
Auburn, ME 04210
800-292-6218
207-777-6218
Fax 207-777-6215
www.specair.com

Date: 03/25/2020

Certificate of Analysis

Customer:
QED EVIRONMENTAL SYSTEMS

Order #: 1736278
Purchase Order #: 135856

Cylinder Size: 105L **CGA Connection:** C10 **Fill Pressure:** 1000 PSI

Analysis: Certified Batch Analysis **Lot #:** 4008501

Component(s):	Requested Concentration(s):	Actual Concentration(s):
Methane	500 PPM	495 PPM
Air	BALANCE	BALANCE

Expiration Date: 03/2023

Comments: MIX MADE USING DIGITAL BALANCES CALIBRATED TO NIST TRACEABLE WEIGHTS / ACCURACY: +/- 5%
METHOD OF PREPARATION: GRAVIMETRIC / PRESSURE TRANSFILLING
ANALYTICAL PRINCIPLE: GC (TCD)

Approved By:

Ron Abbott

Part #
CGCH4-500

QTY
1

Tuesday, March 31, 2020
FGA - R101 / O / 27

• Results are reported in mole percent, unless otherwise indicated. Mixes are prepared via parti[illegible]gh load high sensitivity electronic scales. Prior to use, scales are verified for accuracy using applicable NIST traceable weights; analyses are calibrated against reference materials traceable to NIST weights and/or NIST gas reference materials.
• The information contained herein has been prepared at your request by qualified experts. While we believe that the information is accurate within the limits of the analytical methods employed, and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any particular purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability arising out of the use of the information contained herein exceed the fee established for providing such information.
• This certifies that the instruments used for this analysis have been calibrated in compliance with the specifications in the order using SI/NIST traceable standards. When a statement of conformity is made, accept/reject decisions consider the measurement uncertainty and the specification tolerance. When the measurand and uncertainty are reported, measurement uncertainties are declared in the analytical results and the analytical results are not adjusted to consider measurement uncertainties.

APPENDIX G

WELLFIELD MONITORING LOGS

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - May 6, 8, 15, and 20, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	5/6/2020 11:22	51.0	36.7	1.0	11.3	-12.75	97.2	-12.75	97.2
TRIC0001	5/8/2020 12:12	52.2	36.7	0.8	10.3	-10.70	101.4	-10.69	101.6
TRIC0001	5/8/2020 12:36	51.3	36.3	0.8	11.6	-10.25	101.8	-10.47	102.0
TRIC0001	5/8/2020 12:44	51.7	36.5	0.8	11.0	-9.90	101.1	-13.77	101.6
TRIC0001	5/8/2020 12:49	52.6	37.1	0.5	9.8	-12.16	101.4	-12.15	101.6
TRIC0001	5/8/2020 16:17	55.1	36.0	0.7	8.2	-10.65	102.0	-14.23	102.5
TRIC0001	5/15/2020 19:57	52.6	37.2	1.2	9.0	-15.64	92.7	-20.54	93.4
TRIC0116	5/6/2020 12:24	54.7	36.4	1.5	7.4	-42.81	81.2	-42.82	81.3
TRIC0118	5/6/2020 13:36	16.2	24.1	0.0	59.7	-0.80	97.9	-0.79	97.9
TRIC0123	5/6/2020 11:41	48.7	37.0	0.0	14.3	-16.10	119.2	-16.11	119.3
TRIC0126	5/6/2020 11:34	50.5	36.2	0.0	13.3	-7.09	110.7	-7.09	110.7
TRIC0128	5/6/2020 13:07	46.1	34.6	0.0	19.3	-9.87	113.5	-9.87	113.5
TRIC0129	5/6/2020 13:30	47.1	35.9	3.0	14.0	-31.78	85.9	-31.79	85.9
TRIC0200	5/6/2020 12:51	46.8	35.0	0.0	18.2	-10.01	113.1	-10.00	113.1
TRIC0201	5/6/2020 12:57	30.5	29.5	0.0	40.0	-0.83	103.3	-0.82	103.3
TRIC0202	5/6/2020 13:12	47.2	36.5	0.0	16.3	-9.98	117.6	-9.99	117.6
TRIC0204	5/6/2020 12:46	49.2	38.6	0.1	12.1	-8.41	127.8	-8.45	128.0
TRIC0204	5/8/2020 13:46	49.0	37.2	0.2	13.6	-8.03	129.2	-8.02	129.2
TRIC0204	5/8/2020 13:56	49.4	37.6	0.2	12.8	-7.63	128.4	-8.03	128.6
TRIC0204	5/15/2020 20:24	50.8	39.5	0.1	9.6	-8.80	127.6	-8.81	127.5
TRIC0205	5/6/2020 11:00	48.4	37.0	0.0	14.6	-13.69	125.3	-13.70	125.3
TRIC0206	5/6/2020 11:48	50.0	38.3	0.0	11.7	-2.86	121.6	-2.85	121.6
TRIC0206	5/8/2020 13:00	50.5	37.7	0.0	11.8	-2.61	123.4	-2.61	123.5
TRIC0206	5/8/2020 13:07	50.4	37.7	0.0	11.9	-2.31	117.4	-2.43	121.5
TRIC0206	5/8/2020 16:26	51.9	37.2	0.0	10.9	-2.40	123.9	-2.42	124.0
TRIC0206	5/15/2020 19:49	51.6	38.7	0.0	9.7	-3.01	121.0	-3.02	121.1
TRIC0207	5/6/2020 10:41	44.2	34.8	0.0	21.0	-37.95	120.2	-37.94	120.1
TRIC0208	5/6/2020 13:24	47.1	38.0	0.0	14.9	-25.72	123.8	-25.71	123.8
TRIC0209	5/6/2020 13:47	48.7	37.9	0.0	13.4	-47.93	118.1	-47.93	118.1
TRIC0210	5/6/2020 13:52	47.0	37.1	0.0	15.9	-0.91	120.1	-0.90	120.3
TRIC0211	5/6/2020 10:14	48.8	36.4	0.0	14.8	-21.44	118.5	-21.45	118.5
TRIC0212	5/6/2020 10:32	30.2	28.5	0.0	41.3	-1.60	101.2	-1.60	101.3
TRIC0213	5/6/2020 10:48	47.4	36.7	0.0	15.9	-2.72	111.8	-2.72	111.9
TRIC0213	5/8/2020 17:22	51.0	37.2	0.0	11.8	-1.80	115.1	-1.82	115.1
TRIC0213	5/8/2020 18:21	51.2	37.2	0.0	11.6	-2.01	114.6	-2.01	114.6
TRIC0214	5/6/2020 11:18	46.0	37.1	0.0	16.9	-1.13	113.4	-1.14	113.5
TRIC0214	5/8/2020 14:04	47.4	35.9	0.1	16.6	-0.86	117.4	-0.84	117.4
TRIC0214	5/8/2020 14:08	47.4	36.1	0.0	16.5	-0.73	117.3	-0.75	117.4
TRIC0214	5/8/2020 16:33	49.2	36.7	0.0	14.1	-0.90	117.4	-0.86	117.4
TRIC0214	5/8/2020 16:38	50.7	38.1	0.0	11.2	-8.08	128.9	-8.07	128.9
TRIC0214	5/15/2020 20:08	48.2	37.6	0.0	14.2	-1.07	114.9	-1.13	114.9
TRIC0215	5/6/2020 11:06	49.0	37.6	0.0	13.4	-50.58	125.8	-50.58	125.8
TRIC0218	5/6/2020 13:15	25.9	27.4	0.0	46.7	-1.32	95.5	-1.32	95.5
TRIC0219	5/6/2020 14:00	43.4	33.8	0.4	22.4	-1.26	112.5	-1.25	112.5
TRIC0220	5/6/2020 10:26	37.7	31.9	0.0	30.4	-2.07	96.8	-2.06	96.7
TRIC0222	5/6/2020 10:22	48.0	35.7	0.0	16.3	-8.31	116.5	-8.32	116.5
TRIC0223	5/6/2020 13:55	46.1	35.6	0.0	18.3	-2.76	121.2	-2.76	121.1
TRIC0223	5/8/2020 14:20	46.2	34.3	0.1	19.4	-2.66	122.2	-2.66	122.2
TRIC0223	5/8/2020 14:33	46.7	34.5	0.0	18.8	-2.47	119.4	-2.51	119.7
TRIC0223	5/8/2020 16:45	47.3	35.0	0.0	17.7	-2.98	119.7	-2.96	119.8
TRIC0223	5/15/2020 20:17	47.1	36.2	0.0	16.7	-3.29	116.8	-3.31	116.9
TRIC0223	5/20/2020 13:21	45.5	34.6	0.1	19.8	-4.09	119.2	-3.97	119.1
TRIC0224	5/6/2020 13:02	37.2	30.4	0.0	32.4	-1.09	79.5	-1.09	79.5

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - May 6, 8, 15, and 20, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0225	5/6/2020 12:09	52.6	37.1	0.0	10.3	-2.92	116.9	-2.92	116.9
TRIC0226	5/6/2020 10:36	47.3	37.6	0.0	15.1	-1.87	116.9	-1.88	116.9
TRIC0227	5/6/2020 13:20	25.9	28.5	0.0	45.6	-0.40	87.3	-0.40	87.3
TRIC0228	5/6/2020 13:44	43.1	35.5	0.0	21.4	-1.09	117.9	-1.09	117.9
TRIC0229	5/6/2020 10:19	48.4	36.2	0.0	15.4	-4.78	113.5	-4.78	113.5
TRIC0230	5/6/2020 13:40	38.9	33.9	0.0	27.2	-1.49	125.3	-1.49	125.3
TRIC0230	5/8/2020 13:22	40.8	33.7	0.0	25.5	-1.36	127.9	-1.36	128.0
TRIC0230	5/8/2020 13:30	42.0	30.6	0.3	27.1	-1.12	126.7	-1.25	127.8
TRIC0230	5/8/2020 16:59	43.7	34.8	0.0	21.5	-1.16	127.9	-1.09	127.8
TRIC0230	5/15/2020 19:32	41.0	34.6	0.0	24.4	-2.35	125.5	-2.33	125.3
TRICO203	5/6/2020 12:41	49.6	39.2	0.0	11.2	-0.77	108.7	-0.77	108.7
TRICO203	5/8/2020 17:10	53.6	40.1	0.0	6.3	-0.15	114.1	-0.32	114.9
TRICO203	5/8/2020 17:55	53.7	39.7	0.0	6.6	-0.44	113.7	-0.46	114.1
TRICO203	5/15/2020 20:30	51.3	40.3	0.0	8.4	-1.15	110.5	-1.11	110.7
TRICO216	5/6/2020 11:55	42.8	34.7	0.0	22.5	-1.32	102.2	-1.32	102.1
TRICO217	5/6/2020 12:36	50.2	37.4	0.0	12.4	-3.51	121.0	-3.51	121.0
TRICO221	5/6/2020 12:18	48.2	36.3	0.0	15.5	-0.99	112.9	-0.97	112.9

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - June 3 and 10, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	6/3/2020 10:38	49.4	36.4	1.2	13.0	-17.74	100.0	-17.74	100.1
TRIC0116	6/3/2020 10:03	53.3	36.5	1.4	8.8	-40.40	95.0	-40.40	95.0
TRIC0118	6/3/2020 8:09	16.5	24.6	0.0	58.9	-1.14	99.0	-0.70	97.8
TRIC0123	6/3/2020 10:44	46.9	36.8	0.0	16.3	-16.18	119.7	-16.18	119.7
TRIC0126	6/3/2020 10:55	48.4	36.3	0.0	15.3	-7.15	113.3	-7.15	113.2
TRIC0128	6/3/2020 8:25	45.2	34.7	0.0	20.1	-10.60	114.0	-10.61	114.0
TRIC0129	6/3/2020 9:28	45.8	35.7	3.1	15.4	-21.27	92.5	-21.31	92.5
TRIC0200	6/3/2020 8:37	46.5	35.2	0.0	18.3	-10.51	113.5	-10.51	113.5
TRIC0201	6/3/2020 8:46	29.9	29.7	0.0	40.4	-1.37	105.4	-1.20	104.3
TRIC0202	6/3/2020 8:16	47.0	36.9	0.0	16.1	-10.56	118.1	-10.56	118.0
TRIC0202	6/10/2020 12:11	47.1	35.5	0.0	17.4	-9.97	118.2	-9.98	118.2
TRIC0202	6/10/2020 12:37	45.2	35.1	0.2	19.5	-10.51	118.0	-10.18	118.0
TRIC0204	6/3/2020 11:11	47.9	39.2	0.0	12.9	-9.49	129.1	-9.49	129.1
TRIC0205	6/3/2020 10:26	47.1	37.5	0.0	15.4	-13.52	125.7	-13.51	125.7
TRIC0206	6/3/2020 10:18	48.4	38.1	0.0	13.5	-3.64	124.3	-3.64	124.3
TRIC0207	6/3/2020 11:05	43.6	34.6	0.0	21.8	-36.72	120.4	-36.74	120.4
TRIC0208	6/3/2020 9:17	46.1	38.1	0.0	15.8	-26.08	124.2	-26.08	124.1
TRIC0209	6/3/2020 9:34	47.4	38.4	0.0	14.2	-47.30	118.8	-47.30	118.8
TRIC0210	6/3/2020 7:53	46.1	36.5	0.0	17.4	-1.52	120.6	-1.52	120.6
TRIC0211	6/3/2020 11:37	47.1	36.1	0.0	16.8	-20.91	119.1	-20.91	119.1
TRIC0212	6/3/2020 11:24	29.6	28.1	0.0	42.3	-1.60	109.0	-1.46	106.7
TRIC0213	6/3/2020 11:00	46.7	37.3	0.0	16.0	-2.68	116.9	-2.69	116.9
TRIC0214	6/3/2020 10:32	44.9	37.1	0.0	18.0	-1.21	117.0	-1.23	117.0
TRIC0215	6/3/2020 10:22	48.0	37.7	0.0	14.3	-48.61	126.1	-48.61	126.1
TRIC0218	6/3/2020 9:12	25.3	27.9	0.0	46.8	-1.90	97.8	-1.93	97.9
TRIC0219	6/3/2020 7:44	37.2	29.4	2.7	30.7	-1.99	112.7	-1.99	112.7
TRIC0220	6/3/2020 11:28	35.7	31.0	0.0	33.3	-2.02	104.6	-2.01	104.7
TRIC0222	6/3/2020 11:31	46.6	35.3	0.0	18.1	-8.19	116.9	-8.20	116.9
TRIC0223	6/3/2020 7:48	45.5	35.5	0.0	19.0	-3.95	122.3	-3.95	122.3
TRIC0224	6/3/2020 8:33	32.9	27.2	1.9	38.0	-1.69	87.7	-1.69	87.7
TRIC0225	6/3/2020 10:49	49.7	37.0	0.0	13.3	-3.64	118.8	-3.64	118.8
TRIC0226	6/3/2020 11:16	45.7	37.6	0.0	16.7	-2.03	117.9	-2.03	117.9
TRIC0227	6/3/2020 9:03	25.0	28.8	0.0	46.2	-1.04	90.8	-1.11	91.4
TRIC0227	6/3/2020 9:39	24.0	28.7	0.0	47.3	-1.13	90.0	-1.13	90.1
TRIC0228	6/3/2020 7:58	43.4	35.7	0.0	20.9	-1.81	118.7	-1.81	118.7
TRIC0229	6/3/2020 11:34	46.9	36.0	0.0	17.1	-4.65	115.6	-4.65	115.6
TRIC0230	6/3/2020 8:03	38.6	34.1	0.0	27.3	-2.03	126.7	-2.03	126.8
TRICO203	6/3/2020 9:44	47.8	39.7	0.0	12.5	-1.62	116.2	-1.62	116.2
TRICO216	6/3/2020 10:14	41.3	34.4	0.0	24.3	-1.73	105.9	-1.74	106.0
TRICO217	6/3/2020 9:56	48.0	37.9	0.0	14.1	-4.64	121.7	-4.69	121.7
TRICO221	6/3/2020 10:10	46.8	36.2	0.0	17.0	-1.06	115.0	-1.06	115.0

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - July 15 and 29, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	7/15/2020 11:20	38.5	30.4	3.7	27.4	-36.52	94.3	-36.56	94.4
TRIC0116	7/15/2020 11:40	52.4	35.0	2.0	10.6	-39.01	86.2	-39.01	86.2
TRIC0118	7/15/2020 9:56	18.6	25.7	0.0	55.7	-0.68	96.0	-0.68	96.0
TRIC0123	7/15/2020 11:15	47.6	37.2	0.0	15.2	-16.21	119.4	-16.21	119.4
TRIC0126	7/15/2020 11:54	48.2	36.4	0.0	15.4	-6.82	112.5	-6.84	112.4
TRIC0128	7/15/2020 10:11	46.2	34.4	0.0	19.4	-10.43	113.7	-10.44	113.7
TRIC0129	7/15/2020 10:58	46.2	35.3	3.4	15.1	-13.22	80.3	-13.22	80.3
TRIC0200	7/15/2020 10:23	47.2	35.0	0.0	17.8	-10.48	113.4	-10.48	113.4
TRIC0201	7/15/2020 10:26	28.8	28.6	0.0	42.6	-1.20	101.0	-1.20	101.0
TRIC0202	7/15/2020 10:06	47.5	36.0	0.1	16.4	-10.92	117.7	-10.92	117.7
TRIC0204	7/15/2020 11:09	48.7	38.8	0.0	12.5	-9.69	128.7	-9.69	128.8
TRIC0205	7/15/2020 13:10	48.0	36.9	0.0	15.1	-13.21	125.4	-13.21	125.4
TRIC0205	7/29/2020 12:30	52.4	37.4	0.0	10.2	-8.35	126.0	-10.07	126.3
TRIC0206	7/15/2020 11:26	48.7	37.9	0.0	13.4	-3.59	123.7	-3.59	123.6
TRIC0207	7/15/2020 12:08	44.3	34.9	0.0	20.8	-36.93	120.4	-36.93	120.4
TRIC0208	7/15/2020 10:50	46.7	37.9	0.0	15.4	-26.26	124.0	-26.26	124.0
TRIC0209	7/15/2020 11:05	47.9	37.7	0.0	14.4	-47.53	118.3	-47.53	118.3
TRIC0210	7/15/2020 9:36	46.3	36.6	0.0	17.1	-1.53	120.3	-1.53	120.3
TRIC0211	7/15/2020 13:03	47.6	35.6	0.0	16.8	-20.77	118.5	-20.77	118.5
TRIC0212	7/15/2020 12:20	31.1	28.4	0.0	40.5	-1.12	99.1	-1.11	99.1
TRIC0213	7/15/2020 12:03	47.5	36.9	0.0	15.6	-2.44	113.6	-2.44	113.6
TRIC0214	7/15/2020 11:59	45.2	35.6	0.0	19.2	-1.20	115.9	-1.20	115.9
TRIC0215	7/15/2020 13:07	48.7	37.1	0.0	14.2	-48.66	125.9	-48.66	125.9
TRIC0218	7/15/2020 10:45	26.1	27.4	0.0	46.5	-1.81	97.1	-1.81	97.2
TRIC0219	7/15/2020 9:25	42.7	34.1	0.0	23.2	-1.88	111.5	-1.88	111.9
TRIC0220	7/15/2020 12:25	35.9	30.9	0.0	33.2	-1.81	99.6	-1.79	99.7
TRIC0222	7/15/2020 12:28	47.5	35.5	0.0	17.0	-8.07	116.6	-8.07	116.6
TRIC0223	7/15/2020 9:32	45.5	35.7	0.0	18.8	-3.77	122.0	-3.78	122.0
TRIC0224	7/15/2020 10:19	35.8	29.1	0.7	34.4	-1.68	82.5	-1.68	82.5
TRIC0225	7/15/2020 11:45	50.0	36.7	0.0	13.3	-3.45	118.8	-3.45	118.8
TRIC0226	7/15/2020 12:15	46.2	37.6	0.0	16.2	-1.83	117.1	-1.83	117.1
TRIC0227	7/15/2020 10:41	25.1	28.7	0.0	46.2	-0.90	84.9	-0.90	85.0
TRIC0228	7/15/2020 9:40	43.4	35.9	0.0	20.7	-1.76	118.1	-1.77	118.0
TRIC0229	7/15/2020 12:55	48.8	35.8	0.0	15.4	-4.36	115.1	-4.36	115.1
TRIC0230	7/15/2020 9:51	38.5	33.9	0.0	27.6	-1.89	125.0	-1.89	124.9
TRICO203	7/15/2020 10:35	48.4	39.1	0.0	12.5	-1.42	110.7	-1.43	110.7
TRICO216	7/15/2020 11:30	41.5	34.1	0.0	24.4	-1.61	104.6	-1.61	104.7
TRICO217	7/15/2020 10:31	48.5	37.4	0.0	14.1	-4.81	121.5	-4.82	121.5
TRICO221	7/15/2020 11:34	47.3	35.7	0.0	17.0	-0.93	114.3	-0.93	114.2

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - August 12, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	8/12/2020 8:06	44.2	33.3	3.1	19.4	-49.15	80.5	-49.15	80.5
TRIC0116	8/12/2020 8:30	50.5	33.6	3.3	12.6	-33.08	74.4	-33.11	74.5
TRIC0118	8/12/2020 9:46	19.6	26.5	0.0	53.9	-0.69	97.0	-0.70	97.0
TRIC0123	8/12/2020 8:10	48.5	37.6	0.0	13.9	-16.12	119.2	-16.13	119.2
TRIC0126	8/12/2020 8:49	49.2	36.8	0.0	14.0	-7.03	111.1	-7.03	111.1
TRIC0128	8/12/2020 9:24	46.2	34.4	0.0	19.4	-10.54	113.7	-10.54	113.7
TRIC0129	8/12/2020 10:03	44.2	33.6	4.1	18.1	-10.72	81.3	-11.21	81.3
TRIC0200	8/12/2020 8:59	47.3	35.3	0.0	17.4	-10.53	113.4	-10.54	113.5
TRIC0201	8/12/2020 9:02	29.0	28.9	0.0	42.1	-1.19	96.7	-1.19	96.7
TRIC0202	8/12/2020 9:41	47.7	36.6	0.0	15.7	-10.96	118.0	-10.96	118.0
TRIC0204	8/12/2020 8:43	49.2	38.8	0.0	12.0	-9.71	128.6	-9.71	128.6
TRIC0205	8/12/2020 7:32	49.7	37.6	0.0	12.7	-13.60	125.1	-13.60	125.2
TRIC0206	8/12/2020 8:14	49.7	38.2	0.0	12.1	-3.58	120.1	-3.59	121.5
TRIC0207	8/12/2020 7:24	45.5	35.4	0.0	19.1	-37.02	120.1	-37.08	120.1
TRIC0208	8/12/2020 9:54	47.0	37.5	0.0	15.5	-26.12	124.1	-26.13	124.1
TRIC0209	8/12/2020 10:09	48.0	37.6	0.0	14.4	-47.55	118.1	-47.55	118.2
TRIC0210	8/12/2020 10:16	46.1	36.5	0.0	17.4	-1.61	120.4	-1.61	120.4
TRIC0211	8/12/2020 7:00	48.5	36.3	0.0	15.2	-20.93	118.3	-20.94	118.3
TRIC0212	8/12/2020 7:17	31.8	29.2	0.0	39.0	-1.44	88.1	-1.44	88.2
TRIC0213	8/12/2020 7:28	50.0	37.6	0.0	12.4	-2.63	112.7	-2.63	112.8
TRIC0214	8/12/2020 7:46	46.6	37.8	0.0	15.6	-1.47	116.0	-1.47	116.0
TRIC0215	8/12/2020 7:42	49.7	37.7	0.0	12.6	-49.32	125.8	-49.32	125.8
TRIC0218	8/12/2020 9:10	26.3	28.1	0.0	45.6	-1.94	96.2	-1.94	95.9
TRIC0219	8/12/2020 6:56	43.2	34.3	0.0	22.5	-1.96	111.7	-1.96	111.7
TRIC0220	8/12/2020 7:12	36.1	31.4	0.0	32.5	-2.03	95.9	-2.04	95.9
TRIC0222	8/12/2020 7:08	48.3	35.9	0.0	15.8	-8.31	116.5	-8.32	116.5
TRIC0223	8/12/2020 10:20	45.4	35.4	0.0	19.2	-3.79	122.3	-3.79	122.3
TRIC0224	8/12/2020 9:19	34.1	27.1	2.2	36.6	-1.74	79.2	-1.75	79.2
TRIC0225	8/12/2020 8:53	50.8	37.1	0.0	12.1	-3.56	118.5	-3.56	118.5
TRIC0226	8/12/2020 7:20	47.0	37.7	0.0	15.3	-2.07	115.6	-2.08	115.6
TRIC0227	8/12/2020 9:07	25.0	28.2	0.5	46.3	-1.06	80.3	-1.06	80.3
TRIC0228	8/12/2020 10:13	43.2	35.6	0.0	21.2	-1.96	118.5	-1.96	118.5
TRIC0229	8/12/2020 7:04	48.7	36.7	0.0	14.6	-4.58	113.7	-4.57	113.7
TRIC0230	8/12/2020 9:51	37.7	33.7	0.0	28.6	-1.98	127.3	-1.98	127.3
TRICO203	8/12/2020 8:38	48.9	39.1	0.0	12.0	-1.45	113.9	-1.46	113.9
TRICO216	8/12/2020 8:20	42.7	35.0	0.0	22.3	-1.90	102.0	-1.89	102.0
TRICO217	8/12/2020 8:33	48.6	37.4	0.0	14.0	-4.85	121.4	-4.86	121.4
TRICO221	8/12/2020 8:24	48.0	36.6	0.0	15.4	-1.18	113.1	-1.18	113.1

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - September 9, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	9/9/2020 8:27	46.9	35.4	3.7	14.0	-51.60	64.2	-51.59	64.1
TRIC0116	9/9/2020 10:10	58.1	38.0	0.8	3.1	-48.93	70.8	-48.93	70.8
TRIC0118	9/9/2020 7:42	21.4	27.6	0.0	51.0	-1.06	93.9	-1.07	93.9
TRIC0123	9/9/2020 8:40	49.4	38.2	0.0	12.4	-16.53	118.4	-16.55	118.5
TRIC0126	9/9/2020 9:14	50.6	37.3	0.0	12.1	-7.65	109.5	-7.64	109.5
TRIC0128	9/9/2020 9:28	47.3	35.0	0.0	17.7	-11.55	113.5	-11.55	113.5
TRIC0129	9/9/2020 10:31	47.3	35.5	3.3	13.9	-40.49	66.2	-40.49	66.2
TRIC0200	9/9/2020 9:19	48.2	35.7	0.0	16.1	-11.43	113.2	-11.43	113.2
TRIC0201	9/9/2020 9:47	30.0	29.7	0.0	40.3	-2.16	94.4	-2.15	94.5
TRIC0202	9/9/2020 9:32	48.6	36.5	0.0	14.9	-12.07	117.7	-12.06	117.7
TRIC0204	9/9/2020 9:52	49.9	38.5	0.0	11.6	-10.80	128.4	-10.77	128.4
TRIC0205	9/9/2020 8:49	50.1	37.9	0.0	12.0	-14.44	124.9	-14.45	124.9
TRIC0206	9/9/2020 8:59	50.1	37.6	0.0	12.3	-4.73	122.1	-5.10	123.2
TRIC0207	9/9/2020 8:13	46.5	35.5	0.0	18.0	-37.68	120.1	-37.69	120.1
TRIC0208	9/9/2020 10:15	48.0	38.2	0.0	13.8	-26.96	124.0	-26.97	124.0
TRIC0209	9/9/2020 10:36	49.2	37.8	0.0	13.0	-48.03	118.3	-48.03	118.3
TRIC0210	9/9/2020 7:27	46.9	36.2	0.0	16.9	-2.07	119.5	-2.07	119.4
TRIC0211	9/9/2020 7:55	49.1	36.6	0.0	14.3	-22.06	118.9	-22.06	119.0
TRIC0212	9/9/2020 8:07	33.0	29.1	0.0	37.9	-2.28	84.3	-2.27	84.4
TRIC0213	9/9/2020 8:17	49.9	37.5	0.0	12.6	-3.27	112.3	-3.27	112.6
TRIC0214	9/9/2020 8:23	45.5	37.3	0.0	17.2	-2.01	114.4	-2.02	114.4
TRIC0215	9/9/2020 8:44	50.2	38.3	0.0	11.5	-49.87	125.6	-49.87	125.6
TRIC0218	9/9/2020 9:42	27.2	28.9	0.0	43.9	-2.93	94.0	-2.93	93.9
TRIC0219	9/9/2020 7:19	42.9	32.9	0.1	24.1	-2.34	111.5	-2.34	111.5
TRIC0220	9/9/2020 8:03	37.4	30.6	0.0	32.0	-2.93	93.4	-2.93	93.1
TRIC0222	9/9/2020 8:00	48.6	36.0	0.0	15.4	-9.04	116.4	-9.04	116.4
TRIC0223	9/9/2020 7:23	46.6	35.0	0.0	18.4	-4.33	121.3	-4.32	121.3
TRIC0224	9/9/2020 9:23	34.4	26.1	3.2	36.3	-2.88	68.8	-2.88	68.8
TRIC0225	9/9/2020 9:10	50.4	36.4	0.0	13.2	-4.67	118.4	-4.66	118.4
TRIC0226	9/9/2020 8:10	46.7	37.7	0.0	15.6	-2.70	116.6	-2.70	116.6
TRIC0227	9/9/2020 9:38	24.7	28.4	0.8	46.1	-2.01	71.5	-2.01	71.5
TRIC0228	9/9/2020 7:31	44.1	35.5	0.0	20.4	-2.45	116.6	-2.45	116.6
TRIC0229	9/9/2020 7:52	48.1	36.7	0.0	15.2	-5.29	115.0	-5.30	115.1
TRIC0230	9/9/2020 7:36	36.9	32.7	0.0	30.4	-2.58	125.9	-2.32	124.7
TRICO203	9/9/2020 9:59	46.9	37.9	0.0	15.2	-2.44	112.7	-2.45	112.8
TRICO216	9/9/2020 9:03	40.3	34.3	0.0	25.4	-2.92	99.0	-2.94	99.0
TRICO217	9/9/2020 10:06	48.6	37.7	0.0	13.7	-5.88	121.2	-5.88	121.2
TRICO221	9/9/2020 9:07	47.4	35.2	0.0	17.4	-1.99	110.5	-1.99	110.5

Tri-Cities Recycling & Disposal Facility

Wellfield Monitoring Report - October 13 and 27, 2020

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide) (%)	O2 (Oxygen) (%)	Balance Gas (%)	Initial Static Pressure ("H2O)	Initial Temperature (°F)	Adjusted Static Pressure ("H2O)	Adjusted Temperature (°F)
TRIC0001	10/27/2020 8:06	53.1	38.3	0.1	8.5	-50.98	51.6	-51.16	51.5
TRIC0116	10/13/2020 10:20	43.8	28.6	4.8	22.8	-47.18	86.1	-47.19	86.3
TRIC0118	10/13/2020 10:07	20.8	25.8	0.0	53.4	-1.40	97.3	-1.40	97.3
TRIC0123	10/13/2020 11:30	47.6	34.6	0.0	17.8	-16.84	119.7	-16.84	119.7
TRIC0126	10/13/2020 10:28	48.3	36.2	0.0	15.5	-7.53	106.4	-7.53	106.4
TRIC0128	10/13/2020 10:11	46.4	31.9	0.0	21.7	-11.43	114.1	-11.44	114.1
TRIC0129	10/27/2020 8:00	57.2	40.8	0.6	1.4	-29.47	51.9	-30.07	51.8
TRIC0200	10/13/2020 10:16	46.7	33.7	0.0	19.6	-11.40	113.5	-11.41	113.5
TRIC0201	10/13/2020 11:39	30.7	26.8	0.0	42.5	-1.86	100.4	-1.85	100.4
TRIC0202	10/13/2020 10:09	48.3	35.5	0.0	16.2	-11.95	114.9	-11.96	114.9
TRIC0204	10/13/2020 11:16	48.4	37.0	0.0	14.6	-10.54	128.9	-10.54	128.9
TRIC0205	10/13/2020 11:21	47.3	32.8	0.0	19.9	-14.27	125.3	-14.26	125.3
TRIC0206	10/13/2020 11:23	48.5	35.3	0.0	16.2	-5.04	124.5	-5.03	124.5
TRIC0207	10/13/2020 10:38	44.5	33.9	0.0	21.6	-38.04	120.4	-38.04	120.4
TRIC0208	10/13/2020 11:04	45.9	34.8	0.0	19.3	-26.72	124.2	-26.72	124.3
TRIC0209	10/13/2020 10:59	47.4	34.7	0.0	17.9	-48.28	118.7	-48.27	118.7
TRIC0210	10/13/2020 12:21	46.6	32.2	0.0	21.2	-1.76	120.7	-1.78	120.7
TRIC0211	10/13/2020 10:57	47.9	33.8	0.0	18.3	-22.16	119.4	-22.16	119.4
TRIC0212	10/13/2020 10:43	32.6	28.2	0.0	39.2	-2.19	92.7	-2.21	92.8
TRIC0213	10/13/2020 10:36	47.8	35.7	0.0	16.5	-3.43	115.3	-3.44	115.4
TRIC0214	10/13/2020 10:34	42.7	33.0	0.0	24.3	-2.13	115.9	-2.14	115.9
TRIC0215	10/13/2020 11:19	48.7	35.5	0.0	15.8	-49.77	125.9	-49.76	125.9
TRIC0218	10/13/2020 11:08	26.8	26.2	0.0	47.0	-2.77	98.0	-2.77	98.0
TRIC0219	10/13/2020 9:55	41.6	32.9	0.0	25.5	-12.61	113.0	-2.73	113.0
TRIC0220	10/13/2020 10:50	36.2	29.1	0.0	34.7	-3.06	94.6	-3.00	95.0
TRIC0222	10/13/2020 10:52	46.9	33.6	0.0	19.5	-9.08	116.8	-9.08	116.8
TRIC0223	10/13/2020 9:59	44.9	34.6	0.0	20.5	-4.53	117.6	-4.53	117.7
TRIC0224	10/13/2020 10:14	39.8	28.3	0.0	31.9	-2.75	82.6	-2.75	82.6
TRIC0225	10/13/2020 10:25	50.6	36.2	0.0	13.2	-4.19	117.4	-4.19	117.3
TRIC0226	10/13/2020 10:40	45.5	34.6	0.0	19.9	-2.80	117.4	-2.80	117.4
TRIC0227	10/13/2020 11:06	26.0	26.5	0.0	47.5	-1.83	89.9	-1.83	90.0
TRIC0228	10/13/2020 10:02	42.5	34.4	0.0	23.1	-2.78	118.3	-2.77	118.3
TRIC0229	10/13/2020 10:54	47.4	34.0	0.0	18.6	-5.71	115.6	-5.27	115.6
TRIC0230	10/13/2020 10:04	36.7	32.0	0.0	31.3	-2.37	127.1	-2.37	127.1
TRICO203	10/13/2020 11:13	44.2	34.9	0.0	20.9	-2.24	108.7	-2.24	108.8
TRICO216	10/13/2020 11:25	40.4	32.2	0.0	27.4	-2.61	107.2	-2.61	107.3
TRICO217	10/13/2020 10:22	47.9	35.0	0.0	17.1	-5.74	121.5	-5.74	121.5
TRICO221	10/13/2020 11:27	45.8	33.0	0.0	21.2	-1.68	113.7	-1.67	113.8

APPENDIX H

WELLFIELD DEVIATION LOGS

TRI-CITIES RECYCLING & DISPOSAL FACILITY
Wellfield Deviation Report
May 1, 2020 - October 31, 2020

REPORT PREPARED BY: Mike Chan
UPDATED DATE: 11/19/2020
FLOW SENSING DEVICE: GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Well ID	Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance Gas (%)	Initial Static Pressure (" w.c.)	Initial Temperature (°F)	Adjusted Static Pressure (" w.c.)	Adjusted Temperature (°F)	Comments	Duration of Exceedance (Days)
No well exceedances in May 2020											
No well exceedances in June 2020											
No well exceedances in July 2020											
No well exceedances in August 2020											
No well exceedances in September 2020											
No well exceedances in October 2020											

1) Any adjustments to the wells were made after the first reading was taken. The well was then adjusted accordingly (e.g. valve was slightly opened, slighly closed, fully closed, or fully opened).

2) Abbreviations - CAI: Corrective Action Initiated, NSPS/EG: New Source Performance Standards/Emissions Guidelines

CH_4 - Methane CO_2 - Carbon Dioxide O_2 - Oxygen % - Percent " w.c. - Inches Water Column °F - Degrees Fahrenheit ppmv - parts per million by volume

APPENDIX I

MONTHLY LANDFILL GAS FLOW RATES

2020 Monthly LFG Input to Flare (A-3)

TRI-CITES RECYCLING AND DISPOSAL FACILITY, Fremont, CA

A-3 (Flare)

Month	Total Available Runtime (Hours)	Total Downtime (Hours)	Total Runtime (Hours)	Average Flow (scfm)	CH_4 (%)[1]	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBTU)
January-20	744.00	1.37	742.63	1,135	46.77	50,568,456	23,649,198	23,957
February-20	696.00	0.93	695.07	1,114	46.77	46,461,108	21,728,327	22,011
March-20	743.00	3.37	739.63	1,082	47.28	48,001,492	22,693,357	22,988
April-20	720.00	10.30	709.70	1,051	47.77	44,752,164	21,376,632	21,655
May-20	744.00	0.00	744.00	1,046	47.77	46,694,272	22,304,313	22,594
June-20	720.00	0.00	720.00	1,042	47.77	44,995,137	21,492,692	21,772
July-20	744.00	0.00	744.00	1,035	47.77	46,209,630	22,072,815	22,360
August-20	744.00	0.00	744.00	1,031	47.77	46,006,908	21,975,982	22,262
September-20	720.00	0.00	720.00	1,029	47.77	44,433,184	21,224,266	21,500
October-20	744.00	0.00	744.00	1,025	47.77	45,774,202	21,864,826	22,149
November-20								
December-20								
TOTAL/AVERAGE:	**7,319.00**	**15.97**	**7,303.03**	**1,059**	**47.52**	**463,896,553**	**220,382,407**	**223,247**

NOTE: The annual heat input rate for the A-3 Flare shall not exceed 657,000 MMBtu (Title V Condition No. 8366, Part No. 11).
(1) The methane content was determined from the February 6, 2019 (3/22/19-3/15/20) and February 11, 2020 (3/16/20 - current) source tests.
scfm - standard cubic feet per minute % - percent scf - standard cubic feet MMBTU - million British thermal units

May 1, 2020 - October 31, 2020 Monthly LFG Input to Flare (A-3)

TRI-CITES RECYCLING AND DISPOSAL FACILITY, Fremont, CA

A-3 (Flare)

Month	Total Available Runtime (Hours)	Total Downtime (Hours)	Total Runtime (Hours)	Average Flow (scfm)	CH_4 (%)[(1)]	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBTU)
May-20	744.00	0.00	744.00	1,046	47.77	46,694,272	22,304,313	22,594
June-20	720.00	0.00	720.00	1,042	47.77	44,995,137	21,492,692	21,772
July-20	744.00	0.00	744.00	1,035	47.77	46,209,630	22,072,815	22,360
August-20	744.00	0.00	744.00	1,031	47.77	46,006,908	21,975,982	22,262
September-20	720.00	0.00	720.00	1,029	47.77	44,433,184	21,224,266	21,500
October-20	744.00	0.00	744.00	1,025	47.77	45,774,202	21,864,826	22,149
TOTAL/AVERAGE:	**4,416.00**	**0.00**	**4,416.00**	**1,035**	**47.77**	**274,113,333**	**130,934,893**	**132,637**

NOTE: The annual heat input rate for the A-3 Flare shall not exceed 657,000 MMBtu (Title V Condition No. 8366, Part No. 11).
(1) The methane content was determined from the February 6, 2019 (3/22/19-3/15/20) and February 11, 2020 (3/16/20 - current) source tests.
scfm - standard cubic feet per minute % - percent scf - standard cubic feet MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: May-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
5/1/2020	24.00	47.8	1,049	1,510,416	721,476	1,013	731
5/2/2020	24.00	47.8	1,048	1,508,636	720,626	1,013	730
5/3/2020	24.00	47.8	1,049	1,510,001	721,278	1,013	731
5/4/2020	24.00	47.8	1,051	1,514,102	723,237	1,013	733
5/5/2020	24.00	47.8	1,048	1,509,594	721,083	1,013	730
5/6/2020	24.00	47.8	1,052	1,515,236	723,778	1,013	733
5/7/2020	24.00	47.8	1,053	1,516,667	724,462	1,013	734
5/8/2020	24.00	47.8	1,049	1,510,304	721,422	1,013	731
5/9/2020	24.00	47.8	1,045	1,504,616	718,705	1,013	728
5/10/2020	24.00	47.8	1,045	1,505,311	719,037	1,013	728
5/11/2020	24.00	47.8	1,044	1,502,750	717,814	1,013	727
5/12/2020	24.00	47.8	1,042	1,500,376	716,680	1,013	726
5/13/2020	24.00	47.8	1,046	1,506,115	719,421	1,013	729
5/14/2020	24.00	47.8	1,048	1,509,534	721,055	1,013	730
5/15/2020	24.00	47.8	1,051	1,513,183	722,798	1,013	732
5/16/2020	24.00	47.8	1,055	1,519,062	725,606	1,013	735
5/17/2020	24.00	47.8	1,045	1,504,095	718,457	1,013	728
5/18/2020	24.00	47.8	1,038	1,494,822	714,027	1,013	723
5/19/2020	24.00	47.8	1,041	1,498,988	716,017	1,013	725
5/20/2020	24.00	47.8	1,047	1,507,539	720,102	1,013	729
5/21/2020	24.00	47.8	1,052	1,515,566	723,936	1,013	733
5/22/2020	24.00	47.8	1,047	1,508,196	720,415	1,013	730
5/23/2020	24.00	47.8	1,044	1,502,803	717,839	1,013	727
5/24/2020	24.00	47.8	1,047	1,507,084	719,884	1,013	729
5/25/2020	24.00	47.8	1,048	1,508,644	720,629	1,013	730
5/26/2020	24.00	47.8	1,045	1,504,957	718,868	1,013	728
5/27/2020	24.00	47.8	1,042	1,500,758	716,863	1,013	726
5/28/2020	24.00	47.8	1,040	1,497,731	715,417	1,013	725
5/29/2020	24.00	47.8	1,040	1,497,968	715,530	1,013	725
5/30/2020	24.00	47.8	1,037	1,492,598	712,965	1,013	722
5/31/2020	24.00	47.8	1,039	1,496,620	714,886	1,013	724
Total/Average	**744.00**	**47.8**	**1,046**	**46,694,272**	**22,304,313**	**1,013**	**22,594**
						Maximum:	**735**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: Jun-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
6/1/2020	24.00	47.8	1,042	1,500,162	716,578	1,013	726
6/2/2020	24.00	47.8	1,045	1,504,731	718,760	1,013	728
6/3/2020	24.00	47.8	1,048	1,509,241	720,914	1,013	730
6/4/2020	24.00	47.8	1,047	1,507,146	719,914	1,013	729
6/5/2020	24.00	47.8	1,032	1,486,770	710,181	1,013	719
6/6/2020	24.00	47.8	1,034	1,488,478	710,997	1,013	720
6/7/2020	24.00	47.8	1,040	1,497,001	715,068	1,013	724
6/8/2020	24.00	47.8	1,047	1,507,765	720,210	1,013	730
6/9/2020	24.00	47.8	1,053	1,516,087	724,185	1,013	734
6/10/2020	24.00	47.8	1,051	1,514,021	723,198	1,013	733
6/11/2020	24.00	47.8	1,045	1,505,290	719,027	1,013	728
6/12/2020	24.00	47.8	1,040	1,497,693	715,399	1,013	725
6/13/2020	24.00	47.8	1,046	1,505,521	719,138	1,013	728
6/14/2020	24.00	47.8	1,046	1,506,312	719,516	1,013	729
6/15/2020	24.00	47.8	1,043	1,502,607	717,746	1,013	727
6/16/2020	24.00	47.8	1,043	1,501,490	717,212	1,013	727
6/17/2020	24.00	47.8	1,046	1,505,796	719,269	1,013	729
6/18/2020	24.00	47.8	1,045	1,504,760	718,774	1,013	728
6/19/2020	24.00	47.8	1,039	1,496,075	714,626	1,013	724
6/20/2020	24.00	47.8	1,038	1,494,978	714,102	1,013	723
6/21/2020	24.00	47.8	1,042	1,500,489	716,734	1,013	726
6/22/2020	24.00	47.8	1,042	1,500,602	716,788	1,013	726
6/23/2020	24.00	47.8	1,041	1,499,154	716,096	1,013	725
6/24/2020	24.00	47.8	1,041	1,498,928	715,988	1,013	725
6/25/2020	24.00	47.8	1,035	1,489,965	711,707	1,013	721
6/26/2020	24.00	47.8	1,035	1,490,107	711,775	1,013	721
6/27/2020	24.00	47.8	1,037	1,493,985	713,627	1,013	723
6/28/2020	24.00	47.8	1,035	1,491,033	712,217	1,013	721
6/29/2020	24.00	47.8	1,030	1,483,908	708,814	1,013	718
6/30/2020	24.00	47.8	1,038	1,495,042	714,132	1,013	723
Total/Average	**720.00**	**47.8**	**1,042**	**44,995,137**	**21,492,692**	**1,013**	**21,772**
						Maximum:	**734**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: Jul-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
7/1/2020	24.00	47.8	1,038	1,494,092	713,678	1,013	723
7/2/2020	24.00	47.8	1,033	1,487,264	710,417	1,013	720
7/3/2020	24.00	47.8	1,035	1,490,932	712,169	1,013	721
7/4/2020	24.00	47.8	1,043	1,501,616	717,272	1,013	727
7/5/2020	24.00	47.8	1,043	1,501,245	717,095	1,013	726
7/6/2020	24.00	47.8	1,039	1,496,195	714,683	1,013	724
7/7/2020	24.00	47.8	1,041	1,498,771	715,913	1,013	725
7/8/2020	24.00	47.8	1,039	1,495,743	714,467	1,013	724
7/9/2020	24.00	47.8	1,036	1,492,298	712,822	1,013	722
7/10/2020	24.00	47.8	1,037	1,493,041	713,176	1,013	722
7/11/2020	24.00	47.8	1,041	1,499,178	716,108	1,013	725
7/12/2020	24.00	47.8	1,043	1,501,835	717,377	1,013	727
7/13/2020	24.00	47.8	1,035	1,490,850	712,130	1,013	721
7/14/2020	24.00	47.8	1,035	1,491,082	712,241	1,013	721
7/15/2020	24.00	47.8	1,037	1,492,734	713,030	1,013	722
7/16/2020	24.00	47.8	1,035	1,490,080	711,762	1,013	721
7/17/2020	24.00	47.8	1,036	1,491,341	712,364	1,013	722
7/18/2020	24.00	47.8	1,037	1,493,608	713,447	1,013	723
7/19/2020	24.00	47.8	1,036	1,492,411	712,875	1,013	722
7/20/2020	24.00	47.8	1,038	1,494,736	713,986	1,013	723
7/21/2020	24.00	47.8	1,038	1,495,309	714,260	1,013	724
7/22/2020	24.00	47.8	1,033	1,488,141	710,836	1,013	720
7/23/2020	24.00	47.8	1,029	1,481,811	707,812	1,013	717
7/24/2020	24.00	47.8	1,027	1,479,149	706,541	1,013	716
7/25/2020	24.00	47.8	1,029	1,481,272	707,555	1,013	717
7/26/2020	24.00	47.8	1,027	1,478,964	706,452	1,013	716
7/27/2020	24.00	47.8	1,028	1,480,222	707,053	1,013	716
7/28/2020	24.00	47.8	1,028	1,479,909	706,904	1,013	716
7/29/2020	24.00	47.8	1,027	1,479,094	706,514	1,013	716
7/30/2020	24.00	47.8	1,033	1,486,919	710,252	1,013	719
7/31/2020	24.00	47.8	1,035	1,489,788	711,623	1,013	721
Total/Average	**744.00**	**47.8**	**1,035**	**46,209,630**	**22,072,815**	**1,013**	**22,360**
						Maximum:	**727**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: Aug-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
8/1/2020	24.00	47.8	1,037	1,492,604	712,968	1,013	722
8/2/2020	24.00	47.8	1,037	1,492,607	712,969	1,013	722
8/3/2020	24.00	47.8	1,037	1,493,970	713,620	1,013	723
8/4/2020	24.00	47.8	1,037	1,493,853	713,564	1,013	723
8/5/2020	24.00	47.8	1,034	1,488,986	711,239	1,013	720
8/6/2020	24.00	47.8	1,035	1,490,979	712,191	1,013	721
8/7/2020	24.00	47.8	1,033	1,487,864	710,704	1,013	720
8/8/2020	24.00	47.8	1,034	1,488,810	711,155	1,013	720
8/9/2020	24.00	47.8	1,035	1,490,437	711,933	1,013	721
8/10/2020	24.00	47.8	1,032	1,486,626	710,112	1,013	719
8/11/2020	24.00	47.8	1,032	1,485,515	709,581	1,013	719
8/12/2020	24.00	47.8	1,034	1,488,854	711,176	1,013	720
8/13/2020	24.00	47.8	1,035	1,490,000	711,724	1,013	721
8/14/2020	24.00	47.8	1,036	1,491,938	712,650	1,013	722
8/15/2020	24.00	47.8	1,031	1,485,287	709,473	1,013	719
8/16/2020	24.00	47.8	1,028	1,480,634	707,250	1,013	716
8/17/2020	24.00	47.8	1,029	1,482,443	708,114	1,013	717
8/18/2020	24.00	47.8	1,033	1,487,775	710,661	1,013	720
8/19/2020	24.00	47.8	1,032	1,485,857	709,745	1,013	719
8/20/2020	24.00	47.8	1,029	1,481,661	707,741	1,013	717
8/21/2020	24.00	47.8	1,027	1,479,237	706,583	1,013	716
8/22/2020	24.00	47.8	1,028	1,479,946	706,921	1,013	716
8/23/2020	24.00	47.8	1,027	1,478,504	706,233	1,013	715
8/24/2020	24.00	47.8	1,026	1,478,154	706,065	1,013	715
8/25/2020	24.00	47.8	1,024	1,475,143	704,627	1,013	714
8/26/2020	24.00	47.8	1,024	1,474,086	704,122	1,013	713
8/27/2020	24.00	47.8	1,026	1,476,777	705,408	1,013	715
8/28/2020	24.00	47.8	1,024	1,474,218	704,185	1,013	713
8/29/2020	24.00	47.8	1,023	1,472,728	703,474	1,013	713
8/30/2020	24.00	47.8	1,026	1,476,943	705,487	1,013	715
8/31/2020	24.00	47.8	1,024	1,474,472	704,307	1,013	713
Total/Average	**744.00**	**47.8**	**1,031**	**46,006,908**	**21,975,982**	**1,013**	**22,262**
						Maximum:	**723**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: Sep-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
9/1/2020	24.00	47.8	1,021	1,470,830	702,567	1,013	712
9/2/2020	24.00	47.8	1,027	1,478,400	706,183	1,013	715
9/3/2020	24.00	47.8	1,029	1,482,416	708,101	1,013	717
9/4/2020	24.00	47.8	1,032	1,485,640	709,641	1,013	719
9/5/2020	24.00	47.8	1,034	1,489,339	711,408	1,013	721
9/6/2020	24.00	47.8	1,035	1,491,040	712,220	1,013	721
9/7/2020	24.00	47.8	1,036	1,491,243	712,318	1,013	722
9/8/2020	24.00	47.8	1,024	1,474,929	704,525	1,013	714
9/9/2020	24.00	47.8	1,016	1,463,487	699,059	1,013	708
9/10/2020	24.00	47.8	1,023	1,472,593	703,409	1,013	713
9/11/2020	24.00	47.8	1,031	1,484,872	709,274	1,013	718
9/12/2020	24.00	47.8	1,031	1,484,769	709,225	1,013	718
9/13/2020	24.00	47.8	1,024	1,474,306	704,227	1,013	713
9/14/2020	24.00	47.8	1,025	1,476,301	705,180	1,013	714
9/15/2020	24.00	47.8	1,029	1,481,886	707,848	1,013	717
9/16/2020	24.00	47.8	1,032	1,486,257	709,936	1,013	719
9/17/2020	24.00	47.8	1,031	1,485,353	709,504	1,013	719
9/18/2020	24.00	47.8	1,029	1,481,339	707,587	1,013	717
9/19/2020	24.00	47.8	1,031	1,484,374	709,036	1,013	718
9/20/2020	24.00	47.8	1,030	1,483,592	708,663	1,013	718
9/21/2020	24.00	47.8	1,024	1,474,930	704,525	1,013	714
9/22/2020	24.00	47.8	1,024	1,474,716	704,423	1,013	714
9/23/2020	24.00	47.8	1,030	1,483,041	708,400	1,013	718
9/24/2020	24.00	47.8	1,033	1,487,185	710,379	1,013	720
9/25/2020	24.00	47.8	1,029	1,481,900	707,855	1,013	717
9/26/2020	24.00	47.8	1,032	1,485,677	709,659	1,013	719
9/27/2020	24.00	47.8	1,033	1,487,464	710,512	1,013	720
9/28/2020	24.00	47.8	1,027	1,478,592	706,275	1,013	715
9/29/2020	24.00	47.8	1,023	1,473,568	703,875	1,013	713
9/30/2020	24.00	47.8	1,030	1,483,145	708,449	1,013	718
Total/Average	**720.00**	**47.8**	**1,029**	**44,433,184**	**21,224,266**	**1,013**	**21,500**
						Maximum:	**722**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

Tri-Cities Recycling & Disposal Facility
Fremont, CA

Heat Input Rate

MONTH: Oct-20

Date	Runtime (Hours)	CH_4* (%)	Average Flow (scfm)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
10/1/2020	24.00	47.8	1,032	1,486,748	710,170	1,013	719
10/2/2020	24.00	47.8	1,030	1,483,211	708,481	1,013	718
10/3/2020	24.00	47.8	1,028	1,479,996	706,945	1,013	716
10/4/2020	24.00	47.8	1,024	1,474,611	704,373	1,013	714
10/5/2020	24.00	47.8	1,026	1,477,304	705,659	1,013	715
10/6/2020	24.00	47.8	1,027	1,479,202	706,566	1,013	716
10/7/2020	24.00	47.8	1,024	1,475,049	704,582	1,013	714
10/8/2020	24.00	47.8	1,021	1,470,827	702,566	1,013	712
10/9/2020	24.00	47.8	1,025	1,475,851	704,965	1,013	714
10/10/2020	24.00	47.8	1,023	1,472,924	703,567	1,013	713
10/11/2020	24.00	47.8	1,025	1,475,795	704,939	1,013	714
10/12/2020	24.00	47.8	1,030	1,483,889	708,805	1,013	718
10/13/2020	24.00	47.8	1,030	1,482,979	708,370	1,013	718
10/14/2020	24.00	47.8	1,032	1,486,279	709,946	1,013	719
10/15/2020	24.00	47.8	1,032	1,485,748	709,693	1,013	719
10/16/2020	24.00	47.8	1,029	1,482,424	708,105	1,013	717
10/17/2020	24.00	47.8	1,026	1,477,941	705,964	1,013	715
10/18/2020	24.00	47.8	1,024	1,474,769	704,448	1,013	714
10/19/2020	24.00	47.8	1,027	1,478,221	706,097	1,013	715
10/20/2020	24.00	47.8	1,026	1,477,458	705,733	1,013	715
10/21/2020	24.00	47.8	1,023	1,472,703	703,462	1,013	713
10/22/2020	24.00	47.8	1,016	1,462,999	698,826	1,013	708
10/23/2020	24.00	47.8	1,017	1,464,642	699,611	1,013	709
10/24/2020	24.00	47.8	1,023	1,472,656	703,439	1,013	713
10/25/2020	24.00	47.8	1,021	1,469,897	702,121	1,013	711
10/26/2020	24.00	47.8	1,018	1,465,349	699,949	1,013	709
10/27/2020	24.00	47.8	1,028	1,479,940	706,918	1,013	716
10/28/2020	24.00	47.8	1,026	1,477,252	705,635	1,013	715
10/29/2020	24.00	47.8	1,026	1,476,898	705,465	1,013	715
10/30/2020	24.00	47.8	1,024	1,474,877	704,500	1,013	714
10/31/2020	24.00	47.8	1,025	1,475,763	704,923	1,013	714
Total/Average	**744.00**	**47.8**	**1,025**	**45,774,202**	**21,864,826**	**1,013**	**22,149**
						Maximum:	**719**
						Average:	**729**

Notes:

The methane content was determined from the February 11, 2020 (3/16/20 - current) source test.

The heat input for the A-3 Flare did not exceed 1,800 million Btu per day, as required by Title V Condition 8366, Part 11.

% - percent scfm - standard cubic feet per minute scf - standard cubic feet BTU - British thermal units
MMBTU - million British thermal units

APPENDIX J

STRUCTURE MONITORING REPORTS

WASTE MANAGEMENT
172 98th Avenue
Oakland, CA 94603
(510) 430-8509

June 19, 2020

Mr. Patrick Madej
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538

Re: Second Quarter 2020 Methane-In-Structure Monitoring Report for Tri-Cities Recycling and Disposal Facility

Dear Mr. Madej:

This report for the Tri-Cities Recycling and Disposal Facility (TCRDF) contains the results of the Second Quarter 2020 Perimeter Gas and Methane in Structure Monitoring conducted at the TCRDF.

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.

Table 1 Monitoring Results

Device ID or Structure	Date	CH_4 (Methane) (ppm_v)
S-3 Ops Trailer	5/28/2020	0.0
S-4 Break Area	5/28/2020	0.0
S-5 Collection Booths	5/28/2020	0.0
S-9 Maintenance Break Area	5/28/2020	0.0
S-10 Parts Wash Room	5/28/2020	0.0
S-12 Compressor Room	5/28/2020	0.0
S-13 Raisch Room	5/28/2020	0.0

MONITORING EQUIPMENT AND METHODOLOGY [TITLE 27 §20934(a)(4)]

Perimeter Gas Monitoring

CalRecycle granted TCRDF a variance from probe monitoring on July 2, 2010. Therefore probe monitoring was not conducted due to the decommissioning of Probe TCGP005.

Facility Structures

The technician used a FID to monitor buildings and structures to check for the presence of methane on May 28, 2020. The instrument was calibrated prior to monitoring using 500 parts per million by volume (ppm_v) 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 on June 17, 2020.

CLOSING

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 613-2852.

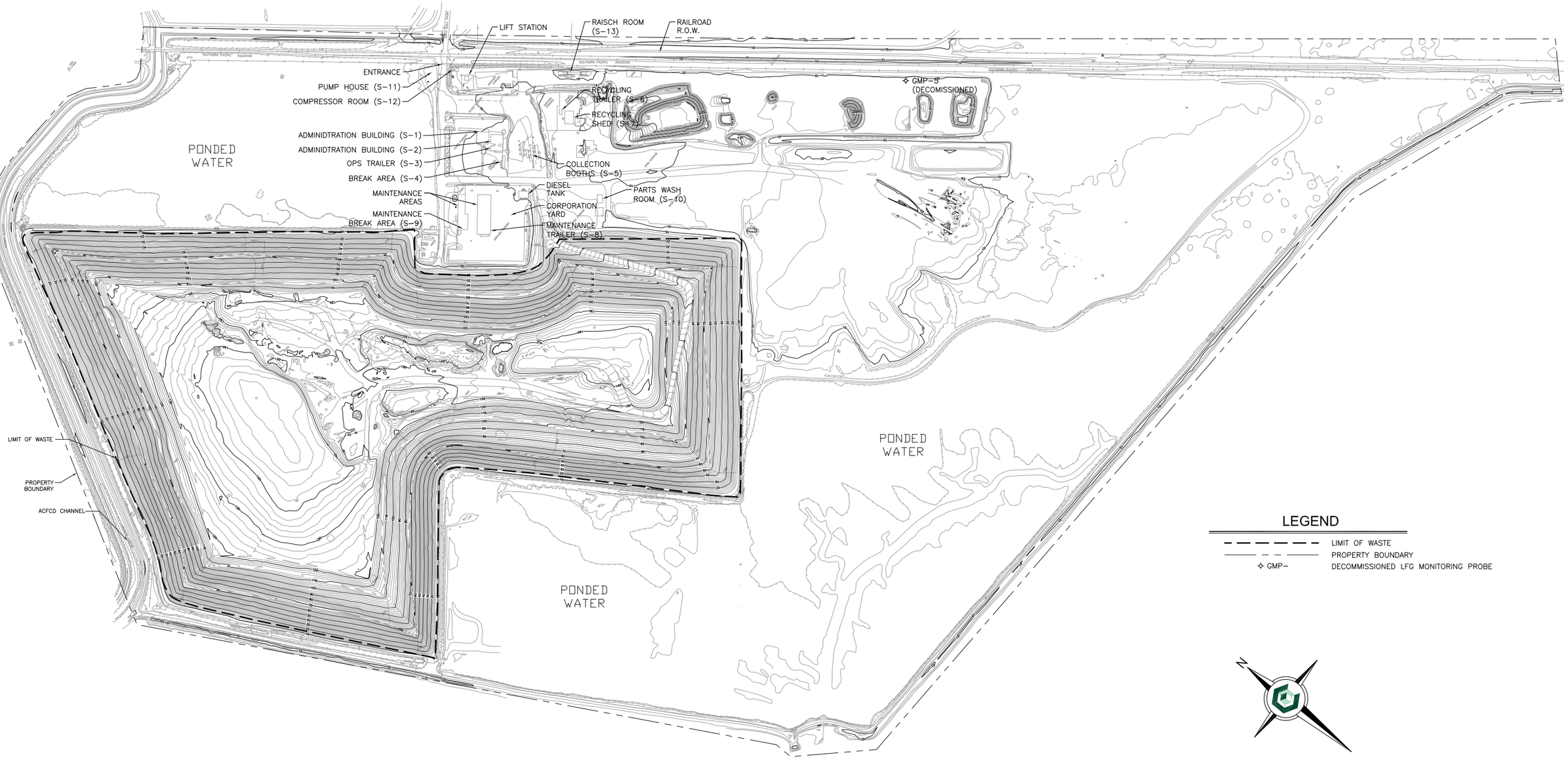
Thank you,

Waste Management

Michael Chan
Environmental Protection Specialist

ATTACHMENT A

SITE MAP



LEGEND

- LIMIT OF WASTE
- PROPERTY BOUNDARY
- ✧ GMP– DECOMMISSIONED LFG MONITORING PROBE

N

0 250 500

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: JUNE 10, 2010. DATUM: HORIZONTAL – NAD27, VERTICAL – NGVD29.

PAUL J. STOUT, P.E.

P.E. Lic. No. C52827 Date

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 9/16/2010
DRAWN BY MRF
DESIGNED BY JBS
CHECKED BY DHT
APPROVED BY PJS

CORNERSTONE Environmental Group, LLC

TRICITIES RECYCLING AND DISPOSAL FACILITY

2010 UPDATE PERIMETER GAS MIGRATION MONITORING PLAN

PREVIOUSLY EXISTING LANDFILL GAS MONITORING LOCATIONS

SHEET NO. **2**

PROJECT NO. 090391.1

1" 1/2" 0" 1"

File: X:\PROJECTS\TRI-CITIES - COMPLIANCE 90391_PROJECT DRAWINGS\LGMP\2010 PGMMP EXHIBITS.dwg Layout: SHT 2 User: michael.klotz Oct 07, 2010 - 3:12pm

ATTACHMENT B

FIELD DATA

Tri-Cities Recycling and Disposal Facility
Gas Detector Calibration Record and Structure Monitoring

Table 1

FID Structure Monitoring Data Analyst: Eduardo carranza Date: 5-28-2020 Instrument: TVA2020 Serial #:202017062364			
Monitored Location	Time	PPM	Comments
S-3 Ops Trailer	1:40 pm	0.0 ppm	ND
S-4 Break Area	1:36 pm	0.0 ppm	ND
S-5 Collection Booths	1:47 pm	0.0 ppm	ND
S-9 Maintenance Break Area	1:29 pm	0.0 ppm	ND
S-10 Parts Wash Room	1:33 pm	0.0 ppm	ND
S-12 Compressor Room	1:55 pm	0.0 ppm	ND
S-13 Raisch Room	1:56 pm	0.0 ppm	ND

Immediately notify compliance personnel of any readings in excess of 1.25 percent methane.

ND = No detection

Table 2

LOCATION: TRI-CITIES RECYCLING AND DISPOSAL FACILITY

MANUFACTURER & MODEL NUMBER: Sierra Monitor Corporation Model # 2001

CALIBRATED BY / INSTRUMENT USED: Eduardo Carranza / Cal System Model# 26

CALIBRATION GAS EXPIRATION DATE: 5/31/2021

Gas Detector Calibration Record				
LOCATION	DATE CALIBRATED and TIME	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED / COMMENTS ON MONITOR CONDITION
S-3 Ops Trailer	6/17/2020 11:10 AM	1629404204	Yes	
S-9 Maintenance Break Area	6/17/2020 11:45AM	0724904533M TS	Yes	
S-4 Break Area	6/17/2020 11:50AM	0608001242	Yes	~~Strobe~~ On for about ~~10 sec After triggered~~
S-5 Collection Booths	6/17/2020 11:05AM	401705272 GCN	Yes	~~Strobe~~ On for about 10 sec After triggered
S-12 Compressor Room	6/17/2020 11:18AM	401705272 GCN	Yes	
S-13 Raisch Room	6/17/2020 11:35AM	1915102415 GLN	Yes	

** **This form must be retained for 12 months after completion.**

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: TCRDF Date: 5-28-2020

Time: 1:15pm

Instrument Make: Thermo scientific Model: TVA2020-A1B3B1 S/N: 202017062364

Calibration Procedure

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

   Stable Reading = 501 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 0.0 ppm (a)
2. Downwind Reading (highest in 30 seconds): 0.0 ppm (b)

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 0.0 ppm

Performed by: eduardo carranza

RESPONSE TIME TEST RECORD

Date: 5-28-2020

Expiration Date (3 months): 8-28-2020

Time: 1:25pm

Instrument Make: Thermo Scientific Model: TVA A1B3B1 S/N: 202017062364

Measurement #1:

Stabilized Reading Using Calibration Gas:	501	ppm
90% of the Stabilized Reading:	450	ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas:	2.10	seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas:	501	ppm
90% of the Stabilized Reading:	450	ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas:	2.15	seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas:	502	ppm
90% of the Stabilized Reading:	450	ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas:	2.5	seconds (c)

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = 2.25 \text{ seconds (must be less than 30 seconds)}$$

Performed by: *Eduardo Carranza*

CALIBRATION PRECISION TEST RECORD

Date: 5-28-2020

Expiration Date (3 months): 8-28-2020

Time: 1:20 pm

Instrument Make: Thermo Scientific Model: TVA 2020-A1B3B1 S/N: 202017062364

Measurement #1:

Meter Reading for Zero Air: 0.0 ppm (a)

Meter Reading for Calibration Gas: 501 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0.1 ppm (c)

Meter Reading for Calibration Gas: 502 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0.0 ppm (e)

Meter Reading for Calibration Gas: 502 ppm (f)

Calculate Precision:

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

.3 % (must be < than 10%)

Performed by: *Eduardo Carranza*

WASTE MANAGEMENT
172 98th Avenue
Oakland, CA 94603
(510) 430-8509

September 29, 2020

Mr. Patrick Madej
Tri-Cities Recycling and Disposal Facility
7010 Auto Mall Parkway
Fremont, California 94538

Re: Third Quarter 2020 Methane-In-Structure Monitoring Report for Tri-Cities Recycling and Disposal Facility

Dear Mr. Madej:

This report for the Tri-Cities Recycling and Disposal Facility (TCRDF) contains the results of the Third Quarter 2020 Perimeter Gas and Methane in Structure Monitoring conducted at the TCRDF.

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.

Table 1 Monitoring Results

Device ID or Structure	Date	CH_4 (Methane) (ppm_v)
S-3 Ops Trailer	8/10/2020	3.3
S-4 Break Area	8/10/2020	2.7
S-5 Collection Booths	8/10/2020	3.1
S-9 Maintenance Break Area	8/10/2020	3.2
S-10 Parts Wash Room	8/10/2020	3.0
S-12 Compressor Room	8/10/2020	2.8
S-13 Raisch Room	8/10/2020	2.9

MONITORING EQUIPMENT AND METHODOLOGY [TITLE 27 §20934(a)(4)]

Perimeter Gas Monitoring

CalRecycle granted TCRDF a variance from probe monitoring on July 2, 2010. Therefore probe monitoring was not conducted due to the decommissioning of Probe TCGP005.

Facility Structures

The technician used a FID to monitor buildings and structures to check for the presence of methane on August 10, 2020. The instrument was calibrated prior to monitoring using 500 parts per million by volume (ppm_v) 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 on September 16, 2020.

CLOSING

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 613-2852.

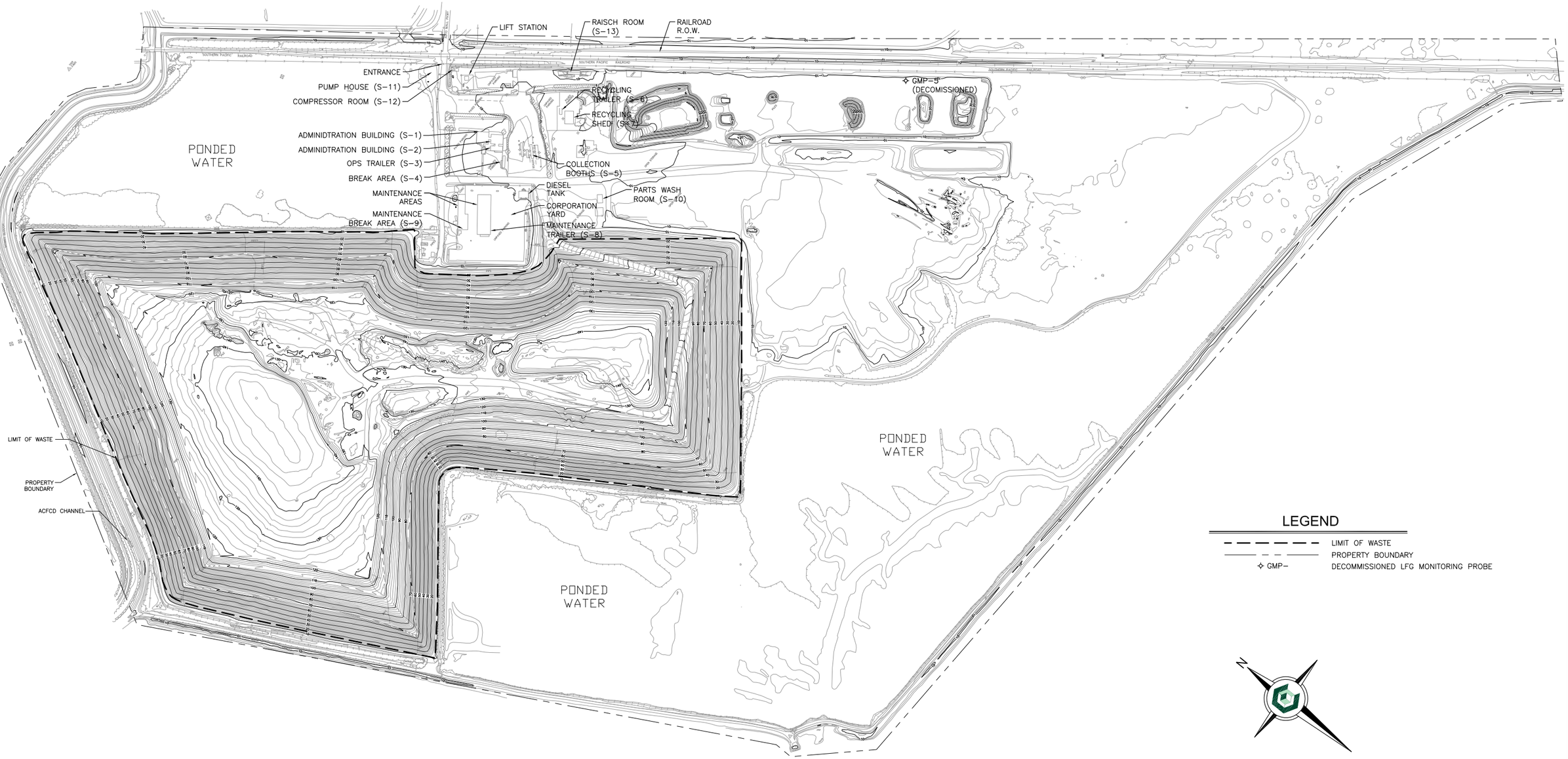
Thank you,

Waste Management

Michael Chan
Environmental Protection Specialist

ATTACHMENT A

SITE MAP



LEGEND

- LIMIT OF WASTE
- PROPERTY BOUNDARY
- ✧ GMP– DECOMMISSIONED LFG MONITORING PROBE

N

0 250 500

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY WALKER ASSOCIATES. DATE OF PHOTOGRAPHY: JUNE 10, 2010. DATUM: HORIZONTAL – NAD27, VERTICAL – NGVD29.

PAUL J. STOUT, P.E.

P.E. Lic. No. C52827 Date

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 9/16/2010
DRAWN BY MRF
DESIGNED BY JBS
CHECKED BY DHT
APPROVED BY PJS

CORNERSTONE Environmental Group, LLC

TRICITIES RECYCLING AND DISPOSAL FACILITY

2010 UPDATE PERIMETER GAS MIGRATION MONITORING PLAN

PREVIOUSLY EXISTING LANDFILL GAS MONITORING LOCATIONS

SHEET NO. **2**

PROJECT NO. 090391.1

1" 1/2" 0" 1"

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ATTACHMENT B

FIELD DATA

Tri-Cities Recycling and Disposal Facility
Gas Detector Calibration Record and Structure Monitoring

Table 1

FID Structure Monitoring Data

Analyst: Ryan Haslam Date: 8-10-20

Instrument: TVA 2020 Serial #: 202016031211

Monitored Location	Time	PPM	Comments
S-3 Ops Trailer		3.3	
S-4 Break Area		2.7	
S-5 Collection Booths		3.1	
S-9 Maintenance Break Area		3.2	
S-10 Parts Wash Room		3.0	
S-12 Compressor Room		2.8	
S-13 Raisch Room		2.9	

Immediately notify compliance personnel of any readings in excess of 1.25 percent methane.

ND = No detection

Table 2

LOCATION: TRI-CITIES RECYCLING AND DISPOSAL FACILITY

MANUFACTURER & MODEL NUMBER: Sierra Monitor Corporation Model # 2001

CALIBRATED BY / INSTRUMENT USED: Eduardo / Daniel L / Cal System Model# 26

CALIBRATION GAS EXPIRATION DATE: 5/31/2022

Gas Detector Calibration Record				
LOCATION	DATE CALIBRATED and TIME	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED / COMMENTS ON MONITOR CONDITION
S-3 Ops Trailer	9/16/2020 10Am	1629404204	Yes	Adjusted / Passed
S-9 Maintenance Break Area	9/16/2020 ~~10:30Am~~ 10:20Am	0724904533MTS	Yes	Passed
S-4 Break Area	9/16/2020 10:06 am	0608001242	Yes	Passed
S-5 Collection Booths	9/16/2020 9:56 am	401705272 GCN	Yes	Adjusted / Passed
S-12 Compressor Room	9/16/2020 10:10Am	401705272 GCN	Yes	Passed
S-13 Raisch Room	9/16/2020 10:12am	1915102415 GLN	Yes	Adjusted / Passed

** **This form must be retained for 12 months after completion.**

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Ryan Haslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 71 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	3	501	1	1
2	2	502	2	2
3	1	501	1	1

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 135921
Counters Observed for the Zero= 2693

Trial 2:
Counts Observed for the Span= 135815
Counters Observed for the Zero= 2682

Trial 3:
Counts Observed for the Span= 135712
Counters Observed for the Zero= 2671

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: entrance Reading: 1.1 ppm

Downwind Location Description: Flare Reading: 1.3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

post

Date: 8-10-20 Site Name: Tri Cities

Inspector(s): Ryan Haslam Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 73 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	2	502	2	1
2	1	~~501~~	1	1
3	3	501	1	2

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 136728
Counters Observed for the Zero= 2681

Trial 2:
Counts Observed for the Span= 136517
Counters Observed for the Zero= 2672

Trial 3:
Counts Observed for the Span= 136482
Counters Observed for the Zero= 2647

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: entrance Reading: 1.1 ppm

Downwind Location Description: Plant Reading: 1.3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

APPENDIX K

ANNUAL H_2S MONITORING REPORTS

WM - TRI-CITIES LANDFILL, Fremont, CA			
ANNUAL HYDROGEN SULFIDE (H_2S) MONITORING			
SAMPLE TAKEN BY:	Eduardo Carranza (SCS)		
DATE	SAMPLE LOCATION	H_2S CONCENTRATION (PPM)	COMMENTS
7/15/2020	Tri Cities Flare A-3	100	None
COMMENTS: PPM - parts per million Sample taken with a Draeger Tube per Title V Permit Condition No. 8366, Part 12			

APPENDIX L

SOURCE TEST REPORT SUMMARY

Tri-Cities Recycling and Disposal Facility

BAAQMD Facility #A2246

Annual Compliance Emissions Test Report #20045
Source Test for Landfill Gas Flare Source (A-3)

Located at:

7010 Auto Mall Parkway
Fremont, CA 94538

Performed and Reported by:

Blue Sky Environmental, Inc
624 San Gabriel Avenue
Albany, CA 94706

Prepared For:

SCS Engineers
Dave Bearden
3117 Fite Circle Suite 108
Sacramento, CA 95827
dbearden@scsengineers.com

For Submittal To:

Attn: Marco Hernandez/Gloria Espena
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
mhernandez@baaqmd.gov/gespena@baaqmd.gov

Testing Performed On:
February 11th, 2020

Report Submitted On:
March 16th, 2020

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 is 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 (510) 508 3469.

Guy Worthington
Principal Project Manager

TABLE of CONTENTS

SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc was contracted to perform the emissions testing on the A-3 Landfill Gas Flare at the Tri-Cities Recycling and Disposal Facility, located at 7010 Auto Mall Parkway, Fremont, California. 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

Test Location:	Tri-Cities Recycling and Disposal Facility 7010 Auto Mall Parkway, Fremont, CA 94538
Source Contact:	Patrick Madej (510) 376-7700
Source Tested:	Enclosed Landfill Gas Flare (A-3)
Source Test Date:	February 11th, 2020
Test Objective:	Determine Compliance with Regulation 8, Rule 34 and Title V Permit Condition 8366 for Facility #A2246
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Ave., Albany, CA 94706 Guy Worthington (510) 508 3469 blueskyenvironmental@yahoo.com Wesley Alder (510) 910-5795 walder@blueksyenvirionmental.com
Test Parameters:	**Landfill Gas** Oxygen (O_2), Nitrogen (N_2), Carbon Dioxide (CO_2), Total Hydrocarbons (THC), Methane (CH_4), Non-Methane Organic Compounds (NMOC), High Heating Value (HHV), Gas F-Factor, Total Reduced Sulfur (TRS) & Sulfur Species, Volumetric Flow Rate **Flare Emissions** THC, CH_4, NMOC, NO_X, CO, O_2, SO_2, Volumetric Flow Rate, Stack Exhaust Temperature.

Table 2. Compliance Summary

Emission Parameter	Average Test Result	Permit Limit	Compliance Status
NO_X, lbs/MMBTU	**0.043**	**0.06**	**In Compliance**
CO, lbs/MMBTU	**0.003**	**0.3**	**In Compliance**
NMOC, (ppmvd @ 3% O_2 as CH_4)	**<1.0**	**30**	**In Compliance**
TRS in Landfill Gas, ppm	**115**	**1300**	**In Compliance**
Methane Destruction Efficiency, %	**>99.999**	**99**	**In Compliance**

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This annual performance test was conducted to demonstrate that the A-3 landfill gas (LFG) flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Title V Permit for Facility #A2246 and Regulation 8 Rule 34.

2.2. Pollutants Tested

The following BAAQMD, Environmental Protection Agency (EPA) and American Society for Testing and Materials (ASTM) sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O_2 and CO_2, Stack Gas Molecular Weight
EPA Method 7E	NO_X Emissions & NO_2 Converter Efficiency
EPA Method 10	CO Emissions
EPA Method 18	CH_4 Emissions
EPA Method 25A	THC and NMHC Emissions
BAAQMD ST-19A	Sulfur Dioxide (SO_2) from Total Reduced Sulfur (TRS)
EPA 19 (Flow Rate Calculation)	Dry Standard Cubic Feet per Minute (DSCFM)
EPA 25C	Gas analysis for NMOC by Gas Chromatography (GC)
ASTM 1945/3588	Gas analysis for BTU and F-Factor
ASTM D-5504	Sulfur Species, Hydrogen Sulfide (H_2S) and TRS

2.3. Test Date(s)

Testing was conducted on February 11th, 2020.

2.4. Sampling and Observing Personnel

Guy Worthington and Wesley Alder representing Blue Sky Environmental, Inc, performed the 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. Michael Chan from WM was present to assist as well.

The BAAQMD was notified of the test in a plan submitted by SCS Engineers on January 26th, 2020 A Source Test Protocol acknowledgement was requested and received by Blue Sky Environmental (NST Number 5813), but no agency observers were present to witness the testing. A copy of the source test protocol and the BAAQMD NST email can be found in Appendix I.

2.5. Source/Process Description

The enclosed LFG flare consists of a 75 million British Thermal Units per hour (MMBtu/hr) multiple nozzle burner. The flare shell is approximately 40 feet high and has an approximately 102 inch inside diameter (ID).

2.6. Source Operating Conditions

The flare operating temperature and the LFG flow rate records are contained in Appendix-F. There is no condensate injection.

The flare was operated at ~1,594 degrees Fahrenheit (°F). The LFG flow rate averaged ~1,113 Standard Cubic Feet per Minute (SCFM).

The LFG methane content of all three runs averaged 47.8 percent (%).

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The A-3 Flare sampling was conducted in the 102 inch ID stack, via ports approximately 35 feet above grade, accessed by a 40 foot boom-lift. Two of the four, 4-inch flange ports are available ~4 stack diameters downstream from the burners and ~1 stack diameters upstream from the exit.

3.2. Point description/Labeling – ports/stack

Blue Sky Environmental conducted two perpendicular 8 point traverses and found stratification >10%, therefore subsequent Continuous Emission Monitoring (CEM) sampling was conducted traversing all 16 points. The traverse points for the 102 inch diameter exhaust stack with 4 inch ports were 7.3, 14.7, 23.8, 36.9, 73.1, 86.2, 95.3 and 102.7 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, 32-minute minimum test runs were performed. All Runs featured a full traverse and involved a delay for the port change (16 minutes of time before and after a 3-4 minute port change).

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 $\%O_2$ and $\%CO_2$ were obtained from the CEMS system.

EPA Method 3A (O_2, CO_2), 10 (CO) and 7E (NO_X) 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 NOx analyzer NO_2 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 18 is used to determine emissions of volatile organics analyzed by gas chromatograph/mass spectroscopy (GC/MS). Gaseous emissions are drawn through a purged, short teflon sample line to a tedlar bag located in a rigid leak proof bag container. Sample is drawn into the bag by evacuating the container to below stack gas pressure to allow sample flow into the bag without using a pump to avoid contamination. Using a rotometer at the probe tip prior to sampling, the negative pressure inside the container is adjusted with an adjustable flow orifice to maintain a constant integrated sample flow for the test duration. The bag samples are taken to a laboratory and analyzed within 72 hours.

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 Methods 1, 2, 3 and 4 wetbulb-drybulb, but the facility flow meter was used to calculate mass emissions. 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 facility flow rates were used to determine emission rates.

ASTM D1945/3588 gas chromotography 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_2S 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).

System Performance Criteria

Instrument Linearity	≤2% Full Scale (checked routinely)
Instrument Bias	≤5% Full Scale (checked routinely)
System Response Time	≤± 2 minutes (checked routinely)
NO_X Converter Efficiency (EPA 20)	≥ 90% (checked prior to testing)
Instrument Zero Drift	≤± 3% Full Scale (complied)
Instrument Span Drift	≤± 3% Full Scale (complied)

Concurrent with the exhaust sampling, Blue Sky collected three SILCO canister samples of the LFG for analysis. The samples were collected using Teflon tubing connections, to Silco SUMMA canisters with a Helium pre-pad same day, prior to shipping to the lab. The gas sample was controlled with a glass orifice to collect a 30-minute integrated sample and vacuum was allowed to drop to zero. All the samples were analyzed for NMOC, HHV, Fd-Factor, Fixed Gases, and Sulfur Species (incl. H_2S and TRS). An additional three samples were collected in 5L Tedlar bags and analyzed for EPA Method 18.

The Flare operating temperature (°F) and inlet volumetric flow rate were continuously measured and recorded by the facility monitors. The data is recorded on a Yokogawa system and was exported into Excel then submitted to Blue Sky for inclusion in this report.

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42C	$NO_X/NO/NO_2$	Chemiluminescence
TECO 48C	CO	GFC/IR
Servomex 1440	O_2	Paramagnetic
Servomex 1440	CO_2	IR

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of Honeywell DPR300 strip chart recorders, supported by a Data Acquisition System (DAS).

The instrument responses were recorded on strip charts in addition to data acquisition into excel files. The averages were corrected for drift using EPA Method 7E, Equation 7E-5b.

3.6. Comments: Limitations and Data Qualifications

Review of the general text
Review of calculations
Review of CEMS data
Review of supporting documentation

The measured emissions meet the Permit required limits, no deviations from the protocol or abnormalities during the test were observed.

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 Email Correspondence)**
J.	**BAAQMD Permit to Operate**

A
Tabulated Results

TABLE #1

Tri-Cities Recycling & Disposal Facility
Flare A-3
1,594°F

RUN	1	2	3	AVERAGE	LIMITS
Test Date	2/11/20	2/11/20	2/11/20		
Test Time	0915-0949	1026-1101	1130-1204		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,594	1,594	1,594	1,594	
Fuel Flow Rate, SCFM	1,110	1,113	1,115	1,113	
Fuel Heat Input, MMBTU/Hr	31.8	32.0	31.8	31.8	
Exhaust Flow Rate, DSCFM (Method 19)	12,263	12,076	12,039	12,126	
Oxygen, O_2, %	12.14	11.95	11.99	12.03	
Carbon Dioxide, CO_2, %	7.64	7.74	7.70	7.69	
NOx, ppm	15.5	15.6	15.8	15.7	
NOx, ppm @ 15% O_2	10.5	10.3	10.5	10.4	
NOx, lbs/hr	1.36	1.34	1.36	1.36	
NOx, lbs/day	**32.6**	**32.3**	**32.7**	**32.5**	
NOx, lbs/MMBTU	**0.043**	**0.042**	**0.043**	**0.043**	**0.06**
CO, ppm	2.0	1.9	1.8	1.9	
CO, ppm @ 15% O_2	1.3	1.2	1.2	1.3	
CO, lbs/hr	0.11	0.10	0.10	0.10	
CO, lbs/day	**2.5**	**2.4**	**2.3**	**2.4**	
CO, lbs/MMBTU	**0.003**	**0.003**	**0.003**	**0.003**	**0.30**
TRS as H_2S, ppm in Fuel	**115**	**122**	**107**	**115**	**1300**
SO_2, ppm Exhaust (calculated)	10.41	11.24	9.91	10.52	
THC, ppm (M18)	<0.5	<0.5	<0.5	<0.5	
THC, lbs/hr as CH_4	<0.015	<0.015	<0.015	<0.015	
CH_4, ppm	<0.5	<0.5	<0.5	<0.5	
CH_4, lbs/hr	<0.015	<0.015	<0.015	<0.015	
TNMHC, ppm as CH_4	<0.5	<0.5	<0.5	<0.5	
TNMHC, lbs/hr as CH_4	<0.015	<0.015	<0.015	<0.015	
TNMHC, ppm @ 3% O_2 as CH_4	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**30**
INLET TNMOC (Method 25C), ppmC	6,283	7,292	8,109	7,228	**or**
INLET NMOC, lbs/hr as CH_4	17.3	20.1	22.4	20.0	
NMOC Removal Efficiency	**99.91%**	**99.93%**	**99.93%**	**99.92%**	**98**
INLET CH_4, ppm	478,000	479,000	476,000	477,667	
INLET CH_4, lbs/hr	1,317.1	1,323.4	1,317.5	1,319	
CH_4 Removal Efficiency	**>99.999%**	**>99.999%**	**>99.999%**	**>99.999%**	**99**
INLET THC (TOC), ppm as CH_4	484,283	486,292	484,109	484,895	
INLET THC (TOC), lbs/hr as CH_4	1,334	1,344	1,340	1,339	
THC (TOC) Removal Efficiency	99.999%	99.999%	99.999%	99.999%	

< 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
NOx = Oxides of Nitrogen as NO_2 (MW = 46)
CO = Carbon Monoxide (MW = 28)
TOC = THC = Total Organic Carbon as Methane including CH_4 (MW = 16)
THC = Total Hydrocarbons as Methane (MW = 16)
NMOC = Total Non-Methane Organic Carbon as Methane (MW = 16)
SO_2 = Sulfur Dioxide as SO_2 (MW = 64.1)

CALCULATIONS,

PPM @ 15% O_2 = ppm * 5.9 / (20.9 - %O_2)
PPM @ 3% O_2 = ppm * 17.9 / (20.9 - %O_2)
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_2 emission ppm = H2S in fuel * Fuel Flow/Stack Gas Flow