WASTE MANAGEMENT

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

TV Tracking #: 16

1. ☐ RECEIVED IN ENFORCEMENT: 06/29/2020

June 26, 2020

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

Director of the Air Division
USEPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901
Attn: Air & Tri-SecENF-2-1

SUBJECT: Combined Title V Semi-Annual Partial 8-34 Annual Report
40 CFR 63 Subpart AAAA Semi-Annual Report
Altamont Landfill and Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94550
Plant Number A2066

Dear Sir or Madam:

The Altamont Landfill and Resource Recovery Facility (ALRRF) is pleased to submit the attached Combined Title V Semi-Annual and Partial 8-34 Annual Report for the period of December 1, 2019 through May 31, 2020 to the Bay Area Air Quality Management District (BAAQMD) and the United States Environmental Protect Agency (USEPA), Region IX. As required by 40 Code of Federal Regulations (CFR) Part 63 Subpart AAAA, the Semi-Annual Startup, Shutdown and Malfunction (SSM) Report is also enclosed. The Combined Title V Semi-Annual and Partial 8-34 Annual Report satisfies the requirements of the Title V Permit listed in Condition Number 19235, Part 23 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,

Marcus Nettz II
Senior 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

Altamont Landfill & Resource Recovery Facility

Livermore, California

December 1, 2019 through May 31, 2020

Prepared for

Waste Management of Alameda County, Inc.
A Waste Management Company

June 29, 2020

For submittal via email to:

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

United States Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Prepared By

WASTE MANAGEMENT

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 PURPOSE

This document is a Combined Semi-Annual Title V Report and Partial Regulation 8, Rule 34 Annual Report for the Altamont Landfill and Resource Recovery Facility (ALRRF). This report is prepared pursuant to Bay Area Air Quality Management District's (BAAQMD) Regulation 8, Rule 34, Section 411, Title 40 Code of Federal Regulations (CFR) Part 60 Subpart WWW and Cc, New Source Performance Standards (NSPS) Emission Guidelines (EG), respectively, for municipal solid waste (MSW) landfills, and the ALRRF Title V Permit. This Report is being submitted as required by Condition Number 19235, Part 23 in the Title V Permit. The EG are applicable to landfills that have received refuse after 1987 and received no modification of design capacity since May 30, 1991. The BAAQMD Regulation 8-34-411 is applicable to all solid waste landfills that meet the applicability requirements of design capacity and non-methane organic compounds (NMOC) annual emissions rates as listed in the regulations cited above. The ALRRF meets these applicability conditions. This Combined Report meets the requirements of BAAQMD Regulation 8-34-411 and 40 CFR §60.757(f) and covers compliance activities conducted from December 1, 2019 through May 31, 2020. This Combined Report also includes the Semi-Annual Report of Startup, Shutdown and Malfunction (SSM) Plan activities pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AAAA for Landfills.

1.2 RECORDKEEPING 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 ALRRF. The records will be maintained at this location for a minimum of five years.

This Combined Report is for the timeframe of December 1, 2019 through May 31, 2020. Section 2 of this report contains the requirements to satisfy both BAAQMD Regulation 8-34-411 and 40 CFR §60.757(f). Section 3 contains the requirements to satisfy both BAAQMD Regulation 8-34-413 and 40 CFR §60.758(g).

1.3 REPORT PREPARATION

This Combined Report has been prepared by Waste Management. It was prepared based on review of information provided by ALRRF.

2 SEMI-ANNUAL MONITORING REPORT

In accordance with Title V Permit Standard Condition 1.F, BAAQMD Regulation 8-34-411 and §60.757(f) in NSPS, this document is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report that is required to be submitted by the ALRRF. 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 December 1, 2019 through May 31, 2020. Table 2-1 lists the rules and regulations that are required to be included in this Combined Report.

Table 2-1. Semi-Annual Report Requirement

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 Appendix B
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2 Appendices A, C, D, E, & F
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 Appendices G & I
8-34-501.4, 8-34-505	Testing performed to satisfy any of the recordkeeping requirements of this rule, including wellhead monitoring.	Sections 2.4 & 2.11 Appendices K & O
8-34-501.5	Monthly landfill gas (LFG) flow rates and well concentration readings for facilities subject to 8-34-404.	Sections 2.4 & 2.7 Appendices G, H, I, J, O, & Q
8-34-501.6, 8-34-503, 8-34-506, §60.757(f)(5)	For operations subject to Section 8-34-503 and 8-34-506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in parts per million, by volume (ppmv), date of discovery, the action taken to repair the leak, date of the repair, date of any required re-monitoring, and the re-monitored concentration in ppmv.	Sections 2.6 & 2.7 Appendices L & M
8-34-501.7	Annual waste acceptance rate and current amount of waste in-place.	Section 2.8
8-34-501.8	Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the Collection and Control Design Plan.	Section 2.9, Appendix N
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 2.11, Appendices O & P
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 2.12, Appendix G, H, I, J, & Q
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 Appendices G, H, & I
8-34-501.12	The records required above shall be made available and retained for a period of five years.	Section 1.2
§60.757(f)(2)	Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.	Section 2.2.1
§60.757(f)(6)	The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), (c)(4) of §60.755.	Section 2.13, Appendices B & R
§60.10(d)(5)(i)	Startup, Shutdown, and Malfunction Events	Section 4, Appendices B, C, D, E, & F

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

Appendix A includes collection system downtime logs that list the time, duration, and the reason for each shutdown. Appendix B includes the Wellfield Start-Up, Shutdown, and Malfunction (SSM) events.

2.1.1 Collection System Downtime

During this reporting period, there were three instances in which all emission control devices did not operate. The total GCCS Downtime for the reporting period of December 1, 2019 through May 31, 2020 is 43.2 hours.

The total GCCS downtime for the partial 2020 calendar year is 33.3 hours out of the 240 hours allowed per year by BAAQMD Regulation 8-34-113. Each instance of collection system downtime is described in Appendix A.

2.1.2 Well Disconnection Log

As required by BAAQMD Regulation 8-34-116 and/or 8-34-117, no more than five (5) LFG collection wells or ten percent of the LFG collection wells of the GCCS were shut down at any one time. No LFG collection wells were disconnected from a vacuum source for longer than 24 hours during this reporting period unless fill was actively being placed or compacted in the immediate vicinity of the well pursuant to BAAQMD Regulation 8-34-116. Appendix B includes the Wellfield SSM Log for the reporting period.

2.1.3 S-210 Liquefied Natural Gas Plant

The daily heat input limit for the S-210 Liquefied Natural Gas (LNG) Plant, pursuant to PTO Condition Number 24255, Part 2 is 1,950 MMBTU/day. As summarized in Table 2-2 below, the LNG Plant did not exceed the permitted daily heat input limit at any time during this reporting period. Appendix H includes heat input logs for the reporting period.

Table 2-2. S-210 LNG Plant Maximum Daily Heat Input Summary

Month/Year	12/2019	1/2020	2/2020	3/2020	4/2020	5/2020
LNG Plant*	598	735	837	875	915	1,006

* Maximum Daily Heat Input (MMBTU/day)

Pursuant to BAAQMD Regulation 1 Rule 523, parametric periods of in-operation for the S-210 LNG Plant did not exceed 24 hours or 15 consecutive days. Parametric monitor periods of inoperation for the S-210 LNG Plant also did not exceed 30 calendar days per consecutive 12-month period. Please refer to Appendix AD for more details.

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

The A-15 Flare (back-up flare) and A-16 Flare (LNG Plant Flare) SSM Logs, which list downtimes and the reasons for the shutdowns, are located in Appendix C. Appendix D contains the SSM Logs for Turbine Number 1 (S-6) and Turbine Number 2 (S-7). Appendix E contains the SSM Log for the LNG Plant (S-210). The total downtime hours for the reporting period are summarized in Table 2-3:

Table 2-3. Emissions Control Device

Emission Control Device	Total Downtime December 1, 2019 through May 31, 2020 (Hours)
A-15 (Back-up Flare)[1]	4,377.2
A-16 (LNG Plant Flare)	73.0
S-6 (Turbine Number 1)	157.8
S-7 (Turbine Number 2)	162.5
S-210 (LNG Plant)	775.7

1 – Used to control LFG when other device(s) are shut down

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

During the period encompassed by this report, LFG was not diverted through a bypass line. No bypass lines have been installed at the ALRRF.

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

S-6 and S-7 Turbines

The Key Emission Control System Operating Parameter (BAAQMD 8-34-509) for the S-6 and S-7 Turbines was determined to be combustion chamber discharge temperature, based on the Annual Source Test. The combustion temperature of both turbines is monitored on a continuous basis and shall not be less than 700 degrees Fahrenheit (°F) averaged over any three-hour period, pursuant to Title V Permit Condition Number 18773, Part 9.

The normal operating temperature of the turbines is 1,170°F. As required by Title V Permit Condition Number 18773, Part 9, continuous monitoring of the combustion temperature of the S-6 and S-7 Turbines started on December 1, 2003. The combustion temperature of the S-6 and S-7 Turbine was maintained between 700°F and 1,220°F averaged over any three-hour period during this reporting period.

The daily heat input permit limit for each turbine, pursuant to Title V Condition Number 18773, Part 8 is 1,378 MMBTU/day. As summarized in Table 2-4, the turbines did not exceed the permitted daily heat input limit at any time during this reporting period.

Table 2-4. Turbine S-6 and S-7 Maximum Daily Heat Input Summary

Month/Year	12/2019	1/2020	2/2020	3/2020	4/2020	5/2020
Turbine (S-6)*	1,091	1,108	1,094	1,105	1,097	1,090
Turbine (S-7)*	1,079	1,075	1,056	1,082	1,073	1,043

* Maximum Daily Heat Input (MMBTU/day)

Appendix F includes turbine combustion temperature deviation and heat input logs for S-6 and S-7.

Pursuant to BAAQMD Regulation 1 Rule 523, parametric periods of inoperation for the S-6 and S-7 Gas Turbines did not exceed 24 hours or 15 consecutive days. Parametric monitor periods of inoperation for the S-6 and S-7 Gas Turbines also did not exceed 30 calendar days per consecutive 12-month period. Please refer to Appendix AD for more details.

A-15 and A-16 Flares

The Daily Heat Input Permit Limits for the A-15 and A-16 Flares, pursuant to Title V Condition Number 19235, Part 4 are 1,704 MMBTU/day and 3,168 MMBTU/day, respectively. Table 2-6 below shows the maximum daily heat input measured during this reporting period.

The A-15 and A-16 Flares did not exceed the permitted daily heat input limit at any time during this reporting period.

Table 2-6. Flares A-15 and A-16 Maximum Daily Heat Input Summary

Month/Year	12/2019	1/2020	2/2020	3/2020	4/2020	5/2020
A-15 (Back-up Flare)[1]	14.0	0.0	0.0	222.0	38.0	0.0
A-16 Flare[1]	1,136	1,274	1,075	1,375	1,331	1,234

1 – Maximum Daily Heat Input (MMBTU/day)

Appendix G includes A-15 and A-16 Flare temperature deviation and heat input logs for the reporting period.

Pursuant to BAAQMD Regulation 1 Rule 523, parametric periods of inoperation for the A-15 and A-16 Flares did not exceed 24 hours or 15 consecutive days. Parametric monitor periods of inoperation for the A-15 and A-16 Flares also did not exceed 30 calendar days per consecutive 12-month period. Please refer to Appendix AD for more details.

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

The combustion zone temperature of the A-15 Flare is continuously monitored using a thermocouple and recorded by a Yokogawa data acquisition system with local digital display. The recorded graphs and tables showing operational data (flow, temperature, operation time) of the flare indicated that the three-hour average combustion zone temperature did not drop below 1,400°F while the flare was in operation during the reporting period. Pursuant to the updated PTO Condition 19235 Part 10(a) issued by the BAAQMD in 2019, the minimum three-hour average operating temperature for the A-15 Flare is 1,481°F. From December 1, 2019 through May 31, 2020, the A-15 Flare three-hour average operating temperature did not drop below 1,525°F.

The combustion zone temperature of the A-16 Flare is continuously monitored using a thermocouple and recorded by a Yokogawa data acquisition system with local digital display. The recorded graphs and tables showing operational data (flow, temperature, operation time) of the flare indicated that the three-hour average combustion zone temperature did not drop below 1,400°F while the flare was in operation during the reporting period. Pursuant to the updated PTO Condition 19235 Part 10(b) issued by the

BAAQMD in 2020 PTO, the minimum three-hour average operating temperature for the A-16 Flare is 1,509°F. From December 1, 2019 through May 31, 2020, the A-16 Flare three-hour average operating temperature did not drop below 1,542°F.

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

Cover integrity monitoring was performed on a monthly basis. The technicians noted one location with erosion during February 2020. The corrective actions were initiated and erosion was corrected in March 2020. The technicians noted erosion, ponding and leachate seep during April 2020. The corrective actions were initiated and erosion and ponding was corrected during May 2020. Site discussed remediation plans for leachate seep west of well 529 and corrective action implementation is in progress. No other areas of concern were found during the reporting period. The Monthly Cover Integrity Monitoring Reports are included in Appendix I. Cover integrity monitoring was performed on the following dates:

- December 30, 2019
- January 30, 2020
- February 28, 2020
- March 27, 2020
- April 30, 2020
- May 29, 2020

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

The ALRRF does not operate under BAAQMD 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 information contained in Appendix J includes the Surface Emissions Monitoring (SEM) data for the quarterly monitoring events performed during this reporting period on the following dates:

- Fourth Quarter 2019 – October 28, 30 and 31, and November 1, 22 and 25, 2019
- First Quarter 2020 – March 4, 5, 6, and 31, and April 1, 2020

  A Thermo Scientific Toxic Vapor Analyzer 1000 (TVA1000) flame ionization detector (FID) was used to perform the SEM during the Fourth Quarter 2019 and First Quarter 2020 event. The landfill surface was monitored along the path delineated on the SEM walking path map. Any areas suspected of having emission problems by visible observations were also monitored. Immediately prior to the Fourth Quarter 2019 and First Quarter 2020 monitoring events, the monitoring equipment was calibrated using zero air and a 500 parts per million by volume (ppmv) methane (CH_4) calibration gas.

- The Fourth Quarter SEM was performed on October 28, 2020, and sixty-five (65) exceedances (FID readings greater than 500 ppm CH_4 above background measurements) were detected. Corrective actions were completed. The ten-day re-monitoring event was conducted on October 31, and November 1, 2020, and no

further exceedances were detected. The thirty-day follow-up monitoring event was conducted on November 22 and 25, 2020, and no exceedances were detected.

- The First Quarter 2020 SEM was performed on March 4, and thirty-seven (37) exceedances (FID readings greater than 500 ppm CH_4 above background measurements) were detected. Corrective actions were completed. The ten-day re-monitoring event was conducted on March 5 and 6, 2020, and no further exceedances were detected. The thirty-day follow-up monitoring event was conducted on March 31 and April 1, 2020 and no exceedances were detected.

See Appendix J for the Fourth Quarter 2019 and First Quarter 2020 SEM Reports.

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

"Quarterly tests for operations subject to Sections 8-34-503 and 506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or Section 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in ppm by volume, date of discovery, the action taken to repair the leak, date of repair, date of any required re-monitoring, and the re-monitored concentration in ppm by volume."

The quarterly LFG component leak testing events for this reporting period were performed on:

- Fourth Quarter 2019 – October 18 and December 6 and 20, 2019
- First Quarter 2020 – March 5 and 11, 2020

A Thermo Scientific TVA1000 FID was used to perform both the Fourth Quarter 2019 and First Quarter 2020 leak testing events. There were no exceedances detected above 1,000 during the Second Quarter 2019 monitoring event. Repairs were initiated and completed within seven days. No exceedances of 1,000 ppm were identified during Fourth Quarter 2019 and First Quarter 2020 monitoring events. See Appendix K for the Component Leak Testing Reports.

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

The waste acceptance rate for this reporting period and the current waste in-place figures, which include waste placed through May 31, 2020, are as follows:

- Waste Acceptance Rate at Fill Area I between December 1, 2019 through May 31, 2020= 35.0 tons
- Current Waste In-Place at Fill Area I as of May 31, 2020= 50,025,694 tons
- Waste Acceptance Rate at Fill Area II between December 1, 2019 through May 31, 2020 = 470,869 tons
- Current Waste In-Place at Fill Area II as of May 31, 2020=1,015,995 tons
- Total Combined Waste In Place at Fill Area I and II as of May 31, 2020=51,041,649 tons (Limit is 88,00,000 tons).

Pursuant to Permit to Operate Condition 19235 18D, the total cumulative amount of decomposable materials placed in existing Fill Area 1 shall not exceed 51, 020, 000 tons. The total combined cumulative amount of decomposable materials placed in Fill Area I and II shall not exceed 88,00,000 tons.

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

The ALRRF includes an approximately 8-acre landfill area on the eastern side of Unit 2 that has been historically segregated for asbestos disposal, as stated in the June 2003 Amended and Restated Collection and Control System Design Plan.

The amount of non-degradable asbestos waste that was placed in this area during this reporting period is 1782 tons (Appendix L).

2.10 GREENWASTE GRINDING OPERATION *(BAAQMD 2-1-105.3)*

The ALRRF was issued PTO 17215 on July 21, 2008, incorporating the following 3 sources:

S-29 – Green Waste Stockpiles (subject to Condition Number 24061)
S-30 – Portable Green Waste Grinding Operation (subject to Condition Number 24062)
S-31 – Portable Diesel Engine for Green Waste Grinder (subject to Condition Number 24063)

Pursuant to PTO Condition Number 24063 Part 2, the S-31 engine did not use more than 76,205 gallons of fuel during any consecutive 12-month period. Pursuant to PTO 17215 Condition Number 24061 Part 1, the total amount of green waste received at S-29 from off-site locations did not exceed 68,040 tons during any consecutive 12-month period. No food wastes were stored or processed at S-29. Appendix AB details the total waste received and fuel usage data for the Portable Green Waste Operation.

Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris for disposal or alternative daily cover (ADC) as of January 1, 2010 but does accept the materials for transfer offsite to a composting and/or biofuels facility and/or onsite grinding through third party. The ALRRF green waste grinding operation, including the S-31 Portable Diesel Engine for the Green Waste Grinder stopped in January 2010, although this operation may occur in the future under allowances provided in Ordinance 2008-01 (i.e. grinding of purchase green waste for erosion control or final cover materials). Currently the grinding operation of accepted green waste is done at the site by third party

2.11 WELLFIELD MONITORING DATA *(BAAQMD 8-34-501.4 & 8-34-505)*

Wellfield monitoring was conducted on a monthly basis pursuant to BAAQMD Regulation 8-34-505. The wellfield concentration readings for December 1, 2019 through May 31, 2020 are included in Appendix M. Each well was monitored for the following:

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

The wellfield monitoring was performed on the following dates:

- December 5, 9, 12, 16, 17, 18, 20, 22, 24, 28, and 30, 2019
- January 7, 9, 10, 14, 15, 16, 20, 27, and 28, 2020
- February 3, 4, 6, 10, 12, 14, 15, 17, 18, 20, 21, 24, and 27, 2020
- March 2, 6, 9, 10, 13, 16, 18, 19, 20, and 27, 2020
- April 6, 7, 8, 12, 15, 16, 17, 21, 22, 26, 29, and 30, 2020
- May 1, 4, 5, 7, 10, 11, 12, 13, 14, 17, 20 and 21, 2020

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

BAAQMD Regulation 8-34-305 (Wellhead Requirements) requires that each wellhead shall operate under a vacuum; wellhead temperature shall be less than 131°F (55 Degrees Celsius); and either the nitrogen concentration shall be less than 20 percent or the oxygen concentration shall be less than 5 percent.

Please refer to the Wellfield Deviation Log, included in Appendix N, for exceedance records for the reporting period.

2.12 GAS FLOW MONITORING RESULTS *(BAAQMD 8-34-501.10, 8-34-508, & §60.757(f)(1))*

The LFG flow rate for the A-15 Flare is measured with a Kurz thermal mass flow meter connected to a Yokogawa digital readout and data acquisition system. The Fluid Components International (FCI) flowmeter was replaced with a Kurz Flowmeter.

The LFG flow rate for the A-16 Flare is measured with a Rosemount Annubar flow meter connected to a Yokogawa digital readout and data acquisition system. Pursuant to BAAQMD Regulation 8-34-508 the flow is monitored continuously and recorded digitally at least every 15 minutes.

Both of the turbines (S-6 and S-7) are equipped with a Daniels flow meter. Pursuant to BAAQMD Regulation 8-34-508, the flow is monitored continuously and recorded digitally at least every 15 minutes.

The LNG Plant (S-210) is equipped with a Rosemount 485 Annubar flow meter. Pursuant to BAAQMD Regulation 8-34-508 the flow is monitored continuously and recorded digitally at least every 15 minutes.

The LFG flow data is available for review at the ALRRF. Appendix O contains a summary of the monthly LFG flow rates for the flares, turbines, and LNG Plant. Table 2-7, below, summarizes the total LFG flow for the reporting period.

Table 2-7. Control Devices LFG Flow Summary
December 1, 2019 through May 31, 2020

Source	Average Flow (scfm)	CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBTU)
A-15 (Backup Flare)[1]	1,057	50.0	1,097,979	554,479	553
A-16 (LNG Plant Flare)[2,4]	1,452	45.2	380,636,132	172,352,040	171,721
S-6 (Turbine 1)[3]	1,485	48.8	313,910,882	153,028,540	155,018
S-7 (Turbine 2) [3]	1,450	48.8	305,492,645	148,965,967	150,903
S-210 (LNG Plant) [3]	N/A	50.1	207,027,009	103,152,646	104,494

CH_4 – methane N/A – not available
1 – From Annual Source Test dated March 16, 201 and March 12, 2020.
2 – Annual Source Test (April 3 and 4, 2019 and March 25 and 26, 2020), average of condensate injection on and off.
3 – Monthly reading
4 – Byproduct gas flow from the LNG Plant to the A-16 Flare has been incorporated into the flare's total throughput.

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."

This section summarizes changes made to the ALRRF GCCS which were permitted by the BAAQMD and implemented for the reporting period. The Wellfield SSM Log listing well decommissions and start-ups is located in Appendix B. Correspondence detailing the decommissioning and startup of wells can be found in Appendix P.

PTO Condition Number 19235, Part 1, which was assigned Application Number (AN) 27839 issued on June 6, 2016 allows the ALRRF to decommission up to one hundred (100) vertical wells and fifteen (15) horizontal wells and/or tire trench collectors, and to install up to one hundred and twenty (120) vertical wells and twenty five (25) horizontal wells and/or tire trench collectors.

Table 2-8 below summarizes the status of permitted wellfield decommissioning and installations per the PTO Condition Number 19235 Part 1(b), as updated by Application Number (AN) 27839 issued on June 6, 2016.

Table 2-8. Wellfield Decommissionings and Installations per PTO Condition Number 19235, Part 1, Updated by Application Number (AN) 27839

As of May 31, 2020	Decommissioning Actions		Installations	
	Vertical Wells	Horizontal wells/ Tire Trench Collectors	Vertical Wells	Horizontal wells/ Tire Trench Collectors
Actions permitted under PTO Condition No. 19235	100	15	120	25
Actions performed by WMAC per PTO Condition No. 19235	89	4	94	5
Remaining actions permitted under PTO Condition No. 19235	**11**	**11**	**26**	**20**

Per the updated PTO Condition Number 19235, Part 1, as of May 31, 2020, there were one hundred and thirty-two (132) vertical wells, three (3) horizontal collectors, and 1 leachate collection system cleanout riser (LCRS) installed at ALRRF.

2.13 MONITORING REPORTS

Section I.F of the Title V Permit requires the ALRRF to submit all monitoring records to the BAAQMD at least once every six months, except where more frequent reporting is required. Monitoring was conducted for the following sources during this reporting period.

2.13.1 A-6 and A-7 – Fogging System

Title V Permit Condition Number 18773, Part 4 allows discretionary operation of the turbines' fogging system (A-6 and A-7). Permit Condition Number 18773, Part 5 requires ALRRF to maintain operational records on the days each of the turbines and the fogging system are operated.

ALRRF did not operate the fogging system during this reporting period. A logbook for the fogging system is maintained at the ALRRF.

2.13.2 Sulfur Monitoring

Title V Permit Condition Number 18773, Part 10 requires that a monthly sulfur (as hydrogen sulfide [H_2S]) sample be collected. The sample must be taken at the main LFG header with a Draeger tube, and the reading shall not exceed 150 ppmv. Table 2-9, below, summarizes all H_2S samples collected during this reporting period.

Table 2-9. Monthly H_2S Sampling Results

Date	Location Sample Taken	H_2S Concentration
12/6/2019	Inlet to Turbines	35 ppmv
1/20/2020	Inlet to Turbines	34 ppmv
2/5/2020	Inlet to Turbines	38 ppmv
3/3/2020	Inlet to Turbines	30 ppmv
4/7/2020	Inlet to Turbines	40 ppmv
5/14/2020	Inlet to Turbines	55 ppmv

2.13.3 LFG Condensate Injection

Title V Permit Condition Number 19235, Part 3 allows injection of LFG condensate into Flares A-15 and A-16 providing that the condensate injection rate does not exceed 3,600 and 7,200 gallons during any day, respectively.

Table 2-10 below summarizes the maximum daily LFG condensate injection for every month during this reporting period:

Table 2-10. Monthly LFG Condensate Injection

Month/Year	A-15 Flare Maximum Daily LFG Condensate Injection[1]	A-16 Flare Maximum Daily LFG Condensate Injection[1]
December 2019	0.0	4,402
January 2020	0.0	4,477
February 2020	0.0	4,536
March 2020	0.0	4,491
April 2020	0.0	4,707
May 2020	0.0	4,416

1 – Permit limit for the A-15 Flare is 4,320 gallons per day. Permit limit for the A-16 Flare is 7,200 gallons per day.

As shown in Table 2-10, LFG condensate injection in the A-15 Flare did not exceed 4,320 gallons per day and the A-16 Flare did not exceed 7,200 gallons per day during this reporting period, in compliance with Permit Condition Number 19235, Part 3. Appendix Q contains daily condensate injection rate tables for the reporting period.

2.13.4 S-99 - Non-Retail Gasoline Dispensing Facility

Title V Permit Condition Number 25723 requires that a Static Pressure Performance Test (Leak Test) TP 206.3 be conducted on the S-99 Gasoline Dispensing Facility at least once in each consecutive 12-month period. ALRRF performed a Leak Test on November 6, 2019 during which S-99 passed all Static Pressure Performance Tests. Leak Test summary results were submitted to the BAAQMD by the testing firm within 30 days on November 18, 2019 and November 21, 2019 (revision), the and revised report is included in Appendix R of previous report.

Permit Condition Number 20813 requires that the facility's annual gasoline throughput not exceed 30,000 gallons in any consecutive 12-month period.

The ALRRF maintains monthly records of the gasoline throughput at S-99 that shows full compliance with the approved throughput limit. Appendix S contains monthly throughput records for this reporting period. The records indicate that 7210 gallons of gasoline fuel was dispensed during this semi-annual reporting period.

2.13.5 VOC-Laden Soil

Volatile organic compound laden (VOC-laden) soil is defined by the BAAQMD as any soil that contains VOCs, as defined in BAAQMD Regulation 8-40-206, at a concentration of 50 parts per million by weight (ppmw) or less. Condition Number 19235, Part 20 of the Title V Permit requires that ALRRF limit the quantity of low VOC-laden soil handled per day so that no more than 15 pounds of total carbon could be emitted to the atmosphere per day. On June 9, 2020 during routine data review for the semi-annual reporting, it was discovered that site exceeded the daily VOC limit in March 2020. The VOC limit was exceeded on March 4, 5, and 6, 2020. ALRRF submitted 10-day Title V

deviation report on June 18, 2020, after ALRRF discovered the exceedance of daily VOC limit on June 9, 2020. As required, a 30-day follow-up letter will be submitted by July 8, 2020. VOC-laden soil receipts and emission calculations for this reporting period are located in Appendix S.

ALRRF accepted high VOC-contaminated soil exceeding 50 ppm volatile organic compounds by weight during this reporting period. All records required by the permit are available onsite.

2.13.6 S-19 - Transfer Tank with Siphon Pump

Title V Permit Condition Number 20774, Parts 1 and 3, limit the wastewater throughput from S-19 to 1,576,800 gallons in any consecutive 12-month period. Table 2-11 compares the actual consecutive 12-month rolling wastewater throughput for the S-19 transfer tank with the permit limit. During the reporting period, no wastewater was directed through S-19 (all wastewater went directly to S-12) and no waste material was collected from the siphon pump during this reporting period.

Table 2-11 Monthly 12-Month Rolling LFG Condensate Throughput

	Consecutive 12-Month S-19 Throughput (Gallons)	Waste Material Collected from the Siphon Pump (Gallons)
PERMIT LIMIT	**1,576,800**	**20,750**
December 2019	0	0
January 2020	0	0
February 2020	0	0
March 2020	0	0
April 2020	0	0
May 2020	0	0

The S-19 transfer tank is also subject to the requirements of BAAQMD Regulation 8, Rule 8 (Oil/Water Separators). This regulation requires an inspection and leak check (readings not to exceed 500 ppmv methane) of all gaskets, all flanges, tank condition, and connections of gauges and pipes on a quarterly basis.

The quarterly S-19 Inspection and Leak Checks were conducted on the following dates:

- Fourth Quarter 2019 – October 18, 2019
- First Quarter 2020 – March 11, 2020

S-19 was in good condition and no leaks were detected above the 500-ppmv limit during the Fourth Quarter 2019 and First Quarter 2020 inspection.

All of the records for S-19 covering this reporting period are included in Appendices T and Y, and are in full compliance with the terms of Permit Condition Number 20774 and the requirements of BAAQMD Regulation 8, Rule 8.

2.13.7 Diesel Engines S-199, S-200, S-201, S-221, S-222/S-228, S-224, and S-225

Fuel usage and operating hour records for all the engines are included in Appendix U.

Operating Hours of Diesel Engines S-199, S-200, and S-201

Emergency use diesel engines S-199, S-200 and S-201 commenced operation in March 2008. S-199, S-200, and S-201 were added to PTO 16864 and operated in compliance

pursuant to PTO Condition Number 22850, which limits operation of S-199, S-200, and S-201 to no more than 50 hours per calendar year for maintenance and testing. ALRRF operated these engines in compliance with Title V Permit Condition Number 22850 for the reporting period.

Fuel Usage of Diesel Engines S-193

Title V Permit Condition Number 20801 requires that diesel fuel usage at remaining engine, S-193, not exceed the rates listed in the table below during any consecutive 12-month period.

ALRRF operated these engines in full compliance with Title V Permit Condition Number 20812 during the consecutive 12-month period ending on November 30, 2019 as follows in Table 2-12.

Table 2-12. Diesel Engines Fuel Usage

Engine	June 1 -2019 to May 31, 2020 Fuel Usage (Gallons)	Permit Limit (Gallons/year)
S-193	0	62,196

Operating Hours of Diesel Engines S-221, S-222/S-228, S-S-224 and S-225

Pursuant to BAAQMD PTO Condition 26733, 26734 and 26225 Part 3, the total combined operating time for the S-221, S-222, S-224 and S-225 diesel engines shall not exceed 29,200 hours during any consecutive 12-month period.

Daily operating records for S-221, S-222/228, S-224 and S-225 are maintained onsite at the ALRRF.

ALRRF submitted surrender notification for S-217 and S-218 to the BAAQMD on March 18, 2016. ALRRF submitted startup notification for S-224 and S-225 to the BAAQMD on March 18, 2016 seven days before scheduled startup date. ALRRF Tipper S-224 replaced S-217 and S-225 replaced S-218.

ALRRF submitted a permit application for S-222 to the BAAQMD on February 2, 2018. ALRRF approved the Tipper repower permit (S-228 replaced S-222) on June 1, 2018. ALRRF submitted startup notification for S-228 to the BAAQMD on June 13, 2018, seven days before scheduled startup date.

ALRRF operated in full compliance with the PTO Condition 25448, 26225, 26734 during the 12-month consecutive period ending May 31, 2020. A summary of operating hours are listed below in Table 2-13. As of May 31, 2020 ALRRF Tippers S-221, S-222/S-228, S-224 and S-225 were operational.

Table 2-13. Diesel Engines Operating Hours

Engine	Hours Operated December 1, 2019-May 31, 2020	Hours Operated in 12-Month Period Ending May 31, 2020	Operations Limits
S-221	368	618	7,300 Hours 12-Months*
S-222/S-228	664	1,565	7,300 Hours 12-Months*
S-224	1,680	3,729	14,600 Hours

Engine	Hours Operated December 1, 2019-May 31, 2020	Hours Operated in 12-Month Period Ending May 31, 2020	Operations Limits
S-225	2,102	3,526	12-Months*
Combined S-221,S-222/S-228, , S-224, and S-225	4,814	9,438	

** Limit according to BAAQMD 26733, 26734 and 26225 Part 3.*

2.13.8 Carbon Monoxide Emissions Tracking

PTO Condition Number 24373 limits the rolling 12-month CO emissions rate for each non-mobile combustion device onsite and for the entire site as a whole.

CO Emissions for the A-15 and A-16 Flares; the S-6 and S-7 Turbines;; the S-31, S-193, S-197, S-198, S-199, S-200, S-201, S-221, S-224, S-225, and S-228 portable diesel-fired engines; and other portable diesel-fired sources under 50 horsepower were calculated using CO emissions factors and monthly operating hours as stipulated in PTO Condition Number 24373. Please refer to Appendices O, V, and W for details. The maximum potential CO emissions for the portable diesel-fired engines as required by PTO Condition Number 24373 Part 3(b) can also be found in Appendix W.

ALRRF operated in full compliance with PTO Condition Numbers 24373 during the 12-month consecutive period ending May 31, 2020 as follows in Table 2-15.

Table 2-15. Site-Wide CO Emissions

Source	12-Month CO Emissions (Tons)	Rolling 12- Month Permit Limit (Tons)
A-15 (Backup Flare)	0.002	93.268
A-16 (LNG Plant Flare)	0.990	115.632
S-6 (Turbine 1)	19.927	56.064
S-7 (Turbine 2)	12.204	56.064
Portable Engines	2.565	N/A
Total (Site-wide)	35.688	225.0

2.13.9 S-140 SBR 1 and S-141 SBR 2 – Aerated Biological Reactors

Title V Permit Condition Number 20922 was revised on August 3, 2006 to include an alternative compliance demonstration method. Permit Condition Number 20922, Part 1 limits the quarterly average total organic carbon (TOC) concentration in the wastewater to less than 52 ppmw with a maximum daily throughput of 52,400 gallons to each tank. Alternatively, emissions of precursor organic compounds (POC) are limited to 10 pounds per day. Part 2 of the revised permit condition limits either the rolling 12-month wastewater throughput for S-140 and S-141 to 6,460,000 gallons or 12-month total POC emissions to less than 1,230 pounds. The rolling 12-month wastewater throughput for S-140 and S-141 was zero (0) gallons as of the end of this reporting period. See Appendix X for flow records for S-140 and S-141.

Table 2-16 below compares Permit Condition Number 20922 concentration limits for S-140 (SBR 1) and S-141 (SBR 2) followed by the actual analytical results for selected constituents obtained during the First Quarter 2020 event on February 24, 2020, and

Second Quarter 2020 event on May 19, 2020. For all Quarters, monitoring was completed by obtaining a sample at the LCRS and at the S-140 Reactor.

Table 2-16 Analytical Results Summary for LCRS and SBR1

Compound	Concentration Limit (ppbw)	First Quarter 2020 Average (ppbw)	Second Quarter 2020 Average (ppbw	Annual Average Results (ppbw)
Benzene	80	1.3	ND	1.0
Chloroform	470	ND	ND	ND
1,4 Dichlorobenzene	1,020	4.3	ND	3.37
Methylene Chloride	2,530	ND	ND	ND
Naphthalene	3,590	1.4	ND	1.27
Perchloroethylene (Tetracholoroethylene)	430	ND	ND	ND
Trichloroethylene (Trichloroethene)	1,290	ND	ND	ND
Vinyl Chloride	30	ND	ND	ND

ppbw – parts per billion by weight
ND – Non-Detect (below detection limit)

Table 2-17 presents the results of TOC testing by quarter and by annual average. Pursuant to Permit Condition Number 20922 if the TOC concentration exceeds the permit limit of 52 ppmw, POC emissions must be calculated using the equation in Permit Condition Number 20922, Part 5h.

Table 2-17. Total Organic Compounds Results Summary

Constituents	Concentration Limit (ppmw)	First Quarter 2020 Average (ppbw)	Second Quarter 2020 Average (ppbw)
TOC concentration	52	0.0019	0.01043
Average Annual TOC Concentration	52	0.0077	0.0182

Appendix X contains the laboratory VOC analytical results and the monthly throughput records for S-140 and S-141. The monitored quarterly and annual concentrations are within the Permit Condition Number 20922 limits.

2.13.10 Non-Methane Organic Compound Content in Collected Landfill Gas

Pursuant to Permit Condition No. 19235, Part 17a, effective upon the commencement of waste disposal in Fill Area 2, the rolling three-year average NMOC concentration in LFG extracted from the site is limited to 600 ppmv expressed as C6, corrected to 50 percent methane content. Waste disposal operations commenced in Fill Area 2 in March 2019.

During June 2017, ALRRF submitted permit application for a change of condition to address the current NMOC concentrations, and proposed a higher Fill Area 2 NMOC concentration as well as requested to revise the Fill Area 1 baseline fugitive POC emissions. The best estimate of the current NMOC concentration in the ALRRF LFG in 2017 was 1,192 ppmv as methane, based on site test data and weighted for each individual combustion device. The FA1 baseline POC emissions, revised in the 2017

application, will be further revised to reflect the upward trending average NMOC concentration documented since 2017. The 2020 change of condition application (or addendum to the 2017 application) will include a request to incorporate the revised FA1 baseline as well as to establish a higher fugitive POC emission limit and a revised POC ERC schedule, which will include a higher assumed NMOC concentration. Appendix P includes POC assessment report that was submitted on June 18, 2020.

3 PERFORMANCE TEST REPORT

In accordance with BAAQMD Rule 8-34-413 and 40 CFR §60.757(g) in the NSPS, a Performance Test Report is required to be submitted for the ALRRF containing performance and monitoring data for the operation of the GCCS. The following operational records have been reviewed, summarized, and are included in this Performance Test Report.

Table 3-1. Performance Test Requirement

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 AA
§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 AB
§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 Appendices K & AB
§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 AC

3.1 SOURCE TEST REPORTS *(BAAQMD 8-34-412)*

Compliance demonstration tests (source tests) were performed on the S-6 and S-7 Gas Turbines and A-16 Flare during 2020.

Source tests for the S-6 and S-7 turbines were performed on January 8, 2020, by Blue Sky Environmental, Inc. (Blue Sky) pursuant to BAAQMD Regulation 8-34-412. The S-6 and S-7 Source Test Report was submitted to the BAAQMD on March 6, 2020, within 60 days of the test date.

The source test for the A-15 Flare was performed by Blue Sky on March 12, 2020 pursuant to 8-34-412. The A-15 Source Test Report was submitted to the BAAQMD on May 11, 2020, within 60 days of the test date.

The 2020 annual source test of the A-16 Flare, including simultaneous operation with the LNG Plant, was performed by Blue Sky on March 25 and 26, 2020. The A-16 2020

Source Test Report was submitted to the BAAQMD on May 18, 2020, within 60 days of the test date.

The results from the source tests performed during this reporting period are summarized in the following sections. For brevity, only the source test summary results pages are included in Appendix Y. The complete source test reports were completed and submitted to the BAAQMD as detailed above and are available upon request.

3.1.1 A-15 Flare Test Results

The March 12, 2020, source test results for the A-15 Flare indicate that the flare is in compliance with 8-34-301.4 and PTO Condition Number 19235. As required by 8-34-301.3 and Condition Number 19235, the flare meets the NMOC emission rate of less than 30 ppmv as methane, corrected to 3 percent O_2. Table 3-2 shows the results of the March 12, 2020 source test. The 2020 source test was conducted without condensate injection. The last time condensate was injected into the A-15 Flare was during the 2011 Source Test. WM does not anticipate injecting any condensate into the system in the future.

Table 3-2. A-15 Source Test Results

Parameter	March 12, 2020 A-15 Flare Results (condensate on)	March 12, 2020 A-15 Flare Results (condensate off)	Permit Limit
NMOC (ppmv as CH_4 @ 3% O_2)	-	<2.2	30
NO_x Emission Rate (lb/MMBTU)	-	0.02	0.06
CO Emission Rate (lb/MMBTU)	-	0.002	0.30
SO_2 Emission (ppmv)	-	9.5	300

3.1.2 A-16 Flare Test Results

The 2020 source test results for the A-16 Flare indicate that the flare is in compliance with 8-34-301.4 and PTO Condition Number 19235. As required by 8-34-301.3 and Condition Number 19235, the flare meets the NMOC emission rate of less than 30 ppmv as methane, corrected to 3 percent O_2. Table 3-3 shows the results of the source test.

The 2020 source test event was completed March 25 and 26, 2020. Results of the A-16 Flare 2020 source test event were submitted to the BAAQMD within 60 days of test date and are included in the semi-annual report.

Table 3-3. A-16 Source Test Results

Parameter	March 26, 2020 A-16 Flare Results (condensate on)	March 25, 2020 A-16 Flare Results (condensate off)	March 25, 2020 A-16 Flare Results (LNG and LFG and condensate on)	Permit Limit
NMOC (ppmv as CH_4 @ 3% O_2)	43.0	33.6	41.3	30
NO_x Emission Rate (lb/MMBTU)	0.057	0.04	0.057	0.06
CO Emission Rate (lb/MMBTU)	0.004	0.005	0.005	0.20
SO_2 Emission Rate (ppmv)	9.8	10.0	5.6	300

3.1.3 S-6 Gas Turbine Test Results

The January 8, 2020, source test results for the S-6 Gas Turbine indicate that the turbine is in compliance with 8-34-301.4 and Title V Permit Condition Number 18773 and that, as required by 8-34-301.4 and Condition Number 18773, the turbine meets the NMOC

emission rate of less than 120 ppmv. The final results of the source test are shown in Table 3-4 below.

Table 3-4. S-6 Source Test Results

Parameter	January 8, 2020 S-6 Gas Turbine Results	Permit Limit
NMOC (ppmv as CH_4 @ 3% O_2)	<<3.9	120
NO_x Emission Rate (lb/MMBTU)	0.1048	0.1567
CO Emission Rate (lb/MMBTU)	0.117	0.2229
TRS Content (ppmv)	59.2	150

3.1.4 S-7 Gas Turbine Test Results

The January 8, 2020, source tests results for the S-7 Gas Turbine indicate that the turbine is in compliance with 8-34-301.4 and Title V Permit Condition Number 18773 and that, as required by 8-34-301.4 and Condition Number 18773, the turbine meets the NMOC emission rate of less than 120 ppmv. The final results of the source test are shown in Table 3-5 below.

Table 3-5. S-7 Source Test Results

Parameter	January 8, 2020 S-7 Gas Turbine Results	Permit Limit
NMOC (ppmv as CH_4 @ 3% O_2)	<4.5	120
NO_x Emission Rate (lb/MMBTU)	0.1084	0.1567
CO Emission Rate (lb/MMBTU)	0.076	0.2229
TRS Content (ppmv)	54.9	150

3.2 COMPLIANCE WITH §60.757(g)(1)

"A diagram of the collection system showing collection system positioning including wells, horizontal collectors…"

A map of the LFG collection system dated June 2020, showing the locations of all vertical wells, horizontal collectors, and other LFG extraction devices is included in Appendix Z.

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 will be based on establishing, maintaining, and documenting the LFG collection flow rate, as required by Title V Permit Condition Number 19235, Part 2. Over the initial monitoring period covered by this Partial Annual 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 density appears more than adequate for controlling surface emissions, based on continuous compliance and

operational experience. This installation density also provides sufficient methane quality and flows to sustain the energy generating control devices. Additional LFG collectors are installed regularly, as required to maintain compliance and provide maximum available LFG extraction for fueling the energy generating control devices.

The total capacity of the LFG mover equipment exceeds the current EPA extraction rates and the historic LFG extraction rates determined to be continuously available from the landfill. Sufficient LFG control device and mover capacity is provided such that the A-15 flare is used as a back-up control device.

The landfill operator will conduct routine monitoring in accordance with NSPS requirements. If the GCCS at the landfill 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.

On March 16, 2016, ALRRF submitted a change of permit conditions request for new well actions, including the installation of up to 120 new vertical wells and 25 horizontal wells and the decommissioning of up to 100 vertical wells and 15 horizontal wells. The BAAQMD approved the application, which was assigned to Application Number (AN) 27839.

Eight (8) existing wells were decommissioned during the period of December 1, 2019 and May 31, 2020. Thirty-six (36) new wells and collectors were started during the period of December 1, 2019 and May 31, 2020. Appendix B contains the Wellfield SSM Log for the wells that were started and decommissioned during the reporting period. See Appendix P for BAAQMD Correspondence for well start-up and decommissioning notifications and correspondence regarding AN 27839.

Compliance with §60.757(g)(2) is confirmed by performing quarterly SEM events. Refer to Section 2.6, Surface Emissions Monitoring, in this report for information pertaining to the surface emissions monitoring results. New wells will be installed as needed in the future to further control emissions.

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."

The GCCS Design Plan dated December 2000 (amended and restated in June 2003, August 2009, and December 2010) for ALRRF does not include asbestos or non-degradable waste areas that are excluded from the collection system. Therefore, §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."

The GCCS Design Plan dated December 2000 (amended and restated in June 2003, August 2009, and December 2010) for ALRRF does not include asbestos or non-degradable waste areas that are excluded from the collection system. The current 8-acre

area that is segregated for asbestos disposal is covered by the GCCS. Therefore, §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 GCCS capacity will be increased as warranted and as required by regulations. See Appendix P for related correspondence.

3.7 COMPLIANCE WITH §60.757(g)(6)

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

In compliance with §60.752(b)(2)(ii)(A)(3) and (4), the GCCS was, and future expansions will be, designed to extract LFG at a sufficient rate to minimize the subsurface lateral migration and surface emissions of LFG. This is achieved by sizing and installing sufficient collection elements, transmission piping, blower(s), and control devices for the estimated maximum rate of LFG to be generated within the refuse at a given point in time. The GCCS will be operated to collect LFG at a sufficient rate, (per the definition in §60.751) by maintaining a negative gauge pressure at all wellheads sufficient to extract a LFG flow rate exceeding the LFG collection flow rate on a continuous basis, as established by the operator per Title V Permit Condition Number 9235, Part 2.

Compliance with §60.757(g)(6) is demonstrated by performing quarterly LFG migration monitoring.

The LFG migration monitoring during the reporting period was performed pursuant to the 2011 Landfill Gas Migration Monitoring Plan. The quarterly LFG migration monitoring results for this reporting period are included in Appendix AA.

The LFG migration monitoring and the structure monitoring event for this reporting period were conducted on the following dates:

- Fourth Quarter 2019 – October 1 and 2, 2019
- First Quarter 2020– January 6 and 7, 2020

The results of monitoring can be found in Appendix AA.

4 STARTUP, SHUTDOWN, AND MALFUNCTION REPORT

4.1 SSM REPORTS FOR THE GCCS AT ALRRF

The NESHAP contained in 40 CFR part 63, AAAA for Municipal Solid Waste 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 a Startup, Shutdown, and Malfunction (SSM) event occurred during the reporting period. The reports required by §63.1980(a) of the NESHAP and §60.757(f) of the NSPS summarize the GCCS exceedances. These two semi-annual reports contain similar information and have been combined as allowed by §63.10(d)(5)(i) of the General Provisions.

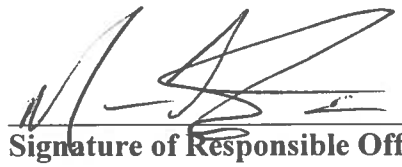
The following is information covering SSM events that occurred during this reporting period:

- During the reporting period, forty-seven (47) wellfield SSM events occurred. The time and duration of each event is presented in the SSM Log contained in Appendix B.
- During the reporting period, six (6) Backup Flare (A-15) SSM events occurred. A-15 was shut down to allow for continuous operation of the LNG Plant and the A-16 Flare. The time and duration of each event is presented in the SSM Log contained in Appendix C.
- During the reporting period, twenty-one (21) LNG Plant Flare (A-16) SSM events occurred. A-16 was shut down and restarted in response to varying LFG demand, to allow for construction in the wellfield, in response to LNG Plant Operations, for forced utility outages and/or for maintenance activities. The time and duration of each event is presented in the SSM Log contained in Appendix C.
- During the reporting period, twenty-nine (29) Turbine Number 1 (S-6) SSM events occurred. S-6 was shut down and restarted during the period for forced utility outages and/or to perform routine maintenance tasks. The time and duration of each event is presented in the SSM Log contained in Appendix D.
- During the reporting period, thirty-nine (39) Turbine Number 2 (S-7) SSM events occurred. S-7 was shut down and restarted during the period for forced utility outages and/or to perform routine maintenance tasks. The time and duration of each event is presented in the SSM Log contained in Appendix D.
- During the reporting period, forty (40) LNG Plant (S-210) SSM events occurred. S-210 was shutdown and restarted during the reporting period for forced utility outages, to perform routine maintenance tasks, to allow for construction in the wellfield, and/or in response to A-16 shutdowns. The time and duration of each event is presented in the SSM Log contained in Appendix E.
- During the reporting period five (5) monitoring/recorder equipment SSM events occurred.

- In all one hundred eighty-seven (187) events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan and there were no deviations from the SSM Plan.
- No exceedances of any applicable emission limitation in the landfills NESHAP (63.10(d)(5)(i)) occurred during this reporting period.
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).

I certify the following:

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



Signature of Responsible Official

6/15/2020

Date

Marcus Nettz II

Name of Responsible Official

APPENDIX A
GAS COLLECTION SYSTEM DOWNTIME LOGS

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY, Livermore, CA

December 1, 2019 - May 31, 2020 GCCS DOWNTIME LOG

START DATE & TIME	STOP DATE & TIME	DURATION (Hours)	Total Shutdown due to All Control Devices Shutdown (Hours)	Comments	APPLICABLE 8-34 EXEMPTION
12/9/19 7:32	12/9/19 9:46	2.23	2.23	All control devices were shut down during fire panel replacement work. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
12/10/19 8:30	12/10/19 15:44	7.23	7.23	All control devices were shut down during wellfield work on 12" tie-in. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
12/11/19 9:38	12/11/19 10:02	0.40	0.40	All control devices were shut down to test fire panel shutdowns (turbines, skids and plant). Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
1/23/20 6:54	1/23/20 17:42	10.80	10.80	All control devices were shut down during annual High Voltage maintenance. Turbine oil & final filters and T-5 gasket was replaced. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
2/13/20 9:54	2/13/20 10:06	0.20	0.20	All control devices were shut down during replacing of bushings on 5kV tranformer. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
2/26/20 8:04	2/26/20 14:56	6.87	6.87	All control devices were shut down during header Tie-in. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
3/14/20 18:50	3/15/20 10:16	15.43	15.43	All control devices were shut down during 21.5 feeder trip (B/C phase, Instantaneous, birds nest on utility pole) during bird strike. Control device operators were onsite to inspect and manually restart the control devices. Visual inspection was conducted, checked PLC for any faults and abnormalities, and initiated device startup.See attached startup checklists A and B.	8-34-113, Inspection and Maintenance
No GCCS downtime in April 2020					
No GCCS downtime in May 2020					
TOTAL January 1, 2020 through May 31, 2020 (HOURS):		33.3	33.3		
TOTAL December 1, 2019 through May 31, 2020 (HOURS):		43.2	43.2		

APPENDIX B
WELLFIELD SSM LOG

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield Completed By: Ben Tarver/Dan Sanjose/ Juan Baracio/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 to May 31, 2020

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	be Emission Standard(s
Well ID Number: ALTA0650 Startup Event X Shutdown Event Malfunction Event	11/25/19 7:03	11/25/19 7:05	0.03	25 hours	Well Located in Active Filling Area. Well Raised.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	11/25/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0650 X Startup Event Shutdown Event Malfunction Event	11/26/19 8:00	11/26/19 8:02	0.03			113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	11/26/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0775 Startup Event X Shutdown Event Malfunction Event	12/18/19 12:05	12/18/19 12:07	0.03	NA	Startup pursuant to PTO Condition 19235 Part 1(b)(iv) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	12/18/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0775 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0776 Startup Event X Shutdown Event Malfunction Event	12/18/19 11:59	12/18/19 12:01	0.03	NA	Startup pursuant to PTO Condition 19235 Part 1(b)(iv) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	12/18/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0776 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0777 Startup Event X Shutdown Event Malfunction Event	12/18/19 11:49	12/18/19 11:51	0.03	NA	Startup pursuant to PTO Condition 19235 Part 1(b)(iv) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	12/18/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0777 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0778 Startup Event X Shutdown Event Malfunction Event	12/18/19 11:42	12/18/19 11:44	0.03	NA	Startup pursuant to PTO Condition 19235 Part 1(b)(iv) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	12/18/2019	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0778 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0702 Startup Event X Shutdown Event Malfunction Event	2/14/20 7:39	2/14/20 7:41	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0702 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0516 Startup Event X Shutdown Event Malfunction Event	2/17/20 11:11	2/17/20 11:13	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0516 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0571 Startup Event X Shutdown Event Malfunction Event	2/17/20 11:26	2/17/20 11:28	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0571 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0676 Startup Event X Shutdown Event Malfunction Event	2/17/20 11:01	2/17/20 11:03	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0676 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0706 Startup Event X Shutdown Event Malfunction Event	2/17/20 11:15	2/17/20 11:17	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Well ID Number: ALTA0706 Startup Event Shutdown Event Malfunction Event						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield Completed By: Ben Tarver/Dan Sanjose/ Juan Baracio/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 to May 31, 2020

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	be Emission Standard(s
Well ID Number: ALTA0723	2/17/20 11:07	2/17/20 11:09	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0723						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0735	2/17/20 10:47	2/17/20 10:49	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0735						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0758	2/17/20 10:57	2/17/20 10:59	0.03	NA	Decommissioned pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/17/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0758						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0780	2/14/20 9:31	2/14/20 9:33	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0780						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0781	2/14/20 9:40	2/14/20 9:42	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0781						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0782	2/14/20 9:47	2/14/20 9:49	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0782						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0782	2/14/20 9:47	2/14/20 9:49	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0782						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0783	2/14/20 10:15	2/14/20 10:17	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0783						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0784	2/14/20 10:37	2/14/20 10:39	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0784						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0785	2/14/20 10:08	2/14/20 10:10	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	113: Inspection and Maintenance X 116: Well Raising 117: Gas Collection 118: Construction Activities	2/14/2020	X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 3	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Well ID Number: ALTA0785						113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities		X Manual (Go to Section 9) Automatic (Go to Section 11)	Procedure No. 1 to 4	Yes (Go to Section 11) X No (Stop)	Yes (Go to Section 12) No (Stop)	
Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield Completed By: Ben Tarver/Dan Sanjose/ Juan Baracio/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 to May 31, 2020

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	be Emission Standard(s
Well ID Number: ALTA0786						113: Inspection and Maintenance						
X Startup Event	2/28/20 7:00	2/28/20 7:02	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	2/28/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0786						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0805						113: Inspection and Maintenance						
X Startup Event	2/24/20 10:00	2/24/20 10:02	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	2/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0805						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0806						113: Inspection and Maintenance						
X Startup Event	2/24/20 9:56	2/24/20 9:58	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	2/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0806						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0807						113: Inspection and Maintenance						
X Startup Event	2/24/20 9:29	2/24/20 9:31	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	2/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0807						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0808						113: Inspection and Maintenance						
X Startup Event	2/24/20 14:24	2/24/20 14:26	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	2/24/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0808						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0787						113: Inspection and Maintenance						
X Startup Event	3/13/20 9:19	3/13/20 9:21	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0787						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0788						113: Inspection and Maintenance						
X Startup Event	3/13/20 9:26	3/13/20 9:28	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0788						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0789						113: Inspection and Maintenance						
X Startup Event	2/14/20 11:03	2/14/20 11:05	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	2/14/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0789						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0790						113: Inspection and Maintenance						
X Startup Event	3/13/20 11:12	3/13/20 11:14	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0790						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0791						113: Inspection and Maintenance						
X Startup Event	3/13/20 11:23	3/13/20 11:25	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0791						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield Completed By: Ben Tarver/Dan Sanjose/ Juan Baracio/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 to May 31, 2020

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	be Emission Standard(s
Well ID Number: ALTA0792						113: Inspection and Maintenance						
X Startup Event	3/13/20 16:18	3/13/20 16:20	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0792						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0793						113: Inspection and Maintenance						
X Startup Event	3/13/20 11:29	3/13/20 11:31	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0793						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0794						113: Inspection and Maintenance						
X Startup Event	3/6/20 16:24	3/6/20 16:26	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0794						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0795						113: Inspection and Maintenance						
X Startup Event	3/6/20 9:08	3/6/20 9:10	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0795						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0796	3/9/20 16:04					113: Inspection and Maintenance						
X Startup Event		3/9/20 16:06	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/9/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0796						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0797	3/6/20 8:36					113: Inspection and Maintenance						
X Startup Event		3/6/20 8:38	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0797						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0798	3/9/20 15:51					113: Inspection and Maintenance						
X Startup Event		3/9/20 15:53	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/9/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0798						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0799	3/3/20 10:45					113: Inspection and Maintenance						
X Startup Event		3/3/20 10:47	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/3/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0799						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0800	3/13/20 11:18					113: Inspection and Maintenance						
X Startup Event		3/13/20 11:20	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0800						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0801	3/6/20 16:35					113: Inspection and Maintenance						
X Startup Event		3/6/20 16:37	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0801						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield Completed By: Ben Tarver/Dan Sanjose/ Juan Baracio/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 to May 31, 2020

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	be Emission Standard(s
Well ID Number: ALTA0802						113: Inspection and Maintenance						
X Startup Event	3/6/20 16:40	3/6/20 16:42	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/6/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0802						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0803						113: Inspection and Maintenance						
X Startup Event	3/13/20 9:13	3/13/20 9:15	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0803						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0804						113: Inspection and Maintenance						
X Startup Event	3/13/20 9:05	3/13/20 9:07	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0804						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0721						113: Inspection and Maintenance						
Startup Event	1/15/20 13:15	1/15/20 13:17	0.03	1,390 hours	Well Located in Active Filling Area. Well Raised.	X 116: Well Raising	1/15/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0721						113: Inspection and Maintenance						
X Startup Event	3/13/20 11:35	3/13/20 11:37	0.03			116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0755						113: Inspection and Maintenance						
Startup Event	9/10/19 12:05	9/10/19 12:07	0.03	4,680 hours	Well Located in Active Filling Area. Well Raised.	X 116: Well Raising	9/10/2019	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0755						113: Inspection and Maintenance						
X Startup Event	3/23/20 11:41	3/23/20 11:43	0.03			116: Well Raising	3/23/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0764						113: Inspection and Maintenance						
Startup Event	9/10/19 11:40	9/10/19 11:42	0.03	4,441 hours	Well Located in Active Filling Area. Well Raised.	X 116: Well Raising	9/10/2019	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0764						113: Inspection and Maintenance						
X Startup Event	3/13/20 12:29	3/13/20 12:31	0.03			116: Well Raising	3/13/2020	X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0809						113: Inspection and Maintenance						
X Startup Event	4/30/20 10:50	4/30/20 10:52	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	4/30/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0809						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0810						113: Inspection and Maintenance						
X Startup Event	4/30/20 10:21	4/30/20 10:23	0.03	NA	Well startup pursuant to PTO Condition 19235 Part 1(b)(i) as updated by PTO 27839.	X 116: Well Raising	4/30/2020	X Manual (Go to Section 9)	Procedure No. 1 to 3	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						
Well ID Number: ALTA0810						113: Inspection and Maintenance						
Startup Event						116: Well Raising		X Manual (Go to Section 9)	Procedure No. 1 to 4	Yes (Go to Section 11)	Yes (Go to Section 12)	
Shutdown Event						117: Gas Collection		Automatic (Go to Section 11)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activities						

Wells Currently Offline-Pending

PTO - Permit to Operate ATC - Authority to Construct

Total SSM Count for December 1, 2019 to May 31, 2020	47

APPENDIX C
FLARES (A-15 AND A-16) SSM LOGS

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: A-15 Landfill Gas Flare (Standby) Completed By: Dan San Jose/Ben Tarver/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Runtime (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit	(12) Describe Emission
Component: A-15 Flare												
x Startup Event	12/4/19 10:48	12/4/19 10:50	0.03	0.5	Flare was offline due to low gas flow. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/4/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	12/4/19 11:20	12/4/19 11:30	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/4/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
x Startup Event	3/10/20 9:36	3/10/20 9:46	0.17	0.3	Flare was shutdown due to low gas flow. Flarewas ignition wire was changed. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	3/10/20 9:52	3/10/20 9:54	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
x Startup Event	3/11/20 8:30	3/11/20 8:40	0.17	3.2	Flare was started during inspection and testing pre source test. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	3/11/20 11:42	3/11/20 11:44	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
x Startup Event	3/12/20 9:26	3/12/20 9:36	0.17	3.9	Flare was started during annual source test. Flare was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	3/12/20 13:22	3/12/20 13:24	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
x Startup Event	3/15/20 10:16	3/15/20 10:26	0.17	4.6	Flare was shutdown due to low gas flow	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/15/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	3/15/20 14:50	3/15/20 14:52	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/15/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
Startup Event	4/14/20 8:42	4/14/20 8:52	0.17	1.3	Flare was started during 21.5 feeder trip. Flare was inspected and restarted. Flare was subsequently shutdown due to low gas flow after turbines were online.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/14/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
x Shutdown Event												
Malfunction Event												
Component: A-15 Flare												
x Startup Event	4/14/20 10:02	4/14/20 10:04	0.03			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/14/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Shutdown Event												
Malfunction Event												

Notes: The A-15 SSM Log is maintained pursuant to Permit Condition No. 19235, Parts 2(b) and 15(
*The A-15 Flare is a standby flare and is shut down to allow for continuous operation of the A-16 Flare and the LNG Pla
There were 743.0 hours available for the A-15 Flare in March 2020 due to Daylight Saving Tin

Total Downtime for December 1, 2019 to May 31, 2020 (Hours)*	4377.2
Total Runtime for December 1, 2019 to May 31, 2020 (Hours)*	13.8
Total Count for December 1, 2019 to May 31, 2020	6

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: A-16 Landfill Gas Flare Completed By: Dan San Jose/Ben Tarver/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit	(12) Describe Emission
Component: A-16 Flare	12/1/19 16:46	12/1/19 16:48	0.03	0.63	Shutdown due to low temperature alarm. Flare was inspected and restarted.	X 113: Inspection and Mair	12/1/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/1/19 17:24	12/1/19 17:34	0.17			X 113: Inspection and Mair	12/1/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/4/19 21:40	12/4/19 21:42	0.03	0.93	Shutdown due to low temperature alarm. Flare was inspected and restarted.	X 113: Inspection and Mair	12/4/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/4/19 22:36	12/4/19 22:46	0.17			X 113: Inspection and Mair	12/4/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/9/19 7:24	12/9/19 7:26	0.03	1.80	Shutdown during Fire panel replacement at turbine plant. Flare was inspected and restarted.	X 113: Inspection and Mair	12/9/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/9/19 9:12	12/9/19 9:22	0.17			X 113: Inspection and Mair	12/9/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/10/19 8:04	12/10/19 8:06	0.03	7.40	Shutdown during Fire panel replacement at turbine plant. Flare was inspected and restarted.	X 113: Inspection and Mair	12/10/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/10/19 15:28	12/10/19 15:38	0.17			X 113: Inspection and Mair	12/10/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/11/19 9:08	12/11/19 9:10	0.03	1.23	Shutdown during Fire panel replacement at turbine plant. Flare was inspected and restarted.	X 113: Inspection and Mair	12/11/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/11/19 10:22	12/11/19 10:32	0.17			X 113: Inspection and Mair	12/11/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/20/19 8:32	12/20/19 8:34	0.03	2.43	Shutdown during inspection and maintenance. Flare was inspected and restarted.	X 113: Inspection and Mair	12/20/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	12/20/19 10:58	12/20/19 11:08	0.17			X 113: Inspection and Mair	12/20/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	1/23/20 5:38	1/23/20 5:40	0.03	12.57	Shutdown during High Voltage Maintenance. Flare was inspected and restarted.	X 113: Inspection and Mair	1/23/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	1/23/20 18:12	1/23/20 18:22	0.17			X 113: Inspection and Mair	1/23/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	1/31/20 0:48	1/31/20 0:50	0.03	0.97	Shutdown due to low temperature alarm. Flare was inspected and restarted.	X 113: Inspection and Mair	1/31/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	1/31/20 1:46	1/31/20 1:56	0.17			X 113: Inspection and Mair	1/31/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	2/11/20 6:08	2/11/20 6:10	0.03	8.20	Shutdown during inspection and installing new insulation. Flare was inspected and restarted.	X 113: Inspection and Mair	2/11/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	2/11/20 14:20	2/11/20 14:30	0.17			X 113: Inspection and Mair	2/11/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: A-16 Landfill Gas Flare Completed By: Dan San Jose/Ben Tarver/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit	(12) Describe Emission
Component: A-16 Flare	2/13/20 9:54	2/13/20 9:56	0.03	0.20	Shutdown during inspection and maintenance on air compressor. Flare was inspected and restarted.	X 113: Inspection and Mair	2/13/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	2/13/20 10:06	2/13/20 10:16	0.17			X 113: Inspection and Mair	2/13/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	2/26/20 8:04	2/26/20 8:06	0.03	6.87	Shutdown during Well field header tie in (24" to 12"). Flare was inspected and restarted.	X 113: Inspection and Mair	2/26/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	2/26/20 14:56	2/26/20 15:06	0.17			X 113: Inspection and Mair	2/26/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/14/20 14:18	3/14/20 14:20	0.03	2.90	Shutdown due to low temperature alarm. Flare was inspected and restarted.	X 113: Inspection and Mair	3/14/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/14/20 17:12	3/14/20 17:22	0.17			X 113: Inspection and Mair	3/14/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/14/20 18:52	3/14/20 18:54	0.03	1.77	Shutdown during repairs on power line near the flare station. Flare was inspected and restarted.	X 113: Inspection and Mainte	3/14/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activitie						
Component: A-16 Flare	3/14/20 20:38	3/14/20 20:48	0.17			X 113: Inspection and Mainte	3/14/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activitie						
Component: A-16 Flare	3/14/20 22:00	3/14/20 22:02	0.03	16.50	Shutdown during power outage caused 21.5 feeder trip caused by bird strike. Flare was inspected and restarted.	X 113: Inspection and Mair	3/14/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/15/20 14:30	3/15/20 14:40	0.17			X 113: Inspection and Mair	3/15/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/19/20 9:14	3/19/20 9:16	0.03	1.73	Shutdown during inspection and replacement of injection system. Flare was inspected and restarted.	X 113: Inspection and Mair	3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/19/20 10:58	3/19/20 11:08	0.17			X 113: Inspection and Mair	3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/19/20 13:02	3/19/20 13:04	0.03	0.87	Shutdown during inspection and replacement of injection system. Flare was inspected and restarted.	X 113: Inspection and Mair	3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/19/20 13:54	3/19/20 14:04	0.17			X 113: Inspection and Mair	3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/26/20 13:20	3/26/20 13:22	0.03	1.00	Shutdown to replace thermocouple. Flare was inspected and restarted.	X 113: Inspection and Mair	3/26/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	3/26/20 14:20	3/26/20 14:30	0.17			X 113: Inspection and Mair	3/26/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	4/14/20 8:16	4/14/20 8:18	0.03	2.23	Shutdown during repairs on power line. Flare was inspected and restarted.	X 113: Inspection and Mair	4/14/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	4/14/20 10:30	4/14/20 10:40	0.17			X 113: Inspection and Mair	4/14/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: A-16 Landfill Gas Flare Completed By: Dan San Jose/Ben Tarver/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit	(12) Describe Emission
Component: A-16 Flare	4/15/20 13:36	4/15/20 13:38	0.03	1.63	Shutdown to reset the condensate flowmeter readout. Flare was inspected and restarted.	X 113: Inspection and Mair	4/15/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	4/15/20 15:14	4/15/20 15:24	0.17			X 113: Inspection and Mair	4/15/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	4/16/20 12:16	4/16/20 12:18	0.03	0.67	Shutdown to fix loose wire in PLC. Flare was inspected and restarted.	X 113: Inspection and Mair	4/16/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	4/16/20 12:56	4/16/20 13:06	0.17			X 113: Inspection and Mair	4/16/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	5/14/20 13:44	5/14/20 13:46	0.03	0.43	Shutdown due to low temperature alarm. Flare was inspected and restarted.	X 113: Inspection and Mair	5/14/2020	Manual (Go to Section 8)		Yes (Go to Section 10	Yes (Go to Section 11	
Startup Event						116: Well Raising						
X Shutdown Event						117: Gas Collection		X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event						118: Construction Activit						
Component: A-16 Flare	5/14/20 14:10	5/14/20 14:20	0.17			X 113: Inspection and Mair	5/14/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10	Yes (Go to Section 11	
X Startup Event						116: Well Raising						
Shutdown Event						117: Gas Collection		Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event						118: Construction Activit						

Note The A-16 SSM Log is maintained pursuant to Permit Condition No. 19235, Part :
There were 743.0 hours available for the A-15 Flare in March 2020 due to Daylight Saving Tim

Total Downtime for December 1, 2019 to May 31, 2020 (Ho	73.0
Total Runtime for December 1, 2019 to May 31, 2020 (Hour	4,318.0
Total Count for December 1, 2019 to May 31, 2020	21

(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.		Procedure
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
TURBINES (S-6 AND S-7) SSM LOGS

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-6 Turbine Number 1 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission
Component: S-6 Turbine	12/3/19 8:14	12/3/19 8:16	0.03	3.00	Shutdown during Water wash, removed generator screens and removed dirt & dust build up. Checked and cleaned discharge check valves. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/3/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/3/19 11:14	12/3/19 11:24	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/3/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/9/19 7:32	12/9/19 7:34	0.03	2.93	Shutdown during Fire panel replacement. Changed Duplex and 8 plex oil filters. Changed gearbox oil (skid lube oil pump). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/9/19 10:28	12/9/19 10:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/10/19 8:30	12/10/19 8:32	0.03	7.57	Shutdown during Wellfield work for 12" tie-in. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/10/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/10/19 16:04	12/10/19 16:14	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/10/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/11/19 9:12	12/11/19 9:14	0.03	0.20	Shutdown when jumper was removed on fire panel. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/11/19 9:24	12/11/19 9:34	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/11/19 9:38	12/11/19 9:40	0.03	0.40	Shutdown during Testing fire panel shutdowns (turbines, skids and plant). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/11/19 10:02	12/11/19 10:12	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/14/19 1:02	12/14/19 1:04	0.03	1.23	Shutdown due to Blower suction negative pressure high. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/14/19 2:16	12/14/19 2:26	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/14/19 8:58	12/14/19 9:00	0.03	9.43	Shutdown due to request from PG&E to repair DTT line. Turbine would not start. Ignition failure.Tested and replaced spark plug. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/14/19 18:24	12/14/19 18:34	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/22/19 13:10	12/22/19 13:12	0.03	3.30	Shutdown during Blower suction negative pressure high. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/22/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/22/19 16:28	12/22/19 16:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/22/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-6 Turbine Number 1 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission
Component: S-6 Turbine	12/24/19 5:48	12/24/19 5:50	0.03	0.67	Shutdown during Blower suction negative pressure high. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/24/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/24/19 6:28	12/24/19 6:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/24/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/31/19 10:34	12/31/19 10:36	0.03	2.10	Shutdown during Water wash, changed Duplex oil filters. Checked chain & sprocket. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/31/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	12/31/19 12:40	12/31/19 12:50	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/31/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/2/20 7:40	1/2/20 7:42	0.03	0.57	Shutdown due to Oil/gas separator differential pressure high. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/2/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/2/20 8:14	1/2/20 8:24	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/3/20 9:06	1/3/20 9:08	0.03	1.20	Shutdown to change Oil/gas separator elements. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/3/20 10:18	1/3/20 10:28	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/3/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/21/20 7:06	1/21/20 7:08	0.03	7.23	Shutdown during HVM, water wash, Roots oil & filter, fuel nozzles brushed. Bleed valve replaced. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/21/20 14:20	1/21/20 14:30	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/21/20 16:54	1/21/20 16:56	0.03	1.13	Shutdown to replace leaking bleed valve gasket. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/21/20 18:02	1/21/20 18:12	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/23/20 6:54	1/23/20 6:56	0.03	11.03	Shutdown during HVM switchgear, Turbine oil & final filters. Skid K/O mesh pad replaced. Compressor skid lube oil pump gearbox replaced. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	1/23/20 17:56	1/23/20 18:06	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	2/12/20 8:12	2/12/20 8:16	0.07	1.67	Shutdown during Water wash, T-5 gasket replaced. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	2/12/20 9:52	2/12/20 10:02	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-6 Turbine Number 1 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission
Component: S-6 Turbine	2/13/20 8:06	2/13/20 8:10	0.07	2.50	Shutdown to replace 5 kV Transformer bushings. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	2/13/20 10:36	2/13/20 10:46	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	2/26/20 8:04	2/26/20 8:08	0.07	8.50	Shutdown during Well field header tie in (24" to 12"). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	2/26/20 16:34	2/26/20 16:44	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/2/20 8:04	3/2/20 8:08	0.07	2.20	Shutdown during Water wash, trouble shoot battery charger. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/2/20 10:16	3/2/20 10:26	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/11/20 12:12	3/11/20 12:16	0.07	0.77	Shutdown to check orifice plate. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/11/20 12:58	3/11/20 13:08	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/14/20 18:50	3/14/20 18:54	0.07	23.73	Shutdown during 21.5 feeder trip (B/C phase, Instantaneous, birds nest on utility pole) during bird strike. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/14/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/15/20 18:34	3/15/20 18:44	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/15/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/15/20 19:28	3/15/20 19:32	0.07	42.50	Shutdown during 24 vdc Battery Charger Failure. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/15/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/17/20 13:58	3/17/20 14:08	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/17/20 14:52	3/17/20 14:56	0.07	1.17	Shutdown during 24 vdc Battery Charger Failure. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/17/20 16:02	3/17/20 16:12	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/17/20 16:22	3/17/20 16:26	0.07	1.77	Shutdown during 24 vdc Battery Charger Failure. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/17/20 18:08	3/17/20 18:18	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/17/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-6 Turbine Number 1 Completed By: Larry Lacerra/Rajan Phadnis

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission
Component: S-6 Turbine	3/25/20 8:02	3/25/20 8:06	0.07	6.30	Shutdown during Water wash, and maintenance on Oil/gas & final filters. Extended downtime for A-16 source test. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/25/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	3/25/20 14:20	3/25/20 14:30	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/25/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	4/16/20 10:46	4/16/20 10:50	0.07	2.07	Shutdown during Water wash, Duplex filters. Chain replaced - lube oil pump. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/16/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	4/16/20 12:50	4/16/20 13:00	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/16/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 6:54	5/6/20 6:58	0.07	12.53	Shutdown due to PG&E shutdown during Transmission line work on 230 kv. Water wash, Pall filters replaced. Installed flow indicator sight glass. Radiators flushed, belts changed. Turbine was	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 19:26	5/6/20 19:36	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 19:30	5/6/20 19:34	0.07	0.03	Shutdown during startup sequence. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 19:32	5/6/20 19:42	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 19:36	5/6/20 19:40	0.07	0.07	Shutdown during startup sequence. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-6 Turbine	5/6/20 19:40	5/6/20 19:50	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

Note The S-6 SSM Log is maintained pursuant to Permit Condition No. 18773, Part

There were 743.0 hours available for the S-6 in march 2020 due to Daylight Saving Tin

Total Downtime for December 1, 2019 to May 31, 2020 (Hours)*	157.80
Total Runtime for December 1, 2019 to May 31, 2020 (Hours)*	4,233.2
Total Count for December 1, 2019 to May 31, 2020	29

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-7 Turbine Number 2 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: S-7 Turbine	12/4/19 8:08	12/4/19 8:10	0.03	2.97	Shutdown during Water wash, removed generator screens and removed dirt & dust build up. Checked and cleaned discharge check valves. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/4/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/4/19 11:06	12/4/19 11:16	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/4/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/9/19 7:22	12/9/19 7:24	0.03	2.40	Shutdown during Fire Panel replacement. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/9/19 9:46	12/9/19 9:50	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/9/19 12:28	12/9/19 12:30	0.03	0.83	Shutdown during panel refit. Failed DOM 136 (HMI) failed was replaced. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/9/19 13:18	12/9/19 13:28	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/9/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/10/19 8:24	12/10/19 8:26	0.03	7.33	Shutdown during Wellfield work. 12" tie-in. Replaced Duplex & 8 plex filters, Oil/gas filters. Changed gearbox oil (skid lube oil pump). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/10/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/10/19 15:44	12/10/19 15:54	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/10/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/11/19 7:28	12/11/19 7:30	0.03	0.17	Shutdown due to Generator Excitation Loss . Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/11/19 7:38	12/11/19 7:48	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/11/19 9:38	12/11/19 9:40	0.03	0.73	Shutdown during Testing fire panel shutdowns (turbines, skids and plant). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/11/19 10:22	12/11/19 10:32	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/11/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/14/19 9:02	12/14/19 9:04	0.03	7.33	Shutdown due to request from PG&E to repair DTT line. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/14/19 16:22	12/14/19 16:32	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/14/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/28/19 22:34	12/28/19 22:36	0.03	1.77	Shutdown due to Failed flex I/O module (ZF2083, RTD). Replaced unit. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/28/2019	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/29/19 0:20	12/29/19 0:30	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/29/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-7 Turbine Number 2 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: S-7 Turbine	12/31/19 8:12	12/31/19 8:14	0.03	1.67	Shutdown during Water wash, changed Duplex oil filters. Checked chain & sprocket. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/31/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	12/31/19 9:52	12/31/19 10:02	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	12/31/2019	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/18/20 5:46	1/18/20 5:48	0.03	0.80	Shutdown due to Flex I/O Module Fault. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/18/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/18/20 6:34	1/18/20 6:44	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/18/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/21/20 14:34	1/21/20 14:36	0.03	2.07	Shutdown during HVM, water wash, Roots oil & filter. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/21/20 16:38	1/21/20 16:48	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/22/20 7:58	1/22/20 8:00	0.03	8.73	Shutdown during Ralph Substation HVM. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/22/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/22/20 16:42	1/22/20 16:52	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/22/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/23/20 6:52	1/23/20 6:54	0.03	10.83	Shutdown during HVM switchgear, Turbine oil & final filters. T-5 gasket replaced. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/23/20 17:42	1/23/20 17:52	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/26/20 6:54	1/26/20 6:56	0.03	1.57	Shutdown due to Blower Suction Negative Pressure High. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/26/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/26/20 8:28	1/26/20 8:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/31/20 8:06	1/31/20 8:08	0.03	1.27	Shutdown to change duplex filters. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/31/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	1/31/20 9:22	1/31/20 9:32	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	1/31/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/12/20 10:12	2/12/20 10:16	0.07	1.63	Shutdown during Water wash, Roots blower to motor coupling changed.Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/12/20 11:50	2/12/20 12:00	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/13/20 8:06	2/13/20 8:10	0.07	2.73	Shutdown to replace 5 kV Transformer bushings. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/13/20 10:50	2/13/20 11:00	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-7 Turbine Number 2 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: S-7 Turbine	2/21/20 9:26	2/21/20 9:30	0.07	0.80	Shutdown to change Duplex oil filters. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/21/20 10:14	2/21/20 10:18	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/21/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/26/20 8:04	2/26/20 8:08	0.07	8.17	Shutdown during Well field header tie in (24" to 12"). Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	2/26/20 16:14	2/26/20 16:18	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	2/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/2/20 10:32	3/2/20 10:36	0.07	1.23	Shutdown during Water wash.Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/2/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/2/20 11:46	3/2/20 11:56	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/10/20 9:12	3/10/20 9:16	0.07	0.87	Shutdown to restart Flare A15 after changing ignition cable. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/10/20 10:04	3/10/20 10:14	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/10/20 11:38	3/10/20 11:42	0.07	0.80	Shutdown to change Duplex filters. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/10/20 12:26	3/10/20 12:30	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/10/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/11/20 8:16	3/11/20 8:20	0.07	3.53	Shutdown to check orifice plate and during operation of flare A15 pre source test. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/11/20 11:48	3/11/20 11:52	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/12/20 9:10	3/12/20 9:14	0.07	4.30	Shutdown during source test on flare A-15. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/12/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/12/20 13:28	3/12/20 13:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/12/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/14/20 18:50	3/14/20 18:54	0.07	22.63	Shutdown during 21.5 feeder trip (B/C phase, Instantaneous, birds nest on utility pole) during bird strike. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/14/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/15/20 17:28	3/15/20 17:38	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/15/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/24/20 8:02	3/24/20 8:06	0.07	8.30	Shutdown during Water wash, and maintenance on Oil/gas & final filters. Extended downtime for A-16 source test. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/24/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/24/20 16:20	3/24/20 16:24	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/24/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-7 Turbine Number 2 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: S-7 Turbine	3/26/20 8:28	3/26/20 8:32	0.07	4.53	Shutdown due to low gas flow during A-16 source testing. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	3/26/20 13:00	3/26/20 13:04	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	3/26/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/2/20 8:06	4/2/20 8:10	0.07	0.77	Shutdown to change Duplex filters changed (D/P increasing).Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/2/20 8:52	4/2/20 9:02	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/2/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/4/20 18:42	4/4/20 18:46	0.07	18.33	Shutdown caused due to Ralph Feeder # 6 tripped - nest on utility pole. S6 ran on island mode. Nest was cleared. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/4/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/5/20 13:02	4/5/20 13:12	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/5/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/9/20 8:30	4/9/20 8:34	0.07	8.03	Shutdown after CASIO shutdown request was received, performed water wash, Roots thermostat, Chain and pump sprocket replaced. Installed sight flow indicator on oil/gas return line. Turbine was	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/9/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/9/20 16:32	4/9/20 16:36	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/9/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/23/20 11:02	4/23/20 11:06	0.07	2.90	Shutdown to remove bird nest. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/23/20 13:56	4/23/20 14:00	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/28/20 8:30	4/28/20 8:34	0.07	1.30	Shutdown during Duplex filters changed (D/P increasing). Maintenance and inspeciton on lube oil pump. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/28/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/28/20 9:48	4/28/20 9:58	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/28/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/30/20 8:02	4/30/20 8:06	0.07	1.33	Shutdown to replace lube oil pump. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/30/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	4/30/20 9:22	4/30/20 9:32	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	4/30/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/4/20 18:14	5/4/20 18:18	0.07	2.30	Shutdown due to Differential or Ground Fault.Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/4/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/4/20 20:32	5/4/20 20:42	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/4/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/6/20 6:52	5/6/20 6:56	0.07	13.40	Shutdown due to PG&E shutdown during Transmission line work on 230 kv. Water wash, Pall filters replaced.Radiators flushed, belts changed. Bearings on outboard fan replaced. Turbine was	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/6/20 20:16	5/6/20 20:26	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/6/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG
AFFECTED EQUIPMENT: S-7 Turbine Number 2 Completed By: Larry Lacerra/Rajan Phadnis
Altamont Landfill and Resource Recovery Facility - Livermore, CA
SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: S-7 Turbine	5/8/20 21:08	5/8/20 21:12	0.07	1.57	Shutdown due to Differential or Ground Fault. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/8/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/8/20 22:42	5/8/20 22:46	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/8/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/11/20 16:26	5/11/20 16:30	0.07	0.17	Shutdown due to Differential or Ground Fault. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/11/2020	Manual (Go to Section 8) X Automatic (Go to Section 10)		Yes (Go to Section 10) No (Stop)	Yes (Go to Section 11) X No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/11/20 16:36	5/11/20 16:40	0.07			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/11/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/13/20 8:12	5/13/20 8:16	0.07	1.40	Shutdown to replace Flex I/OZF2121 and Howden NDE RTD. Duplex filters changed. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/13/20 9:36	5/13/20 9:46	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/13/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/23/20 8:00	5/23/20 8:04	0.07	1.03	Shutdown to Flush radiator. Turbine was inspected and restarted.	X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 3	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
Startup Event												
X Shutdown Event												
Malfunction Event												
Component: S-7 Turbine	5/23/20 9:02	5/23/20 9:12	0.17			X 113: Inspection and Maintenance 116: Well Raising 117: Gas Collection 118: Construction Activities	5/23/2020	X Manual (Go to Section 8) Automatic (Go to Section 10)	Procedure 1 to 4	Yes (Go to Section 10) X No (Stop)	Yes (Go to Section 11) No (Stop)	
X Startup Event												
Shutdown Event												
Malfunction Event												

Not The S-7 SSM Log is maintained pursuant to Permit Condition No. 18773, Part 8
There were 743.0 hours available for the S-6 in march 2020 due to Daylight Saving Time.

Total Downtime for December 1, 2019 to May 31, 2020 (Hours)*	162.5
Total Runtime for December 1, 2019 to May 31, 2020 (Hours)*	4,228.5
Total Count for December 1, 2019 to May 31, 2020	39

A. ALRRF FLARE INSPECTION, MAINTENANCE AND STARTUP CHECKLIST

After each shutdown event technicians go through the following checklist and restart the flares.

1	Alarms and investigate
2	PLC and Yokogawa controls
3	Louver Operation
4	Blower Sk
5	Condensate Injection system
6	Compressor Operation
7	Temperature and flow on the PLC

B. ALRRF TURBINE INSPECTION, MAINTENANCE AND STARTUP CHECKLIST

After each shutdown event Turbine plant managers go through the following checklist prior to restart of control devices.

1	Compressor controls
2	Turbine Controls
3	Compressor skids and turbines
4	Fire pump, controls and alarm panel
5	Air Compressor
6	Temperature and flow on the PLC

APPENDIX E
LNG PLANT (S-210) SSM LOGS

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-210 Liquefied Natural Gas (LNG) Plant Completed By: Benjamin Underhill

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Date Form	(7) Type of Event (Startup and Shutdown Events Only)	(8) Procedures Used	(9) Did Steps Taken Vary From Section 8?	(10) Did Event Cause Any Emission Limit Exceedance	(11) Describe Emission Standard(s) Exceeded
Component: S-210 LNG Plant	12/1/19 0:00	12/1/19 0:02	0.03	36.20	Low Temp Flare Fault on Low LFG Flow / Feed Gas too low to restart LNG Plant	12/1/2019	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/2/19 12:12	12/2/19 12:14	0.03			12/2/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/4/19 21:37	12/4/19 21:39	0.03	17.58	Low Temp Flare Fault on Low LFG Flow	12/4/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/5/19 15:12	12/5/19 15:14	0.03			12/5/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/9/19 7:29	12/9/19 7:31	0.03	54.80	WMI Utility Outage - Replace Turbine Fire Panel	12/9/2019	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/11/19 14:17	12/11/19 14:19	0.03			12/11/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/20/19 8:27	12/20/19 8:29	0.03	7.00	WMI Flare Flame Arrestor Maintenance	12/20/2019	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	12/20/19 15:27	12/20/19 15:29	0.03			12/20/2019	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/3/20 23:39	1/3/20 23:41	0.03	11.15	Molegate Trip: E2TD (system valve & pressures out of sequence)	1/3/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/4/20 10:48	1/4/20 10:50	0.03			1/4/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/4/20 20:46	1/4/20 20:48	0.03	16.43	Molegate Trip: E2TD (system valve & pressures out of sequence)	1/4/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/5/20 13:12	1/5/20 13:14	0.03			1/5/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/5/20 23:28	1/5/20 23:30	0.03	34.00	Molegate Trip: E2TD (system valve & pressures out of sequence)	1/5/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/7/20 9:28	1/7/20 9:30	0.03			1/7/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/9/20 19:08	1/9/20 19:10	0.03	2.35	Molegate Trip: E2TD (system valve & pressures out of sequence)	1/9/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	1/9/20 21:29	1/9/20 21:31	0.03			1/9/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-210 Liquefied Natural Gas (LNG) Plant Completed By: Benjamin Underhill

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Date Form	(7) Type of Event (Startup and Shutdown Events Only)	(8) Procedures Used	(9) Did Steps Taken Vary From Section 8?	(10) Did Event Cause Any Emission Limit Exceedance	(11) Describe Emission Standard(s) Exceeded
Component: S-210 LNG Plant											
Startup Event	1/10/20 8:04	1/10/20 8:06	0.03	7.20	Flare Maintenance/ Troubleshooting (Liquid Trap)	1/10/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/10/20 15:16	1/10/20 15:18	0.03			1/10/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/13/20 3:16	1/13/20 3:18	0.03	6.20	Plant Trip: V100A high level condensate	1/13/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/13/20 9:28	1/13/20 9:30	0.03			1/13/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/21/20 4:43	1/21/20 4:45	0.03	48.80	CP401 Oil pump mechanical seal failure	1/21/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/23/20 5:31	1/23/20 5:33	0.03			1/23/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/23/20 6:56	1/23/20 6:58	0.03	14.80	High Voltage Maintenance	1/23/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/23/20 21:44	1/23/20 21:46	0.03			1/23/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/23/20 21:56	1/23/20 21:58	0.03	18.40	Liquefier tag-in, realignment, start-up & refrigerant charging	1/23/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/24/20 16:20	1/24/20 16:22	0.03			1/24/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/26/20 7:56	1/26/20 7:58	0.03	24.80	Molegate Trip: E2TD (system valve & pressures out of sequence)	1/26/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop) X	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	1/27/20 8:44	1/27/20 8:46	0.03			1/27/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	1/31/20 0:45	1/31/20 0:47	0.03	140.15	LCRS pipe removal & replacement	1/31/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	2/5/20 20:54	2/5/20 20:56	0.03			2/5/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	2/11/20 13:06	2/11/20 13:08	0.03	26.00	Molegate Trip: E2TD (system valve & pressures out of sequence)	2/11/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	2/12/20 15:06	2/12/20 15:08	0.03			2/12/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	2/13/20 9:52	2/13/20 9:54	0.03	3.90	Flare Fault - Loss of control air	2/13/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop) X	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	2/13/20 13:46	2/13/20 13:48	0.03			2/13/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-210 Liquefied Natural Gas (LNG) Plant Completed By: Benjamin Underhill

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Date Form	(7) Type of Event (Startup and Shutdown Events Only)	(8) Procedures Used	(9) Did Steps Taken Vary From Section 8?	(10) Did Event Cause Any Emission Limit Exceedance	(11) Describe Emission Standard(s) Exceeded
Component: S-210 LNG Plant	2/19/20 13:57	2/19/20 13:59	0.03	2.50	Molegate Trip: E2TD (system out of sequence)	2/19/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	2/19/20 16:27	2/19/20 16:29	0.03			2/19/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	2/21/20 21:51	2/21/20 21:53	0.03	65.70	Molegate Trip: Loss of vacuum (Vacuum comprs belt failure)	2/21/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	2/24/20 15:33	2/24/20 15:35	0.03			2/24/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	2/26/20 2:40	2/26/20 2:42	0.03	15.40	WMI Maintenance - SCS Tie-downs	2/26/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	2/26/20 18:04	2/26/20 18:06	0.03			2/26/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/10/20 13:15	3/10/20 13:17	0.03	1.00	Plant Trip - High Inlet Oxygen due to LFG well tie-in	3/10/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/10/20 14:15	3/10/20 14:17	0.03			3/10/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/12/20 9:23	3/12/20 9:25	0.03	4.07	Plant Trip - High Inlet Oxygen due to LFG well opening	3/12/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/12/20 13:27	3/12/20 13:29	0.03			3/12/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/14/20 14:11	3/14/20 14:13	0.03	32.28	Utility Power Outage due to bird nest on power pole	3/14/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/15/20 22:28	3/15/20 22:30	0.03			3/15/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/19/20 9:08	3/19/20 9:10	0.03	6.85	Flare Maintenance	3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/19/20 15:59	3/19/20 16:01	0.03			3/19/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/24/20 9:55	3/24/20 9:57	0.03	4.72	Shutdown during preparation and check for annual source test	3/24/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/24/20 14:38	3/24/20 14:40	0.03			3/24/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/25/20 11:24	3/25/20 11:26	0.03	4.13	Shutdown during annual source test	3/25/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	3/25/20 15:32	3/25/20 15:34	0.03			3/25/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-210 Liquefied Natural Gas (LNG) Plant Completed By: Benjamin Underhill

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Date Form	(7) Type of Event (Startup and Shutdown Events Only)	(8) Procedures Used	(9) Did Steps Taken Vary From Section 8?	(10) Did Event Cause Any Emission Limit Exceedance	(11) Describe Emission Standard(s) Exceeded
Component: S-210 LNG Plant											
Startup Event	3/26/20 8:15	3/26/20 8:17	0.03	8.28	Shutdown during annual source test	3/26/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	3/26/20 16:32	3/26/20 16:34	0.03			3/26/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	3/27/20 14:40	3/27/20 14:42	0.03	1.80	Accidental Fire Alarm Shutdown during alarm panel testing	3/27/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	3/27/20 16:28	3/27/20 16:30	0.03			3/27/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	4/14/20 7:44	4/14/20 7:46	0.03	8.70	Utility power outage - Power line repair	4/14/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	4/14/20 16:26	4/14/20 16:28	0.03			4/14/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	4/15/20 13:26	4/15/20 13:28	0.03	3.00	WM condensate flow meter repair and maintenance.	4/15/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	4/15/20 16:26	4/15/20 16:28	0.03			4/15/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	4/16/20 9:20	4/16/20 9:22	0.03	8.00	WM flare panel electrical repair	4/16/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	4/16/20 17:20	4/16/20 17:22	0.03			4/16/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	4/25/20 22:39	4/25/20 22:41	0.03	23.75	Plant Shutdown: High temp due to WM chiller offline	4/25/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	4/26/20 22:24	4/26/20 22:26	0.03			4/26/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	4/28/20 6:00	4/28/20 6:02	0.03	3.47	LNG storage tank valve packing leak	4/28/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	4/28/20 9:28	4/28/20 9:30	0.03			4/28/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
Startup Event	5/4/20 15:02	5/4/20 15:04	0.03	21.13	Feed B High Temp: WM LFG Chiller Shutdown	5/4/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
X Shutdown Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
Malfunction Event											
Component: S-210 LNG Plant											
X Startup Event	5/5/20 12:10	5/5/20 12:12	0.03			5/5/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
Shutdown Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Malfunction Event											

CONTROL DEVICE AND LFG COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: S-210 Liquefied Natural Gas (LNG) Plant Completed By: Benjamin Underhill

Altamont Landfill and Resource Recovery Facility - Livermore, CA

SSMP REPORT - From December 1, 2019 through May 31, 2020

Identify Flare & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Date Form	(7) Type of Event (Startup and Shutdown Events Only)	(8) Procedures Used	(9) Did Steps Taken Vary From Section 8?	(10) Did Event Cause Any Emission Limit Exceedance	(11) Describe Emission Standard(s) Exceeded
Component: S-210 LNG Plant	5/13/20 10:52	5/13/20 10:54	0.03	6.23	Feed A High Discharge Pressure: Non-regenerative media reaching end of life causing high back pressure	5/13/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/13/20 17:06	5/13/20 17:08	0.03			5/13/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/21/20 12:03	5/21/20 12:05	0.03	4.52	High O2: Damaged LFG well head	5/21/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/21/20 16:34	5/21/20 16:36	0.03			5/21/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/24/20 13:36	5/24/20 13:38	0.03	7.13	Loss of LFG: WMI Blower Fault	5/24/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/24/20 20:44	5/24/20 20:46	0.03			5/24/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/27/20 23:34	5/27/20 23:36	0.03	17.80	High O2: WM investigated with no findings	5/27/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/28/20 17:22	5/28/20 17:24	0.03			5/28/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/28/20 23:06	5/28/20 23:08	0.03	18.17	High O2: LCRS Pump	5/28/2020	Manual (Go to Section 8)		Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							X Automatic (Go to Section 10)		No (Stop)	X No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/29/20 17:16	5/29/20 17:18	0.03			5/29/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/30/20 10:42	5/30/20 10:44	0.03	37.30	Annual Planned Turnaround	5/30/2020	X Manual (Go to Section 8)	Procedure 1 to 3	Yes (Go to Section 10)	Yes (Go to Section 11)	
Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
X Shutdown Event											
Malfunction Event											
Component: S-210 LNG Plant	5/31/20 23:59	6/1/20 0:01	0.03			5/31/2020	X Manual (Go to Section 8)	Procedure 1 to 4	Yes (Go to Section 10)	Yes (Go to Section 11)	
X Startup Event							Automatic (Go to Section 10)		X No (Stop)	No (Stop)	
Shutdown Event											
Malfunction Event											

There were 743.0 hours available for the S-210 in March 2020 due to Daylight Saving Time.

Total Downtime for December 1, 2019 to May 31, 2020 (Hours)*	775.7
Total Runtime for December 1, 2019 to May 31, 2020 (Hours)*	3,615.3
Total Count for December 1, 2019 to May 31, 2020	40

Not S-210 SSM Log compiled pursuant to the ALRRF SSM Plan (June 2009).

APPENDIX F

TURBINES (S-6 AND S-7) COMBUSTION TEMPERATURE REPORTS AND HEAT INPUT LOGS

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
Heat Input Rate
MONTH: December-19

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)
12/1/2019	24.00	47.5	1,510	2,174,134	1,031,877	1,013.0	1,045
12/2/2019	24.00	47.5	1,510	2,174,563	1,031,918	1,013.0	1,045
12/3/2019	21.00	47.1	1,484	1,869,627	880,126	1,013.0	892
12/4/2019	24.00	48.4	1,492	2,148,533	1,039,149	1,013.0	1,053
12/5/2019	24.00	49.1	1,484	2,136,816	1,049,570	1,013.0	1,063
12/6/2019	24.00	48.9	1,490	2,145,496	1,048,750	1,013.0	1,062
12/7/2019	24.00	48.8	1,483	2,135,193	1,042,269	1,013.0	1,056
12/8/2019	24.00	48.9	1,486	2,139,579	1,046,998	1,013.0	1,061
12/9/2019	21.07	49.1	1,491	1,884,422	924,966	1,013.0	937
12/10/2019	16.43	49.1	1,498	1,476,689	724,416	1,013.0	734
12/11/2019	23.40	49.6	1,497	2,102,220	1,041,852	1,013.0	1,055
12/12/2019	24.00	49.5	1,493	2,149,215	1,062,968	1,013.0	1,077
12/13/2019	24.00	49.4	1,490	2,145,696	1,059,691	1,013.0	1,073
12/14/2019	13.33	49.5	1,460	1,167,807	577,581	1,013.0	585
12/15/2019	24.00	49.5	1,511	2,175,514	1,076,951	1,013.0	1,091
12/16/2019	24.00	49.3	1,509	2,173,177	1,072,451	1,013.0	1,086
12/17/2019	24.00	49.0	1,514	2,180,700	1,069,022	1,013.0	1,083
12/18/2019	24.00	48.9	1,505	2,167,881	1,059,818	1,013.0	1,074
12/19/2019	24.00	48.9	1,511	2,176,038	1,063,440	1,013.0	1,077
12/20/2019	24.00	48.7	1,508	2,170,840	1,056,127	1,013.0	1,070
12/21/2019	24.00	48.7	1,497	2,154,984	1,049,754	1,013.0	1,063
12/22/2019	20.70	48.8	1,471	1,826,369	891,773	1,013.0	903
12/23/2019	24.00	48.7	1,504	2,165,419	1,053,615	1,013.0	1,067
12/24/2019	23.33	48.6	1,489	2,085,193	1,013,633	1,013.0	1,027
12/25/2019	24.00	48.3	1,499	2,158,230	1,042,547	1,013.0	1,056
12/26/2019	24.00	48.4	1,504	2,165,728	1,049,189	1,013.0	1,063
12/27/2019	24.00	48.1	1,519	2,188,031	1,052,831	1,013.0	1,067
12/28/2019	24.00	47.7	1,517	2,184,868	1,043,225	1,013.0	1,057
12/29/2019	24.00	47.5	1,517	2,183,954	1,036,637	1,013.0	1,050
12/30/2019	24.00	47.8	1,512	2,177,917	1,040,746	1,013.0	1,054
12/31/2019	21.90	47.7	1,518	1,994,449	950,924	1,013.0	963
Totals/ Average	**713.17**	**48.6**	**1,499**	**64,179,282**	**31,184,813**	**1,013.0**	**31,590**
						Max	**1,091**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
Heat Input Rate
MONTH: January-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)
1/1/2020	24.00	47.5	1,527	2,199,241	1,045,184	1,013.0	1,059
1/2/2020	23.43	47.7	1,512	2,126,345	1,013,677	1,013.0	1,027
1/3/2020	22.80	47.8	1,511	2,066,684	987,412	1,013.0	1,000
1/4/2020	24.00	47.6	1,522	2,192,386	1,043,611	1,013.0	1,057
1/5/2020	24.00	47.4	1,525	2,196,392	1,040,493	1,013.0	1,054
1/6/2020	24.00	47.0	1,523	2,193,094	1,030,080	1,013.0	1,043
1/7/2020	24.00	47.0	1,509	2,172,489	1,021,682	1,013.0	1,035
1/8/2020	24.00	47.4	1,482	2,134,770	1,011,635	1,013.0	1,025
1/9/2020	24.00	47.5	1,468	2,113,438	1,003,648	1,013.0	1,017
1/10/2020	24.00	47.5	1,459	2,100,675	997,016	1,013.0	1,010
1/11/2020	24.00	47.5	1,436	2,067,133	981,603	1,013.0	994
1/12/2020	24.00	47.9	1,439	2,071,757	993,374	1,013.0	1,006
1/13/2020	24.00	48.0	1,447	2,084,173	999,698	1,013.0	1,013
1/14/2020	24.00	48.0	1,433	2,062,929	991,179	1,013.0	1,004
1/15/2020	24.00	48.1	1,430	2,058,638	989,696	1,013.0	1,003
1/16/2020	24.00	48.1	1,416	2,039,020	980,389	1,013.0	993
1/17/2020	24.00	48.7	1,423	2,049,210	998,695	1,013.0	1,012
1/18/2020	24.00	48.6	1,425	2,052,500	997,133	1,013.0	1,010
1/19/2020	24.00	48.6	1,433	2,063,152	1,002,079	1,013.0	1,015
1/20/2020	24.00	48.8	1,437	2,069,097	1,009,512	1,013.0	1,023
1/21/2020	15.63	49.2	1,432	1,343,515	661,647	1,013.0	670
1/22/2020	24.00	49.4	1,246	1,793,769	886,163	1,013.0	898
1/23/2020	12.97	49.6	1,469	1,142,776	566,425	1,013.0	574
1/24/2020	24.00	51.2	1,464	2,108,521	1,080,312	1,013.0	1,094
1/25/2020	24.00	50.7	1,486	2,139,162	1,083,863	1,013.0	1,098
1/26/2020	24.00	50.4	1,484	2,137,510	1,077,282	1,013.0	1,091
1/27/2020	24.00	50.3	1,511	2,175,556	1,094,213	1,013.0	1,108
1/28/2020	24.00	49.9	1,490	2,146,245	1,070,502	1,013.0	1,084
1/29/2020	24.00	49.3	1,518	2,185,430	1,077,409	1,013.0	1,091
1/30/2020	24.00	48.8	1,514	2,180,820	1,064,349	1,013.0	1,078
1/31/2020	24.00	48.7	1,520	2,188,950	1,065,708	1,013.0	1,080
Totals/ Average	**722.83**	**48.5**	**1,467**	**63,655,377**	**30,865,671**	**1,013.0**	**31,267**
						Max	**1,108**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
Heat Input Rate
MONTH: February-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)
2/1/2020	24.00	48.6	1,519	2,187,204	1,062,797	1,013.0	1,077
2/2/2020	24.00	48.7	1,515	2,181,188	1,062,415	1,013.0	1,076
2/3/2020	24.00	48.5	1,500	2,159,866	1,048,606	1,013.0	1,062
2/4/2020	24.00	48.5	1,519	2,187,616	1,061,025	1,013.0	1,075
2/5/2020	24.00	49.0	1,496	2,153,891	1,055,618	1,013.0	1,069
2/6/2020	24.00	49.2	1,481	2,132,815	1,050,264	1,013.0	1,064
2/7/2020	24.00	49.4	1,468	2,114,237	1,043,874	1,013.0	1,057
2/8/2020	24.00	49.4	1,437	2,068,891	1,021,067	1,013.0	1,034
2/9/2020	24.00	49.4	1,421	2,046,045	1,011,138	1,013.0	1,024
2/10/2020	24.00	49.3	1,445	2,080,421	1,024,968	1,013.0	1,038
2/11/2020	24.00	49.3	1,456	2,096,957	1,032,973	1,013.0	1,046
2/12/2020	22.33	49.5	1,472	1,972,192	976,618	1,013.0	989
2/13/2020	21.50	49.5	1,508	1,945,409	963,391	1,013.0	976
2/14/2020	24.00	49.5	1,515	2,182,089	1,080,123	1,013.0	1,094
2/15/2020	24.00	49.4	1,517	2,184,281	1,078,971	1,013.0	1,093
2/16/2020	24.00	49.2	1,520	2,189,380	1,076,616	1,013.0	1,091
2/17/2020	24.00	49.1	1,502	2,163,361	1,061,912	1,013.0	1,076
2/18/2020	24.00	49.1	1,512	2,177,716	1,069,333	1,013.0	1,083
2/19/2020	24.00	49.0	1,518	2,186,490	1,072,176	1,013.0	1,086
2/20/2020	24.00	48.8	1,512	2,177,418	1,062,286	1,013.0	1,076
2/21/2020	24.00	48.7	1,492	2,149,047	1,046,577	1,013.0	1,060
2/22/2020	24.00	48.8	1,500	2,160,186	1,054,609	1,013.0	1,068
2/23/2020	24.00	49.0	1,503	2,164,514	1,060,468	1,013.0	1,074
2/24/2020	24.00	48.4	1,500	2,160,493	1,044,848	1,013.0	1,058
2/25/2020	24.00	48.2	1,511	2,175,844	1,049,664	1,013.0	1,063
2/26/2020	15.50	48.3	1,484	1,380,208	666,778	1,013.0	675
2/27/2020	24.00	48.9	1,477	2,127,382	1,040,121	1,013.0	1,054
2/28/2020	24.00	49.3	1,477	2,127,579	1,049,118	1,013.0	1,063
2/29/2020	24.00	49.1	1,524	2,194,737	1,078,370	1,013.0	1,092
Totals/ Average	**683.33**	**49.0**	**1,493**	**61,227,457**	**30,006,724**	**1,013.0**	**30,397**
						Max	**1,094**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
Heat Input Rate
MONTH: March-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)
3/1/2020	24.00	48.9	1,535	2,210,148	1,080,758	1,013.0	1,095
3/2/2020	21.80	48.5	1,507	1,971,281	956,782	1,013.0	969
3/3/2020	24.00	48.4	1,496	2,154,603	1,043,264	1,013.0	1,057
3/4/2020	24.00	48.6	1,498	2,157,563	1,049,323	1,013.0	1,063
3/5/2020	24.00	48.3	1,531	2,204,200	1,064,231	1,013.0	1,078
3/6/2020	24.00	48.0	1,530	2,203,555	1,057,576	1,013.0	1,071
3/7/2020	24.00	48.5	1,541	2,218,681	1,076,267	1,013.0	1,090
3/8/2020	23.00	48.4	1,542	2,128,089	1,030,539	1,013.0	1,044
3/9/2020	24.00	47.4	1,533	2,207,705	1,045,348	1,013.0	1,059
3/10/2020	24.00	46.2	1,511	2,176,153	1,004,295	1,013.0	1,017
3/11/2020	23.23	46.2	1,488	2,074,391	958,369	1,013.0	971
3/12/2020	24.00	45.9	1,481	2,133,339	978,136	1,013.0	991
3/13/2020	24.00	48.8	1,506	2,169,013	1,058,353	1,013.0	1,072
3/14/2020	18.83	48.4	1,544	1,744,344	844,917	1,013.0	856
3/15/2020	0.90	50.7	1,327	71,652	36,335	1,013.0	37
3/16/2020	0.00	49.2	N/A	0	0	1,013.0	0
3/17/2020	7.10	50.8	1,449	617,351	313,383	1,013.0	317
3/18/2020	24.00	50.2	1,505	2,167,530	1,087,366	1,013.0	1,102
3/19/2020	24.00	49.9	1,502	2,163,454	1,079,098	1,013.0	1,093
3/20/2020	24.00	49.7	1,517	2,183,840	1,086,305	1,013.0	1,100
3/21/2020	24.00	49.2	1,527	2,198,802	1,082,055	1,013.0	1,096
3/22/2020	24.00	48.8	1,511	2,175,467	1,062,350	1,013.0	1,076
3/23/2020	24.00	48.7	1,531	2,204,631	1,074,095	1,013.0	1,088
3/24/2020	24.00	48.9	1,534	2,208,979	1,079,869	1,013.0	1,094
3/25/2020	17.70	49.2	1,521	1,615,661	794,099	1,013.0	804
3/26/2020	24.00	49.4	1,530	2,203,307	1,088,651	1,013.0	1,103
3/27/2020	24.00	49.4	1,534	2,209,199	1,090,604	1,013.0	1,105
3/28/2020	24.00	49.2	1,535	2,210,651	1,088,190	1,013.0	1,102
3/29/2020	24.00	49.1	1,521	2,190,191	1,074,878	1,013.0	1,089
3/30/2020	24.00	49.1	1,523	2,193,812	1,076,143	1,013.0	1,090
3/31/2020	24.00	48.8	1,511	2,176,125	1,061,080	1,013.0	1,075
Totals/ Average	**664.57**	**48.7**	**1,511**	**60,543,717**	**29,422,657**	**1,013.0**	**29,805**
						Max	**1,105**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
Heat Input Rate
MONTH: April-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)
4/1/2020	24.00	48.9	1,502	2,163,258	1,057,935	1,013.0	1,072
4/2/2020	24.00	49.1	1,510	2,174,590	1,066,873	1,013.0	1,081
4/3/2020	24.00	48.8	1,516	2,183,448	1,065,135	1,013.0	1,079
4/4/2020	24.00	48.9	1,430	2,059,258	1,006,412	1,013.0	1,019
4/5/2020	24.00	48.9	1,259	1,812,929	886,866	1,013.0	898
4/6/2020	24.00	50.7	1,481	2,131,991	1,081,236	1,013.0	1,095
4/7/2020	24.00	50.4	1,482	2,134,335	1,076,709	1,013.0	1,091
4/8/2020	24.00	50.3	1,471	2,118,598	1,064,807	1,013.0	1,079
4/9/2020	24.00	50.1	1,361	1,960,458	983,082	1,013.0	996
4/10/2020	24.00	50.1	1,468	2,113,857	1,058,889	1,013.0	1,073
4/11/2020	24.00	50.2	1,478	2,128,606	1,068,374	1,013.0	1,082
4/12/2020	24.00	50.1	1,482	2,133,490	1,068,555	1,013.0	1,082
4/13/2020	24.00	49.8	1,474	2,122,318	1,057,613	1,013.0	1,071
4/14/2020	24.00	49.7	1,455	2,094,609	1,040,796	1,013.0	1,054
4/15/2020	24.00	49.7	1,435	2,065,930	1,027,208	1,013.0	1,041
4/16/2020	21.93	50.0	1,456	1,916,533	959,156	1,013.0	972
4/17/2020	24.00	50.3	1,491	2,147,047	1,080,001	1,013.0	1,094
4/18/2020	24.00	49.9	1,507	2,169,907	1,082,703	1,013.0	1,097
4/19/2020	24.00	49.3	1,508	2,171,881	1,070,684	1,013.0	1,085
4/20/2020	24.00	49.0	1,525	2,196,658	1,075,346	1,013.0	1,089
4/21/2020	24.00	48.7	1,522	2,192,338	1,067,151	1,013.0	1,081
4/22/2020	24.00	48.6	1,507	2,169,506	1,054,452	1,013.0	1,068
4/23/2020	24.00	48.5	1,448	2,084,797	1,011,796	1,013.0	1,025
4/24/2020	24.00	48.9	1,443	2,077,781	1,016,154	1,013.0	1,029
4/25/2020	24.00	49.1	1,436	2,067,460	1,014,709	1,013.0	1,028
4/26/2020	24.00	49.2	1,471	2,118,155	1,041,253	1,013.0	1,055
4/27/2020	24.00	49.0	1,480	2,131,118	1,045,045	1,013.0	1,059
4/28/2020	24.00	48.9	1,442	2,075,878	1,014,675	1,013.0	1,028
4/29/2020	24.00	49.1	1,477	2,127,046	1,044,267	1,013.0	1,058
4/30/2020	24.00	49.0	1,482	2,134,622	1,046,190	1,013.0	1,060
Totals/ Average	**717.93**	**49.4**	**1,467**	**63,178,402**	**31,234,073**	**1,013.0**	**31,640**
						Max	**1,097**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-6 Turbine
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	48.9	1,484	2,136,847	1,045,482	1,013.0	1,059
5/2/2020	24.00	48.8	1,494	2,150,861	1,050,683	1,013.0	1,064
5/3/2020	24.00	48.8	1,497	2,155,124	1,051,083	1,013.0	1,065
5/4/2020	24.00	48.7	1,437	2,069,134	1,006,876	1,013.0	1,020
5/5/2020	24.00	48.6	1,485	2,138,453	1,039,860	1,013.0	1,053
5/6/2020	11.37	48.8	1,468	1,000,934	488,160	1,013.0	495
5/7/2020	24.00	49.0	1,288	1,854,374	909,539	1,013.0	921
5/8/2020	24.00	49.7	1,404	2,021,365	1,005,508	1,013.0	1,019
5/9/2020	24.00	49.8	1,441	2,074,941	1,033,673	1,013.0	1,047
5/10/2020	24.00	49.5	1,491	2,147,175	1,063,420	1,013.0	1,077
5/11/2020	24.00	49.0	1,524	2,194,301	1,075,103	1,013.0	1,089
5/12/2020	24.00	47.3	1,559	2,245,591	1,061,383	1,013.0	1,075
5/13/2020	24.00	47.4	1,568	2,257,386	1,069,840	1,013.0	1,084
5/14/2020	24.00	46.9	1,565	2,253,389	1,056,008	1,013.0	1,070
5/15/2020	24.00	47.0	1,539	2,215,754	1,041,213	1,013.0	1,055
5/16/2020	24.00	47.4	1,529	2,201,311	1,042,419	1,013.0	1,056
5/17/2020	24.00	47.5	1,497	2,156,129	1,024,444	1,013.0	1,038
5/18/2020	24.00	48.1	1,510	2,173,891	1,045,592	1,013.0	1,059
5/19/2020	24.00	48.3	1,541	2,218,780	1,072,654	1,013.0	1,087
5/20/2020	24.00	48.0	1,558	2,243,469	1,076,438	1,013.0	1,090
5/21/2020	24.00	47.5	1,537	2,213,431	1,051,714	1,013.0	1,065
5/22/2020	24.00	47.6	1,535	2,210,075	1,052,163	1,013.0	1,066
5/23/2020	24.00	47.8	1,518	2,186,285	1,044,550	1,013.0	1,058
5/24/2020	24.00	47.5	1,492	2,148,504	1,021,422	1,013.0	1,035
5/25/2020	24.00	47.5	1,443	2,077,974	987,622	1,013.0	1,000
5/26/2020	24.00	47.9	1,415	2,037,797	976,598	1,013.0	989
5/27/2020	24.00	48.3	1,413	2,035,413	983,407	1,013.0	996
5/28/2020	24.00	48.4	1,436	2,068,480	1,001,858	1,013.0	1,015
5/29/2020	24.00	48.6	1,470	2,116,169	1,027,877	1,013.0	1,041
5/30/2020	24.00	48.8	1,495	2,152,743	1,049,901	1,013.0	1,064
5/31/2020	24.00	48.5	1,493	2,149,849	1,042,927	1,013.0	1,056
Totals/ Average	**731.37**	**48.3**	**1,488**	**65,305,929**	**31,499,415**	**1,013.0**	**31,909**
						Max	**1,090**

Notes:
1) The S-6 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-6 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
Heat Input Rate
MONTH: December-19

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)
12/1/2019	24.00	47.5	1,499	2,157,948	1,024,194	1,013.0	1,038
12/2/2019	24.00	47.5	1,498	2,157,298	1,023,725	1,013.0	1,037
12/3/2019	24.00	47.1	1,469	2,115,916	996,066	1,013.0	1,009
12/4/2019	21.03	48.4	1,451	1,831,048	885,596	1,013.0	897
12/5/2019	24.00	49.1	1,483	2,135,180	1,048,766	1,013.0	1,062
12/6/2019	24.00	48.9	1,468	2,114,093	1,033,399	1,013.0	1,047
12/7/2019	24.00	48.8	1,453	2,091,652	1,021,015	1,013.0	1,034
12/8/2019	24.00	48.9	1,470	2,116,929	1,035,914	1,013.0	1,049
12/9/2019	20.77	49.1	1,474	1,836,616	901,500	1,013.0	913
12/10/2019	16.67	49.1	1,465	1,465,151	718,756	1,013.0	728
12/11/2019	23.10	49.6	1,444	2,001,461	991,916	1,013.0	1,005
12/12/2019	24.00	49.5	1,432	2,061,847	1,019,758	1,013.0	1,033
12/13/2019	24.00	49.4	1,437	2,069,309	1,021,965	1,013.0	1,035
12/14/2019	16.67	49.5	1,451	1,450,525	717,409	1,013.0	727
12/15/2019	24.00	49.5	1,489	2,144,564	1,061,630	1,013.0	1,075
12/16/2019	24.00	49.3	1,499	2,158,060	1,064,991	1,013.0	1,079
12/17/2019	24.00	49.0	1,500	2,159,746	1,058,750	1,013.0	1,073
12/18/2019	24.00	48.9	1,472	2,120,320	1,036,567	1,013.0	1,050
12/19/2019	24.00	48.9	1,486	2,140,206	1,045,928	1,013.0	1,060
12/20/2019	24.00	48.7	1,478	2,128,597	1,035,575	1,013.0	1,049
12/21/2019	24.00	48.7	1,457	2,097,381	1,021,694	1,013.0	1,035
12/22/2019	24.00	48.8	1,457	2,098,420	1,024,609	1,013.0	1,038
12/23/2019	24.00	48.7	1,483	2,135,031	1,038,829	1,013.0	1,052
12/24/2019	24.00	48.6	1,490	2,146,282	1,043,329	1,013.0	1,057
12/25/2019	24.00	48.3	1,478	2,127,690	1,027,794	1,013.0	1,041
12/26/2019	24.00	48.4	1,474	2,122,769	1,028,378	1,013.0	1,042
12/27/2019	24.00	48.1	1,484	2,136,845	1,028,202	1,013.0	1,042
12/28/2019	22.57	47.7	1,484	2,009,508	959,495	1,013.0	972
12/29/2019	23.67	47.5	1,497	2,126,024	1,009,140	1,013.0	1,022
12/30/2019	24.00	47.8	1,505	2,166,582	1,035,329	1,013.0	1,049
12/31/2019	22.33	47.7	1,510	2,023,047	964,559	1,013.0	977
Totals/ Average	**718.80**	**48.6**	**1,475**	**63,646,045**	**30,924,781**	**1,013.0**	**31,327**
						Max	**1,079**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
Heat Input Rate
MONTH: January-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)
1/1/2020	24.00	47.5	1,527	2,199,496	1,045,305	1,013.0	1,059
1/2/2020	24.00	47.7	1,525	2,195,325	1,046,561	1,013.0	1,060
1/3/2020	24.00	47.8	1,531	2,204,207	1,053,117	1,013.0	1,067
1/4/2020	24.00	47.6	1,529	2,201,761	1,048,073	1,013.0	1,062
1/5/2020	24.00	47.4	1,522	2,191,678	1,038,260	1,013.0	1,052
1/6/2020	24.00	47.0	1,522	2,191,671	1,029,411	1,013.0	1,043
1/7/2020	24.00	47.0	1,524	2,194,357	1,031,967	1,013.0	1,045
1/8/2020	24.00	47.4	1,524	2,193,863	1,039,639	1,013.0	1,053
1/9/2020	24.00	47.5	1,509	2,172,366	1,031,633	1,013.0	1,045
1/10/2020	24.00	47.5	1,492	2,147,873	1,019,417	1,013.0	1,033
1/11/2020	24.00	47.5	1,494	2,150,870	1,021,366	1,013.0	1,035
1/12/2020	24.00	47.9	1,503	2,164,935	1,038,052	1,013.0	1,052
1/13/2020	24.00	48.0	1,496	2,154,792	1,033,571	1,013.0	1,047
1/14/2020	24.00	48.0	1,498	2,156,610	1,036,190	1,013.0	1,050
1/15/2020	24.00	48.1	1,495	2,153,061	1,035,091	1,013.0	1,049
1/16/2020	24.00	48.1	1,448	2,084,488	1,002,251	1,013.0	1,015
1/17/2020	24.00	48.7	1,431	2,060,326	1,004,112	1,013.0	1,017
1/18/2020	23.20	48.6	1,440	2,004,642	973,883	1,013.0	987
1/19/2020	24.00	48.6	1,448	2,084,501	1,012,448	1,013.0	1,026
1/20/2020	24.00	48.8	1,449	2,087,117	1,018,304	1,013.0	1,032
1/21/2020	21.93	49.2	1,438	1,892,474	931,995	1,013.0	944
1/22/2020	15.27	49.4	1,441	1,320,268	652,243	1,013.0	661
1/23/2020	13.17	49.6	1,421	1,122,211	556,232	1,013.0	563
1/24/2020	24.00	51.2	1,433	2,063,178	1,057,081	1,013.0	1,071
1/25/2020	24.00	50.7	1,437	2,069,955	1,048,798	1,013.0	1,062
1/26/2020	22.43	50.4	1,425	1,918,657	966,982	1,013.0	980
1/27/2020	24.00	50.3	1,465	2,109,287	1,060,883	1,013.0	1,075
1/28/2020	24.00	49.9	1,444	2,079,120	1,037,021	1,013.0	1,051
1/29/2020	24.00	49.3	1,465	2,109,931	1,040,189	1,013.0	1,054
1/30/2020	24.00	48.8	1,464	2,108,652	1,029,128	1,013.0	1,043
1/31/2020	22.73	48.7	1,452	1,980,698	964,319	1,013.0	977
Totals/ Average	**718.73**	**48.5**	**1,477**	**63,768,370**	**30,903,520**	**1,013.0**	**31,305**
						Max	**1,075**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
Heat Input Rate
MONTH: February-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)
2/1/2020	24.00	48.6	1,456	2,096,511	1,018,728	1,013.0	1,032
2/2/2020	24.00	48.7	1,470	2,116,127	1,030,725	1,013.0	1,044
2/3/2020	24.00	48.5	1,474	2,122,432	1,030,432	1,013.0	1,044
2/4/2020	24.00	48.5	1,462	2,105,010	1,020,960	1,013.0	1,034
2/5/2020	24.00	49.0	1,428	2,056,502	1,007,888	1,013.0	1,021
2/6/2020	24.00	49.2	1,412	2,033,866	1,001,539	1,013.0	1,015
2/7/2020	24.00	49.4	1,399	2,014,305	994,534	1,013.0	1,007
2/8/2020	24.00	49.4	1,397	2,011,816	992,899	1,013.0	1,006
2/9/2020	24.00	49.4	1,407	2,026,218	1,001,340	1,013.0	1,014
2/10/2020	24.00	49.3	1,385	1,995,052	982,909	1,013.0	996
2/11/2020	24.00	49.3	1,378	1,984,012	977,335	1,013.0	990
2/12/2020	22.37	49.5	1,410	1,892,874	937,340	1,013.0	950
2/13/2020	21.27	49.5	1,461	1,863,855	923,004	1,013.0	935
2/14/2020	24.00	49.5	1,463	2,106,536	1,042,725	1,013.0	1,056
2/15/2020	24.00	49.4	1,456	2,096,191	1,035,458	1,013.0	1,049
2/16/2020	24.00	49.2	1,466	2,110,880	1,038,014	1,013.0	1,052
2/17/2020	24.00	49.1	1,438	2,071,009	1,016,580	1,013.0	1,030
2/18/2020	24.00	49.1	1,445	2,080,696	1,021,692	1,013.0	1,035
2/19/2020	24.00	49.0	1,453	2,092,508	1,026,091	1,013.0	1,039
2/20/2020	24.00	48.8	1,440	2,073,506	1,011,591	1,013.0	1,025
2/21/2020	23.20	48.7	1,408	1,959,689	954,361	1,013.0	967
2/22/2020	24.00	48.8	1,429	2,057,246	1,004,354	1,013.0	1,017
2/23/2020	24.00	49.0	1,458	2,100,234	1,028,975	1,013.0	1,042
2/24/2020	24.00	48.4	1,447	2,083,193	1,007,464	1,013.0	1,021
2/25/2020	24.00	48.2	1,428	2,055,602	991,657	1,013.0	1,005
2/26/2020	15.83	48.3	1,419	1,348,300	651,363	1,013.0	660
2/27/2020	24.00	48.9	1,412	2,033,115	994,032	1,013.0	1,007
2/28/2020	24.00	49.3	1,415	2,037,492	1,004,695	1,013.0	1,018
2/29/2020	24.00	49.1	1,468	2,114,020	1,038,710	1,013.0	1,052
Totals/ Average	**682.67**	**49.0**	**1,434**	**58,738,797**	**28,787,394**	**1,013.0**	**29,162**
						Max	**1,056**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
Heat Input Rate
MONTH: March-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)
3/1/2020	24.00	48.9	1,479	2,129,381	1,041,263	1,013.0	1,055
3/2/2020	22.77	48.5	1,461	1,995,461	968,518	1,013.0	981
3/3/2020	24.00	48.4	1,457	2,097,853	1,015,786	1,013.0	1,029
3/4/2020	24.00	48.6	1,459	2,101,562	1,022,087	1,013.0	1,035
3/5/2020	24.00	48.3	1,498	2,157,642	1,041,752	1,013.0	1,055
3/6/2020	24.00	48.0	1,496	2,154,408	1,033,989	1,013.0	1,047
3/7/2020	24.00	48.5	1,507	2,169,438	1,052,379	1,013.0	1,066
3/8/2020	23.00	48.4	1,509	2,082,595	1,008,508	1,013.0	1,022
3/9/2020	24.00	47.4	1,494	2,151,313	1,018,647	1,013.0	1,032
3/10/2020	22.33	46.2	1,446	1,937,273	894,051	1,013.0	906
3/11/2020	20.47	46.2	1,441	1,770,153	817,811	1,013.0	828
3/12/2020	19.70	45.9	1,444	1,706,603	782,477	1,013.0	793
3/13/2020	24.00	48.8	1,473	2,121,561	1,035,199	1,013.0	1,049
3/14/2020	18.83	48.4	1,519	1,716,998	831,671	1,013.0	842
3/15/2020	6.53	50.7	1,457	571,327	289,723	1,013.0	293
3/16/2020	24.00	49.2	1,452	2,091,560	1,028,040	1,013.0	1,041
3/17/2020	24.00	50.8	1,462	2,105,041	1,068,571	1,013.0	1,082
3/18/2020	24.00	50.2	1,462	2,105,592	1,056,294	1,013.0	1,070
3/19/2020	24.00	49.9	1,455	2,095,757	1,045,332	1,013.0	1,059
3/20/2020	24.00	49.7	1,466	2,111,170	1,050,157	1,013.0	1,064
3/21/2020	24.00	49.2	1,475	2,123,425	1,044,961	1,013.0	1,059
3/22/2020	24.00	48.8	1,459	2,101,255	1,026,110	1,013.0	1,039
3/23/2020	24.00	48.7	1,483	2,135,915	1,040,617	1,013.0	1,054
3/24/2020	15.70	48.9	1,486	1,399,935	684,365	1,013.0	693
3/25/2020	24.00	49.2	1,499	2,158,388	1,060,850	1,013.0	1,075
3/26/2020	19.47	49.4	1,485	1,734,224	856,877	1,013.0	868
3/27/2020	24.00	49.4	1,498	2,157,167	1,064,918	1,013.0	1,079
3/28/2020	24.00	49.2	1,501	2,161,496	1,063,993	1,013.0	1,078
3/29/2020	24.00	49.1	1,484	2,137,270	1,048,906	1,013.0	1,063
3/30/2020	24.00	49.1	1,492	2,147,826	1,053,585	1,013.0	1,067
3/31/2020	24.00	48.8	1,478	2,128,301	1,037,761	1,013.0	1,051
Totals/ Average	**696.80**	**48.7**	**1,477**	**61,757,890**	**30,085,198**	**1,013.0**	**30,476**
						Max	**1,082**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
Heat Input Rate
MONTH: April-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)
4/1/2020	24.00	48.9	1,468	2,114,573	1,034,126	1,013.0	1,048
4/2/2020	23.23	49.1	1,460	2,035,893	998,827	1,013.0	1,012
4/3/2020	24.00	48.8	1,472	2,119,706	1,034,040	1,013.0	1,047
4/4/2020	18.70	48.9	1,461	1,639,629	801,329	1,013.0	812
4/5/2020	10.97	48.9	1,421	934,759	457,274	1,013.0	463
4/6/2020	24.00	50.7	1,451	2,088,897	1,059,381	1,013.0	1,073
4/7/2020	24.00	50.4	1,441	2,075,292	1,046,924	1,013.0	1,061
4/8/2020	24.00	50.3	1,434	2,065,357	1,038,048	1,013.0	1,052
4/9/2020	15.97	50.1	1,433	1,372,627	688,311	1,013.0	697
4/10/2020	24.00	50.1	1,437	2,068,823	1,036,330	1,013.0	1,050
4/11/2020	24.00	50.2	1,444	2,079,844	1,043,900	1,013.0	1,057
4/12/2020	24.00	50.1	1,445	2,080,589	1,042,060	1,013.0	1,056
4/13/2020	24.00	49.8	1,437	2,069,770	1,031,426	1,013.0	1,045
4/14/2020	24.00	49.7	1,413	2,034,052	1,010,705	1,013.0	1,024
4/15/2020	24.00	49.7	1,390	2,001,002	994,925	1,013.0	1,008
4/16/2020	24.00	50.0	1,408	2,028,068	1,014,975	1,013.0	1,028
4/17/2020	24.00	50.3	1,428	2,056,071	1,034,239	1,013.0	1,048
4/18/2020	24.00	49.9	1,446	2,082,062	1,038,872	1,013.0	1,052
4/19/2020	24.00	49.3	1,453	2,092,171	1,031,389	1,013.0	1,045
4/20/2020	24.00	49.0	1,471	2,117,989	1,036,835	1,013.0	1,050
4/21/2020	24.00	48.7	1,468	2,113,511	1,028,781	1,013.0	1,042
4/22/2020	24.00	48.6	1,447	2,084,267	1,013,023	1,013.0	1,026
4/23/2020	21.10	48.5	1,423	1,801,582	874,346	1,013.0	886
4/24/2020	24.00	48.9	1,395	2,008,797	982,417	1,013.0	995
4/25/2020	24.00	49.1	1,386	1,995,702	979,491	1,013.0	992
4/26/2020	24.00	49.2	1,418	2,042,343	1,003,985	1,013.0	1,017
4/27/2020	24.00	49.0	1,420	2,045,257	1,002,941	1,013.0	1,016
4/28/2020	22.70	48.9	1,381	1,880,299	919,077	1,013.0	931
4/29/2020	24.00	49.1	1,425	2,051,314	1,007,086	1,013.0	1,020
4/30/2020	22.67	49.0	1,422	1,933,421	947,580	1,013.0	960
Totals/ Average	**687.33**	**49.4**	**1,433**	**59,113,667**	**29,232,644**	**1,013.0**	**29,613**
						Max	**1,073**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-7 Turbine
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	48.9	1,434	2,065,182	1,010,419	1,013.0	1,024
5/2/2020	24.00	48.8	1,441	2,075,083	1,013,666	1,013.0	1,027
5/3/2020	24.00	48.8	1,444	2,078,962	1,013,938	1,013.0	1,027
5/4/2020	21.70	48.7	1,427	1,857,991	904,130	1,013.0	916
5/5/2020	24.00	48.6	1,435	2,067,019	1,005,124	1,013.0	1,018
5/6/2020	24.00	48.8	1,313	1,890,099	921,810	1,013.0	934
5/7/2020	10.60	49.0	1,370	871,471	427,442	1,013.0	433
5/8/2020	22.43	49.7	1,353	1,821,002	905,839	1,013.0	918
5/9/2020	24.00	49.8	1,395	2,008,694	1,000,671	1,013.0	1,014
5/10/2020	24.00	49.5	1,443	2,078,159	1,029,238	1,013.0	1,043
5/11/2020	23.83	49.0	1,458	2,085,139	1,021,619	1,013.0	1,035
5/12/2020	24.00	47.3	1,499	2,158,476	1,020,208	1,013.0	1,033
5/13/2020	22.60	47.4	1,508	2,044,619	969,003	1,013.0	982
5/14/2020	24.00	46.9	1,510	2,173,883	1,018,749	1,013.0	1,032
5/15/2020	24.00	47.0	1,484	2,137,465	1,004,424	1,013.0	1,017
5/16/2020	24.00	47.4	1,469	2,115,862	1,001,955	1,013.0	1,015
5/17/2020	24.00	47.5	1,436	2,067,743	982,449	1,013.0	995
5/18/2020	24.00	48.1	1,449	2,086,446	1,003,533	1,013.0	1,017
5/19/2020	24.00	48.3	1,470	2,117,305	1,023,596	1,013.0	1,037
5/20/2020	24.00	48.0	1,478	2,128,407	1,021,230	1,013.0	1,035
5/21/2020	24.00	47.5	1,456	2,096,966	996,375	1,013.0	1,009
5/22/2020	24.00	47.6	1,456	2,096,323	998,008	1,013.0	1,011
5/23/2020	22.97	47.8	1,441	1,985,988	948,853	1,013.0	961
5/24/2020	24.00	47.5	1,425	2,052,433	975,749	1,013.0	988
5/25/2020	24.00	47.5	1,378	1,984,372	943,134	1,013.0	955
5/26/2020	24.00	47.9	1,349	1,942,072	930,722	1,013.0	943
5/27/2020	24.00	48.3	1,347	1,939,071	936,859	1,013.0	949
5/28/2020	24.00	48.4	1,370	1,973,419	955,816	1,013.0	968
5/29/2020	24.00	48.6	1,402	2,018,432	980,404	1,013.0	993
5/30/2020	24.00	48.8	1,419	2,044,025	996,879	1,013.0	1,010
5/31/2020	24.00	48.5	1,425	2,051,813	995,368	1,013.0	1,008
Totals/ Average	**724.13**	**48.3**	**1,429**	**62,113,921**	**29,957,211**	**1,013.0**	**30,347**
						Max	**1,043**

Notes:
1) The S-7 heat input log is maintained pursuant to Permit Condition No. 18773, Part 8.
2) The daily heat input limit for S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBtu/Day.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet

ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY, Livermore, CA
S-6 TEMPERATURE REPORT December 1, 2019 THROUGH May 31, 2020

KEY EMISSION CONTROL SYSTEM OPERATING PARAMETERS (BAAQMD Reg 8, Rule 34, Section 509)

REPORT PREPARED BY: Rajan Phadnis **DATE:** 06/01/20
TEMPERATURE SENSING DEVICE: Thermocouple

DATE/TIME	TEMPERATURE (°F)	EXPLANATION (If below 855°F)	CAUSE	EXPLANATION	DURATION OF DEVIATION (Hours)	ACTION TAKEN

COMMENTS:

No temperature deviations occurred during December 2019
No temperature deviations occurred during January 2020
No temperature deviations occurred during February 2020
No temperature deviations occurred during March 2020
No temperature deviations occurred during April 2020
No temperature deviations occurred during May 2020

Not The S-6 temperature report is maintained pursuant to Permit Condition No. 18773, Part 9.
The combustion chamber discharge temperature for each Gas Turbine shall be maintained between 700°F and 1220°F, averaged over any 3-hour period.

ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY, Livermore, CA
S-7 TEMPERATURE REPORT December 1, 2019 THROUGH May 31, 2020

KEY EMISSION CONTROL SYSTEM OPERATING PARAMETERS (BAAQMD Reg 8, Rule 34, Section 509)

REPORT PREPARED BY: Rajan Phadnis **DATE:** 06/01/20
TEMPERATURE SENSING DEVICE: Thermocouple

DATE/TIME	TEMPERATURE (°F)	EXPLANATION (If below 855°F)	CAUSE	EXPLANATION	DURATION OF DEVIATION (Hours)	ACTION TAKEN

COMMENTS:

No temperature deviations occurred during December 2019
No temperature deviations occurred during January 2020
No temperature deviations occurred during February 2020
No temperature deviations occurred during March 2020
No temperature deviations occurred during April 2020
No temperature deviations occurred during May 2020

Not The S-7 temperature report is maintained pursuant to Permit Condition No. 18773, Part 9.
The combustion chamber discharge temperature for each Gas Turbine shall be maintained between 700°F and 1220°F, averaged over any 3-hour period.

APPENDIX G

FLARES (A-15 AND A-16) TEMPERATURE DEVIATION REPORTS AND HEAT INPUT LOGS

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
Heat Input Rate
MONTH: December-19

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
12/1/2019	0.0	50.5	N/A	0	0	997.7	0
12/2/2019	0.0	50.5	N/A	0	0	997.7	0
12/3/2019	0.0	50.5	N/A	0	0	997.7	0
12/4/2019	0.5	50.5	839	26,845	13,557	997.7	14
12/5/2019	0.0	50.5	N/A	0	0	997.7	0
12/6/2019	0.0	50.5	N/A	0	0	997.7	0
12/7/2019	0.0	50.5	N/A	0	0	997.7	0
12/8/2019	0.0	50.5	N/A	0	0	997.7	0
12/9/2019	0.0	50.5	N/A	0	0	997.7	0
12/10/2019	0.0	50.5	N/A	0	0	997.7	0
12/11/2019	0.0	50.5	N/A	0	0	997.7	0
12/12/2019	0.0	50.5	N/A	0	0	997.7	0
12/13/2019	0.0	50.5	N/A	0	0	997.7	0
12/14/2019	0.0	50.5	N/A	0	0	997.7	0
12/15/2019	0.0	50.5	N/A	0	0	997.7	0
12/16/2019	0.0	50.5	N/A	0	0	997.7	0
12/17/2019	0.0	50.5	N/A	0	0	997.7	0
12/18/2019	0.0	50.5	N/A	0	0	997.7	0
12/19/2019	0.0	50.5	N/A	0	0	997.7	0
12/20/2019	0.0	50.5	N/A	0	0	997.7	0
12/21/2019	0.0	50.5	N/A	0	0	997.7	0
12/22/2019	0.0	50.5	N/A	0	0	997.7	0
12/23/2019	0.0	50.5	N/A	0	0	997.7	0
12/24/2019	0.0	50.5	N/A	0	0	997.7	0
12/25/2019	0.0	50.5	N/A	0	0	997.7	0
12/26/2019	0.0	50.5	N/A	0	0	997.7	0
12/27/2019	0.0	50.5	N/A	0	0	997.7	0
12/28/2019	0.0	50.5	N/A	0	0	997.7	0
12/29/2019	0.0	50.5	N/A	0	0	997.7	0
12/30/2019	0.0	50.5	N/A	0	0	997.7	0
12/31/2019	0.0	50.5	N/A	0	0	997.7	0
Totals/ Average	**0.53**	**50.5**	**839**	**26,845**	**13,557**	997.7	**14**
						Max	**14**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
Heat Input Rate
MONTH: January-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
1/1/2020	0.0	50.5	N/A	0	0	997.7	0
1/2/2020	0.0	50.5	N/A	0	0	997.7	0
1/3/2020	0.0	50.5	N/A	0	0	997.7	0
1/4/2020	0.0	50.5	N/A	0	0	997.7	0
1/5/2020	0.0	50.5	N/A	0	0	997.7	0
1/6/2020	0.0	50.5	N/A	0	0	997.7	0
1/7/2020	0.0	50.5	N/A	0	0	997.7	0
1/8/2020	0.0	50.5	N/A	0	0	997.7	0
1/9/2020	0.0	50.5	N/A	0	0	997.7	0
1/10/2020	0.0	50.5	N/A	0	0	997.7	0
1/11/2020	0.0	50.5	N/A	0	0	997.7	0
1/12/2020	0.0	50.5	N/A	0	0	997.7	0
1/13/2020	0.0	50.5	N/A	0	0	997.7	0
1/14/2020	0.0	50.5	N/A	0	0	997.7	0
1/15/2020	0.0	50.5	N/A	0	0	997.7	0
1/16/2020	0.0	50.5	N/A	0	0	997.7	0
1/17/2020	0.0	50.5	N/A	0	0	997.7	0
1/18/2020	0.0	50.5	N/A	0	0	997.7	0
1/19/2020	0.0	50.5	N/A	0	0	997.7	0
1/20/2020	0.0	50.5	N/A	0	0	997.7	0
1/21/2020	0.0	50.5	N/A	0	0	997.7	0
1/22/2020	0.0	50.5	N/A	0	0	997.7	0
1/23/2020	0.0	50.5	N/A	0	0	997.7	0
1/24/2020	0.0	50.5	N/A	0	0	997.7	0
1/25/2020	0.0	50.5	N/A	0	0	997.7	0
1/26/2020	0.0	50.5	N/A	0	0	997.7	0
1/27/2020	0.0	50.5	N/A	0	0	997.7	0
1/28/2020	0.0	50.5	N/A	0	0	997.7	0
1/29/2020	0.0	50.5	N/A	0	0	997.7	0
1/30/2020	0.0	50.5	N/A	0	0	997.7	0
1/31/2020	0.0	50.5	N/A	0	0	997.7	0
Totals/ Average	**0.00**	**50.5**	**N/A**	**0**	**0**	997.7	**0**
						Max	**0**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
Heat Input Rate
MONTH: February-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
2/1/2020	0.0	50.5	N/A	0	0	997.7	0
2/2/2020	0.0	50.5	N/A	0	0	997.7	0
2/3/2020	0.0	50.5	N/A	0	0	997.7	0
2/4/2020	0.0	50.5	N/A	0	0	997.7	0
2/5/2020	0.0	50.5	N/A	0	0	997.7	0
2/6/2020	0.0	50.5	N/A	0	0	997.7	0
2/7/2020	0.0	50.5	N/A	0	0	997.7	0
2/8/2020	0.0	50.5	N/A	0	0	997.7	0
2/9/2020	0.0	50.5	N/A	0	0	997.7	0
2/10/2020	0.0	50.5	N/A	0	0	997.7	0
2/11/2020	0.0	50.5	N/A	0	0	997.7	0
2/12/2020	0.0	50.5	N/A	0	0	997.7	0
2/13/2020	0.0	50.5	N/A	0	0	997.7	0
2/14/2020	0.0	50.5	N/A	0	0	997.7	0
2/15/2020	0.0	50.5	N/A	0	0	997.7	0
2/16/2020	0.0	50.5	N/A	0	0	997.7	0
2/17/2020	0.0	50.5	N/A	0	0	997.7	0
2/18/2020	0.0	50.5	N/A	0	0	997.7	0
2/19/2020	0.0	50.5	N/A	0	0	997.7	0
2/20/2020	0.0	50.5	N/A	0	0	997.7	0
2/21/2020	0.0	50.5	N/A	0	0	997.7	0
2/22/2020	0.0	50.5	N/A	0	0	997.7	0
2/23/2020	0.0	50.5	N/A	0	0	997.7	0
2/24/2020	0.0	50.5	N/A	0	0	997.7	0
2/25/2020	0.0	50.5	N/A	0	0	997.7	0
2/26/2020	0.0	50.5	N/A	0	0	997.7	0
2/27/2020	0.0	50.5	N/A	0	0	997.7	0
2/28/2020	0.0	50.5	N/A	0	0	997.7	0
2/29/2020	0.0	50.5	N/A	0	0	997.7	0
Totals/ Average	**0.00**	**50.5**	**N/A**	**0**	**0**	997.7	**0**
						Max	**0**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
Heat Input Rate
MONTH: March-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
3/1/2020	0.0	50.5	N/A	0	0	997.7	0
3/2/2020	0.0	50.5	N/A	0	0	997.7	0
3/3/2020	0.0	50.5	N/A	0	0	997.7	0
3/4/2020	0.0	50.5	N/A	0	0	997.7	0
3/5/2020	0.0	50.5	N/A	0	0	997.7	0
3/6/2020	0.0	50.5	N/A	0	0	997.7	0
3/7/2020	0.0	50.5	N/A	0	0	997.7	0
3/8/2020	0.0	50.5	N/A	0	0	997.7	0
3/9/2020	0.0	50.5	N/A	0	0	997.7	0
3/10/2020	0.3	50.5	1,146	18,331	9,257	997.7	9
3/11/2020	3.2	50.5	1,232	236,476	119,420	997.7	119
3/12/2020	3.9	50.5	1,274	300,576	151,791	997.7	151
3/13/2020	0.0	50.5	N/A	0	0	997.7	0
3/14/2020	0.0	50.5	N/A	0	0	997.7	0
3/15/2020	4.6	50.5	1,607	440,218	222,310	997.7	222
3/16/2020	0.0	50.5	N/A	0	0	997.7	0
3/17/2020	0.0	50.5	N/A	0	0	997.7	0
3/18/2020	0.0	50.5	N/A	0	0	997.7	0
3/19/2020	0.0	50.5	N/A	0	0	997.7	0
3/20/2020	0.0	50.5	N/A	0	0	997.7	0
3/21/2020	0.0	50.5	N/A	0	0	997.7	0
3/22/2020	0.0	50.5	N/A	0	0	997.7	0
3/23/2020	0.0	50.5	N/A	0	0	997.7	0
3/24/2020	0.0	50.5	N/A	0	0	997.7	0
3/25/2020	0.0	50.5	N/A	0	0	997.7	0
3/26/2020	0.0	50.5	N/A	0	0	997.7	0
3/27/2020	0.0	50.5	N/A	0	0	997.7	0
3/28/2020	0.0	50.5	N/A	0	0	997.7	0
3/29/2020	0.0	50.5	N/A	0	0	997.7	0
3/30/2020	0.0	50.5	N/A	0	0	997.7	0
3/31/2020	0.0	50.5	N/A	0	0	997.7	0
Totals/ Average	**11.97**	**50.5**	**1,387**	**995,601**	**502,779**	997.7	**502**
						Max	**222**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the

% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
Heat Input Rate
MONTH: April-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
4/1/2020	0.0	50.5	N/A	0	0	997.7	0
4/2/2020	0.0	50.5	N/A	0	0	997.7	0
4/3/2020	0.0	50.5	N/A	0	0	997.7	0
4/4/2020	0.0	50.5	N/A	0	0	997.7	0
4/5/2020	0.0	50.5	N/A	0	0	997.7	0
4/6/2020	0.0	50.5	N/A	0	0	997.7	0
4/7/2020	0.0	50.5	N/A	0	0	997.7	0
4/8/2020	0.0	50.5	N/A	0	0	997.7	0
4/9/2020	0.0	50.5	N/A	0	0	997.7	0
4/10/2020	0.0	50.5	N/A	0	0	997.7	0
4/11/2020	0.0	50.5	N/A	0	0	997.7	0
4/12/2020	0.0	50.5	N/A	0	0	997.7	0
4/13/2020	0.0	50.5	N/A	0	0	997.7	0
4/14/2020	1.3	50.5	944	75,533	38,144	997.7	38
4/15/2020	0.0	50.5	N/A	0	0	997.7	0
4/16/2020	0.0	50.5	N/A	0	0	997.7	0
4/17/2020	0.0	50.5	N/A	0	0	997.7	0
4/18/2020	0.0	50.5	N/A	0	0	997.7	0
4/19/2020	0.0	50.5	N/A	0	0	997.7	0
4/20/2020	0.0	50.5	N/A	0	0	997.7	0
4/21/2020	0.0	50.5	N/A	0	0	997.7	0
4/22/2020	0.0	50.5	N/A	0	0	997.7	0
4/23/2020	0.0	50.5	N/A	0	0	997.7	0
4/24/2020	0.0	50.5	N/A	0	0	997.7	0
4/25/2020	0.0	50.5	N/A	0	0	997.7	0
4/26/2020	0.0	50.5	N/A	0	0	997.7	0
4/27/2020	0.0	50.5	N/A	0	0	997.7	0
4/28/2020	0.0	50.5	N/A	0	0	997.7	0
4/29/2020	0.0	50.5	N/A	0	0	997.7	0
4/30/2020	0.0	50.5	N/A	0	0	997.7	0
Totals/ Average	**1.33**	**50.5**	**944**	**75,533**	**38,144**	997.7	**38**
						Max	**38**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-15 Landfill Gas Flare
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	0.0	50.5	N/A	0	0	997.7	0
5/2/2020	0.0	50.5	N/A	0	0	997.7	0
5/3/2020	0.0	50.5	N/A	0	0	997.7	0
5/4/2020	0.0	50.5	N/A	0	0	997.7	0
5/5/2020	0.0	50.5	N/A	0	0	997.7	0
5/6/2020	0.0	50.5	N/A	0	0	997.7	0
5/7/2020	0.0	50.5	N/A	0	0	997.7	0
5/8/2020	0.0	50.5	N/A	0	0	997.7	0
5/9/2020	0.0	50.5	N/A	0	0	997.7	0
5/10/2020	0.0	50.5	N/A	0	0	997.7	0
5/11/2020	0.0	50.5	N/A	0	0	997.7	0
5/12/2020	0.0	46.2	N/A	0	0	997.7	0
5/13/2020	0.0	46.2	N/A	0	0	997.7	0
5/14/2020	0.0	46.2	N/A	0	0	997.7	0
5/15/2020	0.0	46.2	N/A	0	0	997.7	0
5/16/2020	0.0	46.2	N/A	0	0	997.7	0
5/17/2020	0.0	46.2	N/A	0	0	997.7	0
5/18/2020	0.0	46.2	N/A	0	0	997.7	0
5/19/2020	0.0	46.2	N/A	0	0	997.7	0
5/20/2020	0.0	46.2	N/A	0	0	997.7	0
5/21/2020	0.0	46.2	N/A	0	0	997.7	0
5/22/2020	0.0	46.2	N/A	0	0	997.7	0
5/23/2020	0.0	46.2	N/A	0	0	997.7	0
5/24/2020	0.0	46.2	N/A	0	0	997.7	0
5/25/2020	0.0	46.2	N/A	0	0	997.7	0
5/26/2020	0.0	46.2	N/A	0	0	997.7	0
5/27/2020	0.0	46.2	N/A	0	0	997.7	0
5/28/2020	0.0	46.2	N/A	0	0	997.7	0
5/29/2020	0.0	46.2	N/A	0	0	997.7	0
5/30/2020	0.0	46.2	N/A	0	0	997.7	0
5/31/2020	0.0	46.2	N/A	0	0	997.7	0
Totals/ Average	**0.00**	**47.7**	**N/A**	**0**	**0**	997.7	**0**
						Max	**0**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-15 flare is 1,704 MMBtu.
2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the

% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: December-19

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
12/1/2019	23.37	45.3	1,240	1,723,141	15,064	1,738,205	787,059	997.7	785
12/2/2019	24.00	45.3	1,155	1,385,713	278,004	1,663,717	753,331	997.7	752
12/3/2019	24.00	45.3	1,178	941,591	754,383	1,695,974	767,937	997.7	766
12/4/2019	23.07	45.3	1,128	847,549	713,847	1,561,396	707,000	997.7	705
12/5/2019	24.00	45.3	1,085	1,231,787	330,189	1,561,976	707,263	997.7	706
12/6/2019	24.00	45.3	1,055	722,907	795,935	1,518,842	687,732	997.7	686
12/7/2019	24.00	45.3	1,120	826,304	786,022	1,612,326	730,061	997.7	728
12/8/2019	24.00	45.3	1,071	767,246	775,712	1,542,958	698,651	997.7	697
12/9/2019	22.20	45.3	1,527	1,745,399	288,458	2,033,857	920,930	997.7	919
12/10/2019	16.60	45.3	1,719	1,688,477	23,361	1,711,838	775,120	997.7	773
12/11/2019	22.77	45.3	1,460	1,645,618	348,213	1,993,831	902,807	997.7	901
12/12/2019	24.00	45.3	1,236	1,015,514	764,038	1,779,552	805,781	997.7	804
12/13/2019	24.00	45.3	1,235	1,013,164	765,944	1,779,108	805,580	997.7	804
12/14/2019	24.00	45.3	1,746	1,738,480	775,684	2,514,164	1,138,413	997.7	1,136
12/15/2019	24.00	45.3	1,158	896,093	772,129	1,668,222	755,371	997.7	754
12/16/2019	24.00	45.3	1,218	977,295	776,678	1,753,973	794,199	997.7	792
12/17/2019	24.00	45.3	1,233	1,013,097	762,034	1,775,131	803,779	997.7	802
12/18/2019	24.00	45.3	1,435	1,296,014	770,519	2,066,533	935,726	997.7	934
12/19/2019	24.00	45.3	1,613	1,536,654	786,656	2,323,310	1,051,995	997.7	1,050
12/20/2019	21.57	45.3	1,417	1,203,810	629,246	1,833,056	830,008	997.7	828
12/21/2019	24.00	45.3	1,200	849,423	878,331	1,727,754	782,327	997.7	781
12/22/2019	24.00	45.3	1,341	1,049,861	880,700	1,930,561	874,158	997.7	872
12/23/2019	24.00	45.3	1,215	859,463	889,738	1,749,201	792,038	997.7	790
12/24/2019	24.00	45.3	1,280	955,190	887,847	1,843,037	834,527	997.7	833
12/25/2019	24.00	45.3	1,230	885,676	885,720	1,771,396	802,088	997.7	800
12/26/2019	24.00	45.3	1,259	919,611	893,900	1,813,511	821,158	997.7	819
12/27/2019	24.00	45.3	1,316	1,007,449	888,264	1,895,713	858,379	997.7	856
12/28/2019	24.00	45.3	1,403	1,133,737	886,760	2,020,497	914,881	997.7	913
12/29/2019	24.00	45.3	1,413	1,151,566	883,869	2,035,435	921,645	997.7	920
12/30/2019	24.00	45.3	1,351	1,051,539	893,870	1,945,409	880,881	997.7	879
12/31/2019	24.00	45.3	1,503	1,270,941	893,016	2,163,957	979,840	997.7	978
Totals/ Average	**729.57**	**45.3**	**1,301**	**35,350,309**	**21,674,131**	**57,024,440**	**25,820,666**	997.7	**25,761**
								Max	**1,136**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: January-20

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
1/1/2020	24.00	45.3	1,325	1,024,692	883,141	1,907,833	863,867	997.7	862
1/2/2020	24.00	45.3	1,460	1,343,889	759,134	2,103,023	952,249	997.7	950
1/3/2020	24.00	45.3	1,563	1,567,955	683,213	2,251,168	1,019,329	997.7	1,017
1/4/2020	24.00	45.3	1,546	1,493,990	732,523	2,226,513	1,008,165	997.7	1,006
1/5/2020	24.00	45.3	1,571	1,543,751	718,040	2,261,791	1,024,139	997.7	1,022
1/6/2020	24.00	45.3	1,611	1,686,815	633,580	2,320,395	1,050,675	997.7	1,048
1/7/2020	24.00	45.3	1,546	1,437,034	789,620	2,226,654	1,008,229	997.7	1,006
1/8/2020	24.00	45.3	1,462	1,358,147	747,015	2,105,162	953,217	997.7	951
1/9/2020	24.00	45.3	1,277	947,559	891,212	1,838,771	832,596	997.7	831
1/10/2020	24.00	45.3	1,391	1,267,800	735,545	2,003,345	907,115	997.7	905
1/11/2020	24.00	45.3	1,244	867,727	924,267	1,791,994	811,415	997.7	810
1/12/2020	24.00	45.3	1,243	900,037	889,877	1,789,914	810,473	997.7	809
1/13/2020	24.00	45.3	1,393	1,589,841	415,769	2,005,610	908,140	997.7	906
1/14/2020	24.00	45.3	1,214	796,339	952,067	1,748,406	791,678	997.7	790
1/15/2020	24.00	45.3	1,193	711,574	1,006,032	1,717,606	777,732	997.7	776
1/16/2020	24.00	45.3	1,154	655,654	1,006,294	1,661,948	752,530	997.7	751
1/17/2020	24.00	45.3	1,111	682,453	917,675	1,600,128	724,538	997.7	723
1/18/2020	24.00	45.3	1,108	843,990	751,672	1,595,662	722,516	997.7	721
1/19/2020	24.00	45.3	1,037	738,430	754,916	1,493,346	676,187	997.7	675
1/20/2020	24.00	45.3	1,016	648,831	813,716	1,462,547	662,241	997.7	661
1/21/2020	24.00	45.3	1,679	1,831,176	586,823	2,417,999	1,094,870	997.7	1,092
1/22/2020	24.00	45.3	1,958	2,766,195	53,831	2,820,026	1,276,908	997.7	1,274
1/23/2020	11.43	45.3	1,987	1,359,520	3,777	1,363,297	617,301	997.7	616
1/24/2020	24.00	45.3	1,668	2,205,991	196,312	2,402,303	1,087,763	997.7	1,085
1/25/2020	24.00	45.3	1,394	1,127,250	879,893	2,007,143	908,834	997.7	907
1/26/2020	24.00	45.3	1,427	747,815	1,306,463	2,054,278	930,177	997.7	928
1/27/2020	24.00	45.3	1,296	778,287	1,088,541	1,866,828	845,300	997.7	843
1/28/2020	24.00	45.3	1,223	772,857	988,748	1,761,605	797,655	997.7	796
1/29/2020	24.00	45.3	1,175	655,497	1,036,003	1,691,500	765,911	997.7	764
1/30/2020	24.00	45.3	1,061	555,438	972,577	1,528,015	691,885	997.7	690
1/31/2020	23.03	45.3	1,279	1,650,456	116,436	1,766,892	800,049	997.7	798
Totals/ Average	**730.47**	**45.3**	**1,378**	**36,556,990**	**23,234,712**	**59,791,702**	**27,073,683**	997.7	**27,011**
								Max	**1,274**

NOT1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: February-20

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
2/1/2020	24.00	45.3	1,068	1,462,883	75,414	1,538,297	696,541	997.7	695
2/2/2020	24.00	45.3	1,052	1,463,773	51,029	1,514,802	685,902	997.7	684
2/3/2020	24.00	45.3	1,053	1,457,499	58,146	1,515,645	686,284	997.7	685
2/4/2020	24.00	45.3	1,053	1,458,419	57,632	1,516,051	686,468	997.7	685
2/5/2020	24.00	45.3	1,346	1,715,973	222,325	1,938,298	877,661	997.7	876
2/6/2020	24.00	45.3	1,252	835,599	967,786	1,803,385	816,573	997.7	815
2/7/2020	24.00	45.3	1,068	596,670	940,593	1,537,263	696,073	997.7	694
2/8/2020	24.00	45.3	1,124	676,684	941,403	1,618,087	732,670	997.7	731
2/9/2020	24.00	45.3	1,263	867,805	950,230	1,818,035	823,206	997.7	821
2/10/2020	24.00	45.3	1,319	787,298	1,112,527	1,899,825	860,241	997.7	858
2/11/2020	15.80	45.3	1,583	827,900	672,885	1,500,785	679,555	997.7	678
2/12/2020	24.00	45.3	1,428	1,085,098	971,195	2,056,293	931,089	997.7	929
2/13/2020	23.80	45.3	1,427	1,159,471	878,254	2,037,725	922,682	997.7	921
2/14/2020	24.00	45.3	1,320	862,980	1,038,373	1,901,353	860,933	997.7	859
2/15/2020	24.00	45.3	1,466	1,118,246	992,910	2,111,156	955,931	997.7	954
2/16/2020	24.00	45.3	1,484	1,177,139	959,246	2,136,385	967,355	997.7	965
2/17/2020	24.00	45.3	1,498	1,122,267	1,035,329	2,157,596	976,959	997.7	975
2/18/2020	24.00	45.3	1,513	1,105,311	1,073,206	2,178,517	986,432	997.7	984
2/19/2020	24.00	45.3	1,505	1,060,813	1,106,683	2,167,496	981,442	997.7	979
2/20/2020	24.00	45.3	1,403	889,378	1,130,882	2,020,260	914,774	997.7	913
2/21/2020	24.00	45.3	1,492	1,020,544	1,127,668	2,148,212	972,710	997.7	970
2/22/2020	24.00	45.3	1,591	1,456,317	834,716	2,291,033	1,037,380	997.7	1,035
2/23/2020	24.00	45.3	1,652	2,351,166	28,161	2,379,327	1,077,359	997.7	1,075
2/24/2020	24.00	45.3	1,585	1,807,246	475,430	2,282,676	1,033,596	997.7	1,031
2/25/2020	24.00	45.3	1,354	852,325	1,097,722	1,950,047	882,981	997.7	881
2/26/2020	17.13	45.3	1,798	1,038,724	809,402	1,848,126	836,831	997.7	835
2/27/2020	24.00	45.3	1,508	1,083,132	1,088,193	2,171,325	983,176	997.7	981
2/28/2020	24.00	45.3	1,448	991,295	1,093,967	2,085,262	944,207	997.7	942
2/29/2020	24.00	45.3	1,336	833,128	1,091,040	1,924,168	871,263	997.7	869
Totals/ Average	**680.73**	**45.3**	**1,379**	**33,165,083**	**22,882,347**	**56,047,430**	**25,378,276**	997.7	**25,320**
								Max	**1,075**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: March-20

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
3/1/2020	24.00	45.3	1,301	767,678	1,105,131	1,872,809	848,008	997.7	846
3/2/2020	24.00	45.3	1,512	1,057,974	1,119,331	2,177,305	985,884	997.7	984
3/3/2020	24.00	45.3	1,394	902,120	1,104,847	2,006,967	908,755	997.7	907
3/4/2020	24.00	45.3	1,335	829,918	1,091,993	1,921,911	870,241	997.7	868
3/5/2020	24.00	45.3	1,285	758,487	1,091,678	1,850,165	837,755	997.7	836
3/6/2020	24.00	45.3	1,348	860,100	1,080,678	1,940,778	878,784	997.7	877
3/7/2020	24.00	45.3	1,396	931,000	1,079,486	2,010,486	910,348	997.7	908
3/8/2020	23.00	45.3	1,401	898,676	1,034,294	1,932,970	875,249	997.7	873
3/9/2020	24.00	45.3	1,485	1,060,219	1,078,553	2,138,772	968,436	997.7	966
3/10/2020	24.00	45.3	1,615	1,264,289	1,061,044	2,325,333	1,052,911	997.7	1,050
3/11/2020	24.00	45.3	1,667	1,313,525	1,086,944	2,400,469	1,086,932	997.7	1,084
3/12/2020	24.00	45.3	1,697	1,489,763	953,675	2,443,438	1,106,389	997.7	1,104
3/13/2020	24.00	45.3	1,496	1,090,123	1,063,613	2,153,736	975,212	997.7	973
3/14/2020	17.33	45.3	1,276	666,105	661,446	1,327,551	601,115	997.7	600
3/15/2020	9.50	45.3	2,074	817,565	364,380	1,181,945	535,185	997.7	534
3/16/2020	24.00	45.3	2,114	2,041,646	1,002,304	3,043,950	1,378,301	997.7	1,375
3/17/2020	24.00	45.3	2,108	1,995,815	1,039,272	3,035,087	1,374,287	997.7	1,371
3/18/2020	24.00	45.3	1,595	1,222,039	1,074,597	2,296,636	1,039,917	997.7	1,038
3/19/2020	21.40	45.3	1,766	1,392,412	875,137	2,267,549	1,026,746	997.7	1,024
3/20/2020	24.00	45.3	1,673	1,322,238	1,087,139	2,409,377	1,090,966	997.7	1,088
3/21/2020	24.00	45.3	1,654	1,300,867	1,080,273	2,381,140	1,078,180	997.7	1,076
3/22/2020	24.00	45.3	1,681	1,338,269	1,081,929	2,420,198	1,095,866	997.7	1,093
3/23/2020	24.00	45.3	1,581	1,204,839	1,071,515	2,276,354	1,030,733	997.7	1,028
3/24/2020	24.00	45.3	1,909	1,902,830	845,884	2,748,714	1,244,618	997.7	1,242
3/25/2020	24.00	45.3	1,900	1,925,805	809,577	2,735,382	1,238,581	997.7	1,236
3/26/2020	23.00	45.3	1,838	1,825,708	710,951	2,536,659	1,148,599	997.7	1,146
3/27/2020	24.00	45.3	1,641	1,328,118	1,035,425	2,363,543	1,070,212	997.7	1,068
3/28/2020	24.00	45.3	1,534	1,103,867	1,104,744	2,208,611	1,000,059	997.7	998
3/29/2020	24.00	45.3	1,530	1,061,611	1,141,829	2,203,440	997,718	997.7	995
3/30/2020	24.00	45.3	1,482	946,560	1,186,995	2,133,555	966,074	997.7	964
3/31/2020	24.00	45.3	1,514	989,687	1,189,948	2,179,635	986,939	997.7	985
Totals/ Average	**718.23**	**45.3**	**1,609**	**37,609,853**	**31,314,612**	**68,924,465**	**31,208,998**	997.7	**31,137**
								Max	**1,375**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: April-20

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
4/1/2020	24.00	45.3	1,564	1,170,750	1,080,783	2,251,533	1,019,494	997.7	1,017
4/2/2020	24.00	45.3	1,566	1,128,704	1,125,785	2,254,489	1,020,833	997.7	1,018
4/3/2020	24.00	45.3	1,507	1,052,832	1,117,732	2,170,564	982,831	997.7	981
4/4/2020	24.00	45.3	1,566	1,130,416	1,124,598	2,255,014	1,021,070	997.7	1,019
4/5/2020	24.00	45.3	1,746	1,394,216	1,119,307	2,513,523	1,138,123	997.7	1,136
4/6/2020	24.00	45.3	1,470	1,007,369	1,108,868	2,116,237	958,232	997.7	956
4/7/2020	24.00	45.3	1,529	1,079,386	1,122,513	2,201,899	997,020	997.7	995
4/8/2020	24.00	45.3	1,581	1,139,896	1,137,016	2,276,912	1,030,986	997.7	1,029
4/9/2020	24.00	45.3	1,733	1,423,070	1,072,917	2,495,987	1,130,183	997.7	1,128
4/10/2020	24.00	45.3	1,522	1,271,239	919,745	2,190,984	992,078	997.7	990
4/11/2020	24.00	45.3	1,443	1,153,733	924,120	2,077,853	940,852	997.7	939
4/12/2020	24.00	45.3	1,122	689,919	926,023	1,615,942	731,699	997.7	730
4/13/2020	24.00	45.3	1,190	781,705	931,350	1,713,055	775,671	997.7	774
4/14/2020	21.77	45.3	1,614	1,238,851	869,612	2,108,463	954,712	997.7	953
4/15/2020	22.53	45.3	1,751	1,392,349	975,532	2,367,881	1,072,177	997.7	1,070
4/16/2020	23.37	45.3	2,102	2,145,254	801,444	2,946,698	1,334,265	997.7	1,331
4/17/2020	24.00	45.3	1,988	1,666,167	1,196,416	2,862,583	1,296,178	997.7	1,293
4/18/2020	24.00	45.3	1,908	1,509,675	1,238,214	2,747,889	1,244,244	997.7	1,241
4/19/2020	24.00	45.3	1,889	1,488,151	1,232,003	2,720,154	1,231,686	997.7	1,229
4/20/2020	24.00	45.3	1,614	1,092,478	1,232,348	2,324,826	1,052,681	997.7	1,050
4/21/2020	24.00	45.3	1,388	774,888	1,224,086	1,998,974	905,135	997.7	903
4/22/2020	24.00	45.3	1,353	731,014	1,217,053	1,948,067	882,085	997.7	880
4/23/2020	24.00	45.3	1,525	987,238	1,209,251	2,196,489	994,570	997.7	992
4/24/2020	24.00	45.3	1,534	1,028,106	1,181,438	2,209,544	1,000,482	997.7	998
4/25/2020	24.00	45.3	1,522	1,007,173	1,184,307	2,191,480	992,302	997.7	990
4/26/2020	24.00	45.3	1,827	2,001,016	629,880	2,630,896	1,191,270	997.7	1,189
4/27/2020	24.00	45.3	1,519	1,080,346	1,106,967	2,187,313	990,415	997.7	988
4/28/2020	24.00	45.3	1,720	1,417,539	1,059,535	2,477,074	1,121,619	997.7	1,119
4/29/2020	24.00	45.3	1,474	863,790	1,259,269	2,123,059	961,321	997.7	959
4/30/2020	24.00	45.3	1,563	999,068	1,251,574	2,250,642	1,019,091	997.7	1,017
Totals/ Average	**715.67**	**45.3**	**1,594**	**35,846,338**	**32,579,686**	**68,426,024**	**30,983,304**	997.7	**30,912**
								Max	**1,331**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

Altamont Landfill and Resource Recovery Facility
Livermore, CA

A-16 Landfill Gas Flare
Heat Input Rate
MONTH: May-20

Date	Runtime (Hours)	CH_4 (%)	Average Flow (scfm)	Landfill Gas Volume (scf)	Byproduct Gas (BPG) Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
5/1/2020	24.00	45.3	1,495	873,565	1,279,650	2,153,215	974,976	997.7	973
5/2/2020	24.00	45.3	1,455	779,804	1,315,116	2,094,920	948,580	997.7	946
5/3/2020	24.00	45.3	1,461	795,027	1,309,363	2,104,389	952,867	997.7	951
5/4/2020	24.00	45.3	1,766	1,486,544	1,056,988	2,543,532	1,151,711	997.7	1,149
5/5/2020	24.00	45.3	1,897	1,927,365	805,008	2,732,373	1,237,218	997.7	1,234
5/6/2020	24.00	45.3	1,885	1,535,631	1,178,783	2,714,414	1,229,087	997.7	1,226
5/7/2020	24.00	45.3	1,883	1,413,729	1,298,157	2,711,886	1,227,942	997.7	1,225
5/8/2020	24.00	45.3	1,750	1,218,840	1,300,648	2,519,488	1,140,824	997.7	1,138
5/9/2020	24.00	45.3	1,583	967,164	1,312,226	2,279,390	1,032,108	997.7	1,030
5/10/2020	24.00	45.3	1,563	1,038,574	1,212,680	2,251,254	1,019,368	997.7	1,017
5/11/2020	24.00	45.3	1,654	1,283,820	1,098,074	2,381,894	1,078,522	997.7	1,076
5/12/2020	24.00	45.3	1,586	1,182,833	1,101,117	2,283,950	1,034,173	997.7	1,032
5/13/2020	24.00	45.3	1,719	1,598,435	876,493	2,474,928	1,120,647	997.7	1,118
5/14/2020	24.00	45.3	1,536	1,111,761	1,099,880	2,211,641	1,001,431	997.7	999
5/15/2020	24.00	45.3	1,546	1,190,193	1,035,823	2,226,016	1,007,940	997.7	1,006
5/16/2020	24.00	45.3	1,569	1,260,805	998,461	2,259,266	1,022,996	997.7	1,021
5/17/2020	24.00	45.3	1,480	1,088,232	1,043,184	2,131,416	965,105	997.7	963
5/18/2020	24.00	45.3	1,394	974,901	1,031,812	2,006,713	908,639	997.7	907
5/19/2020	24.00	44.5	1,355	908,506	1,042,985	1,951,491	867,464	997.7	865
5/20/2020	24.00	44.5	1,363	930,424	1,031,675	1,962,099	872,179	997.7	870
5/21/2020	24.00	44.5	1,476	1,774,989	350,708	2,125,697	944,901	997.7	943
5/22/2020	24.00	44.5	1,322	849,753	1,054,185	1,903,938	846,326	997.7	844
5/23/2020	24.00	44.5	1,437	1,045,108	1,023,873	2,068,981	919,690	997.7	918
5/24/2020	23.57	44.5	1,576	1,459,930	767,894	2,227,824	990,297	997.7	988
5/25/2020	24.00	44.5	1,525	1,136,742	1,058,621	2,195,363	975,868	997.7	974
5/26/2020	24.00	44.5	1,592	1,251,286	1,041,052	2,292,338	1,018,975	997.7	1,017
5/27/2020	24.00	44.5	1,606	1,294,922	1,017,116	2,312,038	1,027,732	997.7	1,025
5/28/2020	24.00	44.5	1,778	2,272,426	288,159	2,560,585	1,138,214	997.7	1,136
5/29/2020	24.00	44.5	1,565	1,941,203	312,425	2,253,628	1,001,768	997.7	999
5/30/2020	24.00	44.5	1,511	1,671,742	504,082	2,175,824	967,183	997.7	965
5/31/2020	24.00	44.5	1,605	2,305,332	6,248	2,311,580	1,027,528	997.7	1,025
Totals/ Average	**743.57**	**44.9**	**1,578**	**40,569,585**	**29,852,486**	**70,422,071**	**31,652,258**	997.7	**31,579**
								Max	**1,234**

NOTE 1) Pursuant to Permit Condition No. 19235, Part 4, the daily heat input limit to the A-16 flare is 3,168 MMBtu.
2) Starting June 2019, the average methane percentage from the April 3 and 4 , 2019 source test will be used.
% - Percent **CH_4** - methane **scfm** - standard cubic feet per minute **scf** - standard cubic feet **btu** - British thermal units **MMBTU** - million British thermal units

ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY, Livermore, CA
A-15 TEMPERATURE REPORT December 1, 2019 THROUGH May 31, 2020

REPORT PREPARED BY: Rajan Phadnis **DATE:** 06/01/20
TEMPERATURE SENSING DEVICE: Thermocouple **MODEL:** Type K

DATE	TIME (Hours)	TEMPERATURE (°F)	CAUSE	EXPLANATION	ACTION TAKEN
No temperature deviations occurred during December 2019					
No temperature deviations occurred during January 2020					
No temperature deviations occurred during February 2020					
No temperature deviations occurred during March 2020					
No temperature deviations occurred during April 2020					
No temperature deviations occurred during May 2020					

COMMENTS:

The 3-hour average flare combustion zone temperature did not drop below 1,400°F while the flare was in operation

Notes: 1) Pursuant to Permit Condition No. 19235, Part 10, the combustion zone temperature of the A-15 shall be maintained at a minimum of 50°F below the average combustion zone temperature determined during the most recent source test, provided that the minimum combustion zone temperature is not less than 1,400°F.
2) Pursuant to Permit Condition No. 19235, Part 10(a), the three-hour average minimum combustion zone temperature for the A-15 Flare is 1,525°F.

ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY, Livermore, CA
A-16 TEMPERATURE REPORT December 1, 2019 THROUGH May 31, 2020

REPORT PREPARED BY: Rajan Phadnis **DATE:** 06/01/20
TEMPERATURE SENSING DEVICE: Thermocouple **MODEL:** Type K

DATE	TIME (Hours)	TEMPERATURE (°F)	CAUSE	EXPLANATION	ACTION TAKEN
No temperature deviations occurred during December 2019					
No temperature deviations occurred during January 2020					
No temperature deviations occurred during February 2020					
No temperature deviations occurred during March 2020					
No temperature deviations occurred during April 2020					
No temperature deviations occurred during May 2020					

COMMENTS:

The 3-hour average flare combustion zone temperature did not drop below 1,400°F while the flare was in operation

Notes:

1) Pursuant to Permit Condition No. 19235, Part 10, the combustion zone temperature of the A-16 Flare shall be maintained at a minimum of 50°F below the average combustion zone temperature determined during the most recent source test, provided that the minimum combustion zone temperature is not less than 1,400°F.

2) Pursuant to Permit Condition No. 19235, Part 10(b), the three-hour average minimum combustion zone temperature for the A-16 Flare is 1,542°F.

APPENDIX H

LNG PLANT (S-210) HEAT INPUT LOGS

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: December-19

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
12/1/2019	50.60	2,671	1,352	1,013.0	1
12/2/2019	50.60	72,919	36,897	1,013.0	37
12/3/2019	50.60	493,906	249,916	1,013.0	253
12/4/2019	50.60	749,016	379,002	1,013.0	384
12/5/2019	50.60	317,915	160,865	1,013.0	163
12/6/2019	50.60	837,145	423,595	1,013.0	429
12/7/2019	50.60	846,547	428,353	1,013.0	434
12/8/2019	50.60	855,428	432,847	1,013.0	438
12/9/2019	50.60	261,165	132,149	1,013.0	134
12/10/2019	50.60	0	0	1,013.0	0
12/11/2019	50.60	337,102	170,574	1,013.0	173
12/12/2019	50.60	775,410	392,357	1,013.0	397
12/13/2019	50.60	797,317	403,442	1,013.0	409
12/14/2019	50.60	840,418	425,252	1,013.0	431
12/15/2019	50.60	937,156	474,201	1,013.0	480
12/16/2019	50.60	941,754	476,528	1,013.0	483
12/17/2019	50.60	919,015	465,022	1,013.0	471
12/18/2019	50.60	836,427	423,232	1,013.0	429
12/19/2019	50.60	807,840	408,767	1,013.0	414
12/20/2019	50.60	751,784	380,403	1,013.0	385
12/21/2019	50.60	1,164,160	589,065	1,013.0	597
12/22/2019	50.60	1,143,533	578,628	1,013.0	586
12/23/2019	50.60	1,157,276	585,582	1,013.0	593
12/24/2019	50.60	1,160,630	587,279	1,013.0	595
12/25/2019	50.60	1,145,010	579,375	1,013.0	587
12/26/2019	50.60	1,166,367	590,182	1,013.0	598
12/27/2019	50.60	1,159,789	586,853	1,013.0	594
12/28/2019	50.60	1,148,857	581,322	1,013.0	588.88
12/29/2019	50.60	1,101,316	557,266	1,013.0	565
12/30/2019	50.60	1,134,647.0	574,131.4	1,013.0	581.6
12/31/2019	50.60	1,121,840	567,651	1,013.0	575
Total/ Average	**50.6**	**24,984,360**	**12,642,086**	1,013.0	**12,806**
				Maximum	**598**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: January-20

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
1/1/2020	51.20	1,107,054	566,812	1,013.0	574
1/2/2020	51.20	509,051	260,634	1,013.0	264
1/3/2020	51.20	182,500	93,440	1,013.0	95
1/4/2020	51.20	267,772	137,099	1,013.0	139
1/5/2020	51.20	204,662	104,787	1,013.0	106
1/6/2020	51.20	0	0	1,013.0	0
1/7/2020	51.20	457,234	234,104	1,013.0	237
1/8/2020	51.20	517,477	264,948	1,013.0	268
1/9/2020	51.20	1,071,510	548,613	1,013.0	556
1/10/2020	51.20	423,142	216,649	1,013.0	219
1/11/2020	51.20	1,208,043	618,518	1,013.0	627
1/12/2020	51.20	1,144,964	586,222	1,013.0	594
1/13/2020	51.20	515,309	263,838	1,013.0	267
1/14/2020	51.20	1,301,574	666,406	1,013.0	675
1/15/2020	51.20	1,406,332	720,042	1,013.0	729
1/16/2020	51.20	1,416,805	725,404	1,013.0	735
1/17/2020	51.20	1,079,011	552,454	1,013.0	560
1/18/2020	51.20	395,676	202,586	1,013.0	205
1/19/2020	51.20	382,324	195,750	1,013.0	198
1/20/2020	51.20	298,982	153,079	1,013.0	155
1/21/2020	51.20	68,868	35,260	1,013.0	36
1/22/2020	51.20	0	0	1,013.0	0
1/23/2020	51.20	0	0	1,013.0	0
1/24/2020	51.20	100,296	51,352	1,013.0	52
1/25/2020	51.20	761,917	390,102	1,013.0	395
1/26/2020	51.20	1,414,255	724,099	1,013.0	734
1/27/2020	51.20	1,304,179	667,740	1,013.0	676
1/28/2020	51.20	1,361,007	696,836	1,013.0	705.89
1/29/2020	51.20	1,416,600	725,299	1,013.0	735
1/30/2020	51.20	1,283,754.0	657,282.0	1,013.0	665.8
1/31/2020	51.20	40,843	20,912	1,013.0	21
Total/ Average	**51.2**	**21,641,141**	**11,080,264**	1,013.0	**11,224**
				Maximum	**735**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: February-20

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
2/1/2020	50.96	0	0	1,013.0	0
2/2/2020	50.96	0	0	1,013.0	0
2/3/2020	50.96	0	0	1,013.0	0
2/4/2020	50.96	0	0	1,013.0	0
2/5/2020	50.96	196,486	100,129	1,013.0	101
2/6/2020	50.96	1,260,940	642,575	1,013.0	651
2/7/2020	50.96	1,267,361	645,847	1,013.0	654
2/8/2020	50.96	1,241,951	632,898	1,013.0	641
2/9/2020	50.96	1,202,849	612,972	1,013.0	621
2/10/2020	50.96	1,288,326	656,531	1,013.0	665
2/11/2020	50.96	686,170	349,672	1,013.0	354
2/12/2020	50.96	1,233,348	628,514	1,013.0	637
2/13/2020	50.96	1,149,133	585,598	1,013.0	593
2/14/2020	50.96	1,443,626	735,672	1,013.0	745
2/15/2020	50.96	1,287,025	655,868	1,013.0	664
2/16/2020	50.96	1,230,517	627,071	1,013.0	635
2/17/2020	50.96	1,424,553	725,952	1,013.0	735
2/18/2020	50.96	1,504,312	766,597	1,013.0	777
2/19/2020	50.96	1,503,631	766,250	1,013.0	776
2/20/2020	50.96	1,621,036	826,080	1,013.0	837
2/21/2020	50.96	1,468,695	748,447	1,013.0	758
2/22/2020	50.96	885,825	451,416	1,013.0	457
2/23/2020	50.96	0	0	1,013.0	0
2/24/2020	50.96	587,024	299,147	1,013.0	303
2/25/2020	50.96	1,583,090	806,743	1,013.0	817
2/26/2020	50.96	930,589	474,228	1,013.0	480
2/27/2020	50.96	1,558,638	794,282	1,013.0	805
2/28/2020	50.96	1,563,768	796,896	1,013.0	807.26
2/29/2020	50.96	1,574,711	802,473	1,013.0	813
Total/ Average	**50.96**	**29,693,604**	**15,131,861**	1,013.0	**15,329**
				Maximum	**837**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: March-20

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
3/1/2020	49.3	1,549,620	763,808	1,013.0	774
3/2/2020	49.3	1,485,166	732,038	1,013.0	742
3/3/2020	49.3	1,476,690	727,861	1,013.0	737
3/4/2020	49.3	1,583,971	780,739	1,013.0	791
3/5/2020	49.3	1,584,320	780,911	1,013.0	791
3/6/2020	49.3	1,572,394	775,033	1,013.0	785
3/7/2020	49.3	1,562,563	770,187	1,013.0	780
3/8/2020	49.3	1,504,097	741,369	1,013.0	751
3/9/2020	49.3	1,574,708	776,174	1,013.0	786
3/10/2020	49.3	1,492,090	735,451	1,013.0	745
3/11/2020	49.3	1,548,455	763,233	1,013.0	773
3/12/2020	49.3	1,320,316	650,784	1,013.0	659
3/13/2020	49.3	1,512,905	745,711	1,013.0	755
3/14/2020	49.3	929,234	458,019	1,013.0	464
3/15/2020	49.3	376,638	185,645	1,013.0	188
3/16/2020	49.3	1,247,329	614,808	1,013.0	623
3/17/2020	49.3	1,375,344	677,907	1,013.0	687
3/18/2020	49.3	1,551,861	764,912	1,013.0	775
3/19/2020	49.3	1,157,742	570,651	1,013.0	578
3/20/2020	49.3	1,557,910	767,894	1,013.0	778
3/21/2020	49.3	1,535,303	756,751	1,013.0	767
3/22/2020	49.3	1,536,843	757,510	1,013.0	767
3/23/2020	49.3	1,537,868	758,015	1,013.0	768
3/24/2020	49.3	1,146,526	565,123	1,013.0	572
3/25/2020	49.3	1,017,277	501,416	1,013.0	508
3/26/2020	49.3	879,330	433,422	1,013.0	439
3/27/2020	49.3	1,371,511	676,018	1,013.0	685
3/28/2020	49.3	1,571,093	774,392	1,013.0	784.46
3/29/2020	49.3	1,649,722	813,148	1,013.0	824
3/30/2020	49.3	1,751,880.0	863,502	1,013.0	874.73
3/31/2020	49.3	1,739,012	857,159	1,013.0	868
Total/ Average	**49.3**	**43,699,718**	**21,539,591**	1,013.0	**21,820**
				Maximum	**875**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: April-20

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
4/1/2020	48.7	1,526,262	743,442	1,013.0	753
4/2/2020	48.7	1,630,334	794,136	1,013.0	804
4/3/2020	48.7	1,616,220	787,261	1,013.0	797
4/4/2020	48.7	1,608,165	783,337	1,013.0	794
4/5/2020	48.7	1,591,611	775,274	1,013.0	785
4/6/2020	48.7	1,598,525	778,642	1,013.0	789
4/7/2020	48.7	1,629,258	793,612	1,013.0	804
4/8/2020	48.7	1,665,918	811,469	1,013.0	822
4/9/2020	48.7	1,448,671	705,648	1,013.0	715
4/10/2020	48.7	1,128,677	549,779	1,013.0	557
4/11/2020	48.7	1,114,684	542,963	1,013.0	550
4/12/2020	48.7	1,103,540	537,534	1,013.0	545
4/13/2020	48.7	1,162,086	566,052	1,013.0	573
4/14/2020	48.7	1,170,041	569,927	1,013.0	577
4/15/2020	48.7	1,386,919	675,568	1,013.0	684
4/16/2020	48.7	1,023,008	498,307	1,013.0	505
4/17/2020	48.7	1,780,242	867,156	1,013.0	878
4/18/2020	48.7	1,853,853	903,012	1,013.0	915
4/19/2020	48.7	1,852,205	902,209	1,013.0	914
4/20/2020	48.7	1,851,501	901,866	1,013.0	914
4/21/2020	48.7	1,839,653	896,095	1,013.0	908
4/22/2020	48.7	1,838,884	895,720	1,013.0	907
4/23/2020	48.7	1,821,864	887,430	1,013.0	899
4/24/2020	48.7	1,755,927	855,312	1,013.0	866
4/25/2020	48.7	1,734,324	844,789	1,013.0	856
4/26/2020	48.7	129,199	62,933	1,013.0	64
4/27/2020	48.7	1,572,125	765,782	1,013.0	776
4/28/2020	48.7	1,441,994	702,395	1,013.0	711.53
4/29/2020	48.7	1,843,752	898,092	1,013.0	910
4/30/2020	48.7	1,842,965.0	897,708	1,013.0	909.38
Total/ Average	**48.7**	**45,562,407**	**22,193,448**	1,013.0	**22,482**
				Maximum	**915**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

Altamont Landfill and Resource Recovery Facility
Livermore, CA

S-210 LNG Plant
Heat Input Rate
MONTH: May-20

Date	Average Exit CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heating Value of CH_4 (btu/scf)	Heat Input (MMBTU)/Day
5/1/2020	49.6	1,912,373	948,919	1,013.0	961
5/2/2020	49.6	2,002,265	993,524	1,013.0	1,006
5/3/2020	49.6	1,994,843	989,841	1,013.0	1,003
5/4/2020	49.6	1,255,352	622,906	1,013.0	631
5/5/2020	49.6	633,770	314,477	1,013.0	319
5/6/2020	49.6	1,704,645	845,845	1,013.0	857
5/7/2020	49.6	1,964,704	974,886	1,013.0	988
5/8/2020	49.6	1,957,501	971,312	1,013.0	984
5/9/2020	49.6	1,971,300	978,159	1,013.0	991
5/10/2020	49.6	1,812,455	899,340	1,013.0	911
5/11/2020	49.6	1,592,030	789,965	1,013.0	800
5/12/2020	49.6	1,585,198	786,575	1,013.0	797
5/13/2020	49.6	1,237,406	614,001	1,013.0	622
5/14/2020	49.6	1,504,988	746,775	1,013.0	756
5/15/2020	49.6	1,413,342	701,300	1,013.0	710
5/16/2020	49.6	1,370,653	680,118	1,013.0	689
5/17/2020	49.6	1,450,089	719,534	1,013.0	729
5/18/2020	49.6	1,437,304	713,190	1,013.0	722
5/19/2020	49.6	1,455,908	722,422	1,013.0	732
5/20/2020	49.6	1,434,839	711,967	1,013.0	721
5/21/2020	49.6	404,966	200,944	1,013.0	204
5/22/2020	49.6	1,492,278	740,468	1,013.0	750
5/23/2020	49.6	1,441,648	715,346	1,013.0	725
5/24/2020	49.6	1,059,564	525,756	1,013.0	533
5/25/2020	49.6	1,432,252	710,683	1,013.0	720
5/26/2020	49.6	1,339,415	664,618	1,013.0	673
5/27/2020	49.6	1,310,582	650,311	1,013.0	659
5/28/2020	49.6	301,202	149,456	1,013.0	151.40
5/29/2020	49.6	341,771	169,587	1,013.0	172
5/30/2020	49.6	631,136	313,170	1,013.0	317.24
5/31/2020	49.6	0	0	1,013.0	0
Total/ Average	**49.6**	**41,445,779**	**20,565,395**	1,013.0	**20,833**
				Maximum	**1,006**

Notes: 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.
2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.
% - Percent **CH_4** - methane **btu** - British thermal units **MMBTU** - million British thermal units **scf** - standard cubic feet

APPENDIX I
MONTHLY COVER INTEGRITY MONITORING REPORTS

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 12/30/19
TECHNICIAN: Dan San Jose

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

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 01.30.20
TECHNICIAN: Dan San Jose

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

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 02.28.20
TECHNICIAN: Dan San Jose

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		x	
Dead vegetation		x	
Erosion on cap system		x	
Erosion on side slopes	x		Near Well 612
Ponding of water on cap		x	
Surface cracking		x	
Acceptable vegetation	x		
Exposed waste		x	

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
Erosion near Well 612			Operations was informed about the required actions
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 03.27.2020
TECHNICIAN: Dan San Jose

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

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
Erosion near Well 612		03.27.2020	Added soil and compacted
Note: Monthly cover integrity monitoring is performed pursuant to BAAQMD Regulation 8-34-501.4			

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 04.30.2020
TECHNICIAN: Dan San Jose

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		x	
Dead vegetation		x	
Erosion on cap system		x	
Erosion on side slopes	x		See below for details
Ponding of water on cap	x		See below for details
Surface cracking		x	
Acceptable vegetation	x		
Exposed waste	x		See below for details

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
west of well 751	-	04/21/20	Ponding of water west of well 751 on rd
-	east of 769	-	Erosion on road east of well 769
-	south of 766	-	Exposed waste south of well 766
-	south of 769	-	Ponding of water south of well 769 on bench rd
north of 738 743	-	-	Ponding of water north of wells 738 ,743 on bench rd
south of 664	-	-	Ponding of water south of well 664 on bench rd
-	north of leachate Tank	-	Erosion north east of leachate tank on bench rd
-	west of well 529	-	Ponding of water west of well 529 below bench rd
-	west of well 529	-	Ponding of water west of well 529 on bench rd
-	south of well 651	-	Ponding of water south of well 651 on bench rd

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

MONTHLY COVER MONITORING REPORT

LOCATION: Altamont Landfill and Resource Recovery Facility, Livermore, CA
INSPECTION DATE: 05.29.2020
TECHNICIAN: Dan San Jose

COVER & VEGETATION	YES	NO	COMMENTS
Settling of cap		x	
Dead vegetation		x	
Erosion on cap system		x	
Erosion on side slopes		x	See below for details
Ponding of water on cap	x		Leachate seep on bench west Well 529, near main road
Surface cracking		x	
Acceptable vegetation	x		
Exposed waste		x	See below for details

REPAIR AREAS:

GPS Coordinates		Date of Repair	COMMENTS
Northing	Easting		
west of well 751	-	04/21/20	Ponding of water west of well 751 on rd. Repaired added dirt and bladed out.
-	east of 769	5/1/2020	Erosion on road east of well 769. Repaired added dirt and bladed out
-	south of 766	5/1/2020	Exposed waste south of well 766. Added dirt to cover.
-	south of 769	5/1/2020	Ponding of water south of well 769 on bench rd. Added dirt and bladed out
north of 738 743	-	5/15/2020	Ponding of water north of wells 738 ,743 on bench rd.Bladed out.
south of 664	-	5/1/2020	Ponding of water south of well 664 on bench rd, Area Bladed out.
-	north of leachate Tank	5/1/2020	Erosion north east of leachate tank on bench rd. Added dirt and bladed out.
-	west of well 529	5/1/2020	Ponding of water west of well 529 below bench rd. Added dirt and bladed out.
-	west of well 529	5/15/2020	Ponding of water west of well 529 on bench rd. Added dirt and bladed out.
-	south of well 651	5/12/2020	Ponding of water south of well 651 on bench rd. Bladed out.
West of Well 529		-	Leachate seep bench west of Well 529 near main road.

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

APPENDIX J
SURFACE EMISSIONS MONITORING REPORTS

WASTE MANAGEMENT

172 98th Avenue • Oakland, California • 94568 • (510) 430-8509

April 9, 2020

Mr. Benjamin Wade
Environmental Protection Specialist
Altamont Landfill and Resource Recovery Facility
10840 Altamont Road
Livermore, California 94551

Re: First Quarter 2020 Surface Emissions and Component Leak Monitoring Report for the Altamont Landfill and Resource Recovery Facility

Dear Mr. Wade:

This monitoring report for the "Altamont Landfill and Resource Recovery Facility (ALRRF)" contains the results of the First Quarter 2020 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. Initial surface emissions monitoring was performed by RES Environmental, Inc. (RES). Re-monitoring of surface emissions and site-wide component leak monitoring (except Linde Plant), wherever applicable was conducted by ALRRF personnel. The component leak monitoring for Linde Plant was conducted by third party contractor.

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

- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 301 (Landfill Gas Collection and Emission Control System Requirements) and Section 602 (Collection and Control System Leak Inspection procedures).

- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95464, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).

ALRRF Plan and Alternative Compliance Measures

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

PROCEDURES

General

The surface of the ALRRF disposal area has been divided into two-hundred and twenty (220), 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 ALRRF AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

Instantaneous Surface Emissions Monitoring

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

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

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

- Corrective actions must be initiated within 5 days of the initial exceedance and re-monitoring shall be conducted within 10 days of the initial exceedance.
    - If the re-monitoring event shows the exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance.
    - If the 1-month re-monitoring event shows the location is still corrected, all re-monitoring requirements have been completed.
- If either the first 10-day or 1-month re-monitoring events show a second exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance. If the 1-month re-monitoring event shows the area is still corrected, monitoring requirements have been completed.

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

Integrated Surface Emissions Monitoring

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

Grids with results greater than 25 ppm_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 re-monitoring timeline:

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

Component Leak Monitoring Procedures

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

- Leaks between 500 and 999 ppm_v must be corrected and re-monitored within 10 days of the initial exceedance.

- Leaks at or above 1000 ppm_v must be corrected and re-monitored within 7 days of the initial exceedance.

FIRST QUARTER 2020 SEM AND COMPONENT LEAK RESULTS

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

Instantaneous Surface Emissions Monitoring Results

The Instantaneous surface monitoring was performed on March 4, 2020 in accordance with the NSPS, BAAQMD 8-34, and CCR Title 17 §95469 and ACO. Results and data from the monitoring are presented in Attachment A.

Initial Monitoring Event Exceedances of 500 ppm_v

There were 37 exceedances of 500 ppm_v as methane detected on March 4, 2020. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (March 5 and 6, 2020).

Ten-Day Re-Monitoring Results

The 10-day re-monitoring event was completed on March 5 and 6, 2020. All locations were observed at less than 500 ppm_v.

Month Re-Monitoring Results

The 1-month re-monitoring event was completed on March 31 and April 1, 2020. All locations were observed at less than 500 ppm_v.

Readings between 200 ppm_v and 499 ppm_v (Initial and Re-monitored)

There were no readings between 200 ppm_v and 499 ppm_v as methane detected during the initial monitoring event. Pursuant to CCR Title 17 §95471(c), instantaneous surface emissions exceeding 200 ppm_v but below 500 ppm_v are required to be recorded.

Integrated Surface Emissions Monitoring Results

The Integrated surface sampling (ISS) was performed on March 3 and 5, 2020, in accordance with the ACO and requirements outlined in CCR Title 17 §95469.

Initial Monitoring Event Exceedances of 25 ppm_v

There were no grids with exceedances of 25 ppm_v as methane detected during the initial monitoring event on March 3 and 5, 2020.

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

Component Leak Monitoring Results

Component leak monitoring was conducted per the applicable requirements on March 5 and 11, 2020. No leaks greater than 500 ppm_v were identified. Please see Attachment C, for details.

WEATHER CONDITIONS

Wind Speed Conductions during the Surface Emission Monitoring Events

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

Precipitation Requirements

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

EQUIPMENT CALIBRATION

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

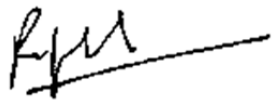
All analyzers were calibrated prior to use with required response time and precision related instrument checks. Calibration records include the following: One time response time test record; One time response factor determination for methane; Calibration Precision test records (test to be

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

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

Thank you,

Waste Management,



Rajan Phadnis
Environmental Protection Specialist

Attachment A – Instantaneous Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- SEM Map

Attachment B – Integrated Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- SEM Map

Attachment C – Component Leak Monitoring Event Records

- Component Leak Exceedances and Monitoring Logs

Attachment D – Weather Station Data

- Strip Chart Data

Attachment E – Calibration Records

- Instrument and Gas Calibration Records

Attachment A

Instantaneous Surface Emission Monitoring Event Records

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

2020 QUARTER: 1
PERFORMED BY: RES
LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Flag Number	Grid Number	Date of Monitoring	Concentration of Emission (ppmv)	Comments
21	197	03.04.20	1,283	Well 545
22	161	03.04.20	6,500	Well 580
23	40	03.04.20	7,000	Black pipe Bench east of Scale House
24	53	03.04.20	16,000	Black pipe Bench east of Scale House
25	88	03.04.20	1,100	Well 802
26	80	03.04.20	17,000	Well 801
27	64	03.04.20	16,000	Well 721
28	57	03.04.20	8,000	Well 798
29	57	03.04.20	9,500	Decom Well 723
30	50	03.04.20	33,000	Well 799
31	45	03.04.20	40,000	Well 794
32	38	03.04.20	7,500	Pipe East of 794
33	16	03.04.20	1,200	Well 508
34	7	03.04.20	3,000	Well 734
35	26	03.04.20	1,200	Well 759
41	155	03.04.20	2,156	Well 579
42	34	03.04.20	847	Surface slope East Scale House
43	71	03.04.20	6,482	Well 766
44	57	03.04.20	1,638	Well 800
45	50	03.04.20	32,576	Well 791
46	44	03.04.20	59,534	Well 790
47	44	03.04.20	20,894	Well 773
48	44	03.04.20	16,978	Well 792
49	37	03.04.20	15,073	Well 793
1	136	03.04.20	500	Surface South LCRS
2	110	03.04.20	700	Surface South LCRS
3	101	03.04.20	3,000	Black pipe South LCRS
4	55	03.04.20	5,000	Well 803
5	42	03.04.20	3,000	Well 787
6	56	03.04.20	3,800	Well 789
7	24	03.04.20	3,900	Gray pipe SE Well 781
61	171	03.04.20	900	Well 772
62	93	03.04.20	850	C I - 5
63	105	03.04.20	3,500	Pipe Near Well 768
64	114	03.04.20	1,100	Black pipe South Well 768
65	98	03.04.20	4,600	Well 715
66	97	03.04.20	29,000	Well 718 Decom

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

2020 QUARTER: 1
INITIAL MONITORING PERFORMED BY:RES
FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio / Dan San Jose
LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			
Flag	Monitoring	Field	Repair	Repair Action	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	Taken	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	Comments
21	03.04.20	1,283	03.05.20	Compact / Becs	03.05.20	133	N/A	04.01.20	56	N/A	Well 545
22	03.04.20	6,500	03.05.20	Compact / Becs	03.05.20	186	N/A	04.01.20	37	N/A	Well 580
23	03.04.20	7,000	03.05.20	Compact	03.05.20	132	N/A	04.01.20	21	N/A	Black pipe Bench east of Scale House
24	03.04.20	16,000	03.05.20	Compact	03.05.20	209	N/A	04.01.20	48	N/A	Black pipe Bench east of Scale House
25	03.04.20	1,100	03.06.20	Sprayed with water	03.06.20	107	N/A	03.31.20	23	N/A	Well 802
26	03.04.20	17,000	03.06.20	Sprayed with water	03.06.20	48	N/A	03.31.20	15	N/A	Well 801
27	03.04.20	16,000	03.05.20	Compact	03.05.20	220	N/A	03.31.20	181	N/A	Well 721
28	03.04.20	8,000	03.06.20	Sprayed with water	03.06.20	30	N/A	03.31.20	11	N/A	Well 798
29	03.04.20	9,500	03.05.20	Compact	03.05.20	168	N/A	03.31.20	6	N/A	Decom Well 723
30	03.04.20	33,000	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	17	N/A	Well 799
31	03.04.20	40,000	03.06.20	Sprayed with water	03.06.20	23	N/A	03.31.20	19	N/A	Well 794
32	03.04.20	7,500	03.05.20	Compact	03.05.20	109	N/A	04.01.20	0	N/A	Pipe East of 794
33	03.04.20	1,200	03.05.20	Compact / Becs	03.05.20	108	N/A	04.01.20	41	N/A	Well 508
34	03.04.20	3,000	03.05.20	Compact / Becs	03.05.20	203	N/A	04.01.20	24	N/A	Well 734
35	03.04.20	1,200	03.05.20	Compact / Becs	03.05.20	27	N/A	04.01.20	13	N/A	Well 759
41	03.04.20	2,156	03.05.20	Compact / Becs	03.05.20	118	N/A	04.01.20	8	N/A	Well 579
42	03.04.20	847	03.05.20	Compact	03.05.20	153	N/A	04.01.20	28	N/A	Surface slope East Scale House
43	03.04.20	6,482	03.05.20	Compact	03.05.20	140	N/A	04.01.20	11	N/A	Well 766
44	03.04.20	1,638	03.06.20	Sprayed with water	03.06.20	25	N/A	03.31.20	6	N/A	Well 800
45	03.04.20	32,576	03.06.20	Sprayed with water	03.06.20	48	N/A	03.31.20	12	N/A	Well 791
46	03.04.20	59,534	03.06.20	Sprayed with water	03.06.20	39	N/A	03.31.20	7	N/A	Well 790
47	03.04.20	20,894	03.06.20	Sprayed with water	03.06.20	37	N/A	03.31.20	120	N/A	Well 773
48	03.04.20	16,978	03.06.20	Sprayed with water	03.06.20	18	N/A	03.31.20	0	N/A	Well 792
49	03.04.20	15,073	03.06.20	Sprayed with water	03.06.20	35	N/A	03.31.20	21	N/A	Well 793
1	03.04.20	500	03.05.20	Compact	03.05.20	59	N/A	04.01.20	17	N/A	Surface South LCRS
2	03.04.20	700	03.05.20	Compact	03.05.20	46	N/A	04.01.20	19	N/A	Surface South LCRS
3	03.04.20	3,000	03.05.20	Compact	03.05.20	133	N/A	04.01.20	58	N/A	Black pipe South LCRS
4	03.04.20	5,000	03.06.20	Sprayed with water	03.06.20	26	N/A	03.31.20	0	N/A	Well 803
5	03.04.20	3,000	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	4	N/A	Well 787
6	03.04.20	3,800	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	13	N/A	Well 789
7	03.04.20	3,900	03.05.20	Compact	03.05.20	208	N/A	03.31.20	0	N/A	Gray pipe SE Well 781
61	03.04.20	900	03.05.20	Compact / Becs	03.05.20	93	N/A	04.01.20	0	N/A	Well 772
62	03.04.20	850	03.05.20	Compact	03.05.20	232	N/A	03.31.20	57	N/A	C I - 5
63	03.04.20	3,500	03.06.20	Compact	03.06.20	148	N/A	03.31.20	44	N/A	Pipe Near Well 768
64	03.04.20	1,100	03.05.20	Compact	03.05.20	49	N/A	04.01.20	32	N/A	Black pipe South Well 768
65	03.04.20	4,600	03.05.20	Compact / Becs	03.05.20	138	N/A	03.31.20	35	N/A	Well 715
66	03.04.20	29,000	03.05.20	Compact	03.05.20	189	N/A	03.31.20	13	N/A	Well 718 Decom

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

2020 QUARTER: 1

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio/ Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			**1st Re-mon 10-day Follow-Up**			**2nd Re-mon Event - 10 Days**			
Flag	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	**Comments**
21	03.04.20	1,283	03.05.20	133					Well 545
22	03.04.20	6,500	03.05.20	186					Well 580
23	03.04.20	7,000	03.05.20	132					Black pipe Bench east of Scale House
24	03.04.20	16,000	03.05.20	209					Black pipe Bench east of Scale House
25	03.04.20	1,100	03.06.20	107					Well 802
26	03.04.20	17,000	03.06.20	48					Well 801
27	03.04.20	16,000	03.05.20	220					Well 721
28	03.04.20	8,000	03.06.20	30					Well 798
29	03.04.20	9,500	03.05.20	168					Decom Well 723
30	03.04.20	33,000	03.06.20	0					Well 799
31	03.04.20	40,000	03.06.20	23					Well 794
32	03.04.20	7,500	03.05.20	109					Pipe East of 794
33	03.04.20	1,200	03.05.20	108					Well 508
34	03.04.20	3,000	03.05.20	203					Well 734
35	03.04.20	1,200	03.05.20	27					Well 759
41	03.04.20	2,156	03.05.20	118					Well 579
42	03.04.20	847	03.05.20	153					Surface slope East Scale House
43	03.04.20	6,482	03.05.20	140					Well 766
44	03.04.20	1,638	03.06.20	25					Well 800
45	03.04.20	32,576	03.06.20	48					Well 791
46	03.04.20	59,534	03.06.20	39					Well 790
47	03.04.20	20,894	03.06.20	37					Well 773
48	03.04.20	16,978	03.06.20	18					Well 792
49	03.04.20	15,073	03.06.20	35					Well 793
1	03.04.20	500	03.05.20	59					Surface South LCRS
2	03.04.20	700	03.05.20	46					Surface South LCRS
3	03.04.20	3,000	03.05.20	133					Black pipe South LCRS
4	03.04.20	5,000	03.06.20	26					Well 803
5	03.04.20	3,000	03.06.20	0					Well 787
6	03.04.20	3,800	03.06.20	0					Well 789
7	03.04.20	3,900	03.05.20	208					Gray pipe SE Well 781
61	03.04.20	900	03.05.20	93					Well 772
62	03.04.20	850	03.05.20	232					C I - 5
63	03.04.20	3,500	03.06.20	148					Pipe Near Well 768
64	03.04.20	1,100	03.05.20	49					Black pipe South Well 768
65	03.04.20	4,600	03.05.20	138					Well 715
66	03.04.20	29,000	03.05.20	189					Well 718 Decom

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

2020 QUARTER: 1

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

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

Instantaneous Landfill Surface Emissions Monitoring
Exceedance and Monitoring Logs (NSPS/BAAQMD 8-34)

2020 QUARTER: 1st

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: Dan San Jose

LANDFILL NAME: ALRRF

Wind Speed: 2 mph **Wind Speed: 4**
Wind Direction: W **Wind Direction: W**

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			Comments
Flag Number	Monitoring Date	Field Reading	Repair Date	Repair Action Taken	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	
21	03.04.20	1,283	03.05.20	Compact / Becs	03.05.20	133	N/A	04.01.20	56	N/A	Well 545
22	03.04.20	6,500	03.05.20	Compact / Becs	03.05.20	186	N/A	04.01.20	37	N/A	Well 580
23	03.04.20	7,000	03.05.20	Compact	03.05.20	132	N/A	04.01.20	21	N/A	Black pipe Bench east of Scale House
24	03.04.20	16,000	03.05.20	Compact	03.05.20	209	N/A	04.01.20	48	N/A	Black pipe Bench east of Scale House
25	03.04.20	1,100	03.06.20	Sprayed with water	03.06.20	107	N/A	03.31.20	23	N/A	Well 802
26	03.04.20	17,000	03.06.20	Sprayed with water	03.06.20	48	N/A	03.31.20	15	N/A	Well 801
27	03.04.20	16,000	03.05.20	Compact	03.05.20	220	N/A	03.31.20	181	N/A	Well 721
28	03.04.20	8,000	03.06.20	Sprayed with water	03.06.20	30	N/A	03.31.20	11	N/A	Well 798
29	03.04.20	9,500	03.05.20	Compact	03.05.20	168	N/A	03.31.20	6	N/A	Decom Well 723
30	03.04.20	33,000	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	17	N/A	Well 799
31	03.04.20	40,000	03.06.20	Sprayed with water	03.06.20	23	N/A	03.31.20	19	N/A	Well 794
32	03.04.20	7,500	03.05.20	Compact	03.05.20	109	N/A	04.01.20	0	N/A	Pipe East of 794
33	03.04.20	1,200	03.05.20	Compact / Becs	03.05.20	108	N/A	04.01.20	41	N/A	Well 508
34	03.04.20	3,000	03.05.20	Compact / Becs	03.05.20	203	N/A	04.01.20	24	N/A	Well 734
35	03.04.20	1,200	03.05.20	Compact / Becs	03.05.20	27	N/A	04.01.20	13	N/A	Well 759
41	03.04.20	2,156	03.05.20	Compact / Becs	03.05.20	118	N/A	04.01.20	8	N/A	Well 579
42	03.04.20	847	03.05.20	Compact	03.05.20	153	N/A	04.01.20	28	N/A	Surface slope East Scale House
43	03.04.20	6,482	03.05.20	Compact	03.05.20	140	N/A	04.01.20	11	N/A	Well 766
44	03.04.20	1,638	03.06.20	Sprayed with water	03.06.20	25	N/A	03.31.20	6	N/A	Well 800
45	03.04.20	32,576	03.06.20	Sprayed with water	03.06.20	48	N/A	03.31.20	12	N/A	Well 791
46	03.04.20	59,534	03.06.20	Sprayed with water	03.06.20	39	N/A	03.31.20	7	N/A	Well 790
47	03.04.20	20,894	03.06.20	Sprayed with water	03.06.20	37	N/A	03.31.20	120	N/A	Well 773
48	03.04.20	16,978	03.06.20	Sprayed with water	03.06.20	18	N/A	03.31.20	0	N/A	Well 792
49	03.04.20	15073	03.06.20	Sprayed with water	03.06.20	35	N/A	03.31.20	21	N/A	Well 793
1	03.04.20	500	03.05.20	Compact	03.05.20	59	N/A	04.01.20	17	N/A	Surface South LCRS
2	03.04.20	700	03.05.20	Compact	03.05.20	46	N/A	04.01.20	19	N/A	Surface South LCRS
3	03.04.20	3000	03.05.20	Compact	03.05.20	133	N/A	04.01.20	58	N/A	Black pipe South LCRS
4	03.04.20	5000	03.06.20	Sprayed with water	03.06.20	26	N/A	03.31.20	0	N/A	Well 803
5	03.04.20	3000	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	4	N/A	Well 787
6	03.04.20	3800	03.06.20	Sprayed with water	03.06.20	0	N/A	03.31.20	13	N/A	Well 789
7	03.04.20	3900	03.05.20	Compact	03.05.20	208	N/A	03.31.20	0	N/A	Gray pipe SE Well 781
61	03.04.20	900	03.05.20	Compact / Becs	03.05.20	93	N/A	04.01.20	0	N/A	Well 772
62	03.04.20	850	03.05.20	Compact	03.05.20	232	N/A	03.31.20	57	N/A	C I - 5
63	03.04.20	3500	03.06.20	Compact	03.06.20	148	N/A	03.31.20	44	N/A	Pipe Near Well 768
64	03.04.20	1100	03.05.20	Compact	03.05.20	49	N/A	04.01.20	32	N/A	Black pipe South Well 768
65	03.04.20	4600	03.05.20	Compact / Becs	03.05.20	138	N/A	03.31.20	35	N/A	Well 715
66	03.04.20	29000	03.05.20	Compact	03.05.20	189	N/A	03.31.20	13	N/A	Well 718 Decom

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Actamont

Quarter / Year:	1st 2020
Technician:	Leigh Wade
Instrument:	TVA 1000
Calibration Standard:	500 ppm

Initial Monitoring Event				First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			
Flag Number	Grid Number	Field Reading (ppm)	Date Monitored	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Comments
θ-21	197	1283	3-4-20										WELL 545
θ-22	161	6,500											WELL 580
θ-23	40	7,600											Black pipe
θ-24	53	16,000											Black pipe
θ-25	88	1,100											Grey pipe
θ-26	80	17,000											Grey pipe
θ-27	64	16,000											Grey pipe
θ-28	57	8,000											Grey pipe
θ-29	57	9,500											Grey pipe
θ-30	50	33,000											Grey pipe
θ-31	45	40,000											Grey pipe
θ-32	38	7,500											Grey pipe
θ-33	16	1,200											WELL 508
θ-34	7	3,000											WELL 701
θ-35	26	1,200											WELL 759
θ-41	155	2,156											WELL 579
θ-42	34	847											SURFACE
θ-43	71	6,482											WELL 766
θ-44	57	1638											Grey pipe
θ-45	50	32,576											Grey pipe 791
θ-46	44	59,534											Grey pipe
θ-47	44	20,894											WELL 773
θ-48	44	16,978											Grey pipe 792
θ-49	37	15,073											Grey pipe 793
θ-1	136	500											SURFACE

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Altamont

Quarter / Year:	1st 2020
Technician:	LEIGHWAOT
Instrument:	TVA1000
Calibration Standard:	500 PPM

Initial Monitoring Event				First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			Comments
Flag Number	Grid Number	Field Reading (ppm)	Date Monitored	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	
~~0-~~ 2	110	700	3-4-20										SURFACE
~~0-~~ 3	101	3,000											BLACK PIPE
~~0-~~ 4	55	5,000											GREY PIPE
~~0-~~ 5	42	3,000											GREY PIPE 787
0- 6	56	3,860											GREY PIPE 789
0- 7	24	3,900											GREY PIPE
~~0-~~ 61	171	900											WELL 772
0- 62	93	850											UNMONITORED WELL
0- 63	105	3,500											UNMONITORED WELL
0- 64	114	1,100											BLACK PIPE
0- 65	98	4,600											WELL 715
0- 66	97	29,000	↓										CAPPED PIPE
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													
0-													

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERALTA, AARON MILLIRON, NICK BANKS, ERNEST REMINEZ

Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 43 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
127	LW	0545	0600	15	1	2	9	
149	AM	0545	0600	57	1	2	9	
150	ER	0545	0600	68	1	2	9	
151	AP	0545	0600	21	1	2	9	
157	NB	0545	0600	39	1	2	9	
158	LW	0600	0615	72	1	2	9	
164	AM	0600	0615	48	1	2	9	
165	ER	0600	0615	35	1	2	9	
171	AP	0600	0615	900	1	2	9	WE11772
172	NB	0600	0615	44	1	2	9	
178	LW	0615	0630	61	1	2	9	
179	AM	0615	0630	32	1	2	9	
185	ER	0615	0630	29	1	2	9	
186	AP	0615	0630	55	1	2	9	
191	NB	0615	0630	32	1	2	9	
192	LW	0630	0645	61	1	2	10	
198	AM	0630	0645	45	1	2	10	
199	ER	0630	0645	59	1	2	10	
204	AP	0630	0645	75	1	2	10	
205	NB	0630	0645	36	1	2	10	
211	LW	0645	0700	103	1	2	11	
212	AM	0645	0700	148	1	2	11	
218	ER	0645	0700	96	1	2	11	
220	AP	0645	0700	77	1	2	11	
216	NB	0645	0700	58	1	2	11	
217	LW	0700	0715	49	1	2	9	
209	AM	0700	0715	31	1	2	9	
210	ER	0700	0715	54	1	2	9	
202	AP	0700	0715	47	1	2	9	
203	NB	0700	0715	31	1	2	9	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 7

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PENELLA, _____
AARON MCRADE, NICK BENNS, _____
ERNES-RAMIREZ, _____ Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 45 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
196	LW	0715	0730	58	1	2	9	
197	AM	0715	0730	1283	1	2	9	WELL 545
189	ER	0715	0730	34	1	2	9	
190	AP	0715	0730	51	1	2	9	
183	NB	0715	0730	30	1	2	9	
184	LW	0730	0745	46	1	2	10	
176	AM	0730	0745	39	1	2	10	
177	ER	0730	0745	28	1	2	10	
169	AP	0730	0745	34	1	2	10	
170	NB	0730	0745	44	1	2	10	
162	LW	0745	0800	36	1	2	11	
163	AM	0745	0800	59	1	2	11	
155	ER	0745	0800	2,156	1	2	11	WELL 579
156	AP	0745	0800	38	1	2	11	
147	NB	0745	0800	75	1	2	4	
148	LW	0800	0815	62	1	2	4	
145	AM	0800	0815	32	1	2	7	
146	ER	0800	0815	49	1	2	7	
153	AP	0800	0815	35	1	2	7	
154	NB	0800	0815	64	1	2	7	
160	LW	0815	0830	31	1	2	11	
161	AM	0815	0830	6,500	1	2	11	WELL 580
167	ER	0815	0830	39	1	2	11	
168	AP	0815	0830	46	1	2	11	
174	NB	0815	0830	25	1	2	11	
175	LW	0830	0845	31	2	3	11	
181	AM	0830	0845	23	2	3	11	
182	ER	0830	0845	37	2	3	11	
187	AP	0830	0845	49	2	3	11	
188	NB	0830	0845	62	2	3	11	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERALTA, AARIN MCBRIDE, NICK BANKS, ERNEST RAMIREZ

Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 47 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
194	LW	0845	0900	22	2	3	11	
195	AM	0845	0900	35	2	3	11	
200	ER	0845	0900	31	2	3	11	
201	AP	0845	0900	26	2	3	11	
207	NB	0845	0900	38	2	3	11	
208	LW	0900	0915	21	1	2	9	
213	AM	0900	0915	71	1	2	9	
214	ER	0900	0915	54	1	2	9	
215	AP	0900	0915	39	1	2	9	
219	NB	0900	0915	20	1	2	9	
206	LW	0915	0930	18	1	2	3	
193	AM	0915	0930	24	1	2	3	
180	ER	0915	0930	41	1	2	3	
173	AP	0915	0930	27	1	2	3	
166	NB	0915	0930	31	1	2	3	
159	LW	0930	0945	29	1	2	4	
152	AM	0930	0945	64	1	2	4	
144	ER	0930	0945	48	1	2	4	
136	AP	0930	0945	500	1	2	4	SURFACE
137	NB	0930	0945	59	1	2	4	
128	LW	0945	1000	37	1	2	12	
129	AM	0945	1000	55	1	2	12	
119	ER	0945	1000	40	1	2	12	
120	AP	0945	1000	27	1	2	12	
110	NB	0945	1000	700	1	2	12	SURFACE
111	LW	1000	1015	44	2	3	12	
112	AM	1000	1015	37	2	3	12	
101	ER	1000	1015	3,000	2	3	12	BLACK PIPE
102	AP	1000	1015	59	2	3	12	
103	NB	1000	1015	46	2	3	12	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERCHA, _____
AARON MCBRIDE, NICK RENKS, _____
ERNESTO RAMIREZ, _____ Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 50 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
92	LW	1015	1030	59	1	2	12	
93	AM	1015	1030	850	1	2	12	UNBARRICADED
94	ER	1015	1030	67	1	2	12	
84	AP	1015	1030	39	1	2	12	
85	NB	1015	1030	72	1	2	12	
86	LW	1030	1045	51	2	3	11	
75	AM	1030	1045	44	2	3	11	
76	ER	1030	1045	91	2	3	11	
77	AP	1030	1045	40	2	3	11	
68	NB	1030	1045	35	2	3	11	
69	LW	1045	1100	62	2	3	11	
60	AM	1045	1100	77	2	3	11	
61	ER	1045	1100	50	2	3	11	
53	AP	1045	1100	16,000	2	3	11	BLACK PIPE
54	NB	1045	1100	152	2	3	11	
40	LW	1100	1115	7,000	2	3	12	BLACK PIPE
47	AM	1100	1115	114	2	3	12	
41	ER	1100	1115	85	2	3	12	
34	AP	1100	1115	847	2	3	12	SURFACE
28	NB	1100	1115	77	2	3	12	
18	LW	1115	1130	49	2	3	14	
12	AM	1115	1130	38	2	3	14	
13	ER	1115	1130	56	2	3	14	
14	AP	1115	1130	79	2	3	14	
19	NB	1115	1130	52	2	3	14	
20	LW	1130	1145	37	2	4	14	
23	AM	1130	1145	41	2	4	14	
24	ER	1130	1145	3,900	2	4	14	GREY PIPE
29	AP	1130	1145	64	2	4	14	
30	NB	1130	1145	42	2	4	14	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LOIS LAWLOR, ERNEST RAMIREZ, AARON MCBRIDE, NICK BANKS, ANTHONY PORALLA

Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 54 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
35	LW	1215	1230	114	3	4	15	
36	AM	1215	1230	61	3	4	15	
42	ER	1215	1230	3,000	3	4	15	GREY PIPE 787
43	AP	1215	1230	58	3	4	15	
48	NB	1215	1230	72	3	4	15	
49	LW	1230	1245	66	2	4	16	
55	AM	1230	1245	5,000	2	4	16	GREY PIPE
56	ER	1230	1245	3,800	2	4	16	GREY PIPE 789
62	AP	1230	1245	45	2	4	16	
63	NB	1230	1245	91	2	4	16	
70	LW	1245	1300	66	2	3	16	
71	AM	1245	1300	6,482	2	3	16	WELL 766
78	ER	1245	1300	145	2	3	16	
79	AP	1245	1300	82	2	3	16	
87	NB	1245	1300	139	2	3	16	
88	LW	1300	1315	1,100	2	3	16	GREY PIPE
95	AM	1300	1315	72	2	3	16	
96	ER	1300	1315	106	2	3	16	
104	AP	1300	1315	58	2	3	16	
105	NB	1300	1315	3,500	2	3	16	UNMARKED WELL
113	LW	1315	1330	60	2	4	16	
114	AM	1315	1330	1,100	2	4	16	BLACK PIPE
121	ER	1315	1330	39	2	4	16	
122	AP	1315	1330	47	2	4	16	
130	NB	1315	1330	24	2	4	16	
131	LW	1330	1345	66	2	5	16	
138	AM	1330	1345	39	2	5	16	
139	ER	1330	1345	33	2	5	16	
140	AP	1330	1345	117	2	5	16	
141	NB	1330	1345	82	2	5	16	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LOIS LWADE, ANTHONY PERALTA, AARON MCBRIDE, NICK REYES, ERNEST RAMIREZ

Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 61 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
132	LW	1345	1400	89	2	3	16	
133	AM	1345	1400	62	2	3	16	
123	ER	1345	1400	135	2	3	16	
124	AP	1345	1400	54	2	3	16	
115	NB	1345	1400	103	2	3	16	
116	LW	1400	1415	67	2	4	16	
106	AM	1400	1415	75	2	4	16	
107	ER	1400	1415	48	2	4	16	
97	AP	1400	1415	29,000	2	4	16	CAPPED PIPE
98	NB	1400	1415	4,600	2	4	16	WELL 715
89	LW	1415	1430	55	2	4	16	
90	AM	1415	1430	60	2	4	16	
80	ER	1415	1430	17,000	2	4	16	GREY PIPE
81	AP	1415	1430	95	2	4	16	
72	NB	1415	1430	52	2	4	16	
73	LW	1430	1445	74	2	3	16	
64	AM	1430	1445	16,000	2	3	16	GREY PIPE
65	ER	1430	1445	77	2	3	16	
57	AP	1430	1445	9,500	2	3	16	GREY PIPE
58	NB	1430	1445	103	2	3	16	
50	LW	1445	1500	33,000	2	3	2	GREY PIPE
51	AM	1445	1500	47	2	3	2	
52	ER	1445	1500	32	2	3	2	
67	AP	1445	1500	29	2	3	2	
44	NB	1445	1500	59,534	2	3	2	GREY PIPE
45	LW	1500	1515	40,000	2	3	16	GREY PIPE
46	AM	1500	1515	35	2	3	16	
37	ER	1500	1515	15,073	2	3	16	GREY PIPE 793
38	AP	1500	1515	7,500	2	3	16	GREY PIPE
39	NB	1500	1515	26	2	3	16	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Leisl Wade, Anthony Peralta, Aaron McBride, Nicki Banks, Ernest Reinier

Cal. Gas Exp. Date: 9-21-20

Date: 3-4-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 63 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
31	LW	1515	1530	57	2	3	16	
32	AM	1515	1530	68	2	3	16	
33	ER	1515	1530	52	2	3	16	
25	AP	1515	1530	49	2	3	16	
26	NB	1515	1530	1,200	2	3	16	WELL 759
27	LW	1530	1545	33	2	3	16	
21	AM	1530	1545	65	2	3	16	
22	ER	1530	1545	42	2	3	16	
15	AP	1530	1545	88	2	3	16	
16	NB	1530	1545	1,200	2	3	16	WELL 508
17	LW	1545	1600	31	2	3	1	
9	AM	1545	1600	26	2	3	1	
10	ER	1545	1600	35	2	3	1	
11	AP	1545	1600	47	2	3	1	
6	NB	1545	1600	53	2	3	1	
7	LW	1600	1615	3,000	2	3	2	WELL 701
8	AM	1600	1615	28	2	3	2	
3	ER	1600	1615	19	2	3	2	
4	AP	1600	1615	26	2	3	2	
5	NB	1600	1615	34	2	3	2	
1	LW	1615	1630	18	2	3	2	
2	AM	1615	1630	22	2	3	2	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGHWADE _____ _____ _____

_____ _____ _____

_____ _____ Cal. Gas Exp. Date: _____

Date: 3-4-20 Instrument Used: _____ Grid Spacing: _____

Temperature: _____ Precip: _____ Upwind BG: _____ Downwind BG: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
59								ASBESTOS
66								
74								
82								
91								
99								
108								
117								
125								
134								
142								
83								
100								
109								
118								
126								
135								
143								

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 1

SCALE HOUSE

LNG FACILITY

MAINTENANCE BUILDING

GAS PLANT

CONDENSATE/ LEACHATE TANKS

LEGEND

- EXISTING SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- ⊕ 598 EXISTING LFG EXTRACTION WELL
- 1 SEM GRID BLOCK
- 1 EXCLUDED PURSUANT TO TITLE 17 95488 (30 DEGREE SLOPE OR GREATER)

N

0 100 200

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPHY: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (i.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.

Instantaneous 3-4-20

- GRIDS MONITORED
- ASBESTOS
- 500+ ppm

DRAFT

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE 5/5/2011	DRAWN BY MRF; DESIGNED BY JDW	CHECKED BY PMS; APPROVED BY TOS			

CORNERSTONE Environmental Group, LLC

ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA

SURFACE EMISSIONS MONITORING
GRID MAP

SHEET NO. 1

PROJECT NO. 110290

SCALE HOUSE

LNG FACILITY

MAINTENANCE BUILDING

GAS PLANT

CONDENSATE/ LEACHATE TANKS

LEGEND

- EXISTING SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- ⊕ 598 EXISTING LFG EXTRACTION WELL
- 1 SEM GRID BLOCK
- 1 EXCLUDED PURSUANT TO TITLE 17 95468 (30 DEGREE SLOPE OR GREATER)

N

0 100 200

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPHY: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (i.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.

1st QUARTER 2020 NSPS

UPWIND

DOWNWIND

DRAFT

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE 5/5/2011	DRAWN BY MRF; DESIGNED BY JEW		CHECKED BY PHS; APPROVED BY PJS		

CORNERSTONE Environmental Group, LLC

ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA

SURFACE EMISSIONS MONITORING
GRID MAP

SHEET NO. 1

PROJECT NO. 110260

Attachment B

Integrated Surface Emission Monitoring Event Records

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

2020 QUARTER: 1

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

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

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERCH, AARON ALBRIDGE, NICK BONKS, ERNEST RAMIREZ

Cal. Gas Exp. Date: 9-21-20

Date: 3-3-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 63 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
127	LW	1200	1225	3.89	1	2	12	
149	AM	1200	1225	5.72	1	2	12	
150	ER	1200	1225	7.38	1	2	11	
151	AP	1200	1225	5.64	1	2	12	
157	NB	1200	1225	8.13	1	2	12	
158	LW	1225	1250	6.20	1	2	12	
164	AM	1225	1250	5.94	1	2	12	
165	ER	1225	1250	6.31	1	2	12	
171	AP	1225	1250	6.58	1	2	12	
172	NB	1225	1250	5.42	1	2	12	
178	LW	1250	1315	6.77	1	2	12	
179	AM	1250	1315	6.04	1	2	12	
185	ER	1250	1315	5.28	1	2	12	
186	AP	1250	1315	5.49	1	2	12	
191	NB	1250	1315	7.23	1	2	12	
192	LW	1315	1340	6.49	1	2	11	
198	AM	1315	1340	6.81	1	2	11	
199	ER	1315	1340	7.13	1	2	11	
204	AP	1315	1340	6.06	1	2	11	
205	NB	1315	1340	8.32	1	2	11	
211	LW	1340	1405	7.14	1	2	11	
212	AM	1340	1405	10.64	1	2	11	
218	ER	1340	1405	12.45	1	2	11	
220	AP	1340	1405	9.70	1	2	11	
216	NB	1340	1405	7.42	1	2	11	
217	LW	1405	1430	6.55	1	2	10	
209	AM	1405	1430	6.81	1	2	10	
210	ER	1405	1430	5.47	1	2	10	
202	AP	1405	1430	6.95	1	2	10	
203	NB	1405	1430	5.42	1	2	10	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERECHA, AARON NEDROE, NICK BENICS, ERNEST REMIREZ

Cal. Gas Exp. Date: 9-21-20

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

Temperature: 65 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
196	LW	1430	1455	5.45	1	2	12	
197	AM	1430	1455	6.11	1	2	12	
189	ER	1430	1455	6.27	1	2	12	
190	AP	1430	1455	5.15	1	2	12	
183	NB	1430	1455	7.39	1	2	12	
184	LW	1455	1520	5.50	1	2	11	
176	AM	1455	1520	5.24	1	2	11	
177	ER	1455	1520	6.70	1	2	11	
169	AM	1455	1520	5.55	1	2	11	
170	NB	1455	1520	5.38	1	2	11	
162	LW	1520	1545	6.20	1	2	11	
163	AM	1520	1545	5.89	1	2	11	
155	ER	1520	1545	5.13	1	2	11	
156	AP	1520	1545	5.41	1	2	11	
147	NB	1520	1545	6.13	1	2	11	
148	LW	1545	1610	7.20	1	2	11	
145	AM	1545	1610	5.60	1	2	11	
146	ER	1545	1610	5.91	1	2	11	
153	AP	1545	1610	4.23	1	2	11	
154	NB	1545	1610	6.18	1	2	11	
160	LW	1610	1635	5.31	1	2	10	
161	AM	1610	1635	6.35	1	2	10	
167	ER	1610	1635	5.79	1	2	10	
168	AP	1610	1635	5.46	1	2	10	
174	NB	1610	1635	6.87	1	2	10	
175	LW	1635	1700	5.49	1	2	9	
181	AM	1635	1700	5.15	1	2	9	
182	ER	1635	1700	6.21	1	2	9	
187	AP	1635	1700	5.34	1	2	9	
188	NB	1635	1700	5.55	1	2	9	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 2

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE _____ _____ _____

_____ _____ _____

_____ _____ Cal. Gas Exp. Date: _____

Date: 3-3-20 Instrument Used: _____ Grid Spacing: _____

Temperature: _____ Precip: _____ Upwind BG: _____ Downwind BG: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
59								ASBESTOS
66								
74								
82								
91								
99								
108								
117								
125								
134								
142								
83								
100								
109								
118								
126								
135								
143								

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 1

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERELLA, AARON MCBRIDE, NICK BANK, ERNEST RENTERIA

Cal. Gas Exp. Date: 9-21-20

Date: 3-5-20 Instrument Used: LVA 1000 Grid Spacing: 25'

Temperature: 43 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
194	LW	0545	0610	5.68	1	2	13	
195	AM	0545	0610	4.92	1	2	13	
200	ER	0545	0610	5.30	1	2	13	
201	AP	0545	0610	5.66	1	2	13	
207	NB	0545	0610	5.21	1	2	13	
208	LW	0610	0635	6.13	1	2	14	
213	AM	0610	0635	5.75	1	2	14	
214	ER	0610	0635	4.32	1	2	14	
215	AP	0610	0635	5.37	1	2	14	
219	NB	0610	0635	5.11	1	2	14	
206	LW	0635	0700	4.74	1	2	14	
193	AM	0635	0700	5.82	1	2	14	
180	ER	0635	0700	6.31	1	2	14	
173	AP	0635	0700	5.22	1	2	14	
166	NB	0635	0700	5.84	1	2	14	
159	LW	0700	0725	6.17	1	2	12	
152	AM	0700	0725	5.38	1	2	12	
144	ER	0700	0725	6.13	1	2	12	
136	AP	0700	0725	5.94	1	2	12	
137	NB	0700	0725	6.22	1	2	12	
128	LW	0725	0750	5.45	1	2	9	
129	AM	0725	0750	4.63	1	2	9	
119	ER	0725	0750	6.11	1	2	9	
120	AP	0725	0750	5.98	1	2	9	
110	NB	0725	0750	6.87	1	2	9	
111	LW	0750	0815	6.99	1	2	9	
112	AM	0750	0815	7.12	1	2	9	
101	ER	0750	0815	7.34	1	2	9	
102	AP	0750	0815	6.22	1	2	9	
103	NB	0750	0815	6.55	1	2	9	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ANTHONY PERETTA, AARON MCBRIDE, NICK REMES, ERNEST RAINEY

Cal. Gas Exp. Date: 9-21-20

Date: 3-5-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 50 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
G2	LW	0815	0840	6.40	1	2	12	
G3	AM	0815	0840	7.13	1	2	12	
G4	ER	0815	0840	6.84	1	2	12	
84	AP	0815	0840	5.27	1	2	12	
85	NB	0815	0840	6.90	1	2	12	
86	LW	0840	0905	7.35	1	2	11	
75	AM	0840	0905	6.31	1	2	11	
76	ER	0840	0905	8.50	1	2	11	
77	AP	0840	0905	7.21	1	2	11	
68	NB	0840	0905	14.71	1	2	11	
69	LW	0905	0930	12.84	1	2	12	
60	AM	0905	0930	19.37	1	2	12	
61	ER	0905	0930	14.55	1	2	12	
53	AP	0905	0930	21.60	1	2	12	
54	NB	0905	0930	18.35	1	2	12	
40	LW	0930	0955	22.75	1	2	12	
47	AM	0930	0955	18.31	1	2	12	
41	ER	0930	0955	14.60	1	2	12	
34	AP	0930	0955	12.72	1	2	12	
28	NB	0930	0955	10.80	1	2	12	
18	LW	0955	1020	6.99	1	2	11	
12	AM	0955	1020	6.74	1	2	11	
13	ER	0955	1020	7.12	1	2	11	
14	AP	0955	1020	6.54	1	2	11	
19	NB	0955	1020	6.25	1	2	11	
20	LW	1020	1045	7.13	1	2	9	
23	AM	1020	1045	6.80	1	2	9	
24	ER	1020	1045	6.45	1	2	9	
29	AP	1020	1045	7.13	1	2	9	
30	NB	1020	1045	6.54	1	2	9	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LOUIS LWADE, ANTHONY PERCHA, _____
AARON MURRIOR, NICK RANKS, _____
ERNEST RENNER, _____ Cal. Gas Exp. Date: 9-21-20

Date: 7-5-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 51 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
35	LW	1045	1110	7.25	1	2	9	
36	AM	1045	1110	6.81	1	2	9	
42	ER	1045	1110	6.94	1	2	9	
43	AP	1045	1110	7.13	1	2	9	
48	NB	1045	1110	7.66	1	2	9	
49	LW	1110	1135	8.24	1	2	8	
55	AM	1110	1135	7.85	1	2	8	
56	ER	1110	1135	6.22	1	2	8	
62	AP	1110	1135	6.35	1	2	8	
63	NB	1110	1135	7.90	1	2	8	
70	LW	1135	1200	6.54	1	2	8	
71	AM	1135	1200	7.28	1	2	8	
78	ER	1135	1200	6.32	1	2	8	
79	AP	1135	1200	6.66	1	2	8	
87	NB	1135	1200	9.31	1	2	8	
88	LW	1200	1225	8.65	2	4	8	
95	AM	1200	1225	8.13	2	4	8	
96	ER	1200	1225	7.31	2	4	8	
104	AP	1200	1225	6.14	2	4	8	
105	NB	1200	1225	6.28	2	4	8	
113	LW	1225	1250	5.94	2	4	8	
114	AM	1225	1250	7.19	2	4	8	
121	ER	1225	1250	6.32	2	4	8	
122	AP	1225	1250	6.84	2	4	8	
130	NB	1225	1250	5.20	2	4	8	
131	LW	1250	1315	6.53	2	4	8	
138	AM	1250	1315	5.79	2	4	8	
139	ER	1250	1315	6.10	2	4	8	
140	AP	1250	1315	6.36	2	4	8	
141	NB	1250	1315	5.97	2	4	8	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIF WADE, AARON MCBRIDE, ERNEST RAMIREZ, ANTHONY PERALTA, NICK BANKS

Cal. Gas Exp. Date: 9-21-20

Date: 3-5-20 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 55 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
132	LW	1315	1340	8.51	2	3	S	
133	AM	1315	1340	7.20	2	3	S	
123	ER	1315	1340	9.47	2	3	S	
124	AP	1315	1340	8.75	2	3	S	
115	NB	1315	1340	6.27	2	3	S	
116	LW	1340	1405	11.45	2	4	S	
106	AM	1340	1405	13.98	2	4	S	
107	ER	1340	1405	10.12	2	4	S	
97	AP	1340	1405	8.70	2	4	S	
98	NB	1340	1405	12.45	2	4	S	
89	LW	1405	1430	6.79	2	3	S	
90	AM	1405	1430	7.45	2	3	S	
80	ER	1405	1430	8.47	2	3	S	
81	AP	1405	1430	9.22	2	3	S	
72	NB	1405	1430	7.60	2	3	S	
73	LW	1430	1455	8.21	2	3	S	
64	AM	1430	1455	10.51	2	3	S	
65	ER	1430	1455	13.77	2	3	S	
57	AP	1430	1455	9.40	2	3	S	
58	NB	1430	1455	11.65	2	3	S	
50	LW	1455	1520	14.28	2	3	S	
51	AM	1455	1520	7.20	2	3	S	
52	ER	1455	1520	8.16	2	3	S	
67	AP	1455	1520	4.13	2	3	S	
44	NB	1455	1520	9.71	2	3	S	
45	LW	1520	1545	11.20	2	3	S	
46	AM	1520	1545	7.14	2	3	S	
37	ER	1520	1545	9.51	2	3	S	
38	AP	1520	1545	10.80	2	3	S	
39	NB	1520	1545	8.16	2	3	S	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: CEIGHWADE, ANTHONY PERALTA, AARON MCBRIDE, NICK RENICK, ERNESTO RAMIREZ

Cal. Gas Exp. Date: 9-2-20

Date: 3-5-20 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 62 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
31	CW	1545	1610	8.12	2	3	9	
32	AM	1545	1610	6.49	2	3	9	
33	EM	1545	1610	5.27	2	3	9	
25	AP	1545	1610	6.12	2	3	9	
26	NB	1545	1610	9.55	2	3	9	
27	CW	1610	1635	5.11	2	3	7	
21	AM	1610	1635	10.80	2	3	7	
22	EM	1610	1635	12.77	2	3	7	
15	AP	1610	1635	9.65	2	3	7	
16	NB	1610	1635	7.14	2	3	7	
17	CW	1635	1700	6.55	2	3	8	
9	AM	1635	1700	7.13	2	3	8	
10	EM	1635	1700	6.98	2	3	8	
11	AP	1635	1700	6.60	2	3	8	
6	NB	1635	1700	8.14	2	3	8	
7	CW	1700	1725	6.79	1	2	8	
8	AM	1700	1725	7.22	1	2	8	
3	EM	1700	1725	6.45	1	2	8	
4	AP	1700	1725	5.12	1	2	8	
5	NB	1700	1725	5.66	1	2	8	
1	CW	1725	1750	5.38	1	2	8	
2	AM	1725	1750	4.76	1	2	8	

Attach Calibration Sheet
Attach site map showing grid ID

Page 5 of 5

SCALE HOUSE

LNG FACILITY

MAINTENANCE BUILDING

GAS PLANT

CONDENSATE/ LEACHATE TANKS

LEGEND

- EXISTING SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- ⊕ 598 EXISTING LFG EXTRACTION WELL
- 1 SEM GRID BLOCK
- 1 EXCLUDED PURSUANT TO TITLE 17 95468 (30 DEGREE SLOPE OR GREATER)

N

0 100 200

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPHY: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (i.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.

INTEGRATED 3-3-20 3-5-20

GRIDS MONITORED

ASBESTOS

DRAFT

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY
	DATE OF IMAGE 3/5/2011	DRAWN BY MRF SCANNED BY JCW			CHECKED BY PHS APPROVED BY PJS	

CORNERSTONE Environmental Group, LLC

ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA

SURFACE EMISSIONS MONITORING
GRID MAP

SHEET NO. 1

PROJECT NO. 110250

1" 1/2" 0" 1"

File: P:\PROJECTS\ALTAMONT\MXD\ET - COMPLIANCE_PROJECT GRIDS\GRIDS\GRIDS-2011 - BASEMAP.mxd Layout: SHT 1 User: mbrady Aug 05, 2011 - 11:03am

Attachment C

Component Leak Monitoring Event Records

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

2020 QUARTER: **1**

INITIAL MONITORING PERFORMED BY: ALRRF/CEG

FOLLOW-UP MONITORING PERFORMED BY CEG-TT

LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	3/11/2020	ND						
A16- Flare Station	3/11/2020	ND						
S6 and S7 Turbines	3/5/2020	ND						
LNG Plant-	3/5/2020	ND						

Note: ICEs were shutdown during the entire quarter

ND= No exceedances detected

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

2020 QUARTER: **1**

INITIAL MONITORING PERFORMED BY: ALRRF/CEG

FOLLOW-UP MONITORING PERFORMED BY: CEG-TT

LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	3/11/2020	ND						
A16- Flare Station	3/11/2020	ND						
S6 and S7 Turbines	3/5/2020	ND						
LNG Plant-	3/5/2020	ND						

Note: ICEs were shutdown during the entire quarter

ND= No exceedances detected

QUARTERLY LFG COMPONENT LEAK MONTORING																				
EQUIPMENT:	Turbine Gas skids																			
INSTRUMENT:	FID																			
MAKE:	Photovac																			
MODEL:	Micro FID																			
S/N:	CZPD312																			
DATE OF SAMPLING:	3/5/2020																			
TECHNICIAN:	L.LaCerra																			
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Roots Flex Couplings			Howden Compressor	InterstageVessel			Oil/Gas Separator Vessel			Gas Separator Vessel		Cooling Towers/ Heat Exchanger Piping		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2	# 3
Compressor skid # 1																					
TEST DATE	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20
LEAK CONCENTRATION FOUND (ppm)	< 3.0 ppm			< 7.0 ppm			2.0 ppm			0 ppm	< 22.0 ppm			< 6.0 ppm			< 2.0 ppm		0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Compressor skid # 2																					
TEST DATE	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 5.0 ppm			< 5.0 ppm			0 ppm	< 12.0 ppm			< 3.0 ppm			< 2.0 ppm		0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Comments:																					
Note:	In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																			

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	Turbine Skids
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	3/5/2020
TECHNICIAN:	L.LaCerra

LOCATION OF LEAK(S)	Bolted connections			Pipes (flanged, unions)			Inlet piping and valves			Sensors, transducers			Propane tank & piping			Gas manifold and piping				
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 3	# 4	# 5
Turbine 1																				
TEST DATE	3/5/20			3/5/20			3/5/20			3/5/20			3/5/20			3/5/20				
LEAK CONCENTRATION FOUND (ppm)	< 4 ppm			< 4 ppm			< 2 ppm			< 3 ppm			0 ppm			< 35 ppm				
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Turbine 2																				
TEST DATE	3/5/20			3/5/20			3/5/20			3/5/20			3/5/20			3/5/20				
LEAK CONCENTRATION FOUND (ppm)	< 2 ppm			< 1 ppm			< 1 ppm			< 1 ppm			0 ppm			< 12 ppm				
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

cornerstone environmental

COMPONENT LEAK CHECK MONITORING

ALTAMONT, LINDE PLANT

INSTRUMENT FID
MAKE: TVA
MODEL: Thermo Scientific / 2020
S/N: 2020-17112952

DATE(S) OF SAMPLING: 3/5/2020
TECHNICIANS: Ben Chipponeri

LOCATION OF LEAK	Date	PPM	Date of Repair	Date of Re-monitoring	Re-monitoring PPM	Comments/Repairs Made
Roadway condensate skid	3/5/2020	0	NA	NA	NA	
Condesate sump	3/5/2020	0	NA	NA	NA	
Liquifer pad	3/5/2020	0	NA	NA	NA	
Compressor A	3/5/2020	0	NA	NA	NA	
Compressor B	3/5/2020	0	NA	NA	NA	
Mole Gate Tank	3/5/2020	0	NA	NA	NA	
Dryer Skid	3/5/2020	0	NA	NA	NA	
VOC Trap	3/5/2020	0	NA	NA	NA	
Tail Gas Surge	3/5/2020	0	NA	NA	NA	
Vacuum Skid	3/5/2020	0	NA	NA	NA	
Mole Gate	3/5/2020	0	NA	NA	NA	
Rec Comp	3/5/2020	0	NA	NA	NA	
Storage Area	3/5/2020	0	NA	NA	NA	
Cold Box	3/5/2020	13	NA	NA	NA	
Ref Sep Skid	3/5/2020	0	NA	NA	NA	
Evap Cooler	3/5/2020	0	NA	NA	NA	
York Oil Filter	3/5/2020	0	NA	NA	NA	
York Oil Cooler	3/5/2020	0	NA	NA	NA	
Membrane Skid	3/5/2020	0	NA	NA	NA	
Heat Exchanger	3/5/2020	0	NA	NA	NA	
Cold Trap	3/5/2020	0	NA	NA	NA	
Sulfa Treat	3/5/2020	0	NA	NA	NA	
GC Shed	3/5/2020	0	NA	NA	NA	
Gas feed line east of york comp, overhead	3/5/2020	12	NA	NA	NA	

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

NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	A16 Flare
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	03.11.20
TECHNICIAN:	Dan San Jose

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Flare Valves, Sensors and Piping			Blowers			LNG Valves, Sensors and Piping to LNG Isolation Valve			Header to Landfill			Propane Tanks and Piping		IC Engine Valves and Sensors			IC Engine Compression Skid			IC Engine Manifold Piping and Metal Container		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#2	#3	# 1	# 2	# 3	#1	# 2	#1	#2	#3	#1	#2	#3	#1	#2	#3
A-16																													
TEST DATE	03.11.20			03.11.20			03.11.20			03.11.20			03.11.20			03.11.20			03.11.20		N/A			N/A			N/A		
LEAK CONCENTRATION FOUND (ppm)	No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found									
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 1																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 2																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
LNG Plant																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													

Comments:

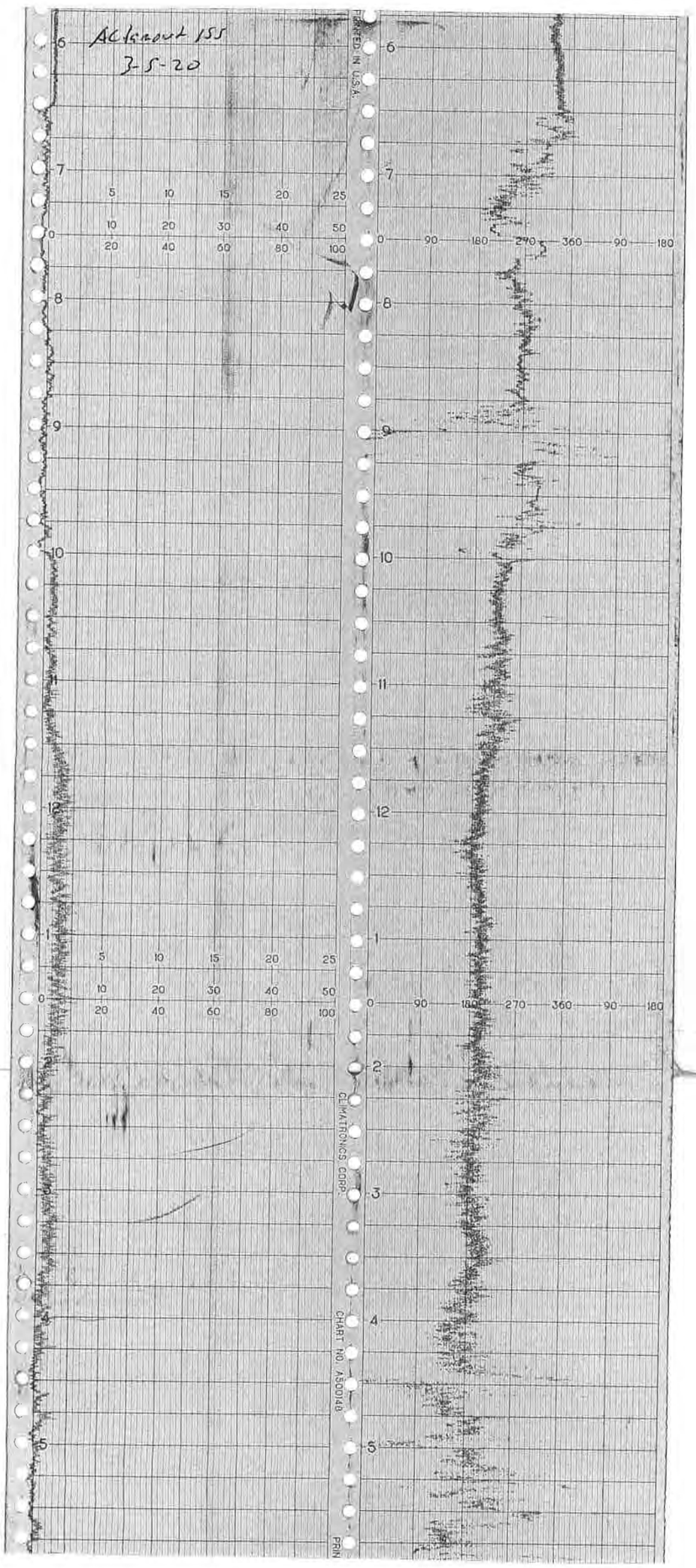
Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING																
EQUIPMENT:	A15															
INSTRUMENT:	FID															
MAKE:	Photovac															
MODEL:	Micro FID															
S/N:	CZPD312															
DATE OF SAMPLING:	3/11/2020															
TECHNICIAN:	Ben Tarver															
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Discharge Blower			Flame Arrestor			Header Pipe to Flare & Sensors		Propane Tank and Piping	
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2
A-15 Flare Station																
TEST DATE	3/11/2020			3/11/2020			3/11/2020			3/11/2020			3/11/2020		3/11/2020	
LEAK CONCENTRATION FOUND (ppm)	No exceedances found			No exceedances found			No exceedances found			No exceedances found			No exceedances found		No exceedances found	
ACTION TAKEN																
REPAIR DATE																
RE-TEST DATE																
RE-TEST CONCENTRATION (ppm)																
Comments:																
Note:	In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.															

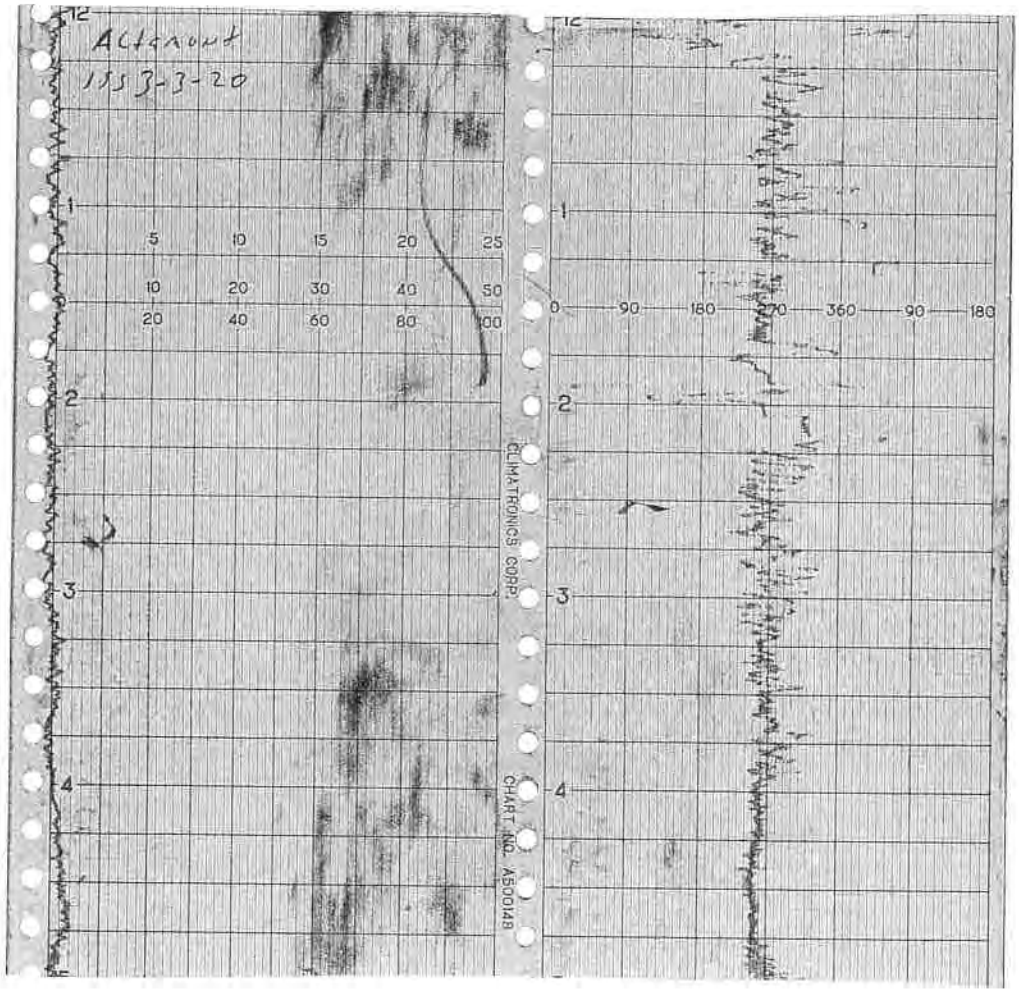
Attachment D

Weather Station Data

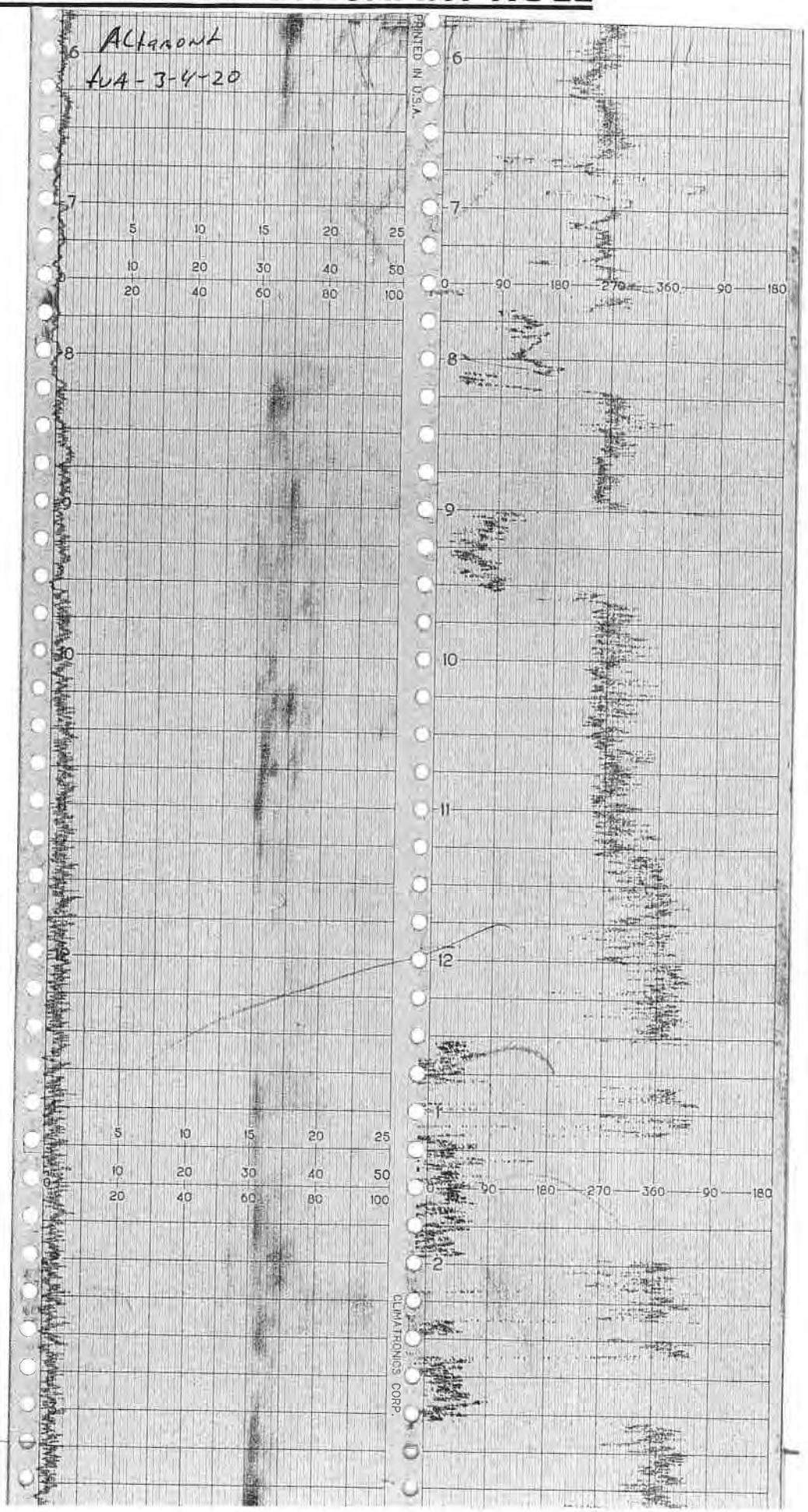
WIND SPEED & DIRECTION CHART ROLL



WIND SPEED & DIRECTION CHART ROLL



WIND SPEED & DIRECTION CHART ROLL



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Environmental Inc.

16-POINT WIND DIRECTION INDEX

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

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

Attachment E

Calibration Records

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Hirano

MODEL: TVA1000 EQUIPMENT #: 10 SERIAL #: 1036346773

MONITORING DATE: 3-3-20 TIME: 1150

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.37 ppm	23 ppm	2
#2	0.21 ppm	25 ppm	0
#3	0.16 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: Jess & Wade Date/Time: 3-3-20 - 1150

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Algonquin INSTRUMENT MAKE: Hiland

MODEL: TVA1000 EQUIPMENT #: 11 SERIAL #: 1036346774

MONITORING DATE: 3-3-20 TIME: 1150

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.28 ppm	24 ppm	1
#2	0.17 ppm	25 ppm	0
#3	0.11 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			.1-3 #DIV/0! Must be less than 10%

Performed By: Anthony Perrotta Date/Time: 3-3-20 - 1150

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Algamont INSTRUMENT MAKE: Ethano

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1036246741

MONITORING DATE: 3-3-20 TIME: 1150

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	24 ppm	21.6 ppm	4
#2	24 ppm	21.6 ppm	4
#3	25 ppm	22.5 ppm	4
Calculate Response Time (1+2+3) / 3			4 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.45 ppm	24 ppm	1
#2	0.18 ppm	24 ppm	1
#3	0.14 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: AARON McBRIDE Date/Time: 3-3-20-1150

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Horiba

MODEL: APVA1000 EQUIPMENT #: 13 SERIAL #: 110274675

MONITORING DATE: 3-3-20 TIME: 1150

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	23 ppm	20.7 ppm	7
#2	24 ppm	21.6 ppm	7
#3	25 ppm	22.5 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.29 ppm	23 ppm	2
#2	0.16 ppm	24 ppm	1
#3	0.08 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			4.0 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 3-3-20 -1150

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Algonz INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 15 SERIAL #: 1036346772

MONITORING DATE: 3-3-20 TIME: 1150

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.33 ppm	24 ppm	1
#2	0.20 ppm	25 ppm	0
#3	0.17 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			1.3 #DIV/0! Must be less than 10%

Performed By: Nick Banks Date/Time: 3-3-20 1150

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Horiba

MODEL: VA1000 EQUIPMENT #: 10 SERIAL #: 10036467J

MONITORING DATE: 3-5-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.25 ppm	24 ppm	1
#2	0.16 ppm	25 ppm	0
#3	0.11 ppm	25 ppm	0
Calculate Precision	[STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1		1.3 #DIV/0! Must be less than 10%

Performed By: Leisha Wade Date/Time: 3-5-20 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 11 SERIAL #: 1036346774

MONITORING DATE: 3-5-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.41 ppm	23 ppm	2
#2	0.26 ppm	25 ppm	0
#3	0.09 ppm	25 ppm	0
Calculate Precision	[STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1		2.6 #DIV/0! Must be less than 10%

Performed By: ANTHONY PANELLA Date/Time: 3-5-20 - 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Hi Flow

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1036246741

MONITORING DATE: 3-5-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.21 ppm	24 ppm	1
#2	0.11 ppm	24 ppm	1
#3	0.10 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: AARON MCBRIDE Date/Time: 3-5-20-0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Thermo

MODEL: TVA 1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE: 7-5-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	23 ppm	20.7 ppm	7
#2	24 ppm	21.6 ppm	7
#3	25 ppm	22.5 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.33 ppm	23 ppm	2
#2	0.27 ppm	24 ppm	1
#3	0.15 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			4.0 #DIV/0! Must be less than 10%

Performed By: Ernest Reinier Date/Time: 7-5-20 - 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 15 SERIAL #: 1036346722

MONITORING DATE: 3-5-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 **ppm**

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.20 ppm	24 ppm	1
#2	0.15 ppm	24 ppm	1
#3	0.08 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: NICK BANKS Date/Time: 3-5-20 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: Thermo

MODEL: TVA 1000 EQUIPMENT #: 10 SERIAL #: 1036346773

MONITORING DATE: 3-4-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	510 ppm	460 ppm	8
#2	496 ppm	446 ppm	8
#3	500 ppm	450 ppm	8
Calculate Response Time (1+2+3) / 3			8 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.28 ppm	510 ppm	10
#2	0.16 ppm	496 ppm	4
#3	0.12 ppm	500 ppm	0
Calculate Precision	[STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1		0.93 #DIV/0! Must be less than 10%

Performed By: Leishwaor Date/Time: 3-4-20 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA1000 EQUIPMENT #: 11 SERIAL #: 1636346774

MONITORING DATE: 3-4-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	489 ppm	435 ppm	7
#2	497 ppm	447 ppm	7
#3	500 ppm	450 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.38 ppm	489 ppm	11
#2	0.21 ppm	497 ppm	3
#3	0.16 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.93 #DIV/0! Must be less than 10%

Performed By: ANTHONY PERALTA Date/Time: 3-4-20 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: Horiba

MODEL: FVA1000 EQUIPMENT #: 12 SERIAL #: 103624674

MONITORING DATE: 3-4-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	495 ppm	445 ppm	6
#2	500 ppm	450 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3) / 3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.47 ppm	495 ppm	5
#2	0.31 ppm	500 ppm	0
#3	0.22 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.33 #DIV/0! Must be less than 10%

Performed By: AARON McBRIDE Date/Time: 3-4-20 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: THorno

MODEL: TVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE: 3-4-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.27 ppm	490 ppm	10
#2	0.14 ppm	501 ppm	1
#3	0.1 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.73 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 3-4-20-0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 15 SERIAL #: 1036346772

MONITORING DATE: 3-4-20 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
2.2 ppm	2.6 ppm	2.4 ppm

Background Value = 2.4 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	503 ppm	453 ppm	)
#2	498 ppm	448 ppm	)
#3	500 ppm	450 ppm	)
Calculate Response Time (1+2+3) / 3			) #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.33 ppm	503 ppm	3
#2	0.25 ppm	498 ppm	2
#3	0.07 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.33 #DIV/0! Must be less than 10%

Performed By: NICK BANKS Date/Time: 3-4-20 -0540

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03 05.20

Time: 9:28 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Calibration Procedure

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

   Stable Reading = 498 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: D. SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03.06.20

Time: 6:44 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Calibration Procedure

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

   Stable Reading = 499 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03.11.20

Time: 8:56 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Calibration Procedure

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

   Stable Reading = 499 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 04.01.20

Time: 7:07 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Calibration Procedure

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

   Stable Reading = 503 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03.31.20

Time: 11:44 (AM) _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

RESPONSE TIME TEST RECORD

Date: 03.05.20

Expiration Date (3 months): 06.05.20

Time: 9:25 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm
90% of the Stabilized Reading: 448 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 3 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 498 ppm
90% of the Stabilized Reading: 448 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 499 ppm
90% of the Stabilized Reading: 449 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 3 seconds (c)

Calculate Response Time:

$$\frac{(a)+(b)+(c)}{3} = 2.7 \text{ seconds (must be less than 30 seconds)}$$

Performed By: D. San Jose

CALIBRATION PRECISION TEST RECORD

Date: 03.05.20

Expiration Date (3 months): 06.05.20

Time: 9:25 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: C2PD312

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 498 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 499 ppm (f)

Calculate Precision:

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

_____ % (must be < than 10%)

Performed By: D. San Jose

TETRA TECH

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: Linde Power Plant

MONITORING DATE: 3/5/2020 **Time:** 8:00AM

INSTRUMENT MAKE: TVA **MODEL:** 2020 **S/N:** 2020-17112952

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	**497.0**	**ppm**
90% of the Stabilized Reading:	**447.3**	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	**5.0**	**seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	**500.0**	**ppm**
90% of the Stabilized Reading:	**450.0**	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	**5.0**	**seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	**499.0**	**ppm**
90% of the Stabilized Reading:	**449.1**	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	**5.0**	**seconds (3)**

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3}$$

= **5.000** **SECONDS (MUST BE LESS THAN 30 SECONDS)**

PERFORMED BY: Ben Chipponeri

TETRA TECH

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: Linde Power Plant

MONITORING DATE: 3/5/2020 **PERFORMED BY:** Ben Chipponeri

QUARTERLY EVENT: _____ **TIME:** 8:00AM

INSTRUMENT MAKE: TVA **MODEL:** 2020 **S/N:** 2020-17112952

Calibration Gas Standard 500ppm CH4 (STD)

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 ppm (1)

Meter Reading for Calibration Gas: 497.0 ppm (2)

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 ppm (3)

Meter Reading for Calibration Gas: 500.0 ppm (4)

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 ppm (5)

Meter Reading for Calibration Gas: 499.0 ppm (6)

CALCULATE PRECISION:

$$\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{100}{1}$$

= 0.267% % (must be less than 10%)

TETRA TECH

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: Linde Power Plant

INSTRUMENT MAKE: TVA **MODEL:** 2020 **S/N:** 2020-17112952

Calibration Procedure

1. **Allow instrument to internally zero itself while introducing zero air.**

2. **Introduce the calibration gas into the probe.**
   Stable Reading= 497.0 **ppm**

3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):** 0.0 **ppm (1)**
   Location: flare

2. **Downwind Reading (highest in 30 seconds):** 0.0 **ppm (2)**
   Location: top of haul road

Calculate Background Value: $\frac{(1) + (2)}{2}$

Background = 0.00 **ppm**

PERFORMED BY: Ben Chipponeri **TIME:** 8:00AM

DATE: 3/5/2020

SEM Calibration Gases

Q1 2020

INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

CERTIFICATE OF ANALYSIS

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

Lot # 19-6779

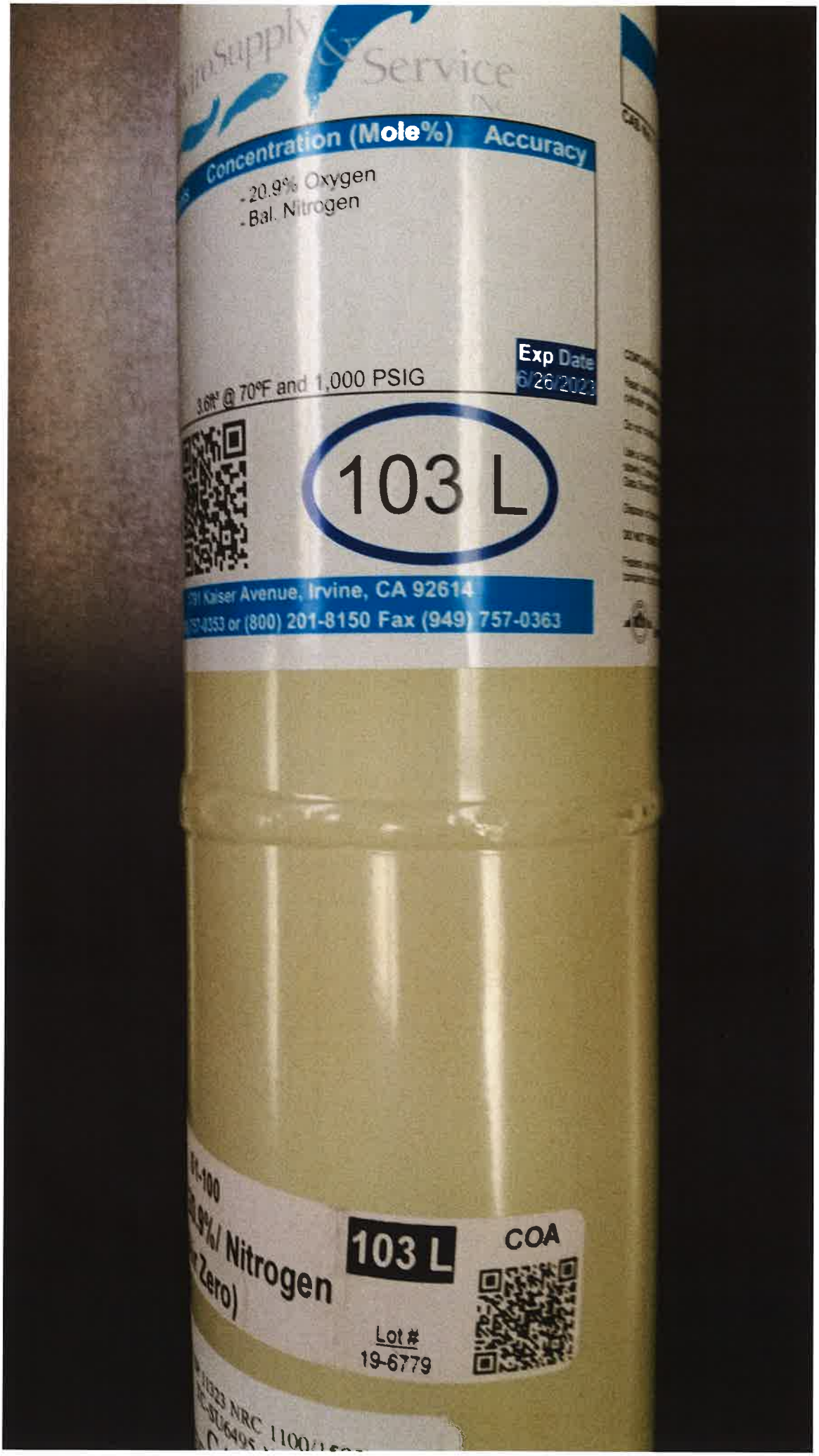
Mfg. Date: 4/3/2019

Parent Cylinder ID Number: 001739, 02268

Method of Preparation:
Gravimetric/Pressure Transfilled

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

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


Concentration (Mole%) Accuracy
- 20.9% Oxygen
- Bal. Nitrogen
Exp Date
6/26/2022
@ 70°F and 1,000 PSIG
103 L
Kaiser Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
103 L
COA
Lot #
19-6779

INTERMOUNTAIN SPECIALTY GASES

520 N. Kings Road • Nampa • Idaho • 83687

800-552-5003 • www.isgases.com

CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy
Methane	25 ppm	± 5%
Air	Balance	

Lot # 17-6074

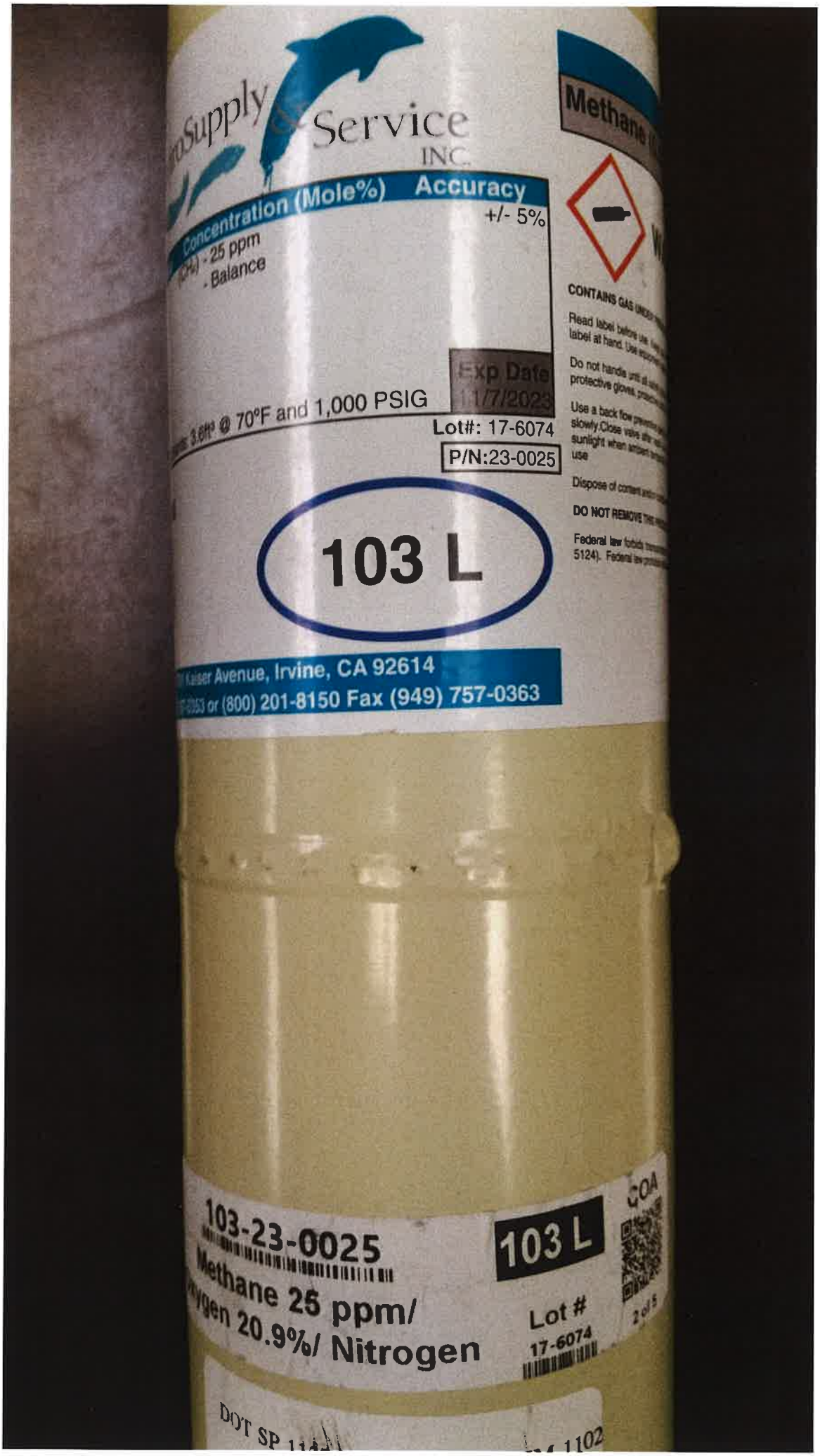
Mfg. Date: 10/16/2017

Parent Cylinder ID Number: 17161

Method of Preparation:
Gravimetric/Pressure Transfilled

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

Analysis By: Tony Janquart
Quality Assurance Manager
800-552-5003
Certificate Date: 10/16/2017


Supply & Service
INC.
Concentration (Mole%) Accuracy
+/- 5%
- 25 ppm
- Balance
Exp Date
11/7/2023
@ 70°F and 1,000 PSIG
Lot#: 17-6074
P/N:23-0025
103 L
Kaiser Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
CONTAINS GAS
Read label before use
label at hand
Do not handle until
protective gloves
Use a back flow
slowly.Close valve
sunlight when ambient
use
Dispose of content
DO NOT REMOVE
Federal law
5124). Federal
COA
103-23-0025
Methane 25 ppm/
ygen 20.9%/ Nitrogen
103 L
Lot #
17-6074
2 of 5
DOT SP
1102

INTERMOUNTAIN SPECIALTY GASES

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800-552-5003 • www.isgases.com

CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy
Methane	500 ppm	± 2%
Air	Balance	

Lot # 19-6955

Mfg. Date: 7/24/2019

Parent Cylinder ID Number: 001763

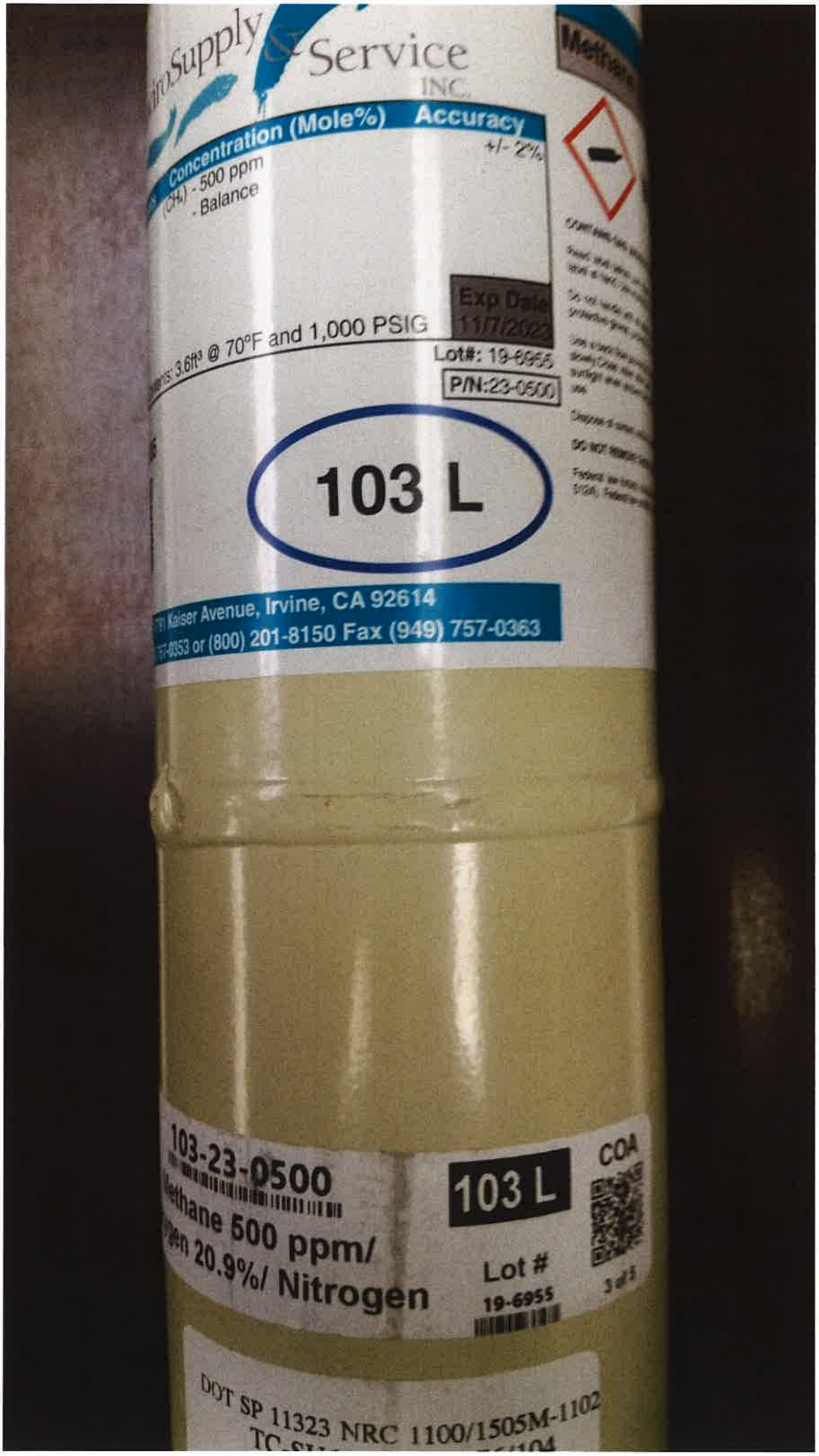
Method of Preparation:

Gravimetric/Pressure Transfilled

Method of Analysis:

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

Analysis By: Tony Janquart
Quality Assurance Manager
800-552-5003
Certificate Date: 7/24/2019


Service
INC.
Concentration (Mole%) Accuracy
+/- 2%
(CH4) - 500 ppm
. Balance
Exp Date
11/7/2023
Lot#: 19-6955
P/N:23-0500
103 L
Kaiser Avenue, Irvine, CA 92614
757-0353 or (800) 201-8150 Fax (949) 757-0363
103-23-0500
103 L
COA
Lot #
19-6955
DOT SP 11323 NRC 1100/1505M-1102

WASTE MANAGEMENT
172 98th Avenue • Oakland, California • 94568 • (510) 430-8509

January 29, 2020

Ms. Luis Rocha
Environmental Protection Specialist
Altamont Landfill and Resource Recovery Facility
10840 Altamont Road
Livermore, California 94551

Re: Fourth Quarter 2019 Surface Emissions and Component Leak Monitoring Report for the Altamont Landfill and Resource Recovery Facility

Dear Mr. Rocha:

This monitoring report for the "Altamont Landfill and Resource Recovery Facility (ALRRF)" contains the results of the Fourth Quarter 2019 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. Initial surface emissions monitoring was performed by RES Environmental, Inc. (RES). Re-monitoring of surface emissions and site-wide component leak monitoring (except Linde Plant), wherever applicable was conducted by ALRRF personnel. The component leak monitoring for Linde Plant was conducted by third party contractor.

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

- Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 301 (Landfill Gas Collection and Emission Control System Requirements) and Section 602 (Collection and Control System Leak Inspection procedures).

- California Code of Regulations (CCR) Title 17, Subchapter 10, Article 4, Subarticle 6, §95464, known as the Assembly Bill 32 (AB32) landfill methane rule (LMR).

ALRRF Plan and Alternative Compliance Measures

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

PROCEDURES

General

The surface of the ALRRF disposal area has been divided into two-hundred and twenty (220), 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 ALRRF AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

Instantaneous Surface Emissions Monitoring

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

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

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

- Corrective actions must be initiated within 5 days of the initial exceedance and re-monitoring shall be conducted within 10 days of the initial exceedance.
    - If the re-monitoring event shows the exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance.
    - If the 1-month re-monitoring event shows the location is still corrected, all re-monitoring requirements have been completed.
- If either the first 10-day or 1-month re-monitoring events show a second exceedance, additional corrective actions shall be completed and a second re-monitoring event shall be conducted within 10 days of the second exceedance.
- If the second 10-day re-monitoring event shows the second exceedance is corrected, the location shall be re-monitored within 1 month of the initial exceedance. If the 1-month re-monitoring event shows the area is still corrected, monitoring requirements have been completed.

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

Integrated Surface Emissions Monitoring

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

Grids with results greater than 25 ppm_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 re-monitoring timeline:

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

Component Leak Monitoring Procedures

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

- Leaks between 500 and 999 ppm_v must be corrected and re-monitored within 10 days of the initial exceedance.
- Leaks at or above 1000 ppm_v must be corrected and re-monitored within 7 days of the initial exceedance.

FOURTH QUARTER 2019 SEM AND COMPONENT LEAK RESULTS

The following is a summary of the SEM and component leak monitoring results completed for the Fourth Quarter 2019.

Instantaneous Surface Emissions Monitoring Results

The Instantaneous surface monitoring was performed on October 28, 29, and 30, 2019, in accordance with the NSPS, BAAQMD 8-34, and CCR Title 17 §95469 and ACO. Results and data from the monitoring are presented in Attachment A.

Initial Monitoring Event Exceedances of 500 ppm_v

There were 65 exceedances of 500 ppm_v as methane detected on October 28, 2019. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (October 30 and 21 and November 1, 2019).

Ten-Day Re-Monitoring Results

The 10-day re-monitoring event was completed on October 30 and 31 and November 1, 2019. All locations were observed at less than 500 ppm_v.

Month Re-Monitoring Results

The 1-month re-monitoring event was completed on November 22 and 25, 2019. All locations were observed at less than 500 ppm_v.

Readings between 200 ppm_v and 499 ppm_v (Initial and Re-monitored)

There were no readings between 200 ppm_v and 499 ppm_v as methane detected during the initial monitoring event. Pursuant to CCR Title 17 §95471(c), instantaneous surface emissions exceeding 200 ppm_v but below 500 ppm_v are required to be recorded.

Integrated Surface Emissions Monitoring Results

The Integrated surface sampling (ISS) was performed on October 30 and 31, 2019, in accordance with the ACO and requirements outlined in CCR Title 17 §95469.

Initial Monitoring Event Exceedances of 25 ppm_v

There were no grids with exceedances of 25 ppm_v as methane detected during the initial monitoring event on October 30 and 31, 2019.

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

Component Leak Monitoring Results

Component leak monitoring was conducted per the applicable requirements on October 18, 2019, and December 6, and 20, 2019. No leaks greater than 500 ppm_v were identified. Please see Attachment C, for details.

WEATHER CONDITIONS

Wind Speed Conductions during the Surface Emission Monitoring Events

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

Precipitation Requirements

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

EQUIPMENT CALIBRATION

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

All analyzers were calibrated prior to use with required response time and precision related instrument checks. Calibration records include the following: One time response time test record;

One time response factor determination for methane; Calibration Precision test records (test to be performed every 3 months); and Daily Instrument Calibration and Background test records for each gas meter that was used during the quarterly monitoring event. The calibration log records are included in Attachment E.

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

Thank you,

Waste Management,

Rajan Phadnis
Environmental Protection Specialist

Attachment A – Instantaneous Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- SEM Map

Attachment B – Integrated Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- SEM Map

Attachment C – Component Leak Monitoring Event Records

- Component Leak Exceedances and Monitoring Logs

Attachment D – Weather Station Data

- Strip Chart Data

Attachment E – Calibration Records

- Instrument and Gas Calibration Records

Attachment A

Instantaneous Surface Emission Monitoring Event Records

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

2019 QUARTER: 4
PERFORMED BY: RES
LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Flag Number	Grid Number	Date of Monitoring	Concentration of Emission (ppmv)	Comments
51	194	10.28.19	500	Well 551
52	206	10.28.19	2000	Well 624
53	40	10.28.19	500	slope south east of scale house
54	61	10.28.19	800	Well 774
55	141	10.28.19	600	Well 685
56	157	10.28.19	500	Well 699
57	157	10.28.19	500	Well 698
76	197	10.28.19	3000	Well 545
77	162	10.28.19	700	lateral east of Well 87
78	168	10.28.19	3000	Well 03
79	110	10.28.19	700	Leachate riser south of lcrs
80	53	10.28.19	500	Pipe marker south east of scale
81	53	10.28.19	10000	Future leachate riser
82	40	10.28.19	20000	Future leachate riser
83	71	10.28.19	500	Well 766
84	97	10.28.19	1000	Well 718
85	97	10.28.19	1000	Well 716
1	191	10.28.19	525	Well 488
2	155	10.28.19	516	Well 534
3	138	10.28.19	540	Well 661
4	136	10.28.19	504	Well 651
5	19	10.28.19	637	Well 472
6	95	10.28.19	571	Well 752
7	105	10.28.19	520	Well 768
8	171	10.28.19	1,500	Well 772
26	204	10.28.19	1,000	Pipe marker north east of 518
27	204	10.28.19	1,100	Pipe marker north east of 518
28	170	10.28.19	800	Well 535
29	169	10.28.19	1400	Pipe marker west of 535
30	155	10.28.19	580	Black Pipe West of 579
31	152	10.28.19	600	Well 529
32	34	10.28.19	834	Pipe marker south east of break trailer
33	80	10.28.19	600	Well 719
34	141	10.28.19	6000	Well 712
35	165	10.28.19	3500	Well 612
101	130	10.28.19	7000	North west slope of well 661
102	137	10.28.19	1500	Slope east of 639
103	137	10.28.19	502	Pipe marker east of 639 bench road
104	145	10.28.19	800	Well 639
105	102	10.28.19	800	Pipe marker north of ci5
106	93	10.28.19	1000	Ci5
107	76	10.28.19	700	Pipe marker west of ci5
108	54	10.28.19	10000	Well 738
109	171	10.28.19	1000	Slope west of 697
86	64	10.28.19	5000	Well 721
87	37	10.28.19	5000	Well 726
36	16	10.28.19	2200	Well 508
37	4	10.28.19	600	Well 734

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

2019 QUARTER: 4
PERFORMED BY: RES
LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Flag Number	Grid Number	Date of Monitoring	Concentration of Emission (ppmv)	Comments
38	7	10.28.19	3000	Remot Well 734
41	8	10.28.19	22000	SURFACE south east of North sump
42	11	10.28.19	1400	SURFACE south east of North sump
43	17	10.28.19	2200	SURFACE Below asbestos area
44	17	10.28.19	11000	SURFACE Below asbestos area
45	27	10.28.19	2600	SURFACE Below asbestos area
58	98	10.28.19	3000	Well 715
59	57	10.28.19	3500	Well 723
60	44	10.28.19	4000	Well 773
61	31	10.28.19	2000	Well 665
62	9	10.28.19	500	Well 678
63	6	10.28.19	3000	Well 677
9	45	10.28.19	2500	Well 706
10	32	10.28.19	1300	Well 516
11	32	10.28.19	700	Well 760
12	26	10.28.19	1800	Well 759
13	127	10.28.19	600	south sump

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY:RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio / Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			
Flag	Monitoring	Field	Repair	Repair Action	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	Taken	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	Comments
51	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	10		11/25/2019	5		Well 551
52	10.28.19	2000	10.30.19	COMPACT/ BECS	10.30.19	106		11/25/2019	10		Well 624
53	10.28.19	500	10.30.19	COMPACT	10.30.19	188		11/25/2019	33		slope south east of scale house
54	10.28.19	800	10.30.19	COMPACT	10.30.19	220		11/22/2019	15		Well 774
55	10.28.19	600	10.30.19	COMPACT/ BECS	10.30.19	210		11/22/2019	5		Well 685
56	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	56		11/25/2019	13		Well 699
57	10.28.19	500	10.30.19	BECS	10.30.19	110		11/25/2019	10		Well 698
76	10.28.19	3000	10.31.19	COMPACT/ BECS	10.31.19	0		11/25/2019	32		Well 545
77	10.28.19	700	10.31.19	BECS	10.31.19	0		11/25/2019	47		lateral east of Well 87
78	10.28.19	3000	10.31.19	COMPACT/ BECS	10.31.19	45		11/25/2019	189		Well 03
79	10.28.19	700	10.31.19	COMPACT	10.31.19	76		11/25/2019	16		Leachate riser south of lcrs
80	10.28.19	500	10.31.19	COMPACT	10.31.19	160		11/25/2019	220		Pipe marker south east of scale
81	10.28.19	10000	10.31.19	COMPACT	10.31.19	200		11/25/2019	120		Future leachate riser
82	10.28.19	20000	10.31.19	COMPACT	10.31.19	215		11/25/2019	118		Future leachate riser
83	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	347		11/22/2019	25		Well 766
84	10.28.19	1000	10.30.19	COMPACT/ BECS	10.30.19	109		11/22/2019	5		Well 718
85	10.28.19	1000	10.30.19	COMPACT/ BECS	10.30.19	108		11/22/2019	10		Well 716
1	10.28.19	525	10.30.19	COMPACT/ BECS	10.30.19	10		11/25/2019	70		Well 488
2	10.28.19	516	10.30.19	COMPACT/ BECS	10.30.19	50		11/25/2019	60		Well 534
3	10.28.19	540	10.30.19	COMPACT/ BECS	10.30.19	0		11/25/2019	14		Well 661
4	10.28.19	504	10.30.19	COMPACT/ BECS	10.30.19	0		11/25/2019	17		Well 651
5	10.28.19	637	10.30.19	COMPACT/ BECS	10.30.19	47		11/22/2019	120		Well 472
6	10.28.19	571	10.30.19	COMPACT	10.30.19	0		11/22/2019	5		Well 752
7	10.28.19	520	10.31.19	COMPACT/ BECS	10.31.19	63		11/22/2019	16		Well 768
8	10.28.19	1,500	10.30.19	COMPACT/ BECS	10.30.19	310		11/22/2019	260		Well 772
26	10.28.19	1,000	10.31.19	COMPACT	10.31.19	20		11/25/2019	58		Pipe marker north east of 518
27	10.28.19	1,100	10.31.19	COMPACT	10.31.19	114		11/25/2019	98		Pipe marker north east of 518
28	10.28.19	800	10.31.19	COMPACT/ BECS	10.31.19	43		11/25/2019	13		Well 535
29	10.28.19	1400	10.31.19	COMPACT	10.31.19	192		11/25/2019	12		Pipe marker west of 535
30	10.28.19	580	10.31.19	COMPACT	10.31.19	375		11/25/2019	234		Black Pipe West of 579
31	10.28.19	600	10.31.19	COMPACT/ BECS	10.31.19	0		11/25/2019	8		Well 529
32	10.28.19	834	10.31.19	COMPACT	10.31.19	244		11/25/2019	26		Pipe marker south east of break trailer

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY:RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio / Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			
Flag	Monitoring	Field	Repair	Repair Action	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	Taken	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	Comments
33	10.28.19	600	10.31.19	COMPACT/ BECS	10.31.19	163		11/22/2019	22		Well 719
34	10.28.19	6000	10.31.19	COMPACT	10.31.19	0		11/25/2019	3		Well 712
35	10.28.19	3500	10.31.19	COMPACT/ BECS	10.31.19	26		11/25/2019	5		Well 612
101	10.28.19	7000	10.31.19	COMPACT	10.31.19	115		11/22/2019	58		North west slope of well 661
102	10.28.19	1500	10.31.19	COMPACT	10.31.19	0		11/22/2019	63		Slope east of 639
103	10.28.19	502	10.31.19	COMPACT	10.31.19	0		11/22/2019	10		Pipe marker east of 639 bench road
104	10.28.19	800	10.31.19	COMPACT/ BECS	10.31.19	360		11/22/2019	5		Well 639
105	10.28.19	800	10.31.19	COMPACT	10.31.19	137		11/22/2019	20		Pipe marker north of ci5
106	10.28.19	1000	10.31.19	COMPACT/ BECS	10.31.19	223		11/22/2019	50		Ci5
107	10.28.19	700	10.31.19	COMPACT	10.31.19	0		11/22/2019	225		Pipe marker west of ci5
108	10.28.19	10000	10.31.19	COMPACT/ BECS	10.31.19	300		11/22/2019	10		Well 738
109	10.28.19	1000	10.31.19	COMPACT	10.31.19	49		11/25/2019	29		Slope west of 697
86	10.28.19	5000	11.01.19	COMPACT/ BECS	11.01.19	387		11/22/2019	40		Well 721
87	10.28.19	5000	11.01.19	COMPACT	11.01.19	215		11/22/2019	250		Well 726
36	10.28.19	2200	11.01.19	COMPACT/ BECS	11.01.19	250		11/22/2019	5		Well 508
37	10.28.19	600	11.01.19	COMPACT/ BECS	11.01.19	64		11/22/2019	10		Well 734
38	10.28.19	3000	11.01.19	COMPACT/ BECS	11.01.19	250		11/22/2019	25		Remot Well 734
41	10.28.19	22000	11.01.19	COMPACT	11.01.19	193		11/25/2019	140		SURFACE south east of North sump
42	10.28.19	1400	11.01.19	COMPACT	11.01.19	136		11/25/2019	130		SURFACE south east of North sump
43	10.28.19	2200	11.01.19	COMPACT	11.01.19	32		11/25/2019	160		SURFACE Below asbestos area
44	10.28.19	11000	11.01.19	COMPACT	11.01.19	388		11/25/2019	135		SURFACE Below asbestos area
45	10.28.19	2600	11.01.19	COMPACT	11.01.19	143		11/25/2019	140		SURFACE Below asbestos area
58	10.28.19	3000	11.01.19	COMPACT/ BECS	11.01.19	122		11/22/2019	21		Well 715
59	10.28.19	3500	11.01.19	COMPACT/ BECS	11.01.19	38		11/22/2019	28		Well 723
60	10.28.19	4000	11.01.19	COMPACT/ BECS	11.01.19	407		11/22/2019	25		Well 773
61	10.28.19	2000	11.01.19	COMPACT	11.01.19	360		11/25/2019	255		Well 665
62	10.28.19	500	11.01.19	COMPACT	11.01.19	120		11/22/2019	10		Well 678
63	10.28.19	3000	11.01.19	COMPACT	11.01.19	164		11/25/2019	8		Well 677
9	10.28.19	2500	11.01.19	COMPACT/ BECS	11.01.19	114		11/22/2019	35		Well 706
10	10.28.19	1300	11.01.19	COMPACT/ BECS	11.01.19	221		11/22/2019	128		Well 516
11	10.28.19	700	11.01.19	COMPACT/ BECS	11.01.19	199		11/22/2019	120		Well 760
12	10.28.19	1800	11.01.19	COMPACT/ BECS	11.01.19	366		11/22/2019	190		Well 759
13	10.28.19	600	11.01.19	COMPACT	11.01.19	136		11/25/2019	287		south sump

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio/ Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			1st Re-mon 10-day Follow-Up			2nd Re-mon Event - 10 Days			
Flag	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	**Comments**
51	10.28.19	500	10.30.19	10					Well 551
52	10.28.19	2000	10.30.19	106					Well 624
53	10.28.19	500	10.30.19	188					slope south east of scale house
54	10.28.19	800	10.30.19	220					Well 774
55	10.28.19	600	10.30.19	210					Well 685
56	10.28.19	500	10.30.19	56					Well 699
57	10.28.19	500	10.30.19	110					Well 698
76	10.28.19	3000	10.31.19	0					Well 545
77	10.28.19	700	10.31.19	0					lateral east of Well 87
78	10.28.19	3000	10.31.19	45					Well 03
79	10.28.19	700	10.31.19	76					Leachate riser south of lcrs
80	10.28.19	500	10.31.19	160					Pipe marker south east of scale
81	10.28.19	10000	10.31.19	200					Future leachate riser
82	10.28.19	20000	10.31.19	215					Future leachate riser
83	10.28.19	500	10.30.19	347					Well 766
84	10.28.19	1000	10.30.19	109					Well 718
85	10.28.19	1000	10.30.19	108					Well 716
1	10.28.19	525	10.30.19	10					Well 488
2	10.28.19	516	10.30.19	50					Well 534
3	10.28.19	540	10.30.19	0					Well 661
4	10.28.19	504	10.30.19	0					Well 651
5	10.28.19	637	10.30.19	47					Well 472

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio/ Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			1st Re-mon 10-day Follow-Up			2nd Re-mon Event - 10 Days			
Flag	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	**Comments**
6	10.28.19	571	10.30.19	0					Well 752
7	10.28.19	520	10.31.19	63					Well 768
8	10.28.19	1,500	10.30.19	310					Well 772
26	10.28.19	1,000	10.31.19	20					Pipe marker north east of 518
27	10.28.19	1,100	10.31.19	114					Pipe marker north east of 518
28	10.28.19	800	10.31.19	43					Well 535
29	10.28.19	1400	10.31.19	192					Pipe marker west of 535
30	10.28.19	580	10.31.19	375					Black Pipe West of 579
31	10.28.19	600	10.31.19	0					Well 529
32	10.28.19	834	10.31.19	244					Pipe marker south east of break trailer
33	10.28.19	600	10.31.19	163					Well 719
34	10.28.19	6000	10.31.19	0					Well 712
35	10.28.19	3500	10.31.19	26					Well 612
101	10.28.19	7000	10.31.19	115					North west slope of well 661
102	10.28.19	1500	10.31.19	0					Slope east of 639
103	10.28.19	502	10.31.19	0					Pipe marker east of 639 bench road
104	10.28.19	800	10.31.19	360					Well 639
105	10.28.19	800	10.31.19	137					Pipe marker north of ci5
106	10.28.19	1000	10.31.19	223					Ci5
107	10.28.19	700	10.31.19	0					Pipe marker west of ci5
108	10.28.19	10000	10.31.19	300					Well 738
109	10.28.19	1000	10.31.19	49					Slope west of 697

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM- Juan Barocio/ Dan San Jose

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

Initial Monitoring Event			1st Re-mon 10-day Follow-Up			2nd Re-mon Event - 10 Days			
Flag	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Number	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	**Comments**
86	10.28.19	5000	11.01.19	387					Well 721
87	10.28.19	5000	11.01.19	215					Well 726
36	10.28.19	2200	11.01.19	250					Well 508
37	10.28.19	600	11.01.19	64					Well 734
38	10.28.19	3000	11.01.19	250					Remot Well 734
41	10.28.19	22000	11.01.19	193					SURFACE south east of North sump
42	10.28.19	1400	11.01.19	136					SURFACE south east of North sump
43	10.28.19	2200	11.01.19	32					SURFACE Below asbestos area
44	10.28.19	11000	11.01.19	388					SURFACE Below asbestos area
45	10.28.19	2600	11.01.19	143					SURFACE Below asbestos area
58	10.28.19	3000	11.01.19	122					Well 715
59	10.28.19	3500	11.01.19	38					Well 723
60	10.28.19	4000	11.01.19	407					Well 773
61	10.28.19	2000	11.01.19	360					Well 665
62	10.28.19	500	11.01.19	120					Well 678
63	10.28.19	3000	11.01.19	164					Well 677
9	10.28.19	2500	11.01.19	114					Well 706
10	10.28.19	1300	11.01.19	221					Well 516
11	10.28.19	700	11.01.19	199					Well 760
12	10.28.19	1800	11.01.19	366					Well 759
13	10.28.19	600	11.01.19	136					south sump

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

2019 QUARTER: 4
INITIAL MONITORING PERFORMED BY: RES
FOLLOW-UP MONITORING PERFORMED BY: NA
LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

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

Instantaneous Landfill Surface Emissions Monitoring
Exceedance and Monitoring Logs (NSPS/BAAQMD 8-34)

2019 QUARTER: 4th
INITIAL MONITORING PERFORMED BY: RES
FOLLOW-UP MONITORING PERFORMED BY: Juan Barocio / Dan San Jose
LANDFILL NAME: ALRRF
Wind Spee 10 **Wind Speed: _____mph**
Wind Direction: _ west **Wind Direction: ____**

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			Comments
Flag Number	Monitoring Date	Field Reading	Repair Date	Repair Action Taken	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	
51	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	10		11/25/2019	5		Well 551
52	10.28.19	2000	10.30.19	COMPACT/ BECS	10.30.19	106		11/25/2019	10		Well 624
53	10.28.19	500	10.30.19	COMPACT	10.30.19	188		11/25/2019	33		slope south east of scale house
54	10.28.19	800	10.30.19	COMPACT	10.30.19	220		11/22/2019	15		Well 774
55	10.28.19	600	10.30.19	COMPACT/ BECS	10.30.19	210		11/22/2019	5		Well 685
56	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	56		11/25/2019	13		Well 699
57	10.28.19	500	10.30.19	BECS	10.30.19	110		11/25/2019	10		Well 698
76	10.28.19	3000	10.31.19	COMPACT/ BECS	10.31.19	0		11/25/2019	32		Well 545
77	10.28.19	700	10.31.19	BECS	10.31.19	0		11/25/2019	47		lateral east of Well 87
78	10.28.19	3000	10.31.19	COMPACT/ BECS	10.31.19	45		11/25/2019	189		Well 03
79	10.28.19	700	10.31.19	COMPACT	10.31.19	76		11/25/2019	16		Leachate riser south of lcrs
80	10.28.19	500	10.31.19	COMPACT	10.31.19	160		11/25/2019	220		Pipe marker south east of scale
81	10.28.19	10000	10.31.19	COMPACT	10.31.19	200		11/25/2019	120		Future leachate riser
82	10.28.19	20000	10.31.19	COMPACT	10.31.19	215		11/25/2019	118		Future leachate riser
83	10.28.19	500	10.30.19	COMPACT/ BECS	10.30.19	347		11/22/2019	25		Well 766
84	10.28.19	1000	10.30.19	COMPACT/ BECS	10.30.19	109		11/22/2019	5		Well 718
85	10.28.19	1000	10.30.19	COMPACT/ BECS	10.30.19	108		11/22/2019	10		Well 716
1	10.28.19	525	10.30.19	COMPACT/ BECS	10.30.19	10		11/25/2019	70		Well 488
2	10.28.19	516	10.30.19	COMPACT/ BECS	10.30.19	50		11/25/2019	60		Well 534
3	10.28.19	540	10.30.19	COMPACT/ BECS	10.30.19	0		11/25/2019	14		Well 661
4	10.28.19	504	10.30.19	COMPACT/ BECS	10.30.19	0		11/25/2019	17		Well 651
5	10.28.19	637	10.30.19	COMPACT/ BECS	10.30.19	47		11/22/2019	120		Well 472
6	10.28.19	571	10.30.19	COMPACT	10.30.19	0		11/22/2019	5		Well 752
7	10.28.19	520	10.31.19	COMPACT/ BECS	10.31.19	63		11/22/2019	16		Well 768
8	10.28.19	1,500	10.30.19	COMPACT/ BECS	10.30.19	310		11/22/2019	260		Well 772
26	10.28.19	1,000	10.31.19	COMPACT	10.31.19	20		11/25/2019	58		Pipe marker north east of 518
27	10.28.19	1,100	10.31.19	COMPACT	10.31.19	114		11/25/2019	98		Pipe marker north east of 518
28	10.28.19	800	10.31.19	COMPACT/ BECS	10.31.19	43		11/25/2019	13		Well 535
29	10.28.19	1400	10.31.19	COMPACT	10.31.19	192		11/25/2019	12		Pipe marker west of 535
30	10.28.19	580	10.31.19	COMPACT	10.31.19	375		11/25/2019	234		Black Pipe West of 579
31	10.28.19	600	10.31.19	COMPACT/ BECS	10.31.19	0		11/25/2019	8		Well 529
32	10.28.19	834	10.31.19	COMPACT	10.31.19	244		11/25/2019	26		trailer
33	10.28.19	600	10.31.19	COMPACT/ BECS	10.31.19	163		11/22/2019	22		Well 719
34	10.28.19	6000	10.31.19	COMPACT	10.31.19	0		11/25/2019	3		Well 712

35	10.28.19	3500	10.31.19	COMPACT/ BECS	10.31.19	26		11/25/2019	5		Well 612
101	10.28.19	7000	10.31.19	COMPACT	10.31.19	115		11/22/2019	58		North west slope of well 661
102	10.28.19	1500	10.31.19	COMPACT	10.31.19	0		11/22/2019	63		Slope east of 639
103	10.28.19	502	10.31.19	COMPACT	10.31.19	0		11/22/2019	10		Pipe marker east of 639 bench road
104	10.28.19	800	10.31.19	COMPACT/ BECS	10.31.19	360		11/22/2019	5		Well 639
105	10.28.19	800	10.31.19	COMPACT	10.31.19	137		11/22/2019	20		Pipe marker north of ci5
106	10.28.19	1000	10.31.19	COMPACT/ BECS	10.31.19	223		11/22/2019	50		Ci5
107	10.28.19	700	10.31.19	COMPACT	10.31.19	0		11/22/2019	225		Pipe marker west of ci5
108	10.28.19	10000	10.31.19	COMPACT/ BECS	10.31.19	300		11/22/2019	10		Well 738
109	10.28.19	1000	10.31.19	COMPACT	10.31.19	49		11/25/2019	29		Slope west of 697
86	10.28.19	5000	11.01.19	COMPACT/ BECS	11.01.19	387		11/22/2019	40		Well 721
87	10.28.19	5000	11.01.19	COMPACT	11.01.19	215		11/22/2019	250		Well 726
36	10.28.19	2200	11.01.19	COMPACT/ BECS	11.01.19	250		11/22/2019	5		Well 508
37	10.28.19	600	11.01.19	COMPACT/ BECS	11.01.19	64		11/22/2019	10		Well 734
38	10.28.19	3000	11.01.19	COMPACT/ BECS	11.01.19	250		11/22/2019	25		Remot Well 734
41	10.28.19	22000	11.01.19	COMPACT	11.01.19	193		11/25/2019	140		SURFACE south east of North sump
42	10.28.19	1400	11.01.19	COMPACT	11.01.19	136		11/25/2019	130		SURFACE south east of North sump
43	10.28.19	2200	11.01.19	COMPACT	11.01.19	32		11/25/2019	160		SURFACE Below asbestos area
44	10.28.19	11000	11.01.19	COMPACT	11.01.19	388		11/25/2019	135		SURFACE Below asbestos area
45	10.28.19	2600	11.01.19	COMPACT	11.01.19	143		11/25/2019	140		SURFACE Below asbestos area
58	10.28.19	3000	11.01.19	COMPACT/ BECS	11.01.19	122		11/22/2019	21		Well 715
59	10.28.19	3500	11.01.19	COMPACT/ BECS	11.01.19	38		11/22/2019	28		Well 723
60	10.28.19	4000	11.01.19	COMPACT/ BECS	11.01.19	407		11/22/2019	25		Well 773
61	10.28.19	2000	11.01.19	COMPACT	11.01.19	360		11/25/2019	255		Well 665
62	10.28.19	500	11.01.19	COMPACT	11.01.19	120		11/22/2019	10		Well 678
63	10.28.19	3000	11.01.19	COMPACT	11.01.19	164		11/25/2019	8		Well 677
9	10.28.19	2500	11.01.19	COMPACT/ BECS	11.01.19	114		11/22/2019	35		Well 706
10	10.28.19	1300	11.01.19	COMPACT/ BECS	11.01.19	221		11/22/2019	128		Well 516
11	10.28.19	700	11.01.19	COMPACT/ BECS	11.01.19	199		11/22/2019	120		Well 760
12	10.28.19	1800	11.01.19	COMPACT/ BECS	11.01.19	366		11/22/2019	190		Well 759
13	10.28.19	600	11.01.19	COMPACT	11.01.19	136		11/25/2019	287		south sump

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Actamont

Quarter / Year:	4th 2019
Technician:	LEIGHWARE
Instrument:	TVA 1000
Calibration Standard:	500

Initial Monitoring Event				First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			
Flag Number	Grid Number	Field Reading (ppm)	Date Monitored	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Comments
~~θ~~-51	194	500	10-28-19										
~~θ~~-52	206	2,000											WELL 551
~~θ~~-53	40	500											WELL 624
~~θ~~-54	61	800											SURFACE
~~θ~~-55	141	600											CAP PIPE
~~θ~~-56	157	500											WELL 685
~~θ~~-57	157	500											WELL 679
~~θ~~-76	197	3,000											WELL 698
~~θ~~-77	162	700											WELL 545
~~θ~~-78	168	3,000											WELL 550
~~θ~~-79	110	700											WELL 303
~~θ~~-80	53	500											BLUE PIPE
~~θ~~-81	53	10,000											WHITE PIPE
~~θ~~-82	40	20,000											PIPE
~~θ~~-83	71	500											PIPE
~~θ~~-84	97	1,000											WELL 766
~~θ~~-85	97	1,000											WELL 718
~~θ~~-1	191	525											WELL 716
~~θ~~-2	155	516											WELL 188
~~θ~~-3	138	540											WELL 534
~~θ~~-4	136	504											WELL 661
~~θ~~-5	19	637											WELL 651
~~θ~~-6	95	571											WELL 472
~~θ~~-7	108	520											WELL 752
~~θ~~-8	171	1,500											WELL 768
													WELL 772

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Actamont

Quarter / Year:	4th 2019
Technician:	GEM & WADE
Instrument:	TVA 1000
Calibration Standard:	500

Initial Monitoring Event				First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			
Flag Number	Grid Number	Field Reading (ppm)	Date Monitored	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Comments
~~0-~~ 26	204	1,000	10-28-19										white pipe
~~0-~~ 27	204	1,100											white pipe
~~0-~~ 28	170	800											well 535
~~0-~~ 29	169	1,400											white pipe
~~0-~~ 30	155	580											Black pipe
~~0-~~ 31	152	600											well 529
~~0-~~ 32	34	834											white pipe
~~0-~~ 33	80	600											well 719
~~0-~~ 34	141	6,000											well 712
~~0-~~ 35	165	3,500											well 612
~~0-~~ 101	130	7,000											surface
~~0-~~ 102	137	1,500											surface
~~0-~~ 103	137	502											white pipe
~~0-~~ 104	145	800											well 639
~~0-~~ 105	102	800											white pipe
~~0-~~ 106	93	1,000											Black pipe
~~0-~~ 107	76	700											white pipe
~~0-~~ 108	54	10,000											well 738
~~0-~~ 109	171	1,000											surface
0-													
0-													
0-													
0-													
0-													
0-													

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Altamont

Quarter / Year:	4th 2019
Technician:	LEIGHWADE
Instrument:	TVA 1000
Calibration Standard:	500

Initial Monitoring Event				First Re-Monitoring Event - 10 Days			Second Re-Monitoring Event - 10 Days			30-Day Follow-up Monitoring			
Flag Number	Grid Number	Field Reading (ppm)	Date Monitored	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Date Monitored	No Excd. <500 ppm	Excd. >500 ppm	Comments
~~0~~-86	64	5,000	10-29-19										
~~0~~-87	37	5,000											WELL 721
~~0~~-36	16	2,200											GREY PIPE
~~0~~-39	4	600											WELL 508
~~0~~-38	7	3,000											WHITE PIPE
~~0~~-41	8	22,000											WELL 734
~~0~~-42	11	1,400											SURFACE
~~0~~-43	17	2,200											SURFACE
~~0~~-44	17	11,000											SURFACE
~~0~~-45	27	2,600											SURFACE
~~0~~-58	98	3,000											SURFACE
~~0~~-59	57	3,500											WELL 715
~~0~~-60	44	4,000											WELL 723
~~0~~-61	31	2,000											WELL 725
~~0~~-62	9	500											UNMARKED WELL
~~0~~-63	6	3,000											UNMARKED WELL
~~0~~-9	45	2,500											CAPPED PIPE 671
~~0~~-10	32	1,300											WELL 706
~~0~~-11	32	700											WELL 516
~~0~~-12	26	1,800											WELL 760
~~0~~-13	127	600	↓										WELL 759
0-													BLACK PIPE
0-													
0-													
0-													

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ARNESTA RAMIREZ, ARRIEN JONES, ANTHONY PERCELL, AARON MCBRIDE

Date: 10-29-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 42 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
64	LW	0550	0605	5,000	4	5	9	WELL 721
37	AT	0550	0605	5,000	4	5	9	GREY PIPE
16	AM	0550	0605	2,200	4	5	9	WELL 508
4	ER	0550	0605	600	4	5	9	WHITE PIPE
7	AP	0550	0605	3,000	4	5	9	WELL 734
8	LW	0605	0620	22,000	4	5	9	SURFACE
11	AT	0605	0620	1,400	4	5	9	SURFACE
17	AM	0605	0620	11,000	4	5	9	SURFACE
27	ER	0605	0620	2,600	4	5	9	SURFACE
98	AP	0605	0620	3,000	4	5	9	WELL 715
57	LW	0620	0635	3,500	4	5	9	WELL 723
44	AT	0620	0635	4,000	4	5	9	WELL 725
31	AM	0620	0635	2,000	4	5	9	UNMARKED WELL
9	ER	0620	0635	500	4	5	9	UNMARKED WELL
6	AP	0620	0635	3,000	4	5	9	CROSS PIPE 671
45	LW	0635	0650	2,500	4	5	9	WELL 706
32	AT	0635	0650	1,300	4	5	9	WELL 516
26	AM	0635	0650	1,800	4	5	9	WELL 759
127	ER	0635	0650	600	4	5	9	BLACK PIPE
1	AP	0635	0650	26	4	5	9	
2	LW	0650	0705	18	3	4	10	
3	AT	0650	0705	45	3	4	10	
5	AM	0650	0705	27	3	4	10	
10	ER	0650	0705	65	3	4	10	
12	AP	0650	0705	40	3	4	10	
13	LW	0705	0720	34	3	4	9	
14	AT	0705	0720	57	3	4	9	
15	AM	0705	0720	45	3	4	9	
18	ER	0705	0720	77	3	4	9	
28	AP	0705	0720	36	3	4	9	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LOUIS WADE, ARRIEN JONES, AARON ALCORIDE, ERNEST RAMIREZ, ANTHONY PARCHA

Date: 10-29-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 51 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
20	LW	0720	0735	78	3	4	9	
21	AJ	0720	0735	43	3	4	9	
22	AM	0720	0735	69	3	4	9	
23	ER	0720	0735	148	3	4	9	
24	AP	0720	0735	72	3	4	9	
25	LW	0735	0750	50	3	4	9	
29	AJ	0735	0750	132	3	4	9	
30	AM	0735	0750	40	3	4	9	
33	ER	0735	0750	29	3	4	9	
35	AP	0735	0750	45	3	4	9	
36	LW	0750	0805	37	3	5	9	
38	AJ	0750	0805	72	3	5	9	
39	AM	0750	0805	58	3	5	9	
46	ER	0750	0805	39	3	5	9	
52	AP	0750	0805	46	3	5	9	
67	LW	0805	0820	21	2	4	8	
41	AJ	0805	0820	107	2	4	8	
42	AM	0805	0820	45	2	4	8	
43	ER	0805	0820	51	2	4	8	
47	AP	0805	0820	95	2	4	8	
48	LW	0820	0835	43	3	4	9	
49	AJ	0820	0835	71	3	4	9	
50	AM	0820	0835	55	3	4	9	
51	ER	0820	0835	82	3	4	9	
55	AP	0820	0835	67	3	4	9	
56	LW	0835	0850	44	3	4	9	
58	AJ	0835	0850	118	3	4	9	
60	AM	0835	0850	165	3	4	9	
62	ER	0835	0850	59	3	4	9	
63	AP	0835	0850	41	3	4	9	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WARD, ERNEST REMIREZ, ARRIEN JONES, ANTHONY PERALTA, AARON MCBRIDE

Date: 10-29-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 57 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
65	LW	0850	0905	81	3	4	S	
68	AT	0850	0905	124	3	4	S	
69	AM	0850	0905	85	3	4	S	
70	ER	0850	0905	54	3	4	S	
72	AP	0850	0905	101	3	4	S	
73	LW	0905	0920	84	3	4	S	
81	AT	0905	0920	98	3	4	S	
90	AM	0905	0920	75	3	4	S	
89	ER	0905	0920	51	3	4	S	
88	AP	0905	0920	63	3	4	S	
79	LW	0920	0935	79	3	4	S	
78	AT	0920	0935	51	3	4	S	
87	AM	0920	0935	84	3	4	S	
96	ER	0920	0935	57	3	4	S	
77	AP	0920	0935	81	3	4	S	
86	LW	0935	0950	59	3	4	S	
85	AT	0935	0950	64	3	4	S	
94	AM	0935	0950	58	3	4	S	
75	ER	0935	0950	77	3	4	S	
84	AP	0935	0950	91	3	4	S	
92	LW	0950	1005	58	3	5	S	
101	AT	0950	1005	92	3	5	S	
111	AM	0950	1005	48	3	5	S	
119	ER	0950	1005	61	3	5	S	
128	AP	0950	1005	93	3	5	S	
103	LW	1005	1020	71	4	5	S	
112	AT	1005	1020	55	4	5	S	
120	AM	1005	1020	68	4	5	S	
129	ER	1005	1020	38	4	5	S	
144	AP	1005	1020	52	4	5	S	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGHWNOK, ARNOLD RAMIREZ
ADRIEN JONES, ANTHONY PERKINS
AARON MCBRIDE

Date: 10-30-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 49 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
176	LW	0545	0600	31	3	4	12	
177	AT	0545	0600	24	3	4	12	
178	AM	0545	0600	35	3	4	12	
179	ER	0545	0600	65	3	4	12	
172	AP	0545	0600	24	3	4	12	
183	LW	0600	0615	31	2	4	12	
184	AT	0600	0615	27	2	4	12	
185	AM	0600	0615	45	2	4	12	
186	ER	0600	0615	57	2	4	12	
189	AP	0600	0615	32	2	4	12	
190	LW	0615	0630	24	3	5	12	
192	AT	0615	0630	48	3	5	12	
196	AM	0615	0630	32	3	5	12	
198	ER	0615	0630	59	3	5	12	
199	AP	0615	0630	21	3	5	12	
202	LW	0630	0645	28	3	5	12	
203	AT	0630	0645	35	3	5	12	
205	AM	0630	0645	68	3	5	12	
209	ER	0630	0645	41	3	5	12	
210	AP	0630	0645	23	3	5	12	
211	LW	0645	0700	64	3	4	12	
212	AT	0645	0700	85	3	4	12	
216	AM	0645	0700	49	3	4	12	
217	ER	0645	0700	106	3	4	12	
218	AP	0645	0700	59	3	4	12	
220	LW	0700	0715	134	2	4	12	
164	AT	0700	0715	76	2	4	12	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LOUIS WADE, ERNEST RAMIREZ
ARRION JONES, ANTHONY PORCELLA
AARON MCBRIDE

Date: 10-29-15 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 65 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
153	LW	1020	1035	29	4	6	8	
104	AT	1020	1035	67	4	6	8	
113	AM	1020	1035	51	4	6	8	
121	ER	1020	1035	39	4	6	8	
114	AP	1020	1035	60	4	6	8	
122	LW	1035	1050	36	4	6	8	
131	AT	1035	1050	44	4	6	8	
106	AM	1035	1050	39	4	6	8	
107	ER	1035	1050	103	4	6	8	
115	AP	1035	1050	81	4	6	8	
116	LW	1050	1105	47	4	6	8	
123	AT	1050	1105	55	4	6	8	
124	AM	1050	1105	68	4	6	8	
132	ER	1050	1105	81	4	6	8	
133	AP	1050	1105	40	4	6	8	
139	LW	1105	1120	28	4	6	7	
140	AT	1105	1120	31	4	6	7	
146	AM	1105	1120	74	4	6	7	
147	ER	1105	1120	55	4	6	7	
148	AP	1105	1120	32	4	6	7	
149	LW	1120	1135	70	4	6	8	
150	AT	1120	1135	48	4	6	8	
151	AM	1120	1135	31	4	6	8	
158	ER	1120	1135	40	4	6	8	
156	AP	1120	1135	32	4	6	8	
163	LW	1135	1150	28	4	5	8	
154	AT	1135	1150	31	4	5	8	
161	AM	1135	1150	28	4	5	8	
159	ER	1135	1150	51	4	5	8	
160	AP	1135	1150	38	4	5	8	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ERNEST RAMIREZ
ARRICU JONES, ANTHONY PERCIFUL
AARON MCBRIDE

Date: 10-29-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 67 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
166	LW	1200	1215	29	4	5	8	
167	AT	1200	1215	41	4	5	8	
173	AM	1200	1215	22	4	5	8	
174	ER	1200	1215	54	4	5	8	
175	AP	1200	1215	29	4	5	8	
180	LW	1215	1230	96	4	6	8	
181	AT	1215	1230	29	4	6	8	
182	AM	1215	1230	26	4	6	8	
187	ER	1215	1230	40	4	6	8	
188	AP	1215	1230	22	4	6	8	
193	LW	1230	1245	51	4	6	8	
195	AT	1230	1245	36	4	6	8	
200	AM	1230	1245	32	4	6	8	
201	ER	1230	1245	46	4	6	8	
207	AP	1230	1245	59	4	6	8	
219	LW	1245	1300	26	4	6	7	
213	AT	1245	1300	37	4	6	7	
208	AM	1245	1300	14	4	6	7	
214	ER	1245	1300	21	4	6	7	
215	AP	1245	1300	16	4	6	7	

Attach Calibration Sheet
Attach site map showing grid ID

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ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: GERALDINE, ERNEST RAMIREZ, ARRION JONES, ANTHONY PERALTA, AARON MCBRIDE

Date: 10-28-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 64 Precip: 0 Upwind BG: 1.4 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
165	LW	1530	1545	3,500	3	5	12	WELL 612
204	AJ	1530	1545	1,100	3	5	12	white pipe
191	AM	1530	1545	525	3	5	12	WELL 488
171	ER	1530	1545	1,500	3	5	12	WELL 772
157	AP	1530	1545	500	3	5	12	WELL 699
141	LW	1545	1600	6,000	4	5	12	WELL 712
71	AJ	1545	1600	500	4	5	12	WELL 766
80	AM	1545	1600	600	4	5	12	WELL 719
97	ER	1545	1600	1,000	4	5	12	WELL 718
105	AP	1545	1600	520	4	5	12	WELL 768
155	LW	1600	1615	580	4	6	12	Black pipe
162	AJ	1600	1615	700	4	6	12	WELL 550
169	AM	1600	1615	1,400	4	6	12	white pipe
170	ER	1600	1615	800	4	6	12	WELL 535
197	AP	1600	1615	3,000	4	6	12	WELL 545
95	LW	1615	1630	571	4	6	12	WELL 752
130	AJ	1615	1630	7,000	4	6	12	SURFACE
138	AM	1615	1630	540	4	6	12	WELL 661
168	ER	1615	1630	3,000	4	6	12	WELL 303
206	AP	1615	1630	2,000	4	6	12	WELL 624
194	LW	1630	1645	500	4	5	12	WELL 551
152	AJ	1630	1645	600	4	5	12	WELL 529
145	AM	1630	1645	800	4	5	12	WELL 639
136	ER	1630	1645	504	4	5	12	WELL 651
137	AP	1630	1645	1,500	4	5	12	SURFACE
110	LW	1645	1700	700	3	4	11	Black pipe
102	AJ	1645	1700	800	3	4	11	white pipe
93	AM	1645	1700	1,000	3	4	11	Black pipe
76	ER	1645	1700	700	3	4	11	white pipe
61	AP	1645	1700	800	3	4	11	CAPPED PIPE

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ERNEST RAMIREZ
ARRICK TONES, ANTHONY PERALTA
AARON MCBRIDE

Date: 10-28-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 68 Precip: 0 Upwind BG: 1.4 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
53	LW	1700	1715	10,000	3	6	12	PIPE
54	AJ	1700	1715	10,000	3	6	12	WELL 738
40	AM	1700	1715	20,000	3	6	12	PIPE
34	ER	1700	1715	834	3	6	12	WHITE PIPE
19	AP	1700	1715	637	3	6	12	WELL 472

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

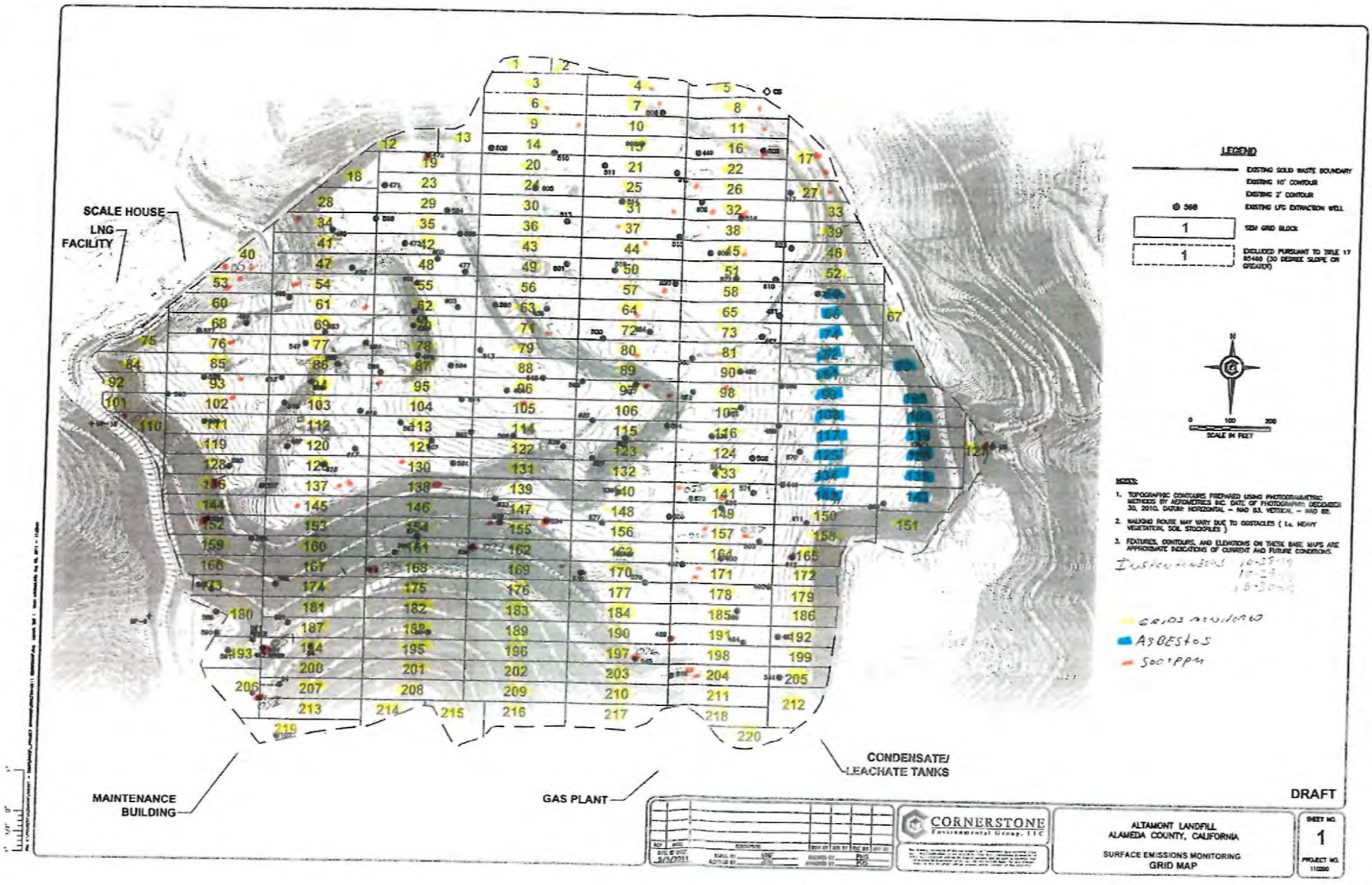
Personnel: LEIGHWADE

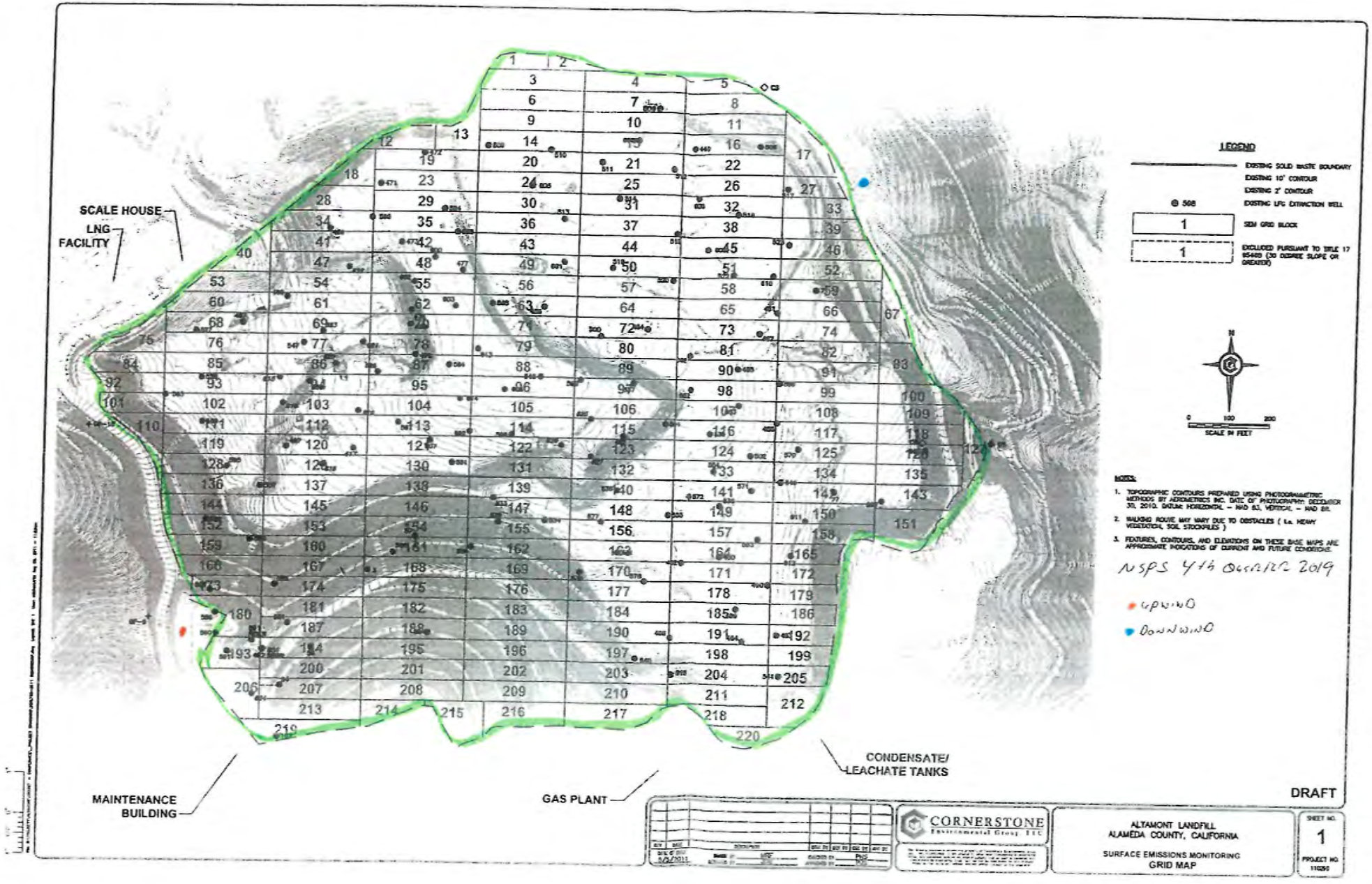
Date: 10-28-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 62 Precip: 0 Upwind BG: 1.4 Downwind BG: 2.6

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
58								
66								ASBESTOS
74								
82								
91								
99								
108								
117								
125								
134								
142								
83								
100								
109								
118								
126								
135								
143								

Attach Calibration Sheet
Attach site map showing grid ID


SCALE HOUSE
LNG FACILITY
MAINTENANCE BUILDING
GAS PLANT
CONDENSATE/ LEACHATE TANKS
LEGEND
EXISTING SOLID WASTE BOUNDARY
EXISTING 10' CONTOUR
EXISTING 2' CONTOUR
EXISTING LFG EXTRACTION WELL
SEM GRID BLOCK
EXCLUDED PURSUANT TO TITLE 17 §5448 (30 DEGREE SLOPE OR GREATER)
SCALE IN FEET
NOTES:
1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPHY: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (I.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.
GRID NUMBER
ASBESTOS
500 PPM
DRAFT
CORNERSTONE
Environmental Group, LLC
ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA
SURFACE EMISSIONS MONITORING
GRID MAP
SHEET NO.
1
PROJECT NO.
110350


SCALE HOUSE
LNG FACILITY
MAINTENANCE BUILDING
GAS PLANT
CONDENSATE/ LEACHATE TANKS
LEGEND
EXISTING SOLID WASTE BOUNDARY
EXISTING 10' CONTOUR
EXISTING 2' CONTOUR
EXISTING LFG EXTRACTION WELL
SEM GRID BLOCK
EXCLUDED PURSUANT TO TITLE 17 95469 (30 DEGREE SLOPE OR GREATER)
SCALE IN FEET
NOTES:
1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPHY: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (i.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.
NSPS Y4 Quarter 2019
upwind
downwind
DRAFT
CORNERSTONE Environmental Group, LLC
ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA
SURFACE EMISSIONS MONITORING
GRID MAP
SHEET NO. 1
PROJECT NO. 110250

Attachment B

Integrated Surface Emission Monitoring Event Records

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

2019 QUARTER: 4

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Altamont Landfill and Resource Recovery Facility

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

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGHANN LOCKE, ERNEST RAINER, ARRICK JONES, ANTHONY PARCELLA, AARON MCBRIDE

Date: 10-30-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 52 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1	LW	0725	0750	5.21	3	6	12	
2	AJ	0725	0750	4.67	3	6	12	
3	AM	0725	0750	5.02	3	6	12	
4	ER	0725	0750	6.11	3	6	12	
5	AP	0725	0750	5.79	3	6	12	
6	LW	0750	0805	6.14	3	4	12	
7	AJ	0750	0805	5.32	3	4	12	
8	AM	0750	0805	6.18	3	4	12	
9	ER	0750	0805	6.34	3	4	12	
10	AP	0750	0805	5.98	3	4	12	
11	LW	0805	0830	5.54	3	4	12	
12	AJ	0805	0830	6.25	3	4	12	
13	AM	0805	0830	5.81	3	4	12	
14	ER	0805	0830	7.82	3	4	12	
15	AP	0800	0830	6.54	3	4	12	
16	LW	0830	0855	7.25	4	5	12	
17	AJ	0830	0855	9.43	4	5	12	
21	AM	0830	0855	6.58	4	5	12	
22	ER	0830	0855	7.22	4	5	12	
25	AP	0830	0855	6.99	4	5	12	
26	LW	0855	0920	6.15	4	6	12	
27	AJ	0855	0920	4.10	4	6	12	
31	AM	0855	0920	6.45	4	6	12	
32	ER	0855	0928	7.02	4	6	12	
33	AP	0855	0920	4.08	4	6	12	
37	LW	0920	0945	7.12	3	5	12	
38	AJ	0920	0945	6.84	3	5	12	
39	AM	0920	0945	4.51	3	5	12	
44	ER	0920	0945	6.12	3	5	12	
45	AP	0920	0945	7.29	3	5	12	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ERNEST RAMIREZ
ARRICK JONES, ANTHONY PERALTA
AARON MCBRIDE

Date: 10-30-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 57 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
46	LW	0945	1010	4.55	3	5	12	
50	AT	0945	1010	7.28	3	5	12	
51	AM	0945	1010	8.30	3	5	12	
52	ER	0945	1010	7.22	3	5	12	
67	AP	0945	1010	3.50	3	5	12	
57	LW	1010	1035	8.50	3	4	14	
58	AT	1010	1035	10.47	3	4	14	
64	AM	1010	1035	12.40	3	4	14	
65	ER	1010	1035	9.65	3	4	14	
72	AP	1010	1035	13.21	3	4	14	
73	LW	1035	1100	11.75	3	4	14	
80	AT	1035	1100	16.90	3	4	14	
81	AM	1035	1100	12.28	3	4	14	
89	ER	1035	1100	18.60	3	4	14	
90	AP	1035	1100	16.31	3	4	14	
97	LW	1100	1125	14.28	2	3	14	
98	AT	1100	1125	12.71	2	3	14	
106	AM	1100	1125	10.50	2	3	14	
107	ER	1100	1125	13.67	2	3	14	
115	AP	1100	1125	10.14	2	3	14	
116	LW	1125	1150	9.75	2	3	14	
123	AT	1125	1150	8.15	2	3	14	
124	AM	1125	1150	7.99	2	3	14	
132	ER	1125	1150	8.06	2	3	14	
133	AP	1125	1150	6.90	2	3	14	
140	LW	1220	1245	7.12	2	3	14	
141	AT	1220	1245	6.45	2	3	14	
148	AM	1220	1245	7.58	2	3	14	
149	ER	1220	1245	7.40	2	3	14	
150	AP	1220	1245	6.92	2	3	14	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 4

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGHWADE, ERNEST RAMIREZ
ARRIEN JONES, ANTHONY PERALTA
AARON McBRIDE

Date: 10-30-19 Instrument Used: GUA 1000 Grid Spacing: 25'

Temperature: 60 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
151	LW	1245	1310	4.21	1	2	14	
156	AJ	1245	1310	5.38	1	2	14	
157	AM	1245	1310	5.12	1	2	14	
158	ER	1245	1310	4.87	1	2	14	
163	AP	1245	1310	5.14	1	2	14	
164	LW	1310	1335	5.51	1	2	14	
165	AJ	1310	1335	5.13	1	2	14	
170	AM	1310	1335	6.28	1	2	14	
171	ER	1310	1335	5.46	1	2	14	
172	AP	1310	1335	6.11	1	2	14	
177	LW	1335	1400	5.58	1	2	11	
178	AJ	1335	1400	6.45	1	2	11	
179	AM	1335	1400	5.14	1	2	11	
184	ER	1335	1400	5.39	1	2	11	
185	AP	1335	1400	6.13	1	2	4	
186	LW	1400	1425	4.98	1	2	9	
190	AJ	1400	1425	5.12	1	2	9	
191	AM	1400	1425	5.52	1	2	9	
192	ER	1400	1425	4.65	1	2	9	
197	AP	1400	1425	4.68	1	2	9	
198	LW	1425	1450	4.04	2	3	10	
199	AJ	1425	1450	5.41	2	3	10	
203	AM	1425	1450	4.50	2	3	10	
204	ER	1425	1450	6.38	2	3	10	
205	AP	1425	1450	5.19	2	3	10	
210	LW	1450	1515	5.75	1	2	9	
211	AJ	1450	1515	5.49	1	2	9	
212	AM	1450	1515	6.85	1	2	9	
127	ER	1450	1515	3.89	1	2	9	
220	AP	1450	1515	6.47	1	2	9	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIS WADE, ERNEST RENNER, ARMIEN TORRES, ANTHONY PERALTA, AARON MCBRIDE

Date: 10-30-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 62 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
217	CW	1515	1540	6.13	2	3	10	
218	AT	1515	1540	5.84	2	3	10	
214	AM	1515	1540	6.55	2	3	10	
215	BR	1515	1540	6.13	2	3	10	
216	AP	1515	1540	5.86	2	3	10	

Attach Calibration Sheet
Attach site map showing grid ID

Page 4 of 4

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leighwade _____ _____ _____

_____ _____ _____

_____ _____ _____

Date: 10-30-17 Instrument Used: _____ Grid Spacing: _____

Temperature: _____ Precip: _____ Upwind BG: _____ Downwind BG: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
59								Asbestos
66								
74								
82								
91								
99								
108								
117								
125								
134								
142								
83								
100								
109								
118								
126								
135								
143								

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 1

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIS LWADE, ERNEST RAMIREZ
ARRIEN JONES, ANTHONY PERCHA
AARON MCBRIDE

Date: 10-31-19 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 46 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
18	LW	0550	0615	7.41	1	2	B	
19	AT	0550	0615	6.30	1	2	B	
20	AM	0550	0615	6.57	1	2	B	
23	ER	0550	0615	5.83	1	2	B	
24	AP	0550	0615	7.28	1	2	B	
28	LW	0615	0640	9.43	2	3	12	
29	AT	0615	0640	6.07	2	3	12	
30	AM	0615	0640	8.12	2	3	12	
34	ER	0615	0640	14.67	2	3	12	
35	AP	0615	0640	8.21	2	3	12	
36	LW	0640	0705	6.75	2	3	12	
41	AT	0640	0705	13.28	2	3	12	
42	AM	0640	0705	7.44	2	3	12	
43	ER	0640	0705	6.39	2	3	12	
47	AP	0640	0705	12.14	2	3	12	
48	LW	0705	0730	9.18	2	3	12	
49	AT	0705	0730	7.56	2	3	12	
54	AM	0705	0730	13.91	2	3	12	
55	ER	0705	0730	8.44	2	3	12	
56	AP	0705	0730	7.70	2	3	12	
61	LW	0730	0755	14.55	2	3	B	
62	AT	0730	0755	6.49	2	3	B	
63	AM	0730	0755	6.88	2	3	B	
69	ER	0730	0755	11.41	1	3	B	
70	AP	0730	0755	6.75	2	3	B	
71	LW	0755	0820	5.98	2	3	B	
77	AT	0755	0820	8.22	2	3	B	
78	AM	0755	0820	6.87	2	3	B	
79	ER	0755	0820	8.51	2	3	B	
86	AP	0755	0820	7.69	2	3	B	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE, ARNOLD ACUNA, AARON MCBRIDE, ANTHONY PERALTA, AARON JONES

Date: 10-31-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 55 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
87	LW	0820	0845	5.43	2	3	11	
88	AT	0820	0845	6.11	2	3	11	
94	AM	0820	0845	6.34	2	3	11	
95	ER	0820	0845	5.82	2	3	11	
96	AP	0820	0845	8.75	2	3	11	
103	LW	0845	0910	6.49	2	3	12	
104	AT	0845	0910	8.20	2	3	12	
105	AM	0845	0910	7.66	2	3	12	
40	ER	0845	0910	23.71	2	3	12	
53	AP	0845	0910	21.48	2	3	12	
60	LW	0910	0935	18.12	2	3	12	
68	AT	0910	0935	16.39	2	3	12	
75	AM	0910	0935	9.40	2	3	12	
76	ER	0910	0935	11.65	2	3	12	
84	AP	0910	0935	8.54	2	3	12	
85	LW	0935	1000	9.71	2	3	12	
92	AT	0935	1000	7.26	2	3	12	
93	AM	0935	1000	8.14	2	3	12	
101	ER	0935	1000	10.31	2	3	12	
102	AP	0935	1000	7.55	2	3	12	
110	LW	1000	1025	6.90	2	3	12	
111	AT	1000	1025	5.71	2	3	12	
112	AM	1000	1025	6.13	2	3	12	
113	ER	1000	1025	5.39	2	3	12	
114	AP	1000	1025	5.17	2	3	12	
119	LW	1025	1050	6.11	2	3	12	
120	AT	1025	1050	5.54	2	3	12	
121	AM	1025	1050	7.32	2	3	12	
122	ER	1025	1050	5.40	2	3	12	
128	AP	1025	1050	5.80	2	3	12	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGHANNA, ERNEST REAMER, ARRICK JONES, ANTHONY PARKER, AARON MCBRIDE

Date: 10-31-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 61 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
129	LW	1050	1115	6.15	3	4	12	
130	AT	1050	1115	5.47	3	4	12	
131	AM	1050	1115	5.20	3	4	12	
136	ER	1050	1115	6.07	3	4	12	
137	AP	1050	1115	5.12	3	4	12	
138	LW	1115	1140	5.59	2	3	13	
139	AT	1115	1140	5.30	2	3	13	
144	AM	1115	1140	6.17	2	3	13	
145	ER	1115	1140	5.38	2	3	13	
146	AP	1115	1140	6.24	2	3	13	
147	LW	1140	1205	5.94	2	4	13	
152	AT	1140	1205	5.15	2	4	13	
153	AM	1140	1205	6.40	2	4	13	
154	ER	1140	1205	6.06	2	4	13	
155	AP	1140	1205	5.90	2	4	13	
159	LW	1235	1300	5.55	2	4	13	
160	AT	1235	1300	5.93	2	4	13	
161	AM	1235	1300	6.17	2	4	13	
162	ER	1235	1300	5.69	2	4	13	
166	AP	1235	1300	5.12	2	4	13	
167	LW	1300	1325	4.94	2	3	13	
168	AT	1300	1325	4.57	2	3	13	
169	AM	1300	1325	5.10	2	3	13	
173	ER	1300	1325	5.58	2	3	13	
174	AP	1300	1325	4.27	2	3	13	
175	LW	1325	1350	4.12	2	3	13	
176	AT	1325	1350	5.39	2	3	13	
180	AM	1325	1350	5.82	2	3	13	
181	ER	1325	1350	6.17	2	3	13	
182	AP	1325	1350	5.28	2	3	13	

Attach Calibration Sheet
Attach site map showing grid ID

ALTAMONT LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

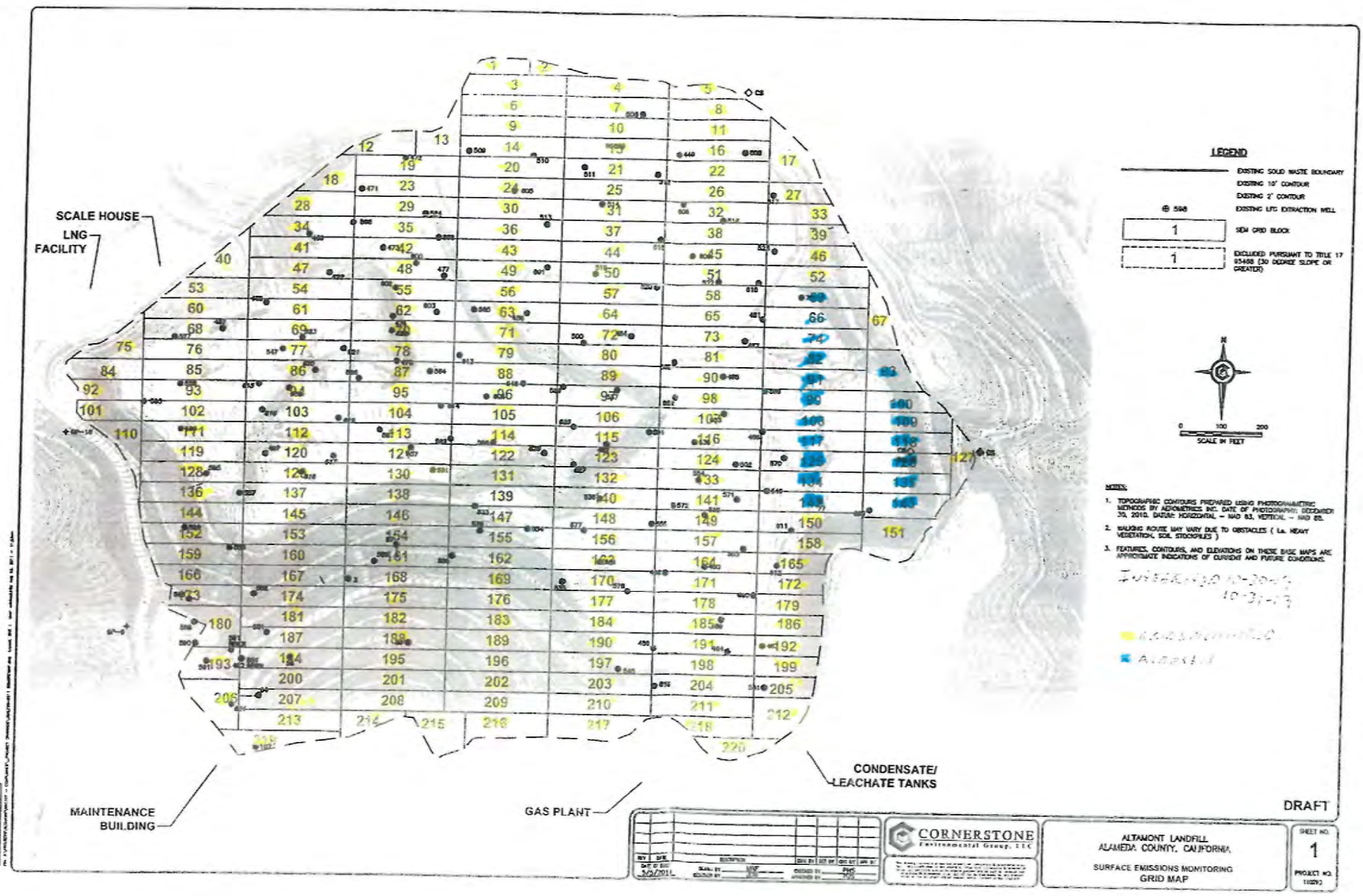
Personnel: LEIGHWADE, ERNEST RAMIREZ
ADRIEN JONES, ANTHONY PERALTA
AARON MURRAY

Date: 10-31-19 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 61 Precip: 0 Upwind BG: 1.6 Downwind BG: 2.4

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
183	LW	1350	1415	5.21	2	3	A	
187	AJ	1350	1415	6.17	2	3	A	
188	AM	1350	1415	5.45	2	3	A	
189	ER	1350	1415	5.31	2	3	A	
193	AP	1350	1415	5.02	2	3	A	
194	LW	1415	1440	4.79	2	3	A	
195	AJ	1415	1440	5.13	2	3	A	
196	AM	1415	1440	4.52	2	3	A	
200	ER	1415	1440	4.66	2	3	A	
201	AP	1415	1440	5.21	2	3	A	
202	LW	1440	1505	4.79	2	3	A	
206	AJ	1440	1505	5.07	2	3	A	
207	AM	1440	1505	5.32	2	3	A	
208	ER	1440	1505	4.96	2	3	A	
209	AP	1440	1505	6.32	2	3	A	
213	LW	1505	1530	5.50	2	3	A	
219	AJ	1505	1530	5.75	2	3	A	

Attach Calibration Sheet
Attach site map showing grid ID


SCALE HOUSE
LNG FACILITY
MAINTENANCE BUILDING
GAS PLANT
CONDENSATE/ LEACHATE TANKS
LEGEND
EXISTING SOLID WASTE BOUNDARY
EXISTING 10' CONTOUR
EXISTING 2' CONTOUR
EXISTING LFG EXTRACTION WELL
SEM GRID BLOCK
EXCLUDED PURSUANT TO TITLE 17 §5408 (30 DEGREE SLOPE OR GREATER)
N
0 100 200
SCALE IN FEET
NOTES:
1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AEROMETRICS INC. DATE OF PHOTOGRAPH: DECEMBER 30, 2010. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. WALKING ROUTE MAY VARY DUE TO OBSTACLES (i.e. HEAVY VEGETATION, SOIL STOCKPILES)
3. FEATURES, CONTOURS, AND ELEVATIONS ON THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS.
DRAFT
CORNERSTONE Environmental Group, LLC
ALTAMONT LANDFILL
ALAMEDA COUNTY, CALIFORNIA
SURFACE EMISSIONS MONITORING
GRID MAP
SHEET NO. 1
PROJECT NO. 110292

Attachment C

Component Leak Monitoring Event Records

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

2019 QUARTER: 4
INITIAL MONITORING PERFORMED BY: ALRRF/CEG
FOLLOW-UP MONITORING PERFORMED BY CEG-TT
LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	10/18/2019	ND						
A16- Flare Station	10/18/2019	ND						
S23 ICE's	Unit was retired	NA						
S24 ICE's	Unit was retired	NA						
S6 and S7 Turbines	12/6/2019	ND						
LNG Plant-	12/20/2019	ND						

Note: ICEs were shutdown during the entire quarter
ND= No exceedances detected

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

2019 QUARTER: 4
INITIAL MONITORING PERFORMED BY: ALRRF/CEG
FOLLOW-UP MONITORING PERFORMED BY: CEG-TT
LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	10/18/2019	ND						
A16- Flare Station	10/18/2019	ND						
S23 ICE's	Unit was retired	NA						
S24 ICE's	Unit was retired	NA						
S6 and S7 Turbines	12/6/2019	ND						
LNG Plant-	12/20/2019	ND						

Note: ICEs were shutdown during the entire quarter
ND= No exceedances detected

QUARTERLY LFG COMPONENT LEAK MONTORING																
EQUIPMENT:	A15															
INSTRUMENT:	FID															
MAKE:	Photovac															
MODEL:	Micro FID															
S/N:	CZPD312															
DATE OF SAMPLING:	10/18/2019															
TECHNICIAN:	Juan Barocio/DanSanjose															
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Discharge Blower			Flame Arrestor			Header Pipe to Flare & Sensors		Propane Tank and Piping	
	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#1	#2
A-15 Flare Station																
TEST DATE	10/18/2019			10/18/2019			10/18/2019			10/18/2019			10/18/19		10/18/19	
LEAK CONCENTRATION FOUND (ppm)	No exceedances found			No exceedances found			No exceedances found			No exceedances found			No exceedances found		No exceedances found	
ACTION TAKEN																
REPAIR DATE																
RE-TEST DATE																
RE-TEST CONCENTRATION (ppm)																
Comments:																
Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	A16 Flare
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	10/18/2019
TECHNICIAN:	Juan Barocio/Dan Sanjose

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Flare Valves, Sensors and Piping			Blowers			LNG Valves, Sensors and Piping to LNG Isolation Valve			Header to Landfill			Propane Tanks and Piping		IC Engine Valves and Sensors			IC Engine Compression Skid			IC Engine Manifold Piping and Metal Container		
	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#1	#2	#3	#1	#2	#3	#1	#2	#3
A-16																													
TEST DATE	10/18/19			10/18/19			10/18/19			10/18/19			10/18/19			10/18/19			10/18/19									
LEAK CONCENTRATION FOUND (ppm)	No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found									
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 1																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 2																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
LNG Plant																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	Turbine Gas skids
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	12/6/2019
TECHNICIAN:	L.LaCerra

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Roots Flex Couplings			Howden Compressor	InterstageVessel			Oil/Gas Separator Vessel			Gas Separator Vessel		Cooling Towers/ Heat Exchanger Piping		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2	# 3
Compressor skid # 1																					
TEST DATE	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 5.0 ppm			< 4.0 ppm			< 26.0 ppm	< 5.0 ppm			<5.0 ppm			5.0 ppm		< 3.0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Compressor skid # 2																					
TEST DATE	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 4.0 ppm			< 6.0 ppm			< 5.0 ppm	< 5.0 ppm			< 5.0 ppm			< 50.0 ppm		< 5.0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING																				
EQUIPMENT:	Turbine Skids																			
INSTRUMENT:	FID																			
MAKE:	Photovac																			
MODEL:	Micro FID																			
S/N:	CZPD312																			
DATE OF SAMPLING:	12/6/2019																			
TECHNICIAN:	L.LaCerra																			
LOCATION OF LEAK(S)	Bolted connections			Pipes (flanged, unions)			Inlet piping and valves			Sensors, transducers			Propane tank & piping			Gas manifold and piping				
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 3	# 4	# 5
Turbine 1																				
TEST DATE	12/6/19			12/6/19			12/6/19			12/6/19			12/6/19			12/6/19				
LEAK CONCENTRATION FOUND (ppm)	< 5..0 ppm			<5.0 ppm			< 5.0 ppm			< 3.0 ppm			< 0 ppm			< 238.0. ppm			< 87.0 ppm	
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Turbine 2																				
TEST DATE	12/6/19			12/6/19			12/6/19			12/6/19			12/6/19			12/6/19				
LEAK CONCENTRATION FOUND (ppm)	< 10.0 ppm			< 75.0 ppm			< 5.0 ppm			< 8.0 ppm			< 0 ppm			< 8.0 ppm			< 5 ppm	
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Comments:																				
Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																				

cornerstone
environmental

COMPONENT LEAK CHECK MONITORING

ALTAMONT, LINDE PLANT 4Q 2019

INSTRUMENT: FID
MAKE: TRIMBLE
MODEL: Thermo Scientific / SITEFID
S/N: TLCF0303
DATES OF SAMPLING: 12/20/2019
TECHNICIANS: MIKE SCHORER

LOCATION OF LEAK	Date	PPM	Date of Repair	Date of Re-monitoring	Re-monitoring PPM	Comments/Repairs Made
Roadway Condensate Skid	12/20/2019	2	NA	NA	NA	Could not pinpoint, slight wind
Condesate Sump	12/20/2019	0	NA	NA	NA	
Liquifer Pad	12/20/2019	0	NA	NA	NA	
Compressor A	12/20/2019	0	NA	NA	NA	
Compressor B	12/20/2019	0	NA	NA	NA	
Mole Gate Tank	12/20/2019	163	NA	NA	NA	Would not sustain, in front of FV327 valve
Dryer Skid	12/20/2019	62	NA	NA	NA	Slight wind hard to pinpoint, would not sustain
VOC Trap	12/20/2019	0	NA	NA	NA	
Tail Gas Surge	12/20/2019	0	NA	NA	NA	
Vacuum Skid	12/20/2019	0	NA	NA	NA	
Mole Gate	12/20/2019	0	NA	NA	NA	
Rec Comp	12/20/2019	0	NA	NA	NA	Oily on pad
Storage Area	12/20/2019	0	NA	NA	NA	
Cold Box	12/20/2019	0	NA	NA	NA	
Ref Sep Skid	12/20/2019	3	NA	NA	NA	Swagelock fitting
Evap Cooler	12/20/2019	0	NA	NA	NA	
York Oil Filter	12/20/2019	0	NA	NA	NA	
York Oil Cooler	12/20/2019	0	NA	NA	NA	
Membrane Skid	12/20/2019	0	NA	NA	NA	
Heat Exchanger	12/20/2019	0	NA	NA	NA	
Cold Trap	12/20/2019	18	NA	NA	NA	Could not pinpoint, would not sustain
Sulfa Treat	12/20/2019	0	NA	NA	NA	
GC Shed	12/20/2019	17	NA	NA	NA	Swagelock fitting on south panel
Gas Feed Line East of York Vomp, Overhead	12/20/2019	12,681	12/20/2019	12/20/2019	0	Flange leaking, tightened and cleaned plug

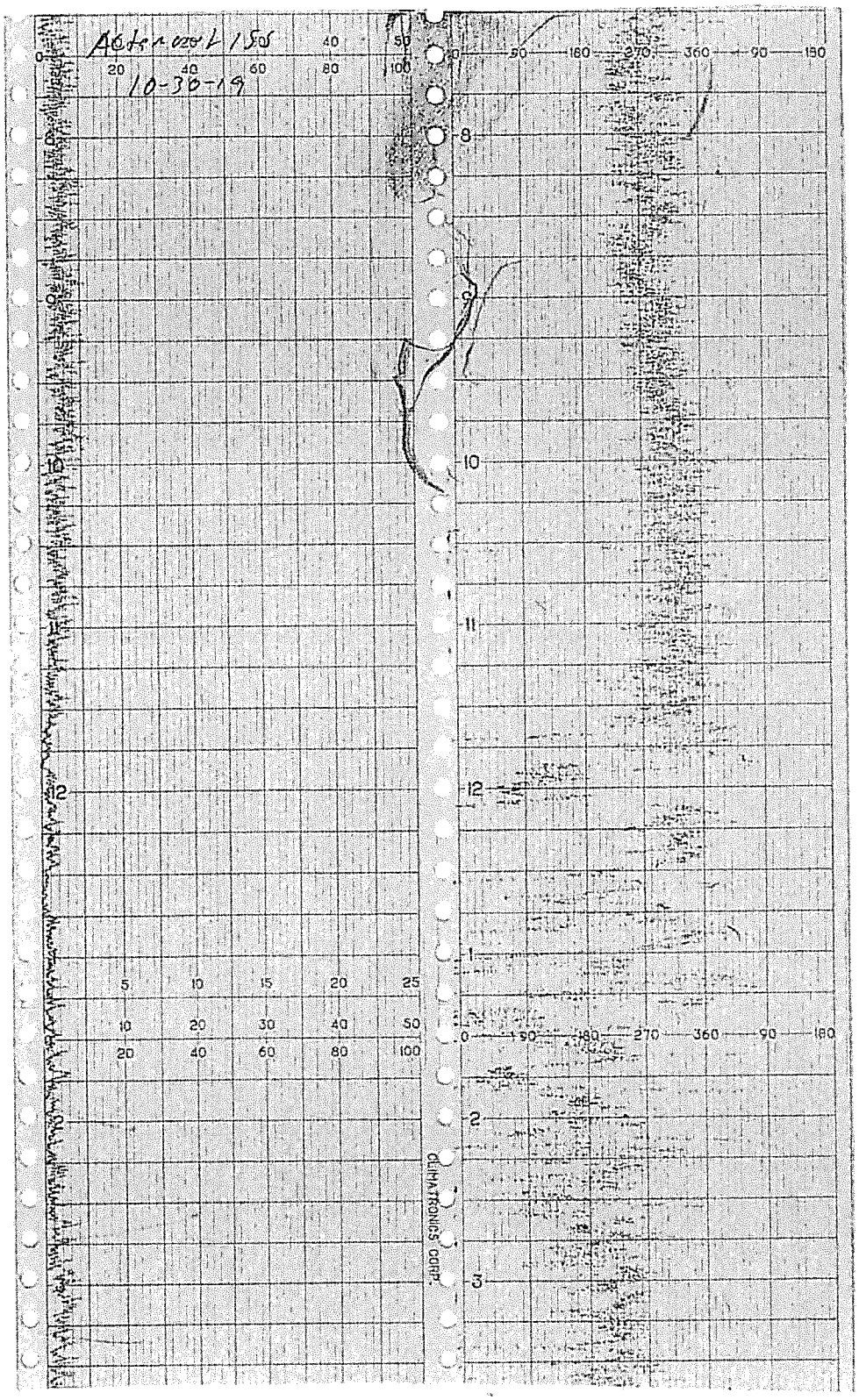
In the event that an exceedance is detected, please intiate corrective action and re-monitor the exceedance location within 7 days of the initial exceedance.

NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

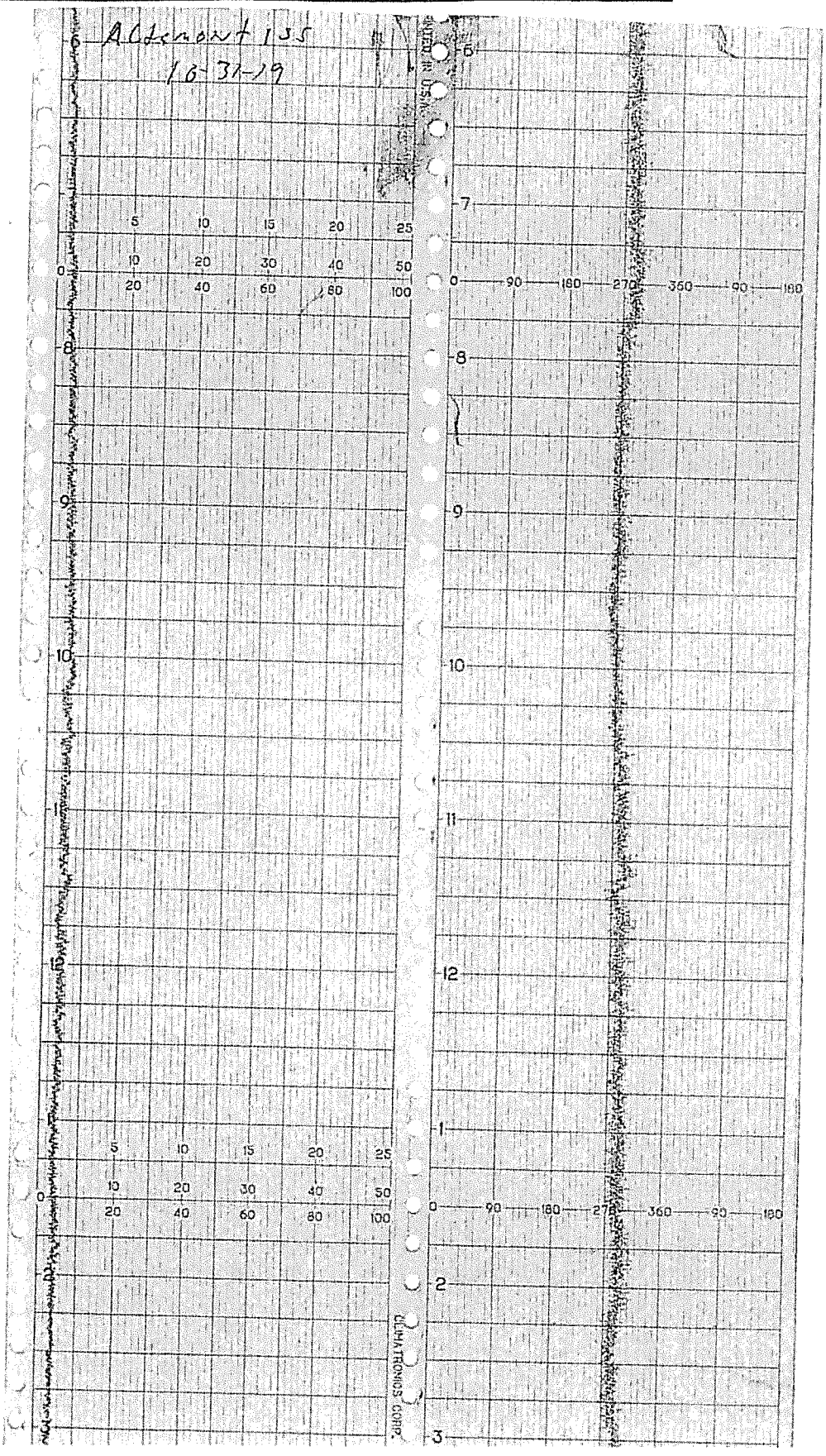
Attachment D

Weather Station Data

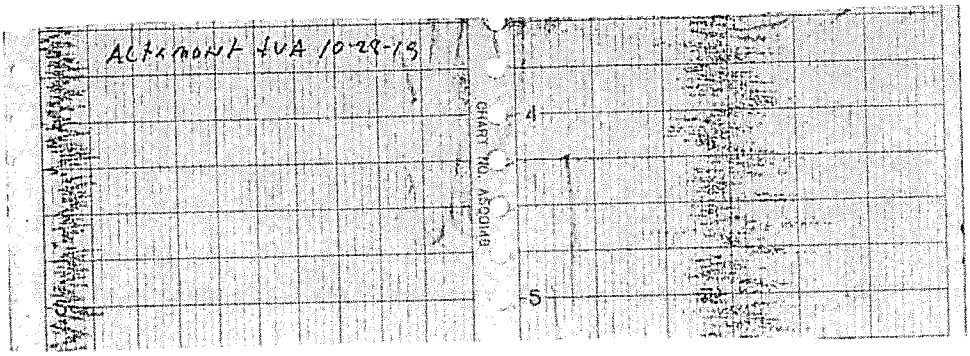
WIND SPEED & DIRECTION CHART ROLL



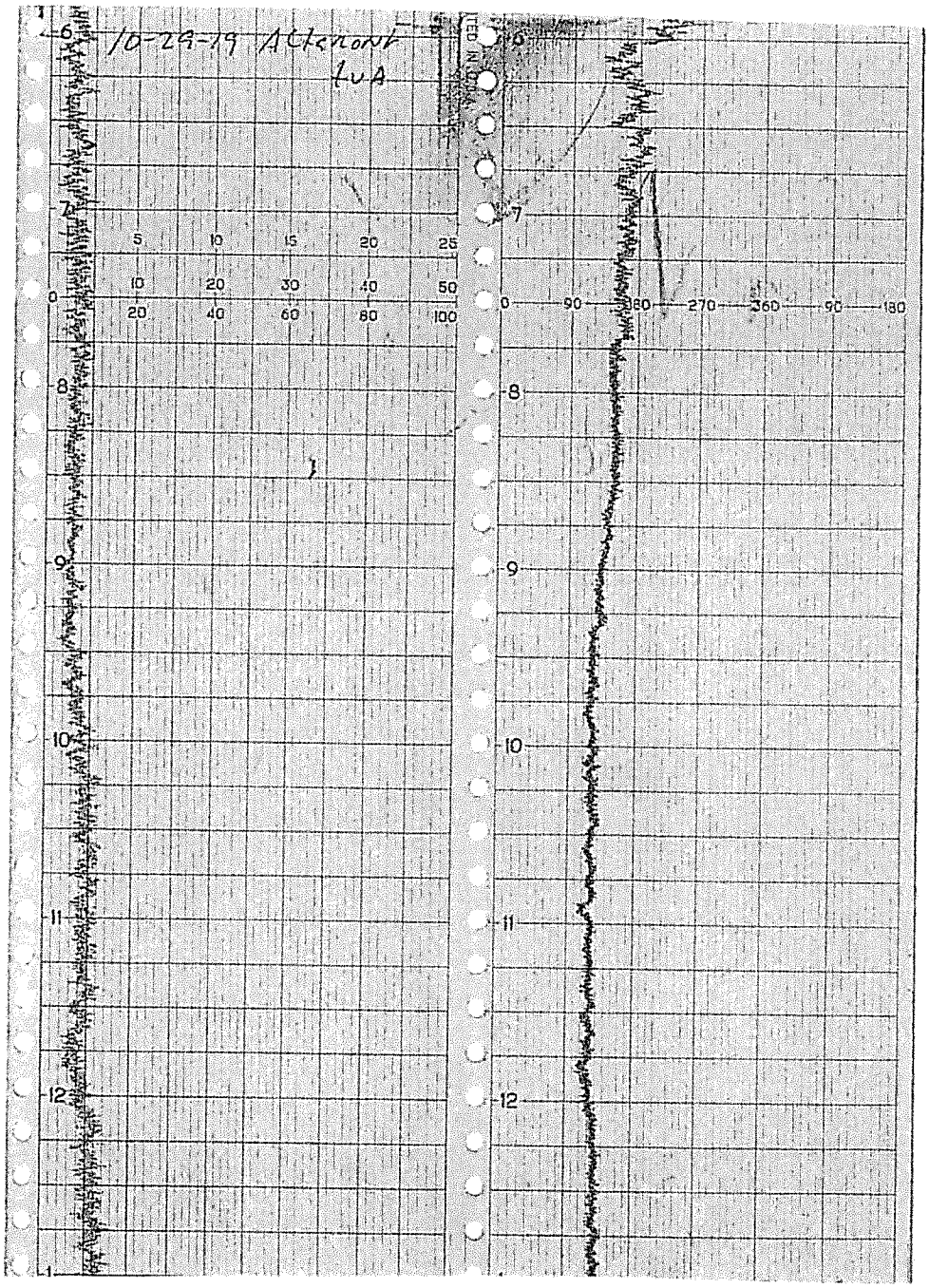
WIND SPEED & DIRECTION CHART ROLL



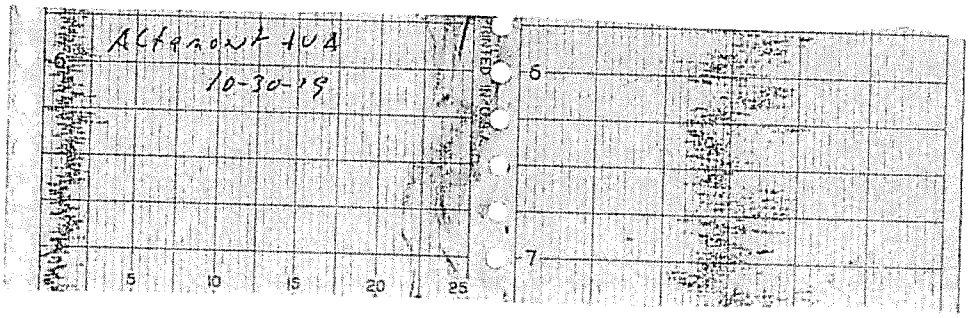
WIND SPEED & DIRECTION CHART ROLL



WIND SPEED & DIRECTION CHART ROLL



WIND SPEED & DIRECTION CHART ROLL



RES Environmental Inc.

16-POINT WIND DIRECTION INDEX

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

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

Attachment E

Calibration Records

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont

MODEL: TVA1000 EQUIPMENT #: 10 INSTRUMENT MAKE: THERMO

MONITORING DATE: 10-28-19 TIME: 1520 SERIAL #: 1036346773

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	496 ppm	446 ppm	6
#2	502 ppm	452 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3)/3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.31 ppm	496 ppm	4
#2	0.24 ppm	502 ppm	2
#3	0.16 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.40 #DIV/0! Must be less than 10%

Performed By: LEIGH WADE Date/Time: 10-28-19 - 1520

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ACTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA1000 EQUIPMENT #: 11 SERIAL #: 1036746774

MONITORING DATE: 10-28-19 TIME: 1520

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	490 ppm	440 ppm	7
#2	498 ppm	448 ppm	7
#3	500 ppm	450 ppm	7
Calculate Response Time (1+2+3)/3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.25 ppm	490 ppm	10
#2	0.14 ppm	498 ppm	2
#3	0.09 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.50 #DIV/0! Must be less than 10%

Performed By: ANTHONY PERALTA Date/Time: 10-28-19-1520

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1036216741

MONITORING DATE: 10-28-19 TIME: 1520

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	490 ppm	490 ppm	6
#2	502 ppm	452 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3) / 3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.40 ppm	490 ppm	10
#2	0.31 ppm	502 ppm	2
#3	0.16 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.80 #DIV/0! Must be less than 10%

Performed By: AARON MCBRIDE Date/Time: 10-28-19-1520

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont

INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE: 10-28-19 TIME: 1520

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	492 ppm	492 ppm	5
#2	498 ppm	448 ppm	5
#3	500 ppm	450 ppm	5
Calculate Response Time (1+2+3) / 3			5 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.34 ppm	492 ppm	8
#2	0.26 ppm	498 ppm	2
#3	0.12 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.66 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 10-28-19 -152

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: "15 SERIAL #: 1036346772

MONITORING DATE: 10-28-19 TIME: 1520

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	496 ppm	446 ppm	7
#2	502 ppm	452 ppm	7
#3	500 ppm	450 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.28 ppm	496 ppm	4
#2	0.21 ppm	502 ppm	2
#3	0.14 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.40 #DIV/0! Must be less than 10%

Performed By: ANDREW JONES Date/Time: 10-28-19 - 1520

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont

MODEL: TVA 1200 EQUIPMENT #: 10 INSTRUMENT MAKE: Thermo

MONITORING DATE: 10-29-19 SERIAL #: 1036346773

TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	496 ppm	446 ppm	?
#2	499 ppm	449 ppm	?
#3	500 ppm	450 ppm	?
Calculate Response Time (1+2+3)/3			? #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = ***500*** **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.41 ppm	496 ppm	4
#2	0.20 ppm	499 ppm	1
#3	0.15 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.33 #DIV/0! Must be less than 10%

Performed By: CRAIG WADE Date/Time: 10-29-19 0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 11 SERIAL #: 1036346774

MONITORING DATE: 10-29-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	489 ppm	439 ppm	6
#2	495 ppm	445 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3) / 3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.33 ppm	489 ppm	11
#2	0.21 ppm	495 ppm	5
#3	0.19 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			1.06 #DIV/0! Must be less than 10%

Performed By: ANTHONY PORCHA Date/Time: 10-29-19-0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 12 SERIAL #: 1036246741

MONITORING DATE: 10-29-19 TIME: 0515

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	506 ppm	456 ppm	6
#2	498 ppm	445 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3) / 3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.20 ppm	506 ppm	6
#2	0.14 ppm	498 ppm	2
#3	6.08 ppm	502 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			8.53 #DIV/0! Must be less than 10%

Performed By: AARON MCBRIDE Date/Time: 10-29-19-0515

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE: 10-29-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	502 ppm	452 ppm	5
#2	496 ppm	446 ppm	5
#3	500 ppm	450 ppm	5
Calculate Response Time (1+2+3) / 3			5 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.28 ppm	502 ppm	2
#2	0.22 ppm	496 ppm	4
#3	0.14 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.46 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 10-29-19-0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: THORAD

MODEL: THR1060 EQUIPMENT #: 15 SERIAL #: 1036316772

MONITORING DATE: 10-29-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.4 ppm	2.6 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	494 ppm	444 ppm	>
#2	501 ppm	451 ppm	>
#3	500 ppm	450 ppm	>
Calculate Response Time (1+2+3) / 3			> #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.19 ppm	494 ppm	6
#2	0.12 ppm	501 ppm	1
#3	0.07 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.96 #DIV/0! Must be less than 10%

Performed By: ARRICK JONES Date/Time: 10-29-10-0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: Altamo

MODEL: TVA 1000 EQUIPMENT #: 10 SERIAL #: 1026346777

MONITORING DATE: 10-30-19 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	495 ppm	445 ppm	6
#2	501 ppm	451 ppm	6
#3	500 ppm	450 ppm	6
Calculate Response Time (1+2+3) / 3			6 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.33 ppm	495 ppm	5
#2	0.21 ppm	501 ppm	1
#3	0.16 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			6.40 #DIV/0! Must be less than 10%

Performed By: Leigh Wade Date/Time: 10-30-19 – 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: ALAMO INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 11 SERIAL #: 1036346771

MONITORING DATE: 10-30-19 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	491 ppm	491 ppm	?
#2	503 ppm	453 ppm	?
#3	500 ppm	450 ppm	?
Calculate Response Time (1+2+3) / 3			? #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.29 ppm	491 ppm	9
#2	0.15 ppm	503 ppm	3
#3	0.11 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.80 #DIV/0! Must be less than 10%

Performed By: ANTHONY PERALTA Date/Time: 10-30-19 - 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Algonot INSTRUMENT MAKE: THermo

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1036246741

MONITORING DATE: 10-30-19 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	502 ppm	452 ppm	5
#2	498 ppm	448 ppm	5
#3	500 ppm	450 ppm	5
Calculate Response Time (1+2+3) / 3			5 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 **ppm**

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.13 ppm	502 ppm	2
#2	0.15 ppm	498 ppm	2
#3	0.09 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.26 #DIV/0! Must be less than 10%

Performed By: AARON McBRIDE Date/Time: 10-30-19 - 0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Algonot INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: " 13 SERIAL #: 1102796775

MONITORING DATE: 10-30-19 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	490 ppm	440 ppm	5
#2	500 ppm	450 ppm	5
#3	500 ppm	450 ppm	5
Calculate Response Time (1+2+3) / 3			5 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0-31 ppm	490 ppm	10
#2	0-26 ppm	560 ppm	0
#3	0-11 ppm	500 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			0.66 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 10-30-19-0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Altamont INSTRUMENT MAKE: Thermo

MODEL: TVA 1000 EQUIPMENT #: 15 SERIAL #: 1636346772

MONITORING DATE: 10-30-19 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 **ppm**

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	489 ppm	409 ppm	7
#2	506 ppm	456 ppm	7
#3	500 ppm	450 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 500 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.45 ppm	489 ppm	11
#2	0.28 ppm	506 ppm	6
#3	.16 ppm	502 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/500 X 100/1			1 #DIV/0! Must be less than 10%

Performed By: Arrien Jones Date/Time: 10-30-19-0540

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Ackerman INSTRUMENT MAKE: THermo

MODEL: TVA 1000 EQUIPMENT #: 10 SERIAL #: 1036216772

MONITORING DATE: 10-30-19 TIME: 0720

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.24 ppm	24 ppm	1
#2	0.18 ppm	25 ppm	0
#3	0.11 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			1.3 #DIV/0! Must be less than 10%

Performed By: LESLIE NOE Date/Time: 10-30-19-0720

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Clermont INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 11 SERIAL #: 1336346779

MONITORING DATE: 10-30-19 TIME: 0720

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	23 ppm	20.7 ppm	7
#2	25 ppm	22.5 ppm	7
#3	25 ppm	22.5 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.34 ppm	23 ppm	2
#2	0.27 ppm	25 ppm	0
#3	0.18 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: Anthony Poreda Date/Time: 10-30-19-0720

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: ALLIANT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 12 SERIAL #: 1036246741

MONITORING DATE: 10-30-19 TIME: 0720

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	23 ppm	20.7 ppm	5
#2	24 ppm	21.6 ppm	5
#3	25 ppm	22.5 ppm	5
Calculate Response Time (1+2+3) / 3			5 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.26 ppm	23 ppm	2
#2	0.18 ppm	24 ppm	1
#3	0.11 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			4.0 #DIV/0! Must be less than 10%

Performed By: AARON MCBRIDE Date/Time: 10-30-19-0720

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Thermo

MODEL: TVA 1000 EQUIPMENT #: 13 SERIAL #: 1102746179

MONITORING DATE: 10-30-19 TIME: 0720

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.19 ppm	24 ppm	1
#2	0.16 ppm	24 ppm	1
#3	0.09 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 10-30-19 0720

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: ACTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 15 SERIAL #: 1036346772

MONITORING DATE: 10-30-19 TIME: 0720

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.39 ppm	24 ppm	1
#2	0.24 ppm	25 ppm	0
#3	0.16 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			.1-3 #DIV/0! Must be less than 10%

Performed By: ARRIEN JONES Date/Time: 10-30-19 - 0720

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: TOPAZ

MODEL: TVA1000 EQUIPMENT #: 10 SERIAL #: 1036346773

MONITORING DATE: 10-31-19 TIME: 0545

Calibration Procedure:

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 2.5 ppm
3. Adjust meter settings to read 25 ppm.

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.40 ppm	24 ppm	1
#2	0.26 ppm	25 ppm	0
#3	0.18 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			1.3 #DIV/0! Must be less than 10%

Performed By: Lois Wade Date/Time: 10-31-19 - 0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Altamont INSTRUMENT MAKE: Honda

MODEL: LVA 1600 EQUIPMENT #: 11 SERIAL #: 1036346774

MONITORING DATE: 10-31-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

Measurement #	Stabilized Reading Using Calibration Gas	90% of the Stabilized Reading	Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas
#1	23 ppm	20.7 ppm	7
#2	24 ppm	21.6 ppm	7
#3	25 ppm	22.5 ppm	7
Calculate Response Time (1+2+3) / 3			7 #DIV/0! Must be less than 30 seconds

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.22 ppm	23 ppm	2
#2	0.14 ppm	24 ppm	1
#3	0.10 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			4.0 #DIV/0! Must be less than 10%

Performed By: Anthony PERATA Date/Time: 10-31-19 0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: ALTAMONT INSTRUMENT MAKE: THERMO

MODEL: TVA 1000 EQUIPMENT #: 12 SERIAL #: 1626216711

MONITORING DATE: 10-31-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.13 ppm	24 ppm	1
#2	0.11 ppm	24 ppm	1
#3	0.06 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			2.6 #DIV/0! Must be less than 10%

Performed By: AARON McBRIDE Date/Time: 10-31-19 0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: ACTIVENT INSTRUMENT MAKE: HONDO

MODEL: FVA1000 EQUIPMENT #: 13 SERIAL #: 1102746725

MONITORING DATE: 10-31-19 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.35 ppm	24 ppm	1
#2	0.27 ppm	25 ppm	0
#3	0.15 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			1.0 #DIV/0! Must be less than 10%

Performed By: ERNEST RAMIREZ Date/Time: 10-31-19 - 0545

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Ackmont INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 15 SERIAL #: 1036346772

MONITORING DATE: 10-31-13 TIME: 0545

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: (Upwind + Downwind) / 2
1.6 ppm	2.4 ppm	2.0 ppm

Background Value = 2.0 ppm

INSTRUMENT RESPONSE TIME RECORD

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

CALIBRATION PRECISION RECORD

Calibration Gas Standard = 25 ppm

Measurement #	Meter Reading for Zero Air (A)	Meter Reading for Calibration Gas (B)	Calculate Precision [STD – (B)]
#1	0.20 ppm	24 ppm	1
#2	0.13 ppm	25 ppm	0
#3	0.17 ppm	25 ppm	0
Calculate Precision [STD-B1] + [STD-B2] + [STD-B3] / 3 X 1/25 X 100/1			.13 #DIV/0! Must be less than 10%

Performed By: ARRICK JONES Date/Time: 10-31-13 0545

RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit # 10

SERIAL NUMBER: 1036346773

TECHNICIAN: [signature] DATE: 10-5-19

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	503	+/- 125
10000	10000	10,003	+/- 2500
< 1	ZERO GAS	0.07	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

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RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #11

SERIAL NUMBER: 1036346774

TECHNICIAN: [signature] DATE: 10-5-19

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,001	+/- 2500
< 1	ZERO GAS	0.81	< 3

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

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RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #12

SERIAL NUMBER: 103624667411

TECHNICIAN: [signature] DATE: 10-5-19

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	500	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.46	< 3

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

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RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #13

SERIAL NUMBER: 1102746775

TECHNICIAN: [signature] DATE: 10-5-19

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	99	+/- 25
500	500	495	+/- 125
10000	10000	10113	+/- 2500
< 1	ZERO GAS	0.72	< 3

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

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

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RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site: _____

Purpose: _____

Operator: _____

Date: 10-5-19 **Time:** 0715

Model # TVA-1000B

Serial # #10 1036346773

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION		
Battery test	(Pass) / Fail	CALIBRATION CHECK		
Reading following ignition	3.19 ppm	Calibration Gas (ppm)	Actual (ppm)	% Accuracy
Leak test	(Pass) / Fail / NA	500	500	100%
Clean system check (check valve chatter)	(Pass) / Fail / NA	RESPONSE TIME		
H_2 supply pressure gauge (acceptable range 9.5 - 12)	(Pass) / Fail / NA	Calibration Gas, ppm	500	
Date of last factory calibration	10-5-19	90% of Calibration Gas, ppm	450	
Factory calibration record w/instrument within 3 months	(Pass) / Fail	Time required to attain 90% of Cal Gas ppm		
		1.	6	
		2.	9	
		3.	10	
		Average	8.3	
		Equal to or less than 30 seconds?	(Y)	N
		Instrument calibrated to CH4 gas.		

Comments: _____

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RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit # 15

SERIAL NUMBER: 1036346772

TECHNICIAN: [signature] DATE: 10-5-15

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID			
METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	100	+/- 25
500	500	503	+/- 125
10000	10000	10,069	+/- 2500
< 1	ZERO GAS	0.68	< 3
PID			
ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

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RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT

CALIBRATION LOG

Site: _____

Purpose: _____

Operator: _____

Date: 10-5-19 **Time:** 0830

Model # TVA 1000B

Serial # #15 1036346772

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION
Battery test	(Pass) / Fail	CALIBRATION CHECK
Reading following ignition	1.98 ppm	Calibration Gas (ppm): 500 / Actual (ppm): 500 / % Accuracy: 100%
Leak test	(Pass) / Fail / NA	RESPONSE TIME
Clean system check (check valve chatter)	(Pass) / Fail / NA	Calibration Gas, ppm: 500
H_2 supply pressure gauge (acceptable range 9.5 - 12)	(Pass) / Fail / NA	90% of Calibration Gas, ppm: 450
Date of last factory calibration	10-5-19	Time required to attain 90% of Cal Gas ppm: 1. 7; 2. 6; 3. 6; Average 6.3
Factory calibration record w/instrument within 3 months	(Pass) / Fail	Equal to or less than 30 seconds? (Y) N
		Instrument calibrated to CH4 gas.

Comments: _____

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RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site: _____

Purpose: _____

Operator: _____

Date: 10-5-19 **Time:** 0730

Model # TVA 1000 B

Serial # #11 1036346774

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION
Battery test	(Pass) / Fail	CALIBRATION CHECK
Reading following ignition	2.69 ppm	Calibration Gas (ppm): 500 / Actual (ppm): 500 / % Accuracy: 100%
Leak test	(Pass) / Fail / NA	RESPONSE TIME
Clean system check (check valve chatter)	(Pass) / Fail / NA	Calibration Gas, ppm: 500
H_2 supply pressure gauge (acceptable range 9.5 - 12)	(Pass) / Fail / NA	90% of Calibration Gas, ppm: 450
Date of last factory calibration	10-5-19	Time required to attain 90% of Cal Gas ppm: 1. 7; 2. 6; 3. 6; Average 6.3
Factory calibration record w/instrument within 3 months	(Pass) / Fail	Equal to or less than 30 seconds? (Y) N
		Instrument calibrated to CH4 gas.

Comments: _____

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RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site: _____

Purpose: _____

Operator: JM / TM

Date: 10-5-19 **Time:** 0745

Model # TVA-1000 B

Serial # #12 1036246741

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION
Battery test	(Pass) / Fail	CALIBRATION CHECK
Reading following ignition	1.90 ppm	Calibration Gas (ppm): 500 / Actual (ppm): 500 / % Accuracy: 100%
Leak test	(Pass) / Fail / NA	RESPONSE TIME
Clean system check (check valve chatter)	(Pass) / Fail / NA	Calibration Gas, ppm: 500
H_2 supply pressure gauge (acceptable range 9.5 - 12)	(Pass) / Fail / NA	90% of Calibration Gas, ppm: 450
Date of last factory calibration	10-5-19	Time required to attain 90% of Cal Gas ppm: 1. 7 / 2. 6 / 3. 6
Factory calibration record w/instrument within 3 months	(Pass) / Fail	Average: 6.3
		Equal to or less than 30 seconds? (Y) N
		Instrument calibrated to CH4 gas.

Comments: _____

465

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RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site: _____

Purpose: _____

Operator: _____

Date: 10-5-19 **Time:** 0800

Model # TVA 1000 B

Serial # #13 1102-246775

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION
Battery test	(Pass) / Fail	CALIBRATION CHECK
Reading following ignition	2.68 ppm	Calibration Gas (ppm): 500 / Actual (ppm): 500 / % Accuracy: 100%
Leak test	(Pass) / Fail / NA	RESPONSE TIME
Clean system check (check valve chatter)	(Pass) / Fail / NA	Calibration Gas, ppm: 500
H_2 supply pressure gauge (acceptable range 9.5 - 12)	(Pass) / Fail / NA	90% of Calibration Gas, ppm: 450
Date of last factory calibration	10-5-19	Time required to attain 90% of Cal Gas ppm: 1. 6 / 2. 7 / 3. 8
Factory calibration record w/instrument within 3 months	(Pass) / Fail	Average: 7.0
		Equal to or less than 30 seconds? (Y) N
		Instrument calibrated to CH4 gas.

Comments: _____

465

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TETRA TECH

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: ALTAMONT

MONITORING DATE: 12/20/2019 Time: 8:00 AM

INSTRUMENT MAKE: TRIMBLE MODEL: SITEFID S/N: TLCF0303

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	497.0	ppm
90% of the Stabilized Reading:	447.3	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	5.0	seconds (1)

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	495.0	ppm
90% of the Stabilized Reading:	445.5	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	5.0	seconds (2)

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	494.0	ppm
90% of the Stabilized Reading:	444.6	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	5.0	seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3}$$

= 5.0 SECONDS (MUST BE LESS THAN 30 SECONDS)

PERFORMED BY: Mike Schorer

TETRA TECH

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: ALTAMONT

MONITORING DATE: 12/20/2019 PERFORMED BY: Mike Schorer

QUARTERLY EVENT: Q4 2019 TIME: 8:00 AM

INSTRUMENT MAKE: TRIMBLE MODEL: SITEFID S/N: TLCF0303

Calibration Gas Standard 500ppm CH4 (STD)

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 ppm (1)

Meter Reading for Calibration Gas: 497.0 ppm (2)

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 ppm (3)

Meter Reading for Calibration Gas: 495.0 ppm (4)

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 ppm (5)

Meter Reading for Calibration Gas: 494.0 ppm (6)

CALCULATE PRECISION:

$$\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{100}{1}$$

= 0.933% % (must be less than 10%)

TETRA TECH

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: ALTAMONT

INSTRUMENT MAKE: TRIMBLE **MODEL:** SITEFID **S/N:** TLCF0303

Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.
   Stable Reading= 497.0 ppm
3. Adjust meter to read 500 ppm.

BACKGROUND DETERMINATION PROCEDURE

1. Upwind Reading (highest in 30 seconds): 0.0 ppm (1)
   Location: North side of plant
2. Downwind Reading (highest in 30 seconds): 0.0 ppm (2)
   Location: South side of plant

Calculate Background Value: $\frac{(1) + (2)}{2}$

Background = 0.00 ppm

PERFORMED BY: Mike Schorer **TIME:** 8:00 AM

DATE: 12/20/2019

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 10.30.19

Time: 8:23 (AM) ____ PM

Instrument Make: PHOTOVAC Model: MICROFID S/N: CZPD312

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 10-31-19

Time: 6:50 AM _____ PM

Instrument Make: Photovac Model: MicroFID S/N: C2PD32

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: Jim Barud

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 12-06-19

Time: 7:06 AM _____ PM

Instrument Make: Photovac Model: MicroFID S/N: CZPD312

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: Juan Barocio

CALIBRATION PRECISION TEST RECORD

Date: 10-18-19

Expiration Date (3 months): 1-18-2020

Time: 8:30 AM _____ PM

Instrument Make: Photovac Model: MicroFID S/N: CZPD312

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 500 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 500 ppm (f)

Calculate Precision:

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

_____ % (must be < than 10%)

Performed By: Jim Barone

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 10-18-19

Time: 8:30 AM _____ PM

Instrument Make: Photovac Model: MicroFID S/N: CZP0317

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: Juan Bueno

RESPONSE TIME TEST RECORD

Date: 10-18-19

Expiration Date (3 months): 1-18-2020

Time: 8:36 AM _____ PM

Instrument Make: Photovac Model: Micro FID S/N: C2PD312

Measurement #1:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (c)

Calculate Response Time:

$\frac{(a) + (b) + (c)}{3}$ = 2 seconds (must be less than 30 seconds)

Performed By: Juan Bucio

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CERTIFICATE OF ANALYSIS

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

Lot # 19-6779

Mfg. Date: 4/3/2019

Parent Cylinder ID Number: 001739, 02268

Method of Preparation:
Gravimetric/Pressure Transfilled

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

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

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CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy
Methane	500 ppm	± 2%
Air	Balance	

Lot # 18-6386

Mfg. Date: 6/4/2018

Parent Cylinder ID Number: 001763

Method of Preparation:

Gravimetric/Pressure Transfilled

Method of Analysis:

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

Analysis By: Tony Janquart
Quality Assurance Manager
800-552-5003
Certificate Date: 6/4/2018

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CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy (+/-)
Methane	500 ppm	2%
Oxygen	20.9 %	2%
Nitrogen	Balance UHP	

Lot #	**18-6641**
Mfg. Date:	12/18/2018
Expiration Date:	
Transfill Date:	see cylinder
Parent Cylinder ID Number:	001763

Method of Preparation:

Gravimetric/Pressure Transfilled

Method of Analysis:

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

Analysis By: Tony Janquart
Title: Quality Assurance Manager
Certificate Date: 12/18/2018

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CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy
Methane	25 ppm	± 5%
Air	Balance	

Lot # 17-6074

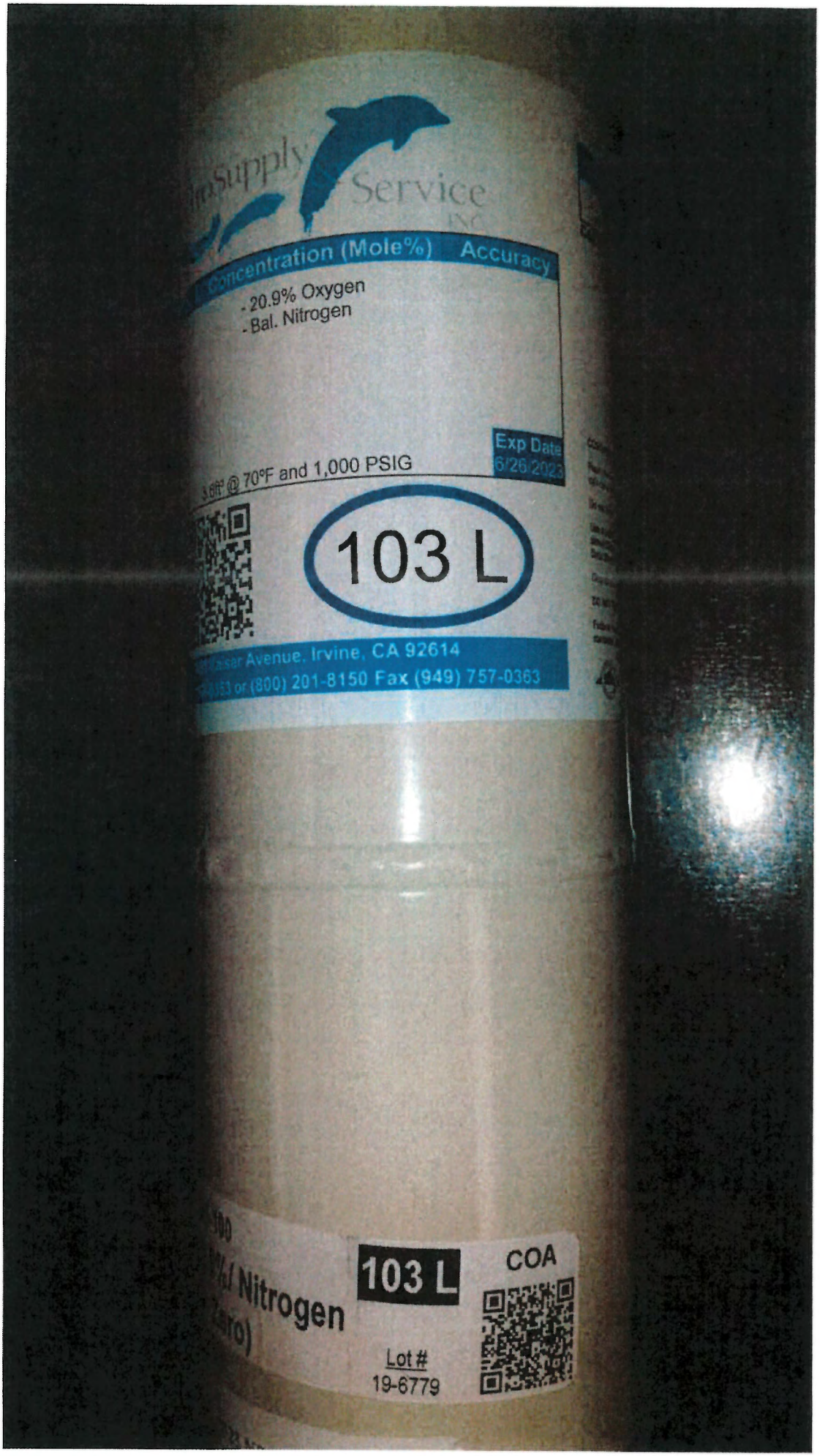
Mfg. Date: 10/16/2017

Parent Cylinder ID Number: 17161

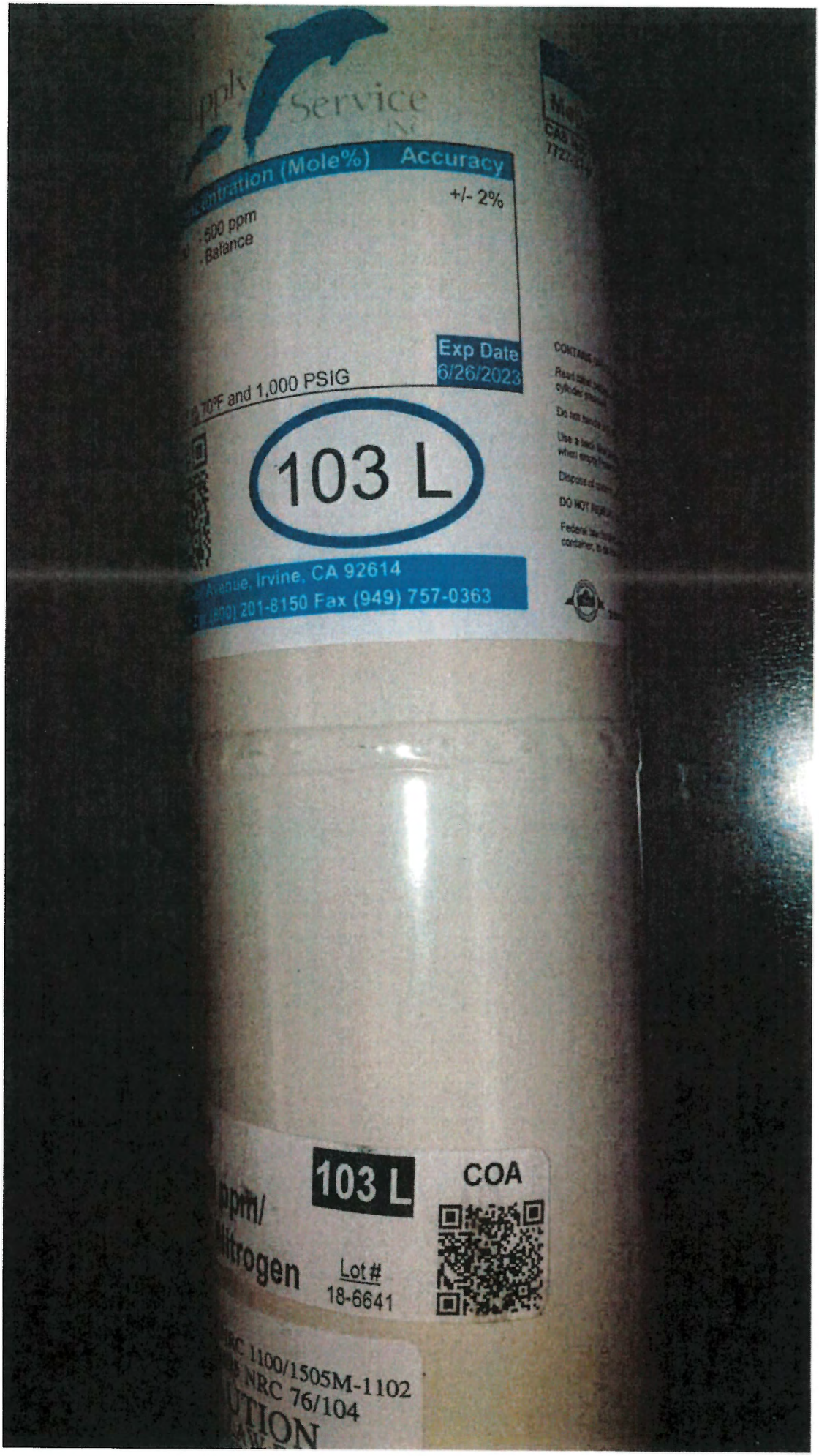
Method of Preparation:
Gravimetric/Pressure Transfilled

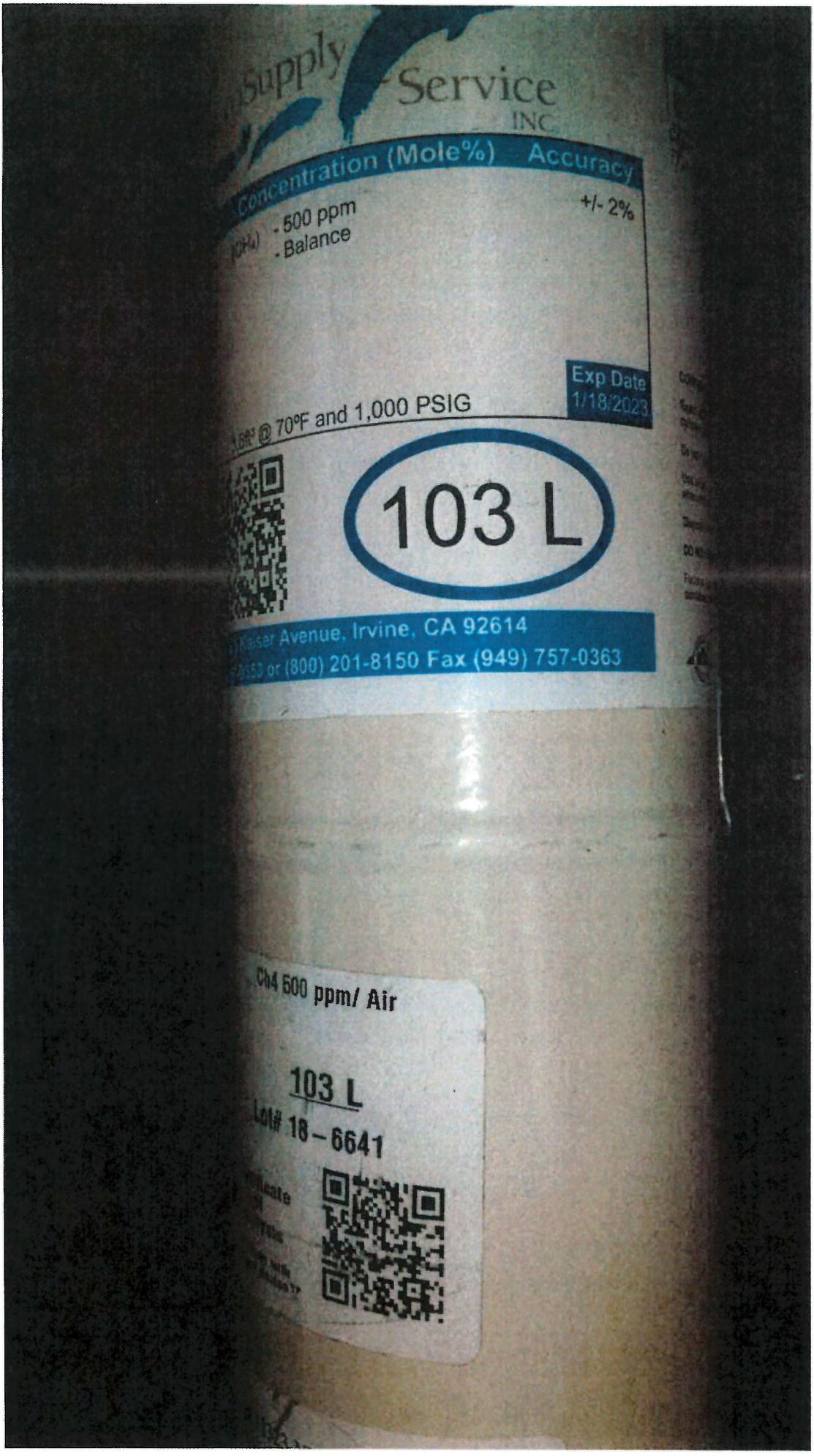
Method of Analysis:
The parent mix was prepared gravimetrically and is traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale.

Analysis By: Tony Janquart
Quality Assurance Manager
800-552-5003
Certificate Date: 10/16/2017


Service
Concentration (Mole%) Accuracy
- 20.9% Oxygen
- Bal. Nitrogen
Exp Date
6/26/2023
@ 70°F and 1,000 PSIG
103 L
Avenue, Irvine, CA 92614
or (800) 201-8150 Fax (949) 757-0363
103 L
COA
Nitrogen
Lot #
19-6779


Accuracy
+/- 2%
- 500 ppm
Balance
Exp Date
12/14/2019
@ 70°F and 1,000 PSIG
103 L
Avenue, Irvine, CA 92614
or (800) 201-8150 Fax (949) 757-0363
ppm/ Air
103 L


Service
centration (Mole%)
Accuracy
+/- 2%
500 ppm
Balance
Exp Date
6/26/2023
70°F and 1,000 PSIG
103 L
Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
103 L
COA
ppm/
itrogen
Lot #
18-6641
1100/1505M-1102
NRC 76/104
UTION


Supply
Service
INC
Concentration (Mole%)
Accuracy
- 500 ppm
- Balance
+/- 2%
Exp Date
1/18/2023
@ 70°F and 1,000 PSIG
103 L
Kaiser Avenue, Irvine, CA 92614
or (800) 201-8150 Fax (949) 757-0363
Ch4 500 ppm/ Air
103 L
Lot# 18-6641


Concentration (Mole%)
Accuracy
- 25 ppm
. Balance
+/- 5%
3.6ft³ @ 70°F and 1,000 PSIG
Exp Date
103 L
Kaiser Avenue, Irvine, CA 92614
Ch4 25 ppm/Air
103 L
Lot# 17 – 6074
Certificate
of
Analysis

APPENDIX K
COMPONENT LEAK REPORTS

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

2020 QUARTER: **1**

INITIAL MONITORING PERFORMED BY: ALRRF/CEG

FOLLOW-UP MONITORING PERFORMED BY CEG-TT

LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	3/11/2020	ND						
A16- Flare Station	3/11/2020	ND						
S6 and S7 Turbines	3/5/2020	ND						
LNG Plant-	3/5/2020	ND						

Note: ICEs were shutdown during the entire quarter

ND= No exceedances detected

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

2020 QUARTER: **1**

INITIAL MONITORING PERFORMED BY: ALRRF/CEG

FOLLOW-UP MONITORING PERFORMED BY: CEG-TT

LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	3/11/2020	ND						
A16- Flare Station	3/11/2020	ND						
S6 and S7 Turbines	3/5/2020	ND						
LNG Plant-	3/5/2020	ND						

Note: ICEs were shutdown during the entire quarter

ND= No exceedances detected

QUARTERLY LFG COMPONENT LEAK MONTORING																				
EQUIPMENT:	Turbine Gas skids																			
INSTRUMENT:	FID																			
MAKE:	Photovac																			
MODEL:	Micro FID																			
S/N:	CZPD312																			
DATE OF SAMPLING:	3/5/2020																			
TECHNICIAN:	L.LaCerra																			
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Roots Flex Couplings			Howden Compressor	InterstageVessel			Oil/Gas Separator Vessel			Gas Separator Vessel		Cooling Towers/ Heat Exchanger Piping		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2	# 3
Compressor skid # 1																					
TEST DATE	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20
LEAK CONCENTRATION FOUND (ppm)	< 3.0 ppm			< 7.0 ppm			2.0 ppm			0 ppm	< 22.0 ppm			< 6.0 ppm			< 2.0 ppm		0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Compressor skid # 2																					
TEST DATE	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20	3/5/20
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 5.0 ppm			< 5.0 ppm			0 ppm	< 12.0 ppm			< 3.0 ppm			< 2.0 ppm		0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Comments:																					
Note:	In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																			

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	Turbine Skids
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	3/5/2020
TECHNICIAN:	L.LaCerra

LOCATION OF LEAK(S)	Bolted connections			Pipes (flanged, unions)			Inlet piping and valves			Sensors, transducers			Propane tank & piping			Gas manifold and piping				
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 3	# 4	# 5
Turbine 1																				
TEST DATE	3/5/20			3/5/20			3/5/20			3/5/20			3/5/20			3/5/20				
LEAK CONCENTRATION FOUND (ppm)	< 4 ppm			< 4 ppm			< 2 ppm			< 3 ppm			0 ppm			< 35 ppm				
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Turbine 2																				
TEST DATE	3/5/20			3/5/20			3/5/20			3/5/20			3/5/20			3/5/20				
LEAK CONCENTRATION FOUND (ppm)	< 2 ppm			< 1 ppm			< 1 ppm			< 1 ppm			0 ppm			< 12 ppm				
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

cornerstone environmental

COMPONENT LEAK CHECK MONITORING

ALTAMONT, LINDE PLANT

INSTRUMENT FID
MAKE: TVA
MODEL: Thermo Scientific / 2020
S/N: 2020-17112952

DATE(S) OF SAMPLING: 3/5/2020
TECHNICIANS: Ben Chipponeri

LOCATION OF LEAK	Date	PPM	Date of Repair	Date of Re-monitoring	Re-monitoring PPM	Comments/Repairs Made
Roadway condensate skid	3/5/2020	0	NA	NA	NA	
Condesate sump	3/5/2020	0	NA	NA	NA	
Liquifer pad	3/5/2020	0	NA	NA	NA	
Compressor A	3/5/2020	0	NA	NA	NA	
Compressor B	3/5/2020	0	NA	NA	NA	
Mole Gate Tank	3/5/2020	0	NA	NA	NA	
Dryer Skid	3/5/2020	0	NA	NA	NA	
VOC Trap	3/5/2020	0	NA	NA	NA	
Tail Gas Surge	3/5/2020	0	NA	NA	NA	
Vacuum Skid	3/5/2020	0	NA	NA	NA	
Mole Gate	3/5/2020	0	NA	NA	NA	
Rec Comp	3/5/2020	0	NA	NA	NA	
Storage Area	3/5/2020	0	NA	NA	NA	
Cold Box	3/5/2020	13	NA	NA	NA	
Ref Sep Skid	3/5/2020	0	NA	NA	NA	
Evap Cooler	3/5/2020	0	NA	NA	NA	
York Oil Filter	3/5/2020	0	NA	NA	NA	
York Oil Cooler	3/5/2020	0	NA	NA	NA	
Membrane Skid	3/5/2020	0	NA	NA	NA	
Heat Exchanger	3/5/2020	0	NA	NA	NA	
Cold Trap	3/5/2020	0	NA	NA	NA	
Sulfa Treat	3/5/2020	0	NA	NA	NA	
GC Shed	3/5/2020	0	NA	NA	NA	
Gas feed line east of york comp, overhead	3/5/2020	12	NA	NA	NA	

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

NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	A16 Flare
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	03.11.20
TECHNICIAN:	Dan San Jose

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Flare Valves, Sensors and Piping			Blowers			LNG Valves, Sensors and Piping to LNG Isolation Valve			Header to Landfill			Propane Tanks and Piping		IC Engine Valves and Sensors			IC Engine Compression Skid			IC Engine Manifold Piping and Metal Container		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#2	#3	# 1	# 2	# 3	#1	# 2	#1	#2	#3	#1	#2	#3	#1	#2	#3
A-16																													
TEST DATE	03.11.20			03.11.20			03.11.20			03.11.20			03.11.20			03.11.20			03.11.20		N/A			N/A			N/A		
LEAK CONCENTRATION FOUND (ppm)	No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found									
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 1																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 2																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
LNG Plant																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING																
EQUIPMENT:	A15															
INSTRUMENT:	FID															
MAKE:	Photovac															
MODEL:	Micro FID															
S/N:	CZPD312															
DATE OF SAMPLING:	3/11/2020															
TECHNICIAN:	Ben Tarver															
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Discharge Blower			Flame Arrestor			Header Pipe to Flare & Sensors		Propane Tank and Piping	
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2
A-15 Flare Station																
TEST DATE	3/11/2020			3/11/2020			3/11/2020			3/11/2020			3/11/2020		3/11/2020	
LEAK CONCENTRATION FOUND (ppm)	No exceedances found			No exceedances found			No exceedances found			No exceedances found			No exceedances found		No exceedances found	
ACTION TAKEN																
REPAIR DATE																
RE-TEST DATE																
RE-TEST CONCENTRATION (ppm)																
Comments:																
Note:	In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.															

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

2019 QUARTER: 4
INITIAL MONITORING PERFORMED BY: ALRRF/CEG
FOLLOW-UP MONITORING PERFORMED BY CEG-TT
LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	10/18/2019	ND						
A16- Flare Station	10/18/2019	ND						
S23 ICE's	Unit was retired	NA						
S24 ICE's	Unit was retired	NA						
S6 and S7 Turbines	12/6/2019	ND						
LNG Plant-	12/20/2019	ND						

Note: ICEs were shutdown during the entire quarter
ND= No exceedances detected

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

2019 QUARTER: 4
INITIAL MONITORING PERFORMED BY: ALRRF/CEG
FOLLOW-UP MONITORING PERFORMED BY: CEG-TT
LANDFILL NAME: **Altamont Landfill and Resource Recovery Facility**

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
A15- Flare Station	10/18/2019	ND						
A16- Flare Station	10/18/2019	ND						
S23 ICE's	Unit was retired	NA						
S24 ICE's	Unit was retired	NA						
S6 and S7 Turbines	12/6/2019	ND						
LNG Plant-	12/20/2019	ND						

Note: ICEs were shutdown during the entire quarter
ND= No exceedances detected

QUARTERLY LFG COMPONENT LEAK MONTORING																
EQUIPMENT:	A15															
INSTRUMENT:	FID															
MAKE:	Photovac															
MODEL:	Micro FID															
S/N:	CZPD312															
DATE OF SAMPLING:	10/18/2019															
TECHNICIAN:	Juan Barocio/DanSanjose															
LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Discharge Blower			Flame Arrestor			Header Pipe to Flare & Sensors		Propane Tank and Piping	
	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#1	#2
A-15 Flare Station																
TEST DATE	10/18/2019			10/18/2019			10/18/2019			10/18/2019			10/18/19		10/18/19	
LEAK CONCENTRATION FOUND (ppm)	No exceedances found			No exceedances found			No exceedances found			No exceedances found			No exceedances found		No exceedances found	
ACTION TAKEN																
REPAIR DATE																
RE-TEST DATE																
RE-TEST CONCENTRATION (ppm)																
Comments:																
Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	A16 Flare
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	10/18/2019
TECHNICIAN:	Juan Barocio/Dan Sanjose

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Flare Valves, Sensors and Piping			Blowers			LNG Valves, Sensors and Piping to LNG Isolation Valve			Header to Landfill			Propane Tanks and Piping		IC Engine Valves and Sensors			IC Engine Compression Skid			IC Engine Manifold Piping and Metal Container		
	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#1	#2	#3	#1	#2	#3	#1	#2	#3
A-16																													
TEST DATE	10/18/19			10/18/19			10/18/19			10/18/19			10/18/19			10/18/19			10/18/19									
LEAK CONCENTRATION FOUND (ppm)	No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found			No Exceedances found									
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 1																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
IC Engine # 2																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													
LNG Plant																													
TEST DATE																													
LEAK CONCENTRATION FOUND (ppm)																													
ACTION TAKEN																													
REPAIR DATE																													
RE-TEST DATE																													
RE-TEST CONCENTRATION (ppm)																													

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING

EQUIPMENT:	Turbine Gas skids
INSTRUMENT:	FID
MAKE:	Photovac
MODEL:	Micro FID
S/N:	CZPD312
DATE OF SAMPLING:	12/6/2019
TECHNICIAN:	L.LaCerra

LOCATION OF LEAK(S)	Bolted Connections			Pipes (Flanged, Unions)			Roots Flex Couplings			Howden Compressor	InterstageVessel			Oil/Gas Separator Vessel			Gas Separator Vessel		Cooling Towers/ Heat Exchanger Piping		
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 1	# 2	# 3
Compressor skid # 1																					
TEST DATE	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 5.0 ppm			< 4.0 ppm			< 26.0 ppm	< 5.0 ppm			<5.0 ppm			5.0 ppm		< 3.0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					
Compressor skid # 2																					
TEST DATE	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19	12/6/19
LEAK CONCENTRATION FOUND (ppm)	< 5.0 ppm			< 4.0 ppm			< 6.0 ppm			< 5.0 ppm	< 5.0 ppm			< 5.0 ppm			< 50.0 ppm		< 5.0 ppm		
ACTION TAKEN																					
REPAIR DATE																					
RE-TEST DATE																					
RE-TEST CONCENTRATION (ppm)																					

Comments:

Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance.
Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).
Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.

QUARTERLY LFG COMPONENT LEAK MONTORING																				
EQUIPMENT:	Turbine Skids																			
INSTRUMENT:	FID																			
MAKE:	Photovac																			
MODEL:	Micro FID																			
S/N:	CZPD312																			
DATE OF SAMPLING:	12/6/2019																			
TECHNICIAN:	L.LaCerra																			
LOCATION OF LEAK(S)	Bolted connections			Pipes (flanged, unions)			Inlet piping and valves			Sensors, transducers			Propane tank & piping			Gas manifold and piping				
	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	#1	# 2	# 3	# 1	# 2	# 3	# 4	# 5
Turbine 1																				
TEST DATE	12/6/19			12/6/19			12/6/19			12/6/19			12/6/19			12/6/19				
LEAK CONCENTRATION FOUND (ppm)	< 5..0 ppm			<5.0 ppm			< 5.0 ppm			< 3.0 ppm			< 0 ppm			< 238.0. ppm			< 87.0 ppm	
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Turbine 2																				
TEST DATE	12/6/19			12/6/19			12/6/19			12/6/19			12/6/19			12/6/19				
LEAK CONCENTRATION FOUND (ppm)	< 10.0 ppm			< 75.0 ppm			< 5.0 ppm			< 8.0 ppm			< 0 ppm			< 8.0 ppm			< 5 ppm	
ACTION TAKEN																				
REPAIR DATE																				
RE-TEST DATE																				
RE-TEST CONCENTRATION (ppm)																				
Comments:																				
Note: In the event that an exceedance is detected, please intiate corrective action and **re-monitor the exceedance location within 7 days** of the initial exceedance. Leaks over 500 ppmv methane are exceedances at any component containing landfill gas pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas pursuant to BAAQMD Regulation 8-34-301.2.																				

cornerstone
environmental

COMPONENT LEAK CHECK MONITORING

ALTAMONT, LINDE PLANT 4Q 2019

INSTRUMENT: FID
MAKE: TRIMBLE
MODEL: Thermo Scientific / SITEFID
S/N: TLCF0303
DATES OF SAMPLING: 12/20/2019
TECHNICIANS: MIKE SCHORER

LOCATION OF LEAK	Date	PPM	Date of Repair	Date of Re-monitoring	Re-monitoring PPM	Comments/Repairs Made
Roadway Condensate Skid	12/20/2019	2	NA	NA	NA	Could not pinpoint, slight wind
Condesate Sump	12/20/2019	0	NA	NA	NA	
Liquifer Pad	12/20/2019	0	NA	NA	NA	
Compressor A	12/20/2019	0	NA	NA	NA	
Compressor B	12/20/2019	0	NA	NA	NA	
Mole Gate Tank	12/20/2019	163	NA	NA	NA	Would not sustain, in front of FV327 valve
Dryer Skid	12/20/2019	62	NA	NA	NA	Slight wind hard to pinpoint, would not sustain
VOC Trap	12/20/2019	0	NA	NA	NA	
Tail Gas Surge	12/20/2019	0	NA	NA	NA	
Vacuum Skid	12/20/2019	0	NA	NA	NA	
Mole Gate	12/20/2019	0	NA	NA	NA	
Rec Comp	12/20/2019	0	NA	NA	NA	Oily on pad
Storage Area	12/20/2019	0	NA	NA	NA	
Cold Box	12/20/2019	0	NA	NA	NA	
Ref Sep Skid	12/20/2019	3	NA	NA	NA	Swagelock fitting
Evap Cooler	12/20/2019	0	NA	NA	NA	
York Oil Filter	12/20/2019	0	NA	NA	NA	
York Oil Cooler	12/20/2019	0	NA	NA	NA	
Membrane Skid	12/20/2019	0	NA	NA	NA	
Heat Exchanger	12/20/2019	0	NA	NA	NA	
Cold Trap	12/20/2019	18	NA	NA	NA	Could not pinpoint, would not sustain
Sulfa Treat	12/20/2019	0	NA	NA	NA	
GC Shed	12/20/2019	17	NA	NA	NA	Swagelock fitting on south panel
Gas Feed Line East of York Vomp, Overhead	12/20/2019	12,681	12/20/2019	12/20/2019	0	Flange leaking, tightened and cleaned plug

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

NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B). Leaks over 1,000 ppmv methane are exceedances at any component containing landfill gas, pursuant to BAAQMD Regulation 8-34-301.2.

APPENDIX L

NON-DEGRADABLE WASTE ACCEPTANCE RECORD

Friable Source Report2

Report Details

Owner: aortega

Last Updated: On demand

Filters: Site show only ('S04305 - Altamont Landfill & Resource Recovery Facility'), Ticket Date only show values between '12/01/2019' and '05/31/2020', Ticket Status show only ('Completed'), Material Name show only ('WM-Asb Friable','FACW')

Material Name	Origin Name	Loads	Tonnage Amount
FACW	Alameda	1.00	0.08
FACW	San Leandro	1.00	1.00
FACW	San Pablo	1.00	0.02
FACW	Sausalito	1.00	0.04
FACW	Walnut Creek	2.00	1.19
WM-Asb Friable	Alameda	12.00	65.72
WM-Asb Friable	Alamo	1.00	4.35
WM-Asb Friable	Albany	1.00	3.46
WM-Asb Friable	Antioch	1.00	0.24
WM-Asb Friable	Atherton	1.00	7.04
WM-Asb Friable	Berkeley	14.00	42.54
WM-Asb Friable	Berkeley Transfer St	2.00	6.00
WM-Asb Friable	Campbell	3.00	18.26
WM-Asb Friable	Concord	2.00	4.44
WM-Asb Friable	Cupertino	1.00	0.22
WM-Asb Friable	Emeryville	1.00	3.25
WM-Asb Friable	Fremont	4.00	30.88
WM-Asb Friable	Gilroy	1.00	6.63
WM-Asb Friable	Hayward	34.00	235.32
WM-Asb Friable	Livermore	5.00	33.94
WM-Asb Friable	Los Altos	1.00	0.35
WM-Asb Friable	Los Gatos	1.00	1.47
WM-Asb Friable	Martinez	7.00	9.75
WM-Asb Friable	Menlo Park	3.00	15.76
WM-Asb Friable	Moffett Field NAS	2.00	17.05
WM-Asb Friable	Moraga	1.00	2.47
WM-Asb Friable	Morgan Hill	2.00	15.44
WM-Asb Friable	Mountain View	13.00	125.61
WM-Asb Friable	Newark	1.00	3.76
WM-Asb Friable	Oakland	16.00	48.62
WM-Asb Friable	Orinda	1.00	4.27
WM-Asb Friable	Palo Alto	3.00	18.61
WM-Asb Friable	Petaluma	1.00	5.58
WM-Asb Friable	Piedmont	1.00	7.36
WM-Asb Friable	Pleasanton	1.00	10.38
WM-Asb Friable	Redwood City	1.00	2.42
WM-Asb Friable	Richmond	2.00	7.29
WM-Asb Friable	Rodeo	2.00	3.52
WM-Asb Friable	San Carlos	1.00	1.92
WM-Asb Friable	San Francisco	82.00	435.11
WM-Asb Friable	San Jose	40.00	448.35
WM-Asb Friable	San Leandro	2.00	8.27
WM-Asb Friable	San Mateo	3.00	20.78

Material Name	Origin Name	Loads	Tonnage Amount
WM-Asb Friable	San Rafael	1.00	7.04
WM-Asb Friable	Santa Clara	2.00	4.87
WM-Asb Friable	South San Francisco	1.00	0.89
WM-Asb Friable	Stanford	6.00	67.33
WM-Asb Friable	Sunnyvale	3.00	16.62
WM-Asb Friable	Yountville	2.00	6.47
Sum			1,781.98

APPENDIX M
MONTHLY WELLHEAD MONITORING DATA

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-December 2019
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 1/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALLC0695	12/5/2019 11:36	48.3	39.8	0	11.9	114	115	-25.2	-25.2
ALLC0698	12/5/2019 9:59	48.4	38.6	2.5	10.5	106	106	-62.1	-61.8
ALLC0699	12/5/2019 11:02	55.1	43.8	0	1.1	114	114	-78.6	-78.7
ALLC0700	12/5/2019 11:57	53.7	41.5	0.5	4.3	100	100	-92	-84.5
ALLC0702	12/17/2019 11:37	51	39	2.5	7.5	47	47	-87.4	-87.4
ALLC0702	12/24/2019 14:55	52.7	39	2.6	5.7	54	54	-87.1	-87.3
ALLC0703	12/17/2019 11:32	57.1	40.1	0.3	2.5	119	119	-15.6	-17.7
ALLC0704	12/16/2019 11:36	52.7	39.4	1.5	6.4	104	104	-20.6	-29.3
ALLC0706	12/16/2019 11:41	50.3	40.3	1.9	7.5	53	58	-12	-20.4
ALLC0709	12/16/2019 9:27	44.1	36.1	0	19.8	102	99	-4.7	-3.8
ALLC0734	12/9/2019 15:30	58.7	41.2	0	0.1	98	98	-49.6	-49.1
ALLC0735	12/16/2019 12:12	56.8	42.8	0.3	0.1	50	50	-65.3	-65.6
ALLC0736	12/16/2019 11:57	55.7	40.2	0	4.1	100	100	-8.5	-12.1
ALLC0737	12/16/2019 8:56	59.6	40.3	0	0.1	111	113	-21.4	-77
ALLC0738	12/6/2019 9:32	56.5	42.9	0.5	0.1	82	82	-91.7	-90.9
ALLC0739	12/6/2019 11:11	57.2	40.2	0.9	1.7	84	84	-90.8	-90.8
ALLC0740	12/6/2019 10:56	39.9	35.2	0.3	24.6	114	113	-10.4	-8.5
ALLC0743	12/6/2019 9:38	47.5	38.7	0	13.8	110	111	-48.1	-51.8
ALLC0744	12/6/2019 11:04	51.6	39.1	0.4	8.9	108	115	-33.4	-71.4
ALLC0745	12/6/2019 10:49	30.6	30.3	0	39.1	122	122	-5.4	-5.4
ALLC0746	12/12/2019 12:37	43.2	37.3	0.7	18.8	120	120	-86.7	-85.6
ALLC0747	12/5/2019 12:12	48	40.9	0.1	11	122	122	-31.4	-31.3
ALLC0748	12/5/2019 12:02	53.8	39.9	1.3	5	109	108	-82.5	-82.7
ALLC0749	12/5/2019 11:53	46	38.8	0	15.2	118	118	-10.7	-5.3
ALLC0775	12/18/2019 12:09	56.7	43.2	0	0.1	103	103	-1.4	-1.4
ALLC0775	12/20/2019 12:39	52.4	47.4	0	0.2	109	110	-1.1	-2
ALLC0775	12/22/2019 7:24	51.9	47.8	0.1	0.2	110	110	-7.4	-2.8
ALLC0775	12/24/2019 15:26	51.3	48.6	0	0.1	111	111	-2.8	-3.4
ALLC0775	12/26/2019 12:03	51.1	48.8	0	0.1	110	111	-3.6	-4.6
ALLC0775	12/27/2019 11:59	51.5	48.2	0.2	0.1	111	112	-5.6	-8.6
ALLC0775	12/27/2019 16:13	51.7	48.2	0	0.1	111	111	-13.1	-14.7
ALLC0775	12/28/2019 9:17	51.7	48	0.1	0.2	111	112	-20.2	-17.2
ALLC0775	12/30/2019 12:14	45.2	45.5	0.2	9.1	112	112	-17.2	-8.4
ALLC0776	12/18/2019 12:04	56.6	43.2	0	0.2	101	99	-1.2	-1.2
ALLC0776	12/20/2019 12:32	54.2	45.6	0.1	0.1	112	112	-1.7	-1.6
ALLC0776	12/22/2019 7:33	53.4	46.4	0.1	0.1	110	113	-1.7	-5.3
ALLC0776	12/24/2019 15:29	52.8	47.1	0	0.1	114	114	-9.5	-9
ALLC0776	12/26/2019 11:58	53.2	46.6	0	0.2	114	115	-13.8	-14.8
ALLC0776	12/27/2019 12:05	51.9	45.6	0.2	2.3	115	115	-16.1	-25.8
ALLC0776	12/27/2019 16:18	51.4	45.3	0.1	3.2	114	115	-22.1	-17.5
ALLC0776	12/28/2019 9:22	47.3	45	0.1	7.6	115	115	-17.7	-12.8
ALLC0776	12/30/2019 12:18	40	41.5	0.3	18.2	115	114	-13.6	-7.7

ALLC0777	12/18/2019 11:53	54.7	45.2	0	0.1	108	111	-1.2	-1.2
ALLC0777	12/19/2019 13:47	55.5	44.3	0	0.2	112	112	-3.2	-5.1
ALLC0777	12/20/2019 12:21	56.1	43.6	0.1	0.2	123	123	-6.2	-7.7
ALLC0777	12/22/2019 7:55	56.3	43.5	0	0.2	123	123	-12.3	-10.3
ALLC0777	12/24/2019 15:17	56	43.9	0	0.1	123	123	-11.9	-13.6
ALLC0777	12/26/2019 11:49	56.2	43.6	0	0.2	123	123	-15.5	-17
ALLC0777	12/27/2019 12:39	56.8	42.9	0.2	0.1	124	124	-21.3	-33.8
ALLC0777	12/27/2019 16:00	56.6	43.2	0.1	0.1	123	123	-37.7	-40
ALLC0777	12/28/2019 9:06	56.7	43	0.2	0.1	123	123	-42.5	-41
ALLC0777	12/30/2019 12:02	57.4	42.2	0.3	0.1	124	124	-41.3	-50.8
ALLC0778	12/18/2019 11:47	57.5	42.2	0.1	0.2	91	91	-1	-0.9
ALLC0778	12/19/2019 13:54	56.6	43.3	0	0.1	82	82	-3.5	-5.6
ALLC0778	12/20/2019 12:16	56.8	43	0.1	0.1	96	97	-6.5	-17.4
ALLC0778	12/20/2019 14:51	56.9	42.8	0.2	0.1	96	97	-7.2	-18
ALLC0778	12/22/2019 7:52	55.4	44.5	0	0.1	96	96	-20.2	-27.6
ALLC0778	12/24/2019 15:14	54.8	45	0	0.2	96	96	-28.6	-40.5
ALLC0778	12/26/2019 11:45	55	44.7	0.1	0.2	95	95	-39.7	-52.5
ALLC0778	12/27/2019 12:30	55.5	44.2	0.1	0.2	94	95	-55.2	-82.8
ALLC0778	12/27/2019 15:55	55.4	44.2	0.3	0.1	92	93	-81.1	-84.6
ALLC0778	12/28/2019 9:01	55.4	44.3	0.1	0.2	91	91	-85	-85
ALLC0778	12/30/2019 11:56	56.7	42.8	0.3	0.2	91	91	-86.7	-85.4
ALTA0003	12/16/2019 10:07	59.8	40	0.1	0.1	111	111	-89.9	-90.6
ALTA0053	12/17/2019 11:19	33.9	43	0.9	22.2	112	111	-3	-3
ALTA0054	12/12/2019 13:26	50.7	37.9	0.2	11.2	77	77	-37	-37.1
ALTA0056	12/12/2019 13:31	58.5	41.1	0.2	0.2	109	109	-62.8	-62.8
ALTA0059	12/16/2019 10:22	48.5	36.5	3.2	11.8	96	94	-84.2	-84.3
ALTA0087	12/16/2019 13:04	59.5	40.3	0	0.2	125	126	-86.4	-85.6
ALTA0108	12/16/2019 13:20	57.3	42.6	0	0.1	67	67	-5.9	-2.2
ALTA0201	12/17/2019 11:49	52.3	36	0.4	11.3	108	108	-91.9	-91.9
ALTA0472	12/12/2019 12:10	56.4	38.7	0.6	4.3	106	106	-76.6	-76
ALTA0483	12/16/2019 12:25	55.4	41.9	0.2	2.5	107	108	-85.8	-85.4
ALTA0488	12/5/2019 12:39	53	40.6	0.5	5.9	126	127	-93.1	-93
ALTA0490	12/16/2019 12:30	56.6	43.3	0	0.1	81	82	-56	-56.3
ALTA0491	12/16/2019 9:22	57.2	39.2	0.6	3	120	120	-83.8	-83.8
ALTA0508	12/16/2019 12:04	54.7	38.5	0.8	6	106	106	-50	-53.6
ALTA0516	12/16/2019 11:19	55.9	43.8	0.1	0.2	44	43	-62.4	-62.5
ALTA0517	12/16/2019 11:31	57.6	38.6	0	3.8	108	109	-34.2	-55.2
ALTA0518	12/5/2019 12:51	47.9	35.7	0	16.4	118	119	-3.3	-3
ALTA0529	12/9/2019 12:36	49.7	38.8	0	11.5	121	122	-10.5	-10.6
ALTA0534	12/16/2019 12:45	53.9	45.8	0.2	0.1	65	65	-91.3	-91.2
ALTA0535	12/16/2019 9:47	46.9	35.9	1.7	15.5	122	122	-71.3	-72.4
ALTA0539	12/5/2019 10:42	43.3	43.2	0	13.5	107	107	-9.7	-9.7
ALTA0541	12/5/2019 9:20	50.1	36.6	0.2	13.1	117	118	-26.3	-26.3
ALTA0545	12/16/2019 9:58	47.7	41.2	0	11.1	121	121	-9.4	-9.4
ALTA0551	12/12/2019 13:43	49	34.6	2.5	13.9	77	78	-33.9	-27.4
ALTA0566	12/16/2019 12:34	57.1	42.1	0.6	0.2	80	80	-46.9	-85.7
ALTA0571	12/5/2019 10:12	33.7	26.5	4.4	35.4	63	63	-68.3	-65.7
ALTA0578	12/5/2019 12:26	49.8	40.5	0.3	9.4	118	119	-89	-87.3
ALTA0579	12/16/2019 12:50	42.5	37.9	0	19.6	123	124	-75.3	-69.2
ALTA0580	12/16/2019 13:08	56.2	43.7	0	0.1	122	122	-87.7	-88.1

ALTA0589	12/30/2019 12:34	21.8	25.7	7.2	45.3	127	127	-71.7	-70.6
ALTA0589	12/30/2019 12:36	22.8	22.1	7.6	47.5	127	127	-71.1	-71.2
ALTA0590	12/6/2019 12:41	48.8	34.4	3.5	13.3	75	75	-78.9	-78.7
ALTA0611	12/5/2019 9:52	46.9	38.1	0	15	126	126	-27.1	-27.1
ALTA0612	12/5/2019 9:45	47.4	39	0.4	13.2	134	134	-40.1	-40.1
ALTA0612	12/5/2019 9:48	48.2	39.6	0	12.2	134	134	-40.2	-40.2
ALTA0624	12/6/2019 12:56	43.6	36.8	0	19.6	82	82	-23.4	-20.5
ALTA0629	12/16/2019 9:34	46.7	36	0.3	17	115	115	-34.3	-33.3
ALTA0639	12/16/2019 12:23	47.8	37.9	0.5	13.8	136	137	-78.4	-78.6
ALTA0639	12/16/2019 12:25	48.8	38.8	0	12.4	137	137	-80.4	-78.6
ALTA0650	12/9/2019 12:26	52.3	41.2	0.1	6.4	122	123	-89.8	-90.4
ALTA0651	12/9/2019 12:30	52.6	40.7	0.1	6.6	117	116	-81	-80.3
ALTA0652	12/16/2019 15:21	33.1	32.1	0.2	34.6	52	52	-26.4	-25.3
ALTA0654	12/6/2019 10:08	56	43.7	0.1	0.2	104	106	-85.6	-84.4
ALTA0660	12/12/2019 12:26	55.7	42.5	0.7	1.1	102	102	-83.2	-80.9
ALTA0661	12/9/2019 12:49	40	38.9	0	21.1	124	123	-52.3	-49.7
ALTA0664	12/9/2019 12:19	50.7	38.8	0.7	9.8	111	111	-88.9	-90
ALTA0665	12/16/2019 10:59	55.7	44.1	0	0.2	47	48	-20.1	-20.2
ALTA0668	12/6/2019 10:33	55.9	43.8	0.2	0.1	122	123	-85.4	-85.4
ALTA0669	12/5/2019 12:08	48.7	40.3	0.5	10.5	115	115	-92.4	-92.5
ALTA0676	12/16/2019 12:39	42.7	32	4.7	20.6	98	98	-13.9	-14.1
ALTA0678	12/16/2019 15:41	56.6	43.3	0	0.1	127	127	-84.7	-84.6
ALTA0681	12/16/2019 11:14	38.2	40.2	0	21.6	81	79	-64	-63.5
ALTA0682	12/16/2019 11:25	55.5	40.8	0	3.7	117	117	-51.1	-51.9
ALTA0683	12/16/2019 8:40	53.5	40.7	1.5	4.3	68	67	-90.6	-90.3
ALTA0685	12/5/2019 11:08	54.7	43.2	0	2.1	98	98	-79.7	-79.4
ALTA0686	12/5/2019 12:19	54.4	42.3	0	3.3	119	119	-86.9	-88.1
ALTA0688	12/6/2019 13:42	41.5	33.7	0.1	24.7	112	112	-58.2	-55.8
ALTA0712	12/5/2019 10:57	56.5	42.7	0	0.8	117	118	-58	-54.6
ALTA0713	12/5/2019 10:16	48.8	40.7	0	10.5	114	114	-63.8	-64.5
ALTA0714	12/5/2019 10:34	56.3	42.4	0	1.3	117	117	-59.3	-59.4
ALTA0715	12/16/2019 8:32	58.5	41.3	0.1	0.1	114	114	-89	-88.9
ALTA0716	12/16/2019 8:27	53.2	44.9	0	1.9	122	123	-85.6	-88.1
ALTA0717	12/5/2019 11:15	51.8	41.9	0	6.3	114	114	-48.9	-48.8
ALTA0719	12/16/2019 8:19	54.7	44.4	0.7	0.2	133	133	-70.7	-71.7
ALTA0719	12/16/2019 8:21	54.1	45.6	0.1	0.2	133	133	-70	-72.4
ALTA0721	12/16/2019 8:02	54.3	43.1	1.1	1.5	120	120	-88.4	-88.1
ALTA0723	12/16/2019 7:55	45.8	37.4	4	12.8	49	48	-90	-89.9
ALTA0732	12/16/2019 8:14	53.7	45.8	0.4	0.1	122	121	-88.1	-88
ALTA0733	12/12/2019 12:17	43	37.3	0.6	19.1	132	132	-35.6	-35
ALTA0733	12/12/2019 12:20	43.2	37.7	0.5	18.6	135	134	-37.6	-35
ALTA0751	12/6/2019 11:26	52.2	40	1.1	6.7	116	117	-4.3	-7.4
ALTA0753	12/6/2019 10:40	54.2	40.1	0.2	5.5	127	128	-55.3	-69.1
ALTA0755	Offline for filling								
ALTA0756	12/9/2019 15:09	49.5	40.6	0	9.9	110	111	-47.5	-47.5
ALTA0758	12/16/2019 15:36	52.6	38.8	0.3	8.3	91	93	-40.8	-85.3
ALTA0759	12/16/2019 11:04	56.2	43.6	0	0.2	120	122	-7.1	-13.6
ALTA0760	12/16/2019 11:08	55.1	44.4	0.1	0.4	119	119	-30.9	-36.2
ALTA0761	12/5/2019 10:25	20.2	31.4	0.3	48.1	112	112	-13.8	-12.5
ALTA0762	12/5/2019 10:52	52.2	43	0	4.8	106	110	-9	-12.7

ALTA0763	12/9/2019 15:13	35.8	36.4	0.4	27.4	117	117	-7.1	-2.6
ALTA0764	Offline for filling								
ALTA0765	12/9/2019 13:31	37.8	31.7	0.7	29.8	112	112	-18.4	-18.4
ALTA0766	12/9/2019 15:03	56.9	42.7	0.2	0.2	103	103	-75.1	-75.1
ALTA0767	12/9/2019 15:18	52.2	41	0	6.8	114	116	-14.3	-15.1
ALTA0768	12/6/2019 10:21	56	43.9	0	0.1	121	121	-79.9	-79.9
ALTA0769	12/16/2019 12:14	55.3	42.7	0.2	1.8	124	124	-78.8	-79
ALTA0770	12/5/2019 10:29	41.8	42.1	0	16.1	117	117	-3.7	-1.7
ALTA0771	12/5/2019 9:29	44.4	42.6	0	13	116	116	-10.1	-8.6
ALTA0772	12/5/2019 11:45	45.6	38.9	0	15.5	122	122	-6.7	-6
ALTA0773	12/16/2019 10:54	59	40.3	0.6	0.1	50	48	-60.6	-60.8

There are 106 vertical LFG wells, 1 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below.

Wells Approved for Higher Operating Value for Temperature	
Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-January 2020
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 2/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALLC0695	1/16/2020 9:09	46.8	39.0	0.0	14.2	115.0	115.0	-34.6	-28.8
ALLC0698	1/9/2020 9:36	54.6	43.2	0.0	2.2	100.0	100.0	-52.0	-52.5
ALLC0699	1/16/2020 8:03	54.9	43.2	0.0	1.9	113.0	114.0	-82.8	-82.8
ALLC0700	1/20/2020 9:57	56.4	43.0	0.0	0.6	90.0	89.0	-89.9	-80.7
ALLC0702	1/29/2020 10:14	14.1	16.9	15.5	53.5	56.0	56.0	-92.0	-92.5
ALLC0702	1/29/2020 10:16	12.4	12.5	16.8	58.3	57.0	57.0	-93.9	-92.5
ALLC0703	1/15/2020 8:53	50.5	37.2	1.2	11.1	118.0	118.0	-16.6	-15.6
ALLC0704	1/15/2020 8:31	47.1	38.3	1.3	13.3	105.0	105.0	-33.2	-28.7
ALLC0706	1/29/2020 10:24	44.1	35.4	4.2	16.3	78.0	77.0	-2.2	-4.6
ALLC0709	1/27/2020 8:22	41.3	34.3	0.0	24.4	102.0	101.0	-4.9	-2.9
ALLC0734	1/14/2020 9:57	58.0	40.9	0.3	0.8	96.0	97.0	-30.0	-30.9
ALLC0735	1/14/2020 10:03	56.5	42.1	0.7	0.7	55.0	55.0	-32.9	-32.2
ALLC0736	1/14/2020 10:24	39.2	33.7	0.0	27.1	102.0	102.0	-20.1	-15.0
ALLC0737	1/14/2020 10:30	44.3	35.1	0.2	20.4	110.0	110.0	-81.4	-73.5
ALLC0738	1/20/2020 8:37	55.6	44.1	0.1	0.2	66.0	66.0	-92.9	-91.3
ALLC0739	1/9/2020 8:46	45.8	38.6	0.3	15.3	67.0	69.0	-89.8	-88.9
ALLC0740	1/9/2020 8:13	33.6	34.3	0.1	32.0	102.0	100.0	-7.9	-6.2
ALLC0743	1/20/2020 8:42	46.5	39.0	0.0	14.5	109.0	110.0	-56.7	-48.7
ALLC0744	1/9/2020 8:36	39.6	36.4	0.0	24.0	95.0	90.0	-80.8	-70.3
ALLC0745	1/9/2020 8:19	26.0	29.6	0.0	44.4	118.0	118.0	-4.8	-4.7
ALLC0746	1/9/2020 8:51	43.4	39.0	0.0	17.6	120.0	121.0	-87.0	-84.7
ALLC0747	1/20/2020 9:52	47.3	40.6	0.0	12.1	121.0	123.0	-38.1	-33.9
ALLC0748	1/20/2020 9:43	55.6	41.6	0.7	2.1	91.0	92.0	-83.5	-84.5
ALLC0749	1/10/2020 11:02	49.1	38.5	0.0	12.4	118.0	118.0	-5.8	-4.7
ALLC0775	1/7/2020 8:18	44.9	44.1	0.1	10.9	111.0	111.0	-4.3	-3.3
ALLC0775	1/9/2020 9:32	44.1	43.4	0.0	12.5	111.0	111.0	-3.3	-2.5
ALLC0776	1/7/2020 8:23	43.1	40.8	0.4	15.7	113.0	115.0	-1.0	-9.3
ALLC0776	1/9/2020 9:41	40.2	40.4	0.2	19.2	115.0	115.0	-15.2	-9.3
ALLC0777	1/7/2020 8:06	56.7	41.8	0.3	1.2	122.0	122.0	-61.2	-62.0
ALLC0777	1/9/2020 9:16	55.5	41.8	0.2	2.5	123.0	123.0	-62.9	-64.8
ALLC0777	1/10/2020 10:11	56.4	40.9	0.0	2.7	122.0	122.0	-64.6	-66.9
ALLC0777	1/14/2020 11:42	54.6	41.6	0.0	3.8	122.0	123.0	-68.4	-68.5
ALLC0778	1/7/2020 8:01	57.9	41.0	0.4	0.7	90.0	90.0	-83.7	-83.6
ALLC0778	1/9/2020 9:11	55.7	42.6	0.1	1.6	91.0	91.0	-86.2	-84.1
ALLC0778	1/10/2020 10:16	57.2	41.7	0.1	1.0	90.0	91.0	-83.6	-83.7
ALLC0778	1/14/2020 11:35	55.3	42.1	0.0	2.6	91.0	91.0	-83.0	-83.0
ALTA0003	1/28/2020 9:18	59.2	40.4	0.2	0.2	109.0	110.0	-102.9	-102.5
ALTA0053	1/29/2020 9:35	23.0	32.0	6.6	38.4	109.0	106.0	-2.1	-1.7
ALTA0053	1/29/2020 9:37	22.6	29.7	7.4	40.3	103.0	103.0	-4.7	-0.9
ALTA0054	1/29/2020 9:09	49.7	38.6	0.0	11.7	76.0	76.0	-40.5	-40.7
ALTA0056	1/29/2020 9:13	58.3	41.5	0.1	0.1	108.0	108.0	-65.7	-65.6
ALTA0059	1/29/2020 9:43	55.2	44.5	0.2	0.1	96.0	95.0	-87.8	-88.3

ALTA0087	1/28/2020 9:08	62.7	35.9	0.3	1.1	123.0	124.0	-97.4	-97.4
ALTA0108	1/10/2020 9:36	57.7	42.1	0.1	0.1	65.0	66.0	-1.9	-2.2
ALTA0201	1/29/2020 8:42	57.0	36.0	0.5	6.5	107.0	107.0	-92.0	-91.9
ALTA0472	1/15/2020 9:59	57.2	39.6	0.4	2.8	107.0	107.0	-77.0	-77.5
ALTA0483	1/16/2020 8:57	51.0	40.9	0.2	7.9	56.0	55.0	-87.5	-88.5
ALTA0488	1/20/2020 11:18	53.7	41.7	0.2	4.4	127.0	128.0	-92.1	-92.0
ALTA0490	1/16/2020 9:02	56.7	42.7	0.0	0.6	56.0	56.0	-55.2	-54.9
ALTA0491	1/27/2020 8:27	59.5	40.3	0.0	0.2	119.0	119.0	-90.7	-90.9
ALTA0508	1/14/2020 10:12	53.3	38.9	0.0	7.8	107.0	107.0	-28.1	-31.4
ALTA0516	1/29/2020 10:29	56.0	43.7	0.1	0.2	55.0	53.0	-30.6	-35.2
ALTA0517	1/14/2020 10:18	47.4	35.3	0.0	17.3	107.0	108.0	-42.9	-37.1
ALTA0518	1/20/2020 10:27	43.7	34.7	0.0	21.6	119.0	119.0	-5.8	-4.5
ALTA0529	1/28/2020 10:26	51.0	40.3	0.0	8.7	122.0	122.0	-14.0	-17.4
ALTA0534	1/29/2020 10:59	54.8	45.1	0.0	0.1	66.0	65.0	-93.5	-93.5
ALTA0535	1/29/2020 11:05	54.2	39.1	0.0	6.7	120.0	120.0	-79.1	-90.2
ALTA0539	1/16/2020 8:11	51.4	45.7	0.0	2.9	77.0	88.0	-15.9	-43.2
ALTA0541	1/16/2020 9:14	50.3	36.5	0.0	13.2	118.0	119.0	-28.0	-23.4
ALTA0545	1/20/2020 11:23	47.5	41.4	0.0	11.1	122.0	122.0	-8.8	-7.7
ALTA0551	1/29/2020 12:19	33.7	27.8	4.2	34.3	115.0	115.0	-32.9	-24.6
ALTA0566	1/14/2020 11:18	56.6	43.2	0.1	0.1	83.0	83.0	-86.0	-86.3
ALTA0571	1/9/2020 9:48	36.6	31.5	1.5	30.4	48.0	47.0	-53.5	-53.4
ALTA0578	1/20/2020 10:16	50.9	41.4	0.1	7.6	96.0	99.0	-87.5	-87.0
ALTA0579	1/28/2020 9:25	45.3	38.5	0.0	16.2	123.0	123.0	-69.6	-65.6
ALTA0580	1/28/2020 9:14	57.8	41.2	0.8	0.2	123.0	124.0	-99.3	-99.0
ALTA0589	1/9/2020 7:42	23.8	21.0	8.0	47.2	126.0	126.0	-72.3	-72.2
ALTA0589	1/9/2020 7:44	21.3	18.5	9.6	50.6	126.0	126.0	-71.7	-71.6
ALTA0590	1/29/2020 12:12	44.5	32.6	4.6	18.3	73.0	73.0	-78.2	-78.4
ALTA0611	1/9/2020 10:22	51.3	38.9	0.0	9.8	127.0	128.0	-27.0	-24.0
ALTA0612	1/9/2020 10:17	47.7	39.5	0.0	12.8	119.0	120.0	-32.1	-29.9
ALTA0624	1/29/2020 9:03	42.8	36.5	0.0	20.7	80.0	80.0	-26.0	-22.6
ALTA0629	1/27/2020 8:18	49.1	36.5	0.1	14.3	113.0	114.0	-30.3	-29.0
ALTA0639	1/27/2020 10:48	50.3	37.5	0.1	12.1	137.0	137.0	-75.0	-72.6
ALTA0639	1/27/2020 10:49	48.7	39.1	0.0	12.2	136.0	137.0	-70.5	-70.5
ALTA0650	1/28/2020 10:17	58.5	39.7	0.1	1.7	125.0	126.0	-90.4	-90.6
ALTA0651	1/28/2020 10:21	58.2	41.6	0.1	0.1	117.0	117.0	-84.9	-85.1
ALTA0652	1/20/2020 9:08	39.2	35.4	0.1	25.3	110.0	109.0	-16.7	-15.4
ALTA0654	1/20/2020 8:49	54.8	45.1	0.0	0.1	95.0	95.0	-85.4	-83.5
ALTA0660	1/20/2020 9:22	55.6	44.3	0.0	0.1	108.0	109.0	-82.7	-82.6
ALTA0661	1/29/2020 10:53	45.2	43.5	0.0	11.3	128.0	127.0	-62.3	-60.3
ALTA0664	1/28/2020 10:09	57.3	38.6	0.2	3.9	116.0	116.0	-89.7	-90.6
ALTA0665	1/14/2020 11:50	56.7	43.1	0.0	0.2	49.0	50.0	-11.0	-13.4
ALTA0668	1/9/2020 8:23	54.6	45.1	0.1	0.2	110.0	111.0	-84.9	-84.6
ALTA0669	1/20/2020 9:47	49.6	40.6	0.3	9.5	86.0	86.0	-91.4	-91.3
ALTA0676	1/14/2020 11:12	44.1	35.6	3.3	17.0	62.0	62.0	-4.0	-2.6
ALTA0678	1/14/2020 11:32	56.6	43.2	0.0	0.2	125.0	126.0	-85.5	-85.6
ALTA0681	1/15/2020 8:18	26.2	33.7	0.0	40.1	54.0	54.0	-59.6	-61.0
ALTA0682	1/15/2020 8:23	54.6	40.1	0.0	5.3	119.0	119.0	-39.4	-39.5
ALTA0683	1/15/2020 8:47	52.9	40.7	1.3	5.1	53.0	53.0	-89.8	-89.9
ALTA0685	1/16/2020 7:58	54.4	42.6	0.0	3.0	58.0	58.0	-82.8	-82.9
ALTA0686	1/20/2020 10:03	54.4	42.5	0.0	3.1	106.0	108.0	-87.6	-88.2

ALTA0688	1/10/2020 10:41	47.4	35.2	0.0	17.4	82.0	82.0	-82.4	-82.5
ALTA0712	1/9/2020 9:58	56.4	43.5	0.0	0.1	118.0	119.0	-52.4	-49.6
ALTA0713	1/16/2020 8:28	48.4	40.8	0.0	10.8	115.0	115.0	-54.8	-54.4
ALTA0714	1/16/2020 8:15	55.7	42.6	0.0	1.7	118.0	118.0	-56.8	-56.5
ALTA0715	1/15/2020 9:48	58.4	41.5	0.0	0.1	114.0	114.0	-89.4	-89.4
ALTA0716	1/15/2020 9:37	53.4	44.6	0.0	2.0	123.0	123.0	-83.1	-83.4
ALTA0717	1/16/2020 7:52	55.4	42.6	0.2	1.8	113.0	113.0	-48.9	-48.9
ALTA0719	1/20/2020 8:03	54.1	45.5	0.2	0.2	132.0	133.0	-79.0	-75.5
ALTA0719	1/20/2020 8:05	54.0	45.8	0.0	0.2	132.0	133.0	-78.3	-76.3
ALTA0721	1/15/2020 9:25	54.7	45.0	0.1	0.2	125.0	125.0	-83.1	-84.7
ALTA0723	1/15/2020 9:17	31.5	25.8	9.1	33.6	51.0	51.0	-84.4	-83.8
ALTA0723	1/15/2020 9:20	26.4	23.6	10.1	39.9	51.0	51.0	-84.8	-85.4
ALTA0723	1/20/2020 7:48	34.0	30.6	7.9	27.5	41.0	41.0	-84.3	-84.0
ALTA0723	1/20/2020 7:49	30.3	22.2	11.8	35.7	40.0	40.0	-83.8	-84.2
ALTA0732	1/15/2020 9:33	53.3	46.6	0.0	0.1	124.0	124.0	-83.0	-84.2
ALTA0733	1/20/2020 8:55	43.8	39.0	0.0	17.2	132.0	132.0	-36.1	-32.2
ALTA0733	1/20/2020 8:57	43.5	38.9	0.0	17.6	134.0	134.0	-32.0	-31.5
ALTA0751	1/9/2020 8:56	38.4	35.5	1.7	24.4	116.0	116.0	-14.0	-7.5
ALTA0753	1/9/2020 8:27	43.7	38.1	0.7	17.5	126.0	126.0	-77.6	-73.8
ALTA0755	Offline for filling								
ALTA0756	1/27/2020 8:45	52.2	42.6	0.0	5.2	112.0	112.0	-56.2	-61.2
ALTA0758	1/14/2020 11:25	44.9	35.1	2.1	17.9	76.0	82.0	-44.1	-72.9
ALTA0759	1/15/2020 8:11	45.3	38.6	0.0	16.1	123.0	123.0	-21.1	-18.7
ALTA0760	1/10/2020 10:25	53.6	42.0	0.0	4.4	119.0	120.0	-39.1	-44.8
ALTA0761	1/10/2020 10:49	25.0	31.2	0.9	42.9	112.0	112.0	-14.2	-7.7
ALTA0761	1/16/2020 8:19	13.6	28.0	0.3	58.1	111.0	111.0	-1.7	-1.7
ALTA0762	1/9/2020 9:54	55.7	43.8	0.0	0.5	113.0	114.0	-15.8	-18.6
ALTA0762	1/16/2020 8:39	54.3	43.7	0.0	2.0	113.0	114.0	-21.5	-23.5
ALTA0762	1/20/2020 11:30	54.4	43.8	0.0	1.8	113.0	114.0	-31.8	-30.8
ALTA0762	1/27/2020 8:38	55.5	44.4	0.0	0.1	112.0	113.0	-36.3	-38.4
ALTA0763	1/27/2020 8:52	35.1	37.0	0.4	27.5	117.0	117.0	-4.6	-4.5
ALTA0764	Offline for filling								
ALTA0765	1/10/2020 10:37	39.0	32.3	0.9	27.8	83.0	81.0	-18.4	-13.5
ALTA0766	1/29/2020 10:37	57.4	42.3	0.2	0.1	99.0	99.0	-80.9	-77.6
ALTA0767	1/15/2020 9:54	49.2	40.0	0.0	10.8	106.0	106.0	-17.9	-17.9
ALTA0768	1/20/2020 9:33	55.2	44.5	0.1	0.2	120.0	120.0	-79.9	-79.8
ALTA0769	1/20/2020 9:28	51.7	43.6	0.0	4.7	125.0	125.0	-83.3	-81.7
ALTA0770	1/16/2020 8:23	44.4	41.7	0.0	13.9	119.0	118.0	-1.8	-1.2
ALTA0771	1/16/2020 8:51	43.8	41.9	0.1	14.2	117.0	117.0	-8.3	-7.2

ALTA0772	1/10/2020 10:58	48.0	38.5	0.0	13.5	122.0	123.0	-6.1	-5.2
ALTA0773	1/14/2020 13:37	58.8	41.0	0.1	0.1	57.0	56.0	-83.6	-83.4

There are 110 vertical LFG wells, 1 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below.

Wells Approved for Higher Operating Value for Temperature

Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-February 2020
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 3/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALLC0695	2/14/2020 8:12	49.9	40.2	0.0	9.9	115.0	115.0	-28.1	-28.5
ALLC0698	2/10/2020 11:50	54.4	45.5	0.0	0.1	98.0	98.0	-54.2	-54.1
ALLC0699	2/10/2020 12:33	51.9	43.2	0.1	4.8	111.0	113.0	-81.6	-81.5
ALLC0700	2/12/2020 7:36	56.0	43.9	0.0	0.1	92.0	90.0	-83.8	-86.5
ALLC0702	2/10/2020 9:56	10.5	23.1	13.1	53.3	61.0	61.0	-80.3	-85.8
ALLC0702	2/10/2020 9:58	10.1	11.5	16.0	62.4	61.0	61.0	-86.8	-90.0
ALLC0702	2/17/2020 11:07	SPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-DECOMMISSIONE							
ALLC0703	2/10/2020 8:23	40.8	33.1	3.2	22.9	117.0	117.0	-10.0	-5.5
ALLC0704	2/10/2020 8:19	52.4	40.3	1.4	5.9	105.0	105.0	-26.8	-35.2
ALLC0706	2/10/2020 8:12	32.4	28.2	7.8	31.6	73.0	73.0	-2.8	-3.6
ALLC0706	2/10/2020 8:15	32.1	27.6	8.1	32.2	74.0	75.0	-4.1	-4.1
ALLC0706	2/12/2020 10:33	39.6	32.9	5.1	22.4	91.0	89.0	-31.2	-35.6
ALLC0706	2/12/2020 10:35	37.4	31.2	6.0	25.4	91.0	91.0	-39.3	-35.4
ALLC0706	2/17/2020 11:15	SPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-DECOMMISSIONE							
ALLC0709	2/3/2020 13:15	45.3	35.4	0.0	19.3	100.0	100.0	-2.0	-1.6
ALLC0734	2/10/2020 7:38	62.8	36.7	0.3	0.2	98.0	99.0	-69.4	-69.7
ALLC0735	2/10/2020 7:46	57.4	41.5	0.9	0.2	49.0	49.0	-71.0	-71.1
ALLC0736	2/10/2020 8:32	51.4	39.3	0.0	9.3	99.0	99.0	-9.2	-10.8
ALLC0737	2/10/2020 8:28	52.0	39.2	0.0	8.8	109.0	110.0	-75.6	-79.6
ALLC0738	2/6/2020 8:35	55.4	44.4	0.1	0.1	124.0	124.0	-88.1	-88.1
ALLC0739	2/10/2020 8:56	55.2	40.6	0.1	4.1	104.0	105.0	-88.7	-90.3
ALLC0740	2/10/2020 9:11	37.3	37.1	0.0	25.6	131.0	131.0	-5.3	-4.7
ALLC0740	2/10/2020 9:13	37.2	37.4	0.0	25.4	130.0	130.0	-8.7	-4.5
ALLC0743	2/6/2020 8:39	49.3	41.3	0.0	9.4	119.0	120.0	-50.2	-46.9
ALLC0744	2/18/2020 9:01	39.7	36.5	0.0	23.8	125.0	125.0	-75.7	-64.5
ALLC0745	2/10/2020 9:18	28.4	31.8	0.0	39.8	119.0	120.0	-5.1	-5.1
ALLC0746	2/10/2020 8:51	49.0	42.4	0.0	8.6	119.0	119.0	-84.2	-83.8
ALLC0747	2/12/2020 7:20	47.8	40.9	0.3	11.0	121.0	122.0	-34.5	-34.0
ALLC0748	2/12/2020 7:28	56.7	43.0	0.2	0.1	110.0	111.0	-80.0	-80.3
ALLC0749	2/12/2020 7:47	50.0	40.2	0.0	9.8	118.0	118.0	-5.1	-5.1
ALLC0775	2/10/2020 11:46	50.3	45.4	0.1	4.2	110.0	111.0	-2.4	-2.7
ALLC0776	2/10/2020 10:46	42.1	39.6	1.2	17.1	112.0	112.0	-7.9	-6.8
ALLC0777	2/12/2020 9:52	55.2	42.3	0.0	2.5	123.0	123.0	-54.4	-53.9
ALLC0778	2/12/2020 9:46	55.7	42.2	0.0	2.1	91.0	91.0	-69.4	-70.0
ALLC0779	2/14/2020 10:48	55.1	44.8	0.0	0.1	80.0	88.0	-1.7	-2.0
ALLC0779	2/15/2020 8:41	55.3	44.2	0.3	0.2	95.0	95.0	-2.6	-3.6
ALLC0779	2/17/2020 6:59	51.2	43.3	0.4	5.1	94.0	95.0	-3.3	-4.4
ALLC0779	2/18/2020 8:20	47.1	40.7	0.6	11.6	95.0	95.0	-5.8	-5.0
ALLC0779	2/18/2020 13:25	44.1	39.7	0.8	15.4	95.0	95.0	-9.1	-4.3
ALLC0779	2/19/2020 7:21	39.4	36.4	1.5	22.7	93.0	92.0	-4.8	-4.3
ALLC0779	2/19/2020 9:34	39.9	39.4	0.3	20.4	97.0	96.0	-15.5	-5.2
ALLC0779	2/19/2020 13:27	37.1	37.3	1.2	24.4	93.0	92.0	-3.6	-3.3

ALLC0779	2/20/2020 7:30	35.8	35.4	1.3	27.5	91.0	91.0	-3.7	-3.4
ALLC0779	2/21/2020 8:20	36.5	35.8	1.1	26.6	92.0	92.0	-3.0	-3.0
ALLC0779	2/21/2020 13:10	37.8	36.6	0.6	25.0	93.0	92.0	-3.5	-1.8
ALLC0779	2/24/2020 8:42	43.4	37.4	0.8	18.4	88.0	89.0	-1.6	-1.7
ALLC0779	2/25/2020 14:31	48.0	37.8	0.0	14.2	91.0	91.0	-0.9	-0.9
ALLC0779	2/27/2020 10:37	51.2	37.3	0.2	11.3	96.0	96.0	-6.9	-5.5
ALLC0780	2/14/2020 9:34	55.5	44.3	0.1	0.1	98.0	98.0	-1.3	-1.4
ALLC0780	2/15/2020 8:37	55.1	44.7	0.0	0.2	98.0	99.0	-3.0	-3.7
ALLC0780	2/17/2020 6:55	54.8	45.0	0.1	0.1	99.0	100.0	-4.6	-5.9
ALLC0780	2/18/2020 8:17	55.1	44.6	0.2	0.1	100.0	101.0	-8.3	-10.5
ALLC0780	2/18/2020 13:21	55.6	44.0	0.2	0.2	101.0	101.0	-12.4	-13.9
ALLC0780	2/19/2020 7:17	55.0	44.7	0.1	0.2	100.0	101.0	-15.3	-17.6
ALLC0780	2/19/2020 13:23	54.9	45.0	0.0	0.1	101.0	101.0	-18.1	-20.4
ALLC0780	2/20/2020 7:24	55.4	43.4	0.0	1.2	100.0	101.0	-25.0	-21.8
ALLC0780	2/21/2020 8:16	52.3	42.6	0.0	5.1	101.0	101.0	-21.3	-19.9
ALLC0780	2/21/2020 13:07	51.5	42.7	0.0	5.8	100.0	101.0	-18.6	-16.8
ALLC0780	2/24/2020 8:39	53.4	42.1	0.0	4.5	101.0	101.0	-18.2	-14.3
ALLC0780	2/25/2020 11:25	52.8	41.9	0.0	5.3	100.0	101.0	-14.7	-13.5
ALLC0780	2/27/2020 10:32	53.9	39.1	0.0	7.0	101.0	101.0	-13.4	-12.9
ALLC0781	2/14/2020 9:45	56.4	43.5	0.0	0.1	94.0	102.0	-1.1	-1.1
ALLC0781	2/15/2020 8:44	54.7	45.1	0.0	0.2	105.0	105.0	-2.7	-3.1
ALLC0781	2/17/2020 7:03	54.0	45.8	0.1	0.1	105.0	105.0	-3.6	-4.6
ALLC0781	2/18/2020 8:25	54.7	44.8	0.3	0.2	105.0	106.0	-6.9	-7.7
ALLC0781	2/18/2020 13:29	53.3	44.7	0.2	1.8	105.0	105.0	-15.7	-8.5
ALLC0781	2/19/2020 7:29	49.4	43.2	0.5	6.9	105.0	105.0	-9.1	-7.3
ALLC0781	2/19/2020 13:31	47.6	43.2	0.3	8.9	105.0	105.0	-6.1	-5.2
ALLC0781	2/20/2020 7:34	46.6	41.2	0.7	11.5	104.0	104.0	-8.4	-4.3
ALLC0781	2/20/2020 13:25	46.4	40.5	0.9	12.2	104.0	104.0	-8.5	-3.7
ALLC0781	2/21/2020 8:25	45.8	40.0	1.2	13.0	103.0	102.0	-3.8	-2.5
ALLC0781	2/21/2020 13:13	45.3	38.9	1.6	14.2	102.0	102.0	-1.6	-1.5
ALLC0781	2/24/2020 8:47	45.3	36.0	3.4	15.3	98.0	101.0	-1.2	-1.2
ALLC0781	2/27/2020 10:41	47.6	34.3	2.8	15.3	101.0	102.0	-1.6	-1.6
ALLC0782	2/14/2020 9:51	56.4	43.3	0.1	0.2	97.0	98.0	-1.0	-1.0
ALLC0782	2/15/2020 8:48	55.4	44.4	0.1	0.1	110.0	112.0	-2.7	-2.9
ALLC0782	2/17/2020 7:09	53.6	46.1	0.2	0.1	113.0	114.0	-3.4	-3.8
ALLC0782	2/18/2020 8:31	54.4	45.0	0.4	0.2	114.0	115.0	-5.9	-6.3
ALLC0782	2/18/2020 13:33	54.6	44.3	0.5	0.6	114.0	115.0	-6.6	-6.8
ALLC0782	2/19/2020 7:32	53.6	43.3	1.0	2.1	114.0	114.0	-8.4	-8.4
ALLC0782	2/19/2020 13:35	52.4	43.7	0.8	3.1	114.0	114.0	-10.8	-7.4
ALLC0782	2/20/2020 7:37	50.9	41.5	1.4	6.2	113.0	114.0	-7.7	-7.2
ALLC0782	2/21/2020 8:28	48.8	40.5	1.7	9.0	113.0	112.0	-9.1	-5.4
ALLC0782	2/21/2020 13:16	47.6	39.4	2.0	11.0	111.0	111.0	-6.9	-3.5
ALLC0782	2/24/2020 8:51	37.2	33.1	4.8	24.9	107.0	109.0	-3.3	-3.3
ALLC0782	2/27/2020 10:48	45.6	33.8	3.2	17.4	111.0	112.0	-3.4	-3.4
ALLC0783	2/14/2020 10:17	56.5	43.4	0.0	0.1	101.0	107.0	-1.1	-1.2
ALLC0783	2/15/2020 8:51	55.6	44.1	0.1	0.2	108.0	108.0	-3.5	-2.9
ALLC0783	2/17/2020 7:13	53.1	44.9	0.1	1.9	108.0	108.0	-3.3	-3.8
ALLC0783	2/18/2020 8:37	46.3	43.3	0.3	10.1	109.0	109.0	-5.0	-4.6
ALLC0783	2/18/2020 13:36	43.8	41.4	0.4	14.4	109.0	109.0	-5.6	-3.6
ALLC0783	2/19/2020 7:36	39.8	40.2	0.9	19.1	108.0	108.0	-3.6	-3.1

ALLC0783	2/19/2020 9:51	36.9	41.6	0.2	21.3	109.0	109.0	-18.0	-5.0
ALLC0783	2/19/2020 13:39	39.8	39.3	1.3	19.6	106.0	106.0	-1.6	-1.6
ALLC0783	2/20/2020 7:41	37.6	37.7	1.8	22.9	106.0	106.0	-1.7	-1.7
ALLC0783	2/21/2020 8:36	31.3	36.4	1.8	30.5	107.0	107.0	-5.7	-2.0
ALLC0783	2/21/2020 13:19	33.6	37.7	0.9	27.8	107.0	106.0	-4.8	-0.7
ALLC0783	2/24/2020 8:56	35.6	36.8	1.6	26.0	105.0	107.0	-0.6	-0.6
ALLC0783	2/27/2020 10:55	37.6	33.7	1.5	27.2	107.0	108.0	-0.9	-0.9
ALLC0784	2/14/2020 10:39	58.4	41.3	0.2	0.1	105.0	110.0	-5.0	-6.0
ALLC0784	2/15/2020 8:55	56.3	43.4	0.1	0.2	106.0	106.0	-13.5	-8.8
ALLC0784	2/17/2020 7:17	55.3	44.5	0.1	0.1	105.0	105.0	-10.1	-10.9
ALLC0784	2/18/2020 8:42	53.9	43.9	0.1	2.1	106.0	106.0	-14.3	-14.8
ALLC0784	2/18/2020 13:40	53.1	43.6	0.1	3.2	106.0	106.0	-18.6	-15.5
ALLC0784	2/19/2020 7:40	51.8	43.2	0.2	4.8	106.0	106.0	-17.4	-17.3
ALLC0784	2/19/2020 13:42	50.3	43.9	0.0	5.8	106.0	106.0	-20.1	-16.1
ALLC0784	2/20/2020 7:45	48.4	42.6	0.0	9.0	106.0	106.0	-20.3	-14.9
ALLC0784	2/20/2020 13:31	47.7	41.7	0.0	10.6	106.0	106.0	-12.5	-11.8
ALLC0784	2/21/2020 8:40	46.2	41.8	0.0	12.0	106.0	106.0	-10.8	-10.1
ALLC0784	2/21/2020 13:22	46.3	41.6	0.0	12.1	105.0	105.0	-7.7	-7.4
ALLC0784	2/24/2020 9:00	48.7	41.6	0.0	9.7	105.0	105.0	-6.9	-6.8
ALLC0784	2/27/2020 11:00	51.6	38.3	0.1	10.0	105.0	106.0	-6.8	-6.8
ALLC0785	2/14/2020 10:11	56.3	43.6	0.0	0.1	80.0	82.0	-1.1	-1.2
ALLC0785	2/15/2020 9:00	56.3	43.6	0.0	0.1	96.0	100.0	-2.0	-3.2
ALLC0785	2/17/2020 7:21	55.4	44.5	0.0	0.1	103.0	103.0	-4.9	-6.5
ALLC0785	2/18/2020 8:46	55.0	42.6	0.1	2.3	103.0	103.0	-10.6	-11.8
ALLC0785	2/18/2020 13:43	52.5	41.8	0.2	5.5	102.0	103.0	-13.2	-13.4
ALLC0785	2/19/2020 7:43	50.6	41.3	0.3	7.8	100.0	100.0	-16.3	-14.0
ALLC0785	2/19/2020 9:56	52.1	41.8	0.0	6.1	100.0	100.0	-14.9	-10.5
ALLC0785	2/19/2020 13:45	54.5	43.1	0.0	2.4	100.0	100.0	-8.6	-8.6
ALLC0785	2/20/2020 7:48	54.7	41.9	0.0	3.4	99.0	99.0	-9.0	-8.6
ALLC0785	2/20/2020 13:37	55.8	42.2	0.0	2.0	99.0	99.0	-7.5	-7.7
ALLC0785	2/21/2020 8:44	53.9	41.8	0.0	4.3	97.0	98.0	-12.2	-8.2
ALLC0785	2/21/2020 13:26	54.3	41.6	0.0	4.1	97.0	98.0	-8.5	-7.1
ALLC0785	2/24/2020 9:07	56.0	41.1	0.0	2.9	96.0	96.0	-7.7	-7.6
ALLC0785	2/27/2020 11:04	55.0	37.7	0.0	7.3	96.0	96.0	-8.7	-8.7
ALLC0786	2/28/2020 7:05	56.1	43.7	0.0	0.2	97.0	104.0	-1.1	-1.9
ALLC0786	2/28/2020 13:50	58.2	41.7	0.0	0.1	113.0	114.0	-1.7	-2.6
ALLC0805	2/24/2020 10:04	34.7	23.3	4.9	37.1	109.0	109.0	-30.2	-19.0
ALLC0805	2/24/2020 14:04	43.8	30.1	2.5	23.6	101.0	101.0	-14.9	-15.0
ALLC0805	2/25/2020 9:52	36.0	29.7	3.9	30.4	101.0	100.0	-13.0	-7.1
ALLC0806	2/24/2020 10:00	39.8	30.9	3.0	26.3	113.0	113.0	-6.2	-2.3
ALLC0806	2/24/2020 14:13	51.6	39.1	0.9	8.4	121.0	119.0	-4.3	-4.0
ALLC0806	2/25/2020 11:20	43.4	37.7	2.7	16.2	114.0	113.0	-4.0	-2.9
ALLC0806	2/27/2020 11:22	45.3	36.6	2.0	16.1	116.0	115.0	-11.4	-6.0
ALLC0807	2/24/2020 9:32	50.5	39.9	2.5	7.1	105.0	106.0	-6.3	-4.5
ALLC0807	2/24/2020 14:19	52.4	43.1	1.0	3.5	111.0	115.0	-3.2	-6.9
ALLC0807	2/25/2020 10:14	53.3	38.6	0.9	7.2	113.0	113.0	-4.0	-3.8
ALLC0807	2/25/2020 11:16	44.4	42.8	1.4	11.4	114.0	114.0	-7.7	-6.4
ALLC0807	2/27/2020 11:14	45.4	40.3	1.3	13.0	117.0	116.0	-13.9	-8.6
ALLC0808	2/24/2020 14:28	53.1	45.4	0.2	1.3	128.0	128.0	-3.3	-3.2
ALTA0003	2/12/2020 12:24	60.0	39.8	0.0	0.2	110.0	112.0	-91.4	-89.7

ALTA0053	2/3/2020 10:42	27.7	36.2	4.6	31.5	101.0	100.0	-0.6	-0.6
ALTA0054	2/3/2020 10:50	50.1	39.7	0.0	10.2	76.0	76.0	-38.5	-38.5
ALTA0056	2/3/2020 10:55	57.6	42.2	0.0	0.2	108.0	108.0	-63.3	-63.1
ALTA0059	2/3/2020 11:03	56.8	42.9	0.2	0.1	94.0	94.0	-83.7	-83.4
ALTA0087	2/12/2020 12:15	59.1	39.7	0.0	1.2	125.0	124.0	-83.5	-83.5
ALTA0108	2/3/2020 9:11	56.8	43.0	0.1	0.1	67.0	68.0	-3.1	-3.5
ALTA0201	2/18/2020 9:27	52.4	38.0	0.3	9.3	108.0	108.0	-90.9	-90.8
ALTA0472	2/6/2020 8:29	59.0	40.8	0.1	0.1	106.0	107.0	-74.0	-78.0
ALTA0483	2/10/2020 12:16	50.9	39.9	0.0	9.2	112.0	113.0	-89.0	-88.7
ALTA0488	2/12/2020 11:55	52.8	41.7	0.0	5.5	126.0	127.0	-64.7	-65.8
ALTA0490	2/10/2020 12:11	56.6	43.3	0.0	0.1	114.0	115.0	-53.9	-54.4
ALTA0491	2/3/2020 13:09	60.7	39.1	0.0	0.2	118.0	119.0	-83.7	-83.5
ALTA0508	2/10/2020 7:52	55.2	39.3	0.2	5.3	106.0	107.0	-68.9	-69.5
ALTA0516	2/12/2020 10:26	52.7	40.2	1.5	5.6	62.0	61.0	-11.0	-12.3
ALTA0517	2/10/2020 7:58	52.2	38.0	0.0	9.8	107.0	108.0	-60.2	-60.2
ALTA0518	2/3/2020 10:34	53.9	36.2	0.0	9.9	118.0	118.0	-3.1	-3.2
ALTA0529	2/18/2020 9:34	42.6	36.8	0.5	20.1	124.0	124.0	-38.4	-38.2
ALTA0534	2/12/2020 8:00	54.8	45.0	0.1	0.1	62.0	62.0	-92.8	-92.8
ALTA0535	2/12/2020 8:26	53.6	40.3	0.0	6.1	120.0	121.0	-60.1	-60.5
ALTA0539	2/10/2020 10:08	44.7	44.1	0.0	11.2	107.0	108.0	-44.7	-40.5
ALTA0541	2/12/2020 12:01	49.7	36.5	0.0	13.8	117.0	118.0	-21.0	-20.6
ALTA0545	2/12/2020 12:08	48.9	41.1	0.0	10.0	121.0	121.0	-5.9	-5.9
ALTA0551	2/12/2020 12:31	40.2	29.8	3.6	26.4	113.0	113.0	-16.5	-14.8
ALTA0566	2/12/2020 9:09	57.1	42.6	0.2	0.1	80.0	79.0	-79.4	-79.0
ALTA0571	2/10/2020 10:51	29.2	28.5	4.8	37.5	61.0	60.0	-53.2	-55.6
ALTA0578	2/12/2020 7:54	52.0	41.5	0.2	6.3	118.0	118.0	-86.6	-87.3
ALTA0579	2/12/2020 8:18	44.9	39.9	0.0	15.2	125.0	118.0	-36.9	-39.3
ALTA0580	2/12/2020 12:20	58.2	41.2	0.5	0.1	126.0	126.0	-83.5	-83.5
ALTA0589	2/24/2020 12:15	22.3	17.9	9.2	50.6	124.0	124.0	-66.3	-67.2
ALTA0589	2/24/2020 12:17	22.2	18.0	9.0	50.8	123.0	123.0	-73.1	-67.6
ALTA0590	2/24/2020 12:21	39.0	25.7	6.6	28.7	87.0	86.0	-78.5	-78.2
ALTA0590	2/24/2020 12:22	32.3	20.1	9.2	38.4	84.0	85.0	-79.3	-78.7
ALTA0590	2/25/2020 9:00	31.9	23.7	8.3	36.1	73.0	73.0	-81.1	-78.9
ALTA0590	2/25/2020 9:02	29.8	20.9	9.4	39.9	73.0	73.0	-82.0	-79.0
ALTA0611	2/10/2020 11:57	50.8	39.8	0.0	9.4	126.0	126.0	-28.6	-25.9
ALTA0612	2/10/2020 12:05	47.3	40.1	0.0	12.6	134.0	134.0	-28.0	-24.9
ALTA0612	2/10/2020 12:07	47.4	40.1	0.0	12.5	134.0	134.0	-25.3	-22.7
ALTA0624	2/3/2020 11:11	43.1	37.0	0.0	19.9	80.0	80.0	-18.5	-16.6
ALTA0629	2/3/2020 13:19	50.2	37.4	0.0	12.4	113.0	113.0	-25.0	-25.1
ALTA0639	2/14/2020 12:08	47.6	40.0	0.0	12.4	138.0	138.0	-67.9	-66.7
ALTA0639	2/14/2020 12:10	47.2	40.2	0.0	12.6	138.0	138.0	-65.7	-65.1
ALTA0650	2/18/2020 9:17	54.5	42.9	0.2	2.4	123.0	123.0	-90.1	-90.1
ALTA0651	2/18/2020 9:21	54.2	42.2	0.0	3.6	114.0	112.0	-84.3	-84.2
ALTA0652	2/14/2020 11:58	44.9	37.6	0.0	17.5	135.0	135.0	-13.4	-12.8
ALTA0652	2/14/2020 12:00	44.8	37.9	0.0	17.3	135.0	135.0	-12.0	-12.0
ALTA0654	2/6/2020 8:45	54.4	45.3	0.2	0.1	132.0	132.0	-90.9	-88.0
ALTA0654	2/6/2020 8:47	55.2	44.4	0.2	0.2	132.0	133.0	-93.4	-91.1
ALTA0660	2/14/2020 12:23	56.9	43.0	0.0	0.1	120.0	120.0	-81.6	-81.7
ALTA0661	2/12/2020 8:07	51.9	46.5	0.0	1.6	127.0	129.0	-48.4	-58.0
ALTA0664	2/18/2020 9:10	57.7	42.0	0.2	0.1	84.0	82.0	-90.5	-90.5

ALTA0665	2/12/2020 10:03	56.3	43.6	0.0	0.1	63.0	63.0	-17.8	-19.0
ALTA0668	2/10/2020 9:21	54.0	45.9	0.0	0.1	126.0	126.0	-86.4	-85.3
ALTA0669	2/12/2020 7:24	52.7	41.3	0.0	6.0	115.0	115.0	-91.8	-91.7
ALTA0676	2/12/2020 11:36	43.7	35.7	3.8	16.8	100.0	99.0	-2.3	-0.4
ALTA0678	2/12/2020 9:41	56.2	43.7	0.0	0.1	127.0	127.0	-72.9	-70.7
ALTA0681	2/12/2020 10:16	22.9	32.2	0.0	44.9	83.0	84.0	-52.6	-45.5
ALTA0682	2/10/2020 8:03	57.2	42.7	0.0	0.1	121.0	122.0	-30.2	-30.2
ALTA0683	2/12/2020 7:05	55.1	41.4	1.0	2.5	73.0	73.0	-91.2	-91.3
ALTA0685	2/12/2020 7:11	56.1	42.4	0.3	1.2	73.0	74.0	-82.2	-82.2
ALTA0686	2/12/2020 7:41	56.2	41.8	0.0	2.0	120.0	120.0	-91.0	-88.7
ALTA0688	2/3/2020 13:05	60.0	39.8	0.1	0.1	96.0	98.0	-87.8	-88.2
ALTA0712	2/10/2020 10:40	54.6	45.3	0.0	0.1	117.0	118.0	-56.7	-53.8
ALTA0713	2/10/2020 10:21	47.1	41.7	0.0	11.2	115.0	115.0	-54.8	-54.7
ALTA0714	2/10/2020 10:12	55.7	44.1	0.0	0.2	117.0	118.0	-60.9	-58.6
ALTA0715	2/10/2020 9:51	56.2	43.5	0.1	0.2	114.0	114.0	-90.4	-90.7
ALTA0716	2/10/2020 9:47	54.7	44.5	0.0	0.8	122.0	123.0	-83.5	-82.0
ALTA0717	2/10/2020 10:30	54.2	43.7	0.0	2.1	114.0	114.0	-49.9	-49.6
ALTA0719	2/10/2020 9:34	52.5	47.4	0.0	0.1	132.0	132.0	-79.7	-79.2
ALTA0719	2/10/2020 9:36	52.4	47.5	0.0	0.1	132.0	132.0	-81.8	-77.9
ALTA0721	Offline for filling								
ALTA0723	2/12/2020 10:42	58.5	41.2	0.1	0.2	78.0	77.0	-54.6	-54.6
ALTA0723	2/17/2020 11:07	SPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-DECOMMISSIONE							
ALTA0732	2/10/2020 9:42	51.5	48.4	0.0	0.1	119.0	119.0	-81.7	-82.2
ALTA0733	2/17/2020 7:31	45.0	40.9	0.0	14.1	144.0	144.0	-27.7	-26.9
ALTA0733	2/17/2020 7:35	45.0	40.9	0.0	14.1	143.0	144.0	-26.4	-20.6
ALTA0733	2/17/2020 7:40	Well 733 CO sample is 20 ppm							
ALTA0733	2/18/2020 10:10	48.5	40.1	0.0	11.4	142.0	142.0	-17.2	-7.1
ALTA0733	2/18/2020 10:12	48.1	41.2	0.0	10.7	141.0	142.0	-6.9	-6.7
ALTA0733	2/18/2020 10:15	Well 733 CO sample is 10 ppm							
ALTA0751	2/5/2020 11:10	42.7	37.6	1.7	18.0	108.0	108.0	-5.3	-4.5
ALTA0753	2/14/2020 10:56	44.3	39.1	0.6	16.0	126.0	126.0	-73.7	-72.3
ALTA0755	Offline for filling								
ALTA0756	2/14/2020 12:51	49.3	40.6	0.0	10.1	112.0	112.0	-59.1	-59.4
ALTA0758	2/12/2020 11:44	36.0	28.8	4.8	30.4	99.0	99.0	-62.8	-63.9
ALTA0759	2/12/2020 10:12	49.8	40.8	0.0	9.4	123.0	123.0	-13.4	-13.4
ALTA0760	2/12/2020 10:08	51.8	42.5	0.0	5.7	119.0	119.0	-49.3	-53.0
ALTA0761	2/10/2020 10:16	11.6	27.8	1.5	59.1	115.0	115.0	-3.0	-3.1
ALTA0762	2/10/2020 10:35	53.2	45.1	0.0	1.7	112.0	113.0	-41.5	-40.4
ALTA0763	2/18/2020 8:56	33.2	36.8	0.5	29.5	120.0	120.0	-4.6	-4.5
ALTA0764	Offline for filling								
ALTA0765	2/3/2020 12:59	58.3	39.9	0.0	1.8	109.0	111.0	-3.8	-8.5
ALTA0765	2/4/2020 8:50	53.8	38.4	0.6	7.2	112.0	112.0	-15.8	-17.9
ALTA0766	2/14/2020 12:45	56.7	43.2	0.0	0.1	100.0	99.0	-77.0	-77.1
ALTA0767	2/18/2020 8:51	48.3	41.1	0.0	10.6	127.0	128.0	-28.1	-19.3
ALTA0768	2/10/2020 9:29	54.8	44.6	0.5	0.1	119.0	118.0	-57.2	-80.5
ALTA0769	2/14/2020 11:01	53.4	42.2	0.0	4.4	125.0	125.0	-81.9	-81.9
ALTA0769	2/14/2020 12:29	54.3	40.8	0.0	4.9	124.0	124.0	-80.5	-80.7
ALTA0770	2/10/2020 10:03	47.6	43.4	0.1	8.9	116.0	117.0	-1.1	-1.1
ALTA0771	2/10/2020 12:27	45.0	43.2	0.0	11.8	117.0	117.0	-6.6	-5.5
ALTA0772	2/12/2020 8:32	50.5	40.8	0.0	8.7	122.0	122.0	-3.9	-4.1

ALTA0773	2/12/2020 9:57	57.9	42.0	0.0	0.1	75.0	67.0	-71.8	-71.9

There are 114 vertical LFG wells, 1 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).A Well Decommissioning Notification Letter for eight vertical wells was submitted to the BAAQMD on February 1, 2020 as required by

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below.

Wells Approved for Higher Operating Value for Temperature

Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-March 2020
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 4/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALLC0695	3/19/2020 16:11	51.0	39.4	0.3	9.3	115.7	115.7	-23.6	-23.6
ALLC0698	3/19/2020 16:28	57.0	43.0	0.1	-0.1	103.2	103.2	-47.6	-48.3
ALLC0699	3/20/2020 11:08	50.5	40.1	0.4	9.0	113.3	110.6	-79.5	-79.1
ALLC0700	3/18/2020 14:15	57.8	42.1	0.1	0.0	90.3	90.3	-68.9	-69.4
ALLC0703	3/18/2020 16:10	46.0	34.2	2.6	17.2	119.8	119.6	-2.2	-1.3
ALLC0704	3/9/2020 9:23	51.0	38.9	1.7	8.4	105.0	106.0	-36.4	-36.4
ALLC0704	3/18/2020 16:15	52.3	38.4	1.9	7.4	104.1	104.1	-35.0	-35.0
ALLC0709	3/20/2020 10:19	55.9	36.6	0.0	7.5	97.5	100.0	-1.0	-1.8
ALLC0734	3/18/2020 15:15	58.0	40.2	0.6	1.2	102.8	102.7	-61.6	-58.5
ALLC0736	3/18/2020 15:49	51.0	37.6	0.1	11.3	100.7	100.7	-11.5	-11.5
ALLC0737	3/18/2020 16:00	55.1	38.9	0.1	5.9	110.5	110.7	-70.6	-73.5
ALLC0738	3/10/2020 7:56	55.4	44.4	0.0	0.2	94.0	94.0	-89.5	-89.5
ALLC0739	3/18/2020 9:46	44.1	37.5	0.0	18.4	89.7	90.4	-88.9	-86.8
ALLC0740	3/18/2020 10:11	33.7	34.8	0.0	31.5	129.4	129.4	-4.8	-4.6
ALLC0743	3/10/2020 8:01	46.5	39.8	0.0	13.7	112.0	111.0	-47.3	-35.4
ALLC0744	3/18/2020 9:57	39.9	36.2	0.0	23.9	127.7	127.6	-54.4	-41.0
ALLC0744	3/18/2020 9:57	39.9	36.2	0.0	23.9	127.7	127.6	-54.4	-41.0
ALLC0745	3/18/2020 11:03	30.6	30.4	0.1	38.9	119.8	119.3	-5.1	-4.9
ALLC0746	3/18/2020 9:33	39.9	36.7	0.0	23.4	120.4	121.1	-81.4	-44.9
ALLC0747	3/18/2020 13:51	51.7	40.5	0.4	7.4	122.0	122.0	-27.2	-27.2
ALLC0748	3/18/2020 14:03	55.4	40.6	0.9	3.1	99.1	88.3	-65.4	-64.9
ALLC0748	3/18/2020 14:09	55.5	40.7	0.9	2.9	93.4	97.7	-68.4	-67.7
ALLC0749	3/18/2020 14:20	50.5	38.8	0.1	10.6	118.0	118.1	-4.8	-4.8
ALLC0775	3/19/2020 16:25	49.0	43.6	0.0	7.4	111.4	111.4	-3.0	-2.9
ALLC0776	3/19/2020 16:42	45.2	40.2	0.1	14.5	110.9	108.1	-5.5	-1.3
ALLC0777	3/23/2020 10:03	50.1	39.6	0.3	10.0	124.0	124.0	-65.9	-64.0
ALLC0778	3/23/2020 9:59	48.0	38.1	0.1	13.8	92.0	92.0	-82.2	-80.4
ALLC0779	3/2/2020 13:04	50.9	40.6	0.0	8.5	97.0	97.0	-4.5	-3.6
ALLC0779	3/17/2020 15:12	54.6	42.0	0.0	3.4	94.4	95.2	-2.3	-3.1
ALLC0780	3/2/2020 13:00	54.7	42.3	0.0	3.0	101.0	102.0	-11.8	-12.6
ALLC0780	3/13/2020 9:41	54.2	42.5	0.0	3.3	101.0	102.0	-17.2	-14.5
ALLC0781	3/2/2020 13:11	49.6	37.2	2.3	10.9	101.0	101.0	-1.0	-1.0
ALLC0781	3/13/2020 10:46	36.0	30.0	7.1	26.9	101.0	101.0	-5.1	-5.0
ALLC0781	3/13/2020 10:49	52.8	39.9	1.5	5.8	102.0	103.0	-9.2	-9.0
ALLC0781	3/16/2020 12:17	56.6	42.7	0.3	0.4	101.0	101.0	-1.0	-1.0
ALLC0781	3/17/2020 15:19	56.9	43.0	0.1	0.0	100.0	101.4	-1.0	-1.2
ALLC0782	3/2/2020 13:15	47.9	37.6	2.3	12.2	110.0	110.0	-2.6	-2.5
ALLC0782	3/13/2020 10:38	44.2	36.7	3.4	15.7	114.0	114.0	-5.6	-5.6
ALLC0782	3/13/2020 10:41	49.7	40.1	1.3	8.9	112.0	114.0	-8.9	-8.9
ALLC0782	3/16/2020 11:59	51.1	39.7	1.7	7.5	114.0	114.0	-2.8	-2.7
ALLC0782	3/17/2020 16:23	49.2	37.7	2.5	10.6	111.7	111.0	-2.6	-2.6
ALLC0783	3/2/2020 13:25	39.8	34.9	1.2	24.1	109.0	109.0	-0.7	-0.5

ALLC0783	3/13/2020 10:06	33.4	31.6	3.6	31.4	106.0	107.0	-1.4	-1.5
ALLC0783	3/13/2020 10:14	35.1	33.7	2.4	28.8	108.0	108.0	-1.6	-2.1
ALLC0783	3/16/2020 12:08	46.8	38.4	0.2	14.6	109.0	109.0	-1.2	-1.0
ALLC0783	3/17/2020 15:25	46.0	38.2	0.3	15.5	107.3	106.6	-0.9	-0.7
ALLC0784	3/2/2020 13:20	53.4	41.6	0.0	5.0	104.0	104.0	-6.3	-6.3
ALLC0784	3/13/2020 10:20	53.6	42.1	0.0	4.3	107.0	107.0	-7.5	-7.8
ALLC0784	3/16/2020 12:03	53.0	41.4	0.0	5.6	106.0	107.0	-6.6	-6.6
ALLC0784	3/17/2020 15:36	53.6	41.4	0.0	5.0	106.0	106.2	-6.3	-6.5
ALLC0785	3/13/2020 10:34	52.2	41.1	0.0	6.7	96.0	96.0	-8.3	-8.6
ALLC0785	3/16/2020 12:12	53.0	40.6	0.0	6.4	96.0	96.0	-8.8	-8.8
ALLC0785	3/17/2020 16:29	53.9	40.2	0.0	5.9	94.4	94.4	-7.6	-7.6
ALLC0786	3/13/2020 10:27	32.9	29.0	6.1	32.0	103.0	103.0	-2.4	-2.3
ALLC0786	3/13/2020 10:30	43.9	37.6	1.7	16.8	106.0	106.0	-9.1	-9.0
ALLC0786	3/17/2020 15:29	50.2	40.7	0.0	9.1	107.1	107.1	-2.7	-2.7
ALLC0787	3/13/2020 9:23	55.3	44.6	0.0	0.1	88.0	88.0	-2.1	-2.1
ALLC0787	3/17/2020 14:48	56.7	43.3	0.0	0.0	93.1	101.1	-0.4	-4.2
ALLC0788	3/13/2020 9:29	56.2	43.7	0.0	0.1	88.0	88.0	-1.1	-1.1
ALLC0788	3/17/2020 15:01	56.8	43.2	0.0	0.0	102.8	110.4	-1.0	-4.5
ALLC0789	3/13/2020 11:07	56.4	43.5	0.0	0.1	90.0	99.0	-1.5	-3.2
ALLC0789	3/17/2020 14:55	56.8	43.2	0.0	0.0	114.4	116.2	-2.2	-4.1
ALLC0790	3/13/2020 11:16	56.2	43.7	0.0	0.1	85.0	87.0	-2.2	-3.8
ALLC0790	3/23/2020 10:20	55.6	44.3	0.0	0.1	89.0	89.0	-7.8	-9.3
ALLC0791	3/13/2020 11:26	56.5	43.4	0.0	0.1	74.0	74.0	-1.0	-1.2
ALLC0792	3/6/2020 16:22	54.6	45.2	0.0	0.2	93.0	94.0	-1.3	-1.3
ALLC0792	3/9/2020 9:01	55.7	44.2	0.0	0.1	94.0	95.0	-1.7	-2.4
ALLC0792	3/13/2020 12:00	52.9	41.4	1.0	4.7	94.0	92.0	-1.9	-1.3
ALLC0793	3/13/2020 11:33	55.6	44.3	0.0	0.1	88.0	90.0	-2.5	-4.4
ALLC0793	3/23/2020 10:08	58.2	41.6	0.0	0.2	59.0	59.0	-81.1	-81.0
ALLC0794	3/6/2020 16:28	55.8	44.1	0.0	0.1	110.0	110.0	-0.8	-0.7
ALLC0794	3/9/2020 9:06	54.8	45.1	0.0	0.1	111.0	111.0	-1.8	-2.1
ALLC0794	3/13/2020 12:04	44.4	41.4	0.0	14.2	111.0	112.0	-2.3	-1.2
ALLC0795	3/9/2020 9:12	55.1	44.8	0.0	0.1	111.0	112.0	-1.9	-1.9
ALLC0795	3/13/2020 12:09	41.6	42.5	0.0	15.9	119.0	119.0	-1.5	-0.7
ALLC0796	3/6/2020 16:08	54.2	45.5	0.1	0.2	121.0	122.0	-1.3	-1.3
ALLC0796	3/9/2020 8:32	54.4	45.5	0.0	0.1	119.0	120.0	-2.2	-3.3
ALLC0796	3/13/2020 11:51	49.7	43.9	0.0	6.4	116.0	116.0	-2.8	-2.0
ALLC0797	3/9/2020 8:40	52.7	47.2	0.0	0.1	68.0	70.0	-1.5	-1.5
ALLC0797	3/13/2020 12:15	52.6	47.3	0.0	0.1	80.0	81.0	-0.9	-1.3
ALLC0798	3/6/2020 15:54	55.2	44.5	0.1	0.2	115.0	115.0	-0.7	-0.7
ALLC0798	3/9/2020 8:25	48.8	40.6	0.0	10.6	110.0	110.0	-1.9	-0.6
ALLC0798	3/13/2020 11:46	55.6	44.3	0.0	0.1	111.0	111.0	-0.4	-0.4
ALLC0799	3/9/2020 8:53	55.0	44.9	0.0	0.1	107.0	107.0	-0.3	-0.3
ALLC0799	3/13/2020 11:56	54.1	44.1	0.0	1.8	107.0	107.0	-0.4	-0.3
ALLC0800	3/13/2020 11:21	55.1	44.8	0.0	0.1	91.0	92.0	-1.1	-1.1
ALLC0800	3/23/2020 10:25	55.3	44.6	0.0	0.1	101.0	103.0	-0.8	-1.6
ALLC0801	3/6/2020 16:38	54.1	45.8	0.0	0.1	116.0	116.0	-1.4	-1.3
ALLC0801	3/9/2020 10:02	55.9	44.0	0.0	0.1	109.0	109.0	-7.3	-4.6
ALLC0801	3/13/2020 12:19	52.3	43.3	0.0	4.4	110.0	110.0	-4.7	-4.9
ALLC0802	3/6/2020 16:43	54.3	45.6	0.0	0.1	115.0	116.0	-1.8	-1.8
ALLC0802	3/9/2020 9:59	56.3	43.6	0.0	0.1	110.0	110.0	-3.0	-4.4

ALLC0802	3/13/2020 12:24	48.5	40.6	0.0	10.9	105.0	105.0	-6.0	-3.2
ALLC0803	3/13/2020 9:16	58.9	40.9	0.0	0.2	88.0	90.0	-1.6	-1.6
ALLC0803	3/17/2020 14:43	57.1	42.8	0.0	0.1	101.1	102.6	-2.1	-2.8
ALLC0804	3/13/2020 9:09	55.6	44.2	0.0	0.2	117.0	118.0	-1.4	-1.4
ALLC0804	3/17/2020 14:33	56.3	43.7	0.0	0.0	117.9	119.0	-1.4	-1.8
ALLC0805	3/3/2020 14:12	18.3	16.9	10.2	54.6	105.0	90.0	-8.4	-63.9
ALLC0805	3/3/2020 14:16	24.2	22.7	6.4	46.7	95.0	95.0	-64.5	-7.4
ALLC0805	3/17/2020 9:05	56.6	40.1	0.1	3.2	55.6	109.1	-1.2	-10.8
ALLC0805	3/17/2020 12:06	43.9	31.2	0.1	24.8	110.1	108.5	-6.3	-4.1
ALLC0806	3/3/2020 14:20	26.4	25.9	6.5	41.2	102.0	102.0	-3.6	-16.6
ALLC0806	3/3/2020 14:23	31.6	31.9	3.2	33.3	108.0	102.0	-4.5	-3.8
ALLC0806	3/3/2020 14:24	31.6	31.9	3.2	33.3	108.0	105.0	-4.5	-3.1
ALLC0806	3/17/2020 12:13	27.3	23.9	8.2	40.6	97.4	92.2	-2.7	-1.7
ALLC0806	3/17/2020 15:54	36.2	31.4	4.3	28.1	104.9	104.9	-7.6	-7.6
ALLC0806	3/17/2020 16:02	37.0	32.7	3.5	26.8	105.9	92.8	-8.0	-1.8
ALLC0807	3/3/2020 14:28	30.2	29.9	6.3	33.6	106.0	110.0	-9.3	-31.0
ALLC0807	3/3/2020 14:31	34.9	35.2	3.8	26.1	110.0	104.0	-32.7	-6.5
ALLC0807	3/17/2020 12:19	32.8	34.1	1.6	31.5	106.8	102.8	-5.1	-3.0
ALLC0808	3/2/2020 12:39	48.8	39.0	0.5	11.7	122.0	121.0	-3.0	-2.8
ALTA0003	3/19/2020 12:02	59.6	39.3	0.1	1.0	110.5	110.5	-72.4	-71.4
ALTA0053	3/19/2020 11:09	28.3	37.5	4.0	30.2	106.4	105.7	-0.5	-0.5
ALTA0054	3/19/2020 10:54	53.2	37.7	0.1	9.0	77.3	77.3	-25.7	-25.8
ALTA0056	3/19/2020 11:00	59.5	40.2	0.1	0.2	106.8	106.7	-44.3	-45.4
ALTA0059	3/19/2020 11:17	57.7	42.2	0.1	0.0	96.3	96.2	-65.6	-65.9
ALTA0087	3/19/2020 12:10	57.5	39.1	0.1	3.3	124.2	124.1	-70.9	-70.9
ALTA0108	3/19/2020 11:27	56.5	41.3	0.1	2.1	76.4	76.4	-3.4	-3.4
ALTA0201	3/20/2020 10:14	53.0	36.0	0.9	10.1	106.0	106.0	-90.7	-90.7
ALTA0472	3/17/2020 14:27	59.3	39.2	0.5	1.0	107.8	107.8	-70.8	-70.8
ALTA0483	3/20/2020 10:51	55.0	40.5	0.1	4.4	119.5	119.5	-84.6	-85.1
ALTA0488	3/23/2020 13:16	55.6	39.1	0.3	5.0	126.0	126.0	-89.3	-89.2
ALTA0490	3/20/2020 10:43	43.5	32.6	4.4	19.5	75.5	78.9	-56.8	-57.2
ALTA0491	3/23/2020 8:43	59.9	40.0	0.0	0.1	119.0	120.0	-86.2	-84.7
ALTA0508	3/18/2020 15:22	54.7	38.3	0.4	6.6	106.5	106.4	-62.0	-62.2
ALTA0517	3/18/2020 15:35	53.3	36.5	0.1	10.1	107.7	107.7	-52.9	-52.8
ALTA0518	3/19/2020 12:23	56.6	36.2	0.1	7.1	119.1	119.4	-2.8	-3.4
ALTA0529	3/23/2020 12:05	39.9	34.1	1.5	24.5	124.7	124.4	-34.7	-25.2
ALTA0534	3/23/2020 12:27	50.3	40.9	2.0	6.8	60.0	60.0	-89.9	-89.4
ALTA0535	3/23/2020 12:37	54.4	40.0	0.0	5.6	119.0	119.0	-89.2	-88.0
ALTA0539	3/20/2020 11:46	46.3	42.0	0.1	11.6	104.8	104.4	-41.2	-41.2
ALTA0541	3/20/2020 9:54	50.5	35.4	0.2	13.9	117.8	117.8	-22.3	-22.3
ALTA0545	3/19/2020 12:17	48.4	40.1	0.2	11.3	121.4	121.4	-6.2	-6.2
ALTA0551	3/19/2020 11:49	41.4	29.6	4.4	24.6	105.4	107.2	-12.7	-10.9
ALTA0566	3/13/2020 9:36	41.9	37.7	2.5	17.9	101.0	102.0	-88.4	-76.9
ALTA0566	3/17/2020 15:06	53.6	40.0	0.9	5.5	74.9	74.8	-53.9	-53.9
ALTA0578	3/18/2020 14:26	49.3	39.6	1.0	10.1	68.5	67.6	-73.9	-74.0
ALTA0579	3/23/2020 12:22	44.6	39.8	0.0	15.6	124.0	125.0	-57.8	-53.9
ALTA0580	3/19/2020 11:57	58.0	41.8	0.2	0.0	123.6	123.6	-65.0	-64.9
ALTA0589	3/19/2020 9:17	20.6	18.4	9.6	51.4	122.3	122.3	-60.0	-59.8
ALTA0590	3/19/2020 9:07	15.4	10.9	15.5	58.2	56.6	56.9	-73.0	-73.1

ALTA0611	3/20/2020 10:07	50.0	37.0	0.1	12.9	126.3	126.4	-28.1	-28.1
ALTA0612	3/20/2020 10:03	46.0	38.1	0.0	15.9	132.3	131.9	-18.9	-19.0
ALTA0624	3/23/2020 7:29	41.5	35.0	0.7	22.8	81.3	81.4	-33.2	-33.1
ALTA0629	3/20/2020 10:13	51.7	36.4	0.1	11.8	113.6	113.7	-25.3	-25.3
ALTA0639	3/27/2020 8:11	48.4	40.7	0.0	10.9	137.0	138.0	-54.4	-54.1
ALTA0639	3/27/2020 8:12	48.4	40.4	0.0	11.2	137.0	138.0	-56.7	-54.0
ALTA0650	3/23/2020 9:06	44.5	35.3	4.0	16.2	121.7	121.6	-89.8	-89.8
ALTA0651	3/23/2020 8:59	42.8	34.3	3.4	19.5	107.6	107.9	-83.4	-83.3
ALTA0652	3/23/2020 11:51	52.5	41.2	0.3	6.0	97.0	105.9	-10.2	-11.9
ALTA0654	3/23/2020 9:24	47.8	37.5	3.9	10.8	102.3	103.6	-84.1	-83.8
ALTA0660	3/23/2020 9:42	49.7	38.6	3.3	8.4	117.7	117.7	-82.7	-82.8
ALTA0661	3/23/2020 12:24	37.0	34.9	3.3	24.8	130.1	130.0	-85.0	-85.0
ALTA0664	3/23/2020 9:11	47.3	35.1	3.8	13.8	98.3	98.7	-90.1	-90.1
ALTA0665	3/23/2020 9:45	56.6	43.3	0.0	0.1	51.0	51.0	-20.9	-20.8
ALTA0668	3/18/2020 11:14	55.0	44.9	0.1	0.0	125.2	125.0	-82.6	-82.6
ALTA0669	3/18/2020 13:58	56.8	42.4	0.1	0.7	117.4	117.4	-73.5	-73.5
ALTA0678	3/23/2020 9:52	57.4	42.4	0.0	0.2	127.0	127.0	-83.7	-83.8
ALTA0681	3/23/2020 9:28	26.8	31.7	0.0	41.5	65.0	65.0	-67.9	-64.3
ALTA0682	3/18/2020 15:41	59.2	40.7	0.1	0.0	120.9	120.9	-23.3	-23.3
ALTA0683	3/23/2020 9:18	55.5	43.5	0.2	0.8	56.0	56.0	-84.9	-84.6
ALTA0685	3/20/2020 11:31	56.4	41.1	0.0	2.5	62.6	62.6	-79.7	-79.7
ALTA0686	3/18/2020 14:31	49.1	38.6	1.1	11.2	114.9	114.9	-74.7	-74.7
ALTA0686	3/23/2020 12:42	51.9	39.9	1.1	7.1	113.0	114.0	-86.7	-86.9
ALTA0688	3/23/2020 8:39	60.3	39.4	0.2	0.1	51.0	51.0	-89.1	-89.1
ALTA0712	3/19/2020 16:37	57.4	42.5	0.1	0.0	118.0	118.0	-47.1	-47.3
ALTA0713	3/23/2020 8:58	46.3	40.1	0.0	13.6	115.0	115.0	-59.5	-56.4
ALTA0714	3/19/2020 17:03	57.7	41.6	0.1	0.6	118.7	118.7	-52.5	-52.1
ALTA0715	3/20/2020 12:01	55.5	38.4	1.1	5.0	113.2	113.2	-85.9	-85.9
ALTA0716	3/20/2020 11:55	54.1	43.1	0.1	2.7	123.2	123.2	-77.9	-79.2
ALTA0717	3/20/2020 11:40	54.3	41.3	0.1	4.3	114.6	114.7	-50.1	-50.1
ALTA0719	3/23/2020 9:06	54.1	45.7	0.0	0.2	133.0	133.0	-78.1	-79.3
ALTA0719	3/23/2020 9:08	54.0	45.8	0.0	0.2	133.0	133.0	-77.2	-77.3
ALTA0721	3/13/2020 11:40	52.8	47.1	0.0	0.1	119.0	122.0	-4.9	-12.5
ALTA0732	3/20/2020 12:10	54.1	45.8	0.1	0.0	120.4	120.7	-77.4	-80.5
ALTA0733	3/23/2020 9:32	53.7	46.2	0.1	0.0	131.5	134.3	-4.2	-5.3
ALTA0733	3/23/2020 9:34	53.4	46.5	0.1	0.0	135.6	136.4	-6.8	-6.8
ALTA0751	3/18/2020 9:23	30.7	29.6	2.6	37.1	106.3	106.2	-20.1	-16.4
ALTA0753	3/18/2020 11:08	44.9	37.7	0.7	16.7	126.2	126.1	-68.7	-65.9
ALTA0755	3/23/2020 11:41	37.6	35.4	3.2	23.8	124.4	124.9	-6.2	-6.2
ALTA0756	3/23/2020 10:16	45.2	36.9	2.3	15.6	111.5	111.5	-67.2	-67.2
ALTA0759	3/23/2020 9:32	48.1	41.0	0.0	10.9	121.0	121.0	-20.3	-16.9
ALTA0760	3/23/2020 9:38	50.4	41.4	0.0	8.2	120.0	120.0	-55.2	-55.0
ALTA0761	3/19/2020 16:54	16.6	30.0	1.3	52.1	113.8	109.6	-3.0	-2.3
ALTA0762	3/19/2020 16:49	53.2	42.2	0.1	4.5	112.9	112.9	-37.0	-37.0
ALTA0763	3/23/2020 9:59	30.5	35.5	0.7	33.3	119.6	119.6	-5.9	-5.9
ALTA0764	3/13/2020 12:31	22.6	29.7	0.0	47.7	87.0	84.0	-2.8	-2.8
ALTA0765	3/23/2020 8:26	42.4	33.9	0.6	23.1	93.0	93.0	-22.7	-22.7
ALTA0766	3/18/2020 11:29	56.9	43.1	0.0	0.0	100.2	100.1	-82.1	-82.1
ALTA0767	3/23/2020 10:06	40.8	37.1	0.6	21.5	127.3	127.6	-22.3	-19.9

ALTA0768	3/18/2020 13:33	54.9	42.8	0.6	1.7	114.9	114.4	-70.4	-70.4
ALTA0769	3/18/2020 13:41	54.1	43.2	0.1	2.6	124.3	124.4	-69.6	-69.8
ALTA0770	3/19/2020 16:58	49.8	43.1	0.0	7.1	117.2	117.2	-1.1	-1.1
ALTA0771	3/19/2020 16:21	47.5	42.1	0.1	10.3	117.5	117.5	-5.2	-5.2
ALTA0772	3/23/2020 12:08	50.7	39.4	0.0	9.9	122.0	122.0	-5.7	-5.1
ALTA0773	3/27/2020 7:59	58.6	41.3	0.0	0.1	53.0	52.0	-81.3	-81.2

There are 132 vertical LFG wells, 1 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).A Well Decommissioning Notification Letter for eight vertical wells was submitted to the BAAQMD on February 1, 2020 as required by PTO Condition 19235 Part (1)(b)(v).

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below

Wells Approved for Higher Operating Value for Temperature

Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-April 2020
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 5/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALHC0809	4/30/2020 10:54	0.4	0.9	20.1	78.6	76.0	76.0	-0.6	-0.6
ALHC0809	4/30/2020 10:56	0.4	0.9	20.0	78.7	76.0	76.0	-0.6	-0.6
ALHC0810	4/30/2020 10:26	38.6	30.5	0.0	30.9	71.0	71.0	-0.8	-0.7
ALLC0695	4/15/2020 9:38	55.0	40.0	0.0	5.0	116.0	116.0	-23.2	-33.3
ALLC0698	4/13/2020 10:37	55.8	44.1	0.0	0.1	102.0	103.0	-54.3	-54.4
ALLC0699	4/13/2020 10:26	51.6	40.8	0.0	7.6	111.0	111.0	-20.0	-19.7
ALLC0700	4/17/2020 9:21	56.1	43.8	0.0	0.1	81.0	82.0	-71.3	-73.0
ALLC0703	4/21/2020 8:34	44.5	34.2	1.8	19.5	119.0	118.0	-1.3	-0.3
ALLC0704	4/13/2020 8:20	51.7	39.4	1.2	7.7	105.0	105.0	-36.9	-40.8
ALLC0709	4/17/2020 8:13	53.5	39.3	0.0	7.2	100.0	102.0	-2.3	-4.4
ALLC0734	4/15/2020 11:38	59.1	39.9	0.0	1.0	110.0	110.0	-60.3	-54.2
ALLC0736	4/6/2020 13:10	50.4	37.1	0.0	12.5	100.0	101.0	-12.2	-17.5
ALLC0736	4/7/2020 10:27	49.8	37.6	0.0	12.6	103.0	103.0	-21.2	-21.3
ALLC0736	4/15/2020 11:54	47.9	35.8	0.0	16.3	103.0	103.0	-19.0	-15.9
ALLC0737	4/6/2020 13:14	54.7	37.8	0.0	7.5	110.0	110.0	-82.1	-85.7
ALLC0737	4/7/2020 10:19	54.0	38.0	0.0	8.0	109.0	110.0	-85.5	-85.6
ALLC0737	4/15/2020 11:57	57.9	38.0	0.0	4.1	110.0	110.0	-69.9	-70.3
ALLC0738	4/21/2020 11:36	57.7	42.2	0.0	0.1	70.0	70.0	-89.6	-89.4
ALLC0739	4/21/2020 9:29	37.5	34.5	0.1	27.9	80.0	80.0	-89.1	-89.1
ALLC0740	4/21/2020 9:10	22.5	30.4	0.0	47.1	117.0	117.0	-5.9	-6.0
ALLC0743	4/21/2020 11:41	50.0	39.7	0.7	9.6	100.0	100.0	-29.8	-29.7
ALLC0744	4/21/2020 9:24	38.7	36.4	0.3	24.6	108.0	108.0	-43.9	-32.5
ALLC0745	4/21/2020 9:05	22.9	28.6	0.0	48.5	120.0	120.0	-10.4	-10.3
ALLC0746	4/21/2020 9:33	40.3	36.8	0.9	22.0	120.0	120.0	-25.5	-25.5
ALLC0747	4/17/2020 9:11	51.7	42.3	0.0	6.0	122.0	123.0	-27.8	-32.9
ALLC0748	4/17/2020 9:17	56.2	43.7	0.0	0.1	102.0	103.0	-69.4	-69.7
ALLC0749	4/22/2020 10:10	56.4	40.4	0.0	3.2	117.0	118.0	-1.3	-2.8
ALLC0775	4/13/2020 10:34	54.8	45.1	0.0	0.1	111.0	111.0	-2.9	-4.0
ALLC0776	4/13/2020 10:13	55.2	43.6	0.0	1.2	105.0	109.0	-3.2	-7.7
ALLC0777	4/13/2020 12:52	55.7	40.3	0.0	4.0	122.0	123.0	-62.1	-62.1
ALLC0778	4/13/2020 12:55	52.7	38.9	0.0	8.4	92.0	92.0	-76.9	-76.8
ALLC0779	4/8/2020 9:18	53.3	41.9	0.0	4.8	95.0	96.0	-4.4	-5.5
ALLC0779	4/13/2020 12:32	49.8	39.5	0.0	10.7	97.0	97.0	-9.9	-9.5
ALLC0779	4/23/2020 8:49	40.6	34.1	0.0	25.3	97.0	97.0	-6.4	-21.9
ALLC0779	4/23/2020 8:54	41.4	34.3	0.0	24.3	97.0	97.0	-21.5	-3.8
ALLC0780	4/8/2020 9:14	55.5	43.0	0.0	1.5	102.0	102.0	-15.3	-16.4
ALLC0780	4/13/2020 12:28	55.6	41.0	0.0	3.4	101.0	101.0	-18.8	-19.8
ALLC0780	4/15/2020 8:43	52.5	40.8	0.0	6.7	102.0	102.0	-20.3	-22.7
ALLC0780	4/16/2020 8:25	49.6	41.7	0.0	8.7	102.0	102.0	-23.0	-24.4
ALLC0780	4/20/2020 9:56	39.7	38.3	0.0	22.0	102.0	101.0	-28.9	-18.9
ALLC0780	4/21/2020 9:28	43.1	38.5	0.0	18.4	101.0	101.0	-10.1	-7.5
ALLC0780	4/22/2020 9:34	45.6	37.8	0.0	16.6	100.0	99.0	-5.0	-4.1

ALLC0780	4/23/2020 8:44	51.9	39.9	0.0	8.2	98.0	99.0	-2.0	-2.4
ALLC0780	4/27/2020 9:34	56.8	41.9	0.0	1.3	100.0	100.0	-3.4	-4.1
ALLC0780	4/29/2020 9:41	57.2	42.6	0.0	0.2	100.0	100.0	-4.3	-4.8
ALLC0781	4/8/2020 9:22	55.4	44.5	0.0	0.1	100.0	100.0	-2.0	-2.3
ALLC0781	4/13/2020 12:36	57.2	42.7	0.0	0.1	101.0	101.0	-3.3	-3.5
ALLC0781	4/15/2020 8:51	57.6	42.3	0.0	0.1	102.0	102.0	-3.3	-7.0
ALLC0781	4/16/2020 8:28	51.0	42.3	0.0	6.7	103.0	103.0	-8.6	-9.0
ALLC0781	4/20/2020 9:59	36.5	35.8	0.5	27.2	102.0	103.0	-10.6	-7.2
ALLC0781	4/21/2020 9:32	40.9	33.6	2.9	22.6	99.0	98.0	-2.5	-2.3
ALLC0781	4/23/2020 8:58	45.5	34.7	2.2	17.6	98.0	101.0	-0.6	-1.6
ALLC0781	4/23/2020 9:06	52.0	38.2	0.0	9.8	103.0	104.0	-2.8	-2.6
ALLC0781	4/27/2020 9:39	47.6	37.5	0.8	14.1	105.0	105.0	-3.3	-3.0
ALLC0781	4/29/2020 9:44	50.5	38.1	0.6	10.8	104.0	104.0	-2.5	-2.4
ALLC0782	4/8/2020 9:27	49.5	38.3	2.1	10.1	113.0	116.0	-4.3	-5.1
ALLC0782	4/8/2020 9:29	54.5	41.4	0.4	3.7	116.0	117.0	-5.1	-5.1
ALLC0782	4/13/2020 12:39	52.3	38.3	1.4	8.0	115.0	115.0	-7.0	-7.0
ALLC0782	4/22/2020 9:37	38.5	36.2	1.6	23.7	115.0	114.0	-4.9	-4.2
ALLC0783	4/8/2020 10:15	44.3	38.8	0.0	16.9	107.0	110.0	-1.5	-2.4
ALLC0783	4/8/2020 10:18	44.8	39.2	0.0	16.0	109.0	108.0	-2.5	-1.7
ALLC0783	4/13/2020 12:45	45.5	38.2	0.0	16.3	109.0	108.0	-3.4	-2.8
ALLC0784	4/8/2020 10:22	54.2	41.7	0.0	4.1	108.0	108.0	-9.3	-9.5
ALLC0784	4/13/2020 12:48	54.6	40.4	0.0	5.0	107.0	108.0	-11.3	-11.4
ALLC0784	4/15/2020 8:57	54.5	40.7	0.0	4.8	108.0	107.0	-11.5	-15.0
ALLC0784	4/16/2020 8:32	49.4	41.0	0.0	9.6	108.0	108.0	-17.1	-17.1
ALLC0784	4/20/2020 10:03	43.5	39.9	0.0	16.6	108.0	109.0	-20.5	-17.0
ALLC0784	4/21/2020 9:36	43.4	39.6	0.0	17.0	108.0	108.0	-10.4	-9.6
ALLC0784	4/22/2020 9:41	41.9	37.9	0.0	20.2	107.0	106.0	-7.5	-7.3
ALLC0784	4/27/2020 9:44	50.9	40.2	0.0	8.9	90.0	90.0	-6.3	-6.3
ALLC0784	4/29/2020 9:48	51.2	39.9	0.0	8.9	106.0	107.0	-6.5	-6.6
ALLC0785	4/8/2020 10:33	54.9	41.5	0.0	3.6	97.0	97.0	-10.0	-10.3
ALLC0785	4/13/2020 12:59	51.8	38.5	0.0	9.7	97.0	97.0	-13.5	-13.2
ALLC0786	4/8/2020 10:26	49.4	39.3	0.0	11.3	105.0	106.0	-3.1	-5.4
ALLC0786	4/8/2020 10:29	50.9	40.0	0.0	9.1	107.0	107.0	-6.2	-5.9
ALLC0786	4/13/2020 13:04	43.8	36.6	0.0	19.6	106.0	106.0	-8.3	-5.4
ALLC0787	4/8/2020 9:10	55.8	44.1	0.0	0.1	101.0	104.0	-5.1	-9.1
ALLC0787	4/13/2020 12:14	57.4	42.5	0.0	0.1	104.0	105.0	-12.3	-16.1
ALLC0787	4/15/2020 8:27	57.0	42.9	0.0	0.1	105.0	106.0	-19.7	-25.4
ALLC0787	4/16/2020 8:13	55.9	44.0	0.0	0.1	105.0	106.0	-25.9	-34.2
ALLC0787	4/20/2020 9:44	47.7	42.3	0.0	10.0	105.0	105.0	-40.8	-38.2
ALLC0787	4/21/2020 9:16	50.2	42.4	0.0	7.4	105.0	106.0	-33.8	-36.1
ALLC0787	4/22/2020 9:15	43.1	36.5	2.2	18.2	105.0	103.0	-36.6	-13.0
ALLC0787	4/23/2020 8:16	51.5	39.3	0.6	8.6	104.0	106.0	-6.4	-21.2
ALLC0787	4/23/2020 8:23	48.9	37.3	1.6	12.2	106.0	105.0	-21.7	-8.2
ALLC0787	4/29/2020 9:32	56.9	43.0	0.0	0.1	103.0	104.0	-10.4	-7.7
ALLC0788	4/8/2020 8:40	55.3	44.6	0.0	0.1	115.0	117.0	-4.9	-9.0
ALLC0788	4/13/2020 12:22	57.3	42.6	0.0	0.1	118.0	119.0	-13.0	-16.9
ALLC0788	4/15/2020 8:32	56.7	43.2	0.0	0.1	119.0	120.0	-19.9	-25.2
ALLC0788	4/16/2020 8:17	55.4	44.5	0.0	0.1	119.0	120.0	-27.8	-37.8
ALLC0788	4/20/2020 9:48	54.5	42.6	0.1	2.8	112.0	112.0	-78.1	-82.2
ALLC0788	4/21/2020 9:21	55.6	42.6	0.0	1.8	111.0	111.0	-87.4	-87.2

ALLC0788	4/22/2020 9:23	40.2	32.3	4.6	22.9	110.0	108.0	-86.9	-22.8
ALLC0788	4/23/2020 8:35	57.5	42.4	0.0	0.1	109.0	112.0	-3.8	-9.3
ALLC0788	4/27/2020 9:28	56.9	42.9	0.0	0.2	110.0	110.0	-8.5	-11.4
ALLC0788	4/29/2020 9:35	56.8	43.1	0.0	0.1	116.0	117.0	-11.7	-14.5
ALLC0789	4/8/2020 8:35	55.1	44.8	0.0	0.1	117.0	118.0	-4.5	-6.8
ALLC0789	4/13/2020 12:25	56.8	43.1	0.0	0.1	118.0	118.0	-9.4	-11.8
ALLC0789	4/15/2020 8:37	55.1	42.3	0.0	2.6	119.0	120.0	-13.8	-20.2
ALLC0789	4/16/2020 8:20	50.1	42.8	0.0	7.1	119.0	120.0	-21.4	-23.5
ALLC0789	4/20/2020 9:52	40.7	38.7	0.0	20.6	119.0	116.0	-30.0	-13.6
ALLC0789	4/21/2020 9:24	52.8	41.1	0.0	6.1	117.0	118.0	-6.9	-8.2
ALLC0789	4/22/2020 9:29	50.5	38.8	0.3	10.4	118.0	119.0	-7.4	-7.3
ALLC0789	4/23/2020 8:40	55.7	41.6	0.0	2.7	119.0	119.0	-5.8	-6.8
ALLC0789	4/27/2020 9:18	56.3	42.2	0.0	1.5	110.0	110.0	-7.4	-9.8
ALLC0789	4/29/2020 9:38	56.6	42.3	0.0	1.1	120.0	120.0	-10.1	-12.1
ALLC0790	4/7/2020 12:17	56.3	43.6	0.0	0.1	88.0	88.0	-17.5	-29.8
ALLC0790	4/8/2020 12:52	55.7	44.2	0.0	0.1	88.0	88.0	-32.4	-44.8
ALLC0790	4/13/2020 9:10	55.8	44.1	0.0	0.1	88.0	88.0	-44.8	-66.5
ALLC0791	4/7/2020 11:41	55.9	44.0	0.0	0.1	80.0	81.0	-3.3	-6.3
ALLC0791	4/8/2020 12:56	55.2	44.7	0.0	0.1	83.0	83.0	-7.6	-11.3
ALLC0791	4/13/2020 9:13	53.5	43.7	0.0	2.8	83.0	83.0	-13.0	-17.1
ALLC0791	4/15/2020 9:14	50.5	41.7	0.0	7.8	84.0	84.0	-18.2	-22.6
ALLC0791	4/15/2020 12:20	50.9	40.5	0.0	8.6	83.0	83.0	-23.8	-26.4
ALLC0791	4/16/2020 8:46	47.4	42.4	0.0	10.2	83.0	84.0	-27.6	-20.3
ALLC0791	4/20/2020 10:16	41.1	39.2	0.0	19.7	84.0	84.0	-20.1	-10.6
ALLC0791	4/21/2020 8:23	47.9	40.2	0.0	11.9	82.0	82.0	-7.2	-4.8
ALLC0791	4/22/2020 9:50	52.7	40.9	0.0	6.4	82.0	82.0	-3.7	-5.3
ALLC0791	4/29/2020 9:55	56.1	43.8	0.0	0.1	82.0	83.0	-5.0	-6.7
ALLC0792	4/7/2020 12:09	56.2	43.7	0.0	0.1	90.0	95.0	-0.5	-1.6
ALLC0792	4/8/2020 12:43	54.9	41.4	0.7	3.0	92.0	93.0	-2.6	-3.5
ALLC0792	4/13/2020 8:57	54.8	42.5	0.4	2.3	104.0	100.0	-9.2	-9.7
ALLC0792	4/15/2020 9:23	53.8	40.0	0.9	5.3	103.0	105.0	-7.9	-15.6
ALLC0792	4/16/2020 8:49	52.6	41.4	0.9	5.1	98.0	99.0	-16.1	-18.8
ALLC0792	4/20/2020 10:19	41.8	36.6	1.6	20.0	100.0	95.0	-22.9	-7.5
ALLC0792	4/21/2020 8:26	42.8	35.9	2.2	19.1	88.0	83.0	-3.3	-1.4
ALLC0792	4/22/2020 9:54	46.8	37.8	1.2	14.2	89.0	90.0	-0.6	-0.6
ALLC0792	4/29/2020 9:59	56.7	43.1	0.0	0.2	78.0	81.0	-0.2	-1.0
ALLC0793	4/7/2020 12:13	56.4	43.5	0.0	0.1	93.0	96.0	-13.2	-27.8
ALLC0793	4/8/2020 12:48	56.1	43.8	0.0	0.1	93.0	94.0	-39.4	-59.7
ALLC0793	4/15/2020 9:28	56.9	43.0	0.0	0.1	93.0	93.0	-60.5	-68.1
ALLC0793	4/16/2020 8:53	55.3	44.6	0.0	0.1	94.0	94.0	-64.8	-64.8
ALLC0793	4/20/2020 10:23	55.8	44.1	0.0	0.1	93.0	93.0	-77.6	-77.5
ALLC0793	4/22/2020 9:57	56.3	42.4	0.0	1.3	92.0	93.0	-78.4	-78.2
ALLC0794	4/7/2020 12:04	54.5	45.4	0.0	0.1	110.0	111.0	-0.1	-0.4
ALLC0794	4/8/2020 12:25	53.3	46.6	0.0	0.1	111.0	111.0	-0.6	-0.9
ALLC0794	4/13/2020 8:46	47.2	44.0	0.0	8.8	112.0	112.0	-3.7	-3.4
ALLC0794	4/21/2020 8:43	39.5	40.1	0.0	20.4	113.0	112.0	-1.3	-0.4
ALLC0795	4/7/2020 11:59	46.0	43.7	0.0	10.3	121.0	121.0	-4.4	-3.7
ALLC0795	4/8/2020 12:29	38.6	41.2	0.0	20.2	120.0	121.0	-2.6	-11.9
ALLC0795	4/8/2020 12:35	43.4	43.3	0.0	13.3	121.0	121.0	-12.4	-3.4
ALLC0795	4/13/2020 8:15	31.7	37.5	0.0	30.8	121.0	121.0	-3.1	-1.9

ALLC0796	4/7/2020 11:52	53.4	45.1	0.0	1.5	113.0	113.0	-1.3	-2.1
ALLC0796	4/13/2020 8:10	46.8	43.6	0.0	9.6	113.0	113.0	-2.7	-2.6
ALLC0797	4/7/2020 12:23	52.0	47.9	0.0	0.1	77.0	75.0	-1.2	-1.6
ALLC0797	4/8/2020 12:12	51.8	48.1	0.0	0.1	70.0	69.0	-2.0	-2.7
ALLC0797	4/13/2020 8:07	51.3	48.6	0.0	0.1	64.0	63.0	-3.1	-4.2
ALLC0797	4/15/2020 9:09	52.0	47.9	0.0	0.1	82.0	80.0	-3.6	-10.3
ALLC0797	4/16/2020 8:41	51.0	48.9	0.0	0.1	67.0	66.0	-9.3	-12.6
ALLC0797	4/20/2020 10:11	43.8	45.8	0.0	10.4	69.0	68.0	-14.4	-5.9
ALLC0797	4/21/2020 8:19	42.9	44.8	0.0	12.3	87.0	85.0	-4.7	-1.8
ALLC0797	4/27/2020 8:59	48.6	46.1	0.0	5.3	90.0	90.0	-1.7	-2.4
ALLC0798	4/7/2020 11:44	55.8	44.1	0.0	0.1	108.0	109.0	-0.2	-0.6
ALLC0798	4/8/2020 12:16	54.2	43.3	0.0	2.5	108.0	108.0	-1.0	-1.3
ALLC0798	4/13/2020 9:20	40.4	38.6	0.0	21.0	108.0	108.0	-2.4	-1.2
ALLC0799	4/7/2020 11:49	55.3	43.2	0.0	1.5	108.0	108.0	-0.1	-0.2
ALLC0799	4/8/2020 12:20	44.6	39.4	0.1	15.9	108.0	108.0	-0.5	-0.9
ALLC0799	4/8/2020 12:22	44.2	39.2	0.1	16.5	108.0	109.0	-0.9	-0.1
ALLC0799	4/13/2020 8:50	34.6	34.4	0.1	30.9	110.0	109.0	-0.4	-0.3
ALLC0800	4/7/2020 11:37	55.8	44.1	0.0	0.1	105.0	106.0	-1.7	-2.4
ALLC0800	4/8/2020 12:07	55.0	44.9	0.0	0.1	107.0	108.0	-2.8	-3.7
ALLC0800	4/13/2020 9:16	54.6	45.3	0.0	0.1	108.0	109.0	-5.0	-6.4
ALLC0800	4/15/2020 9:03	55.0	44.9	0.0	0.1	109.0	109.0	-7.0	-12.2
ALLC0800	4/16/2020 8:37	54.1	45.8	0.0	0.1	109.0	109.0	-14.0	-16.7
ALLC0800	4/20/2020 10:07	49.5	43.6	0.0	6.9	108.0	109.0	-20.5	-20.6
ALLC0800	4/21/2020 8:56	48.7	43.4	0.0	7.9	108.0	109.0	-20.5	-16.4
ALLC0800	4/22/2020 9:46	47.1	41.5	0.0	11.4	108.0	109.0	-13.9	-7.9
ALLC0800	4/27/2020 9:08	54.5	43.2	0.0	2.3	105.0	105.0	-4.6	-5.3
ALLC0800	4/29/2020 9:52	55.8	44.1	0.0	0.1	108.0	109.0	-5.2	-6.0
ALLC0801	4/8/2020 12:00	54.8	42.7	0.0	2.5	110.0	110.0	-4.6	-5.5
ALLC0801	4/13/2020 8:02	49.8	41.4	0.0	8.8	109.0	110.0	-6.5	-7.0
ALLC0802	4/8/2020 11:54	56.7	43.2	0.0	0.1	102.0	102.0	-2.4	-3.9
ALLC0802	4/13/2020 7:58	51.9	41.5	0.0	6.6	101.0	101.0	-5.3	-6.6
ALLC0803	4/8/2020 8:45	55.9	44.0	0.0	0.1	103.0	104.0	-2.6	-3.9
ALLC0803	4/13/2020 12:10	58.0	41.9	0.0	0.1	105.0	106.0	-9.0	-7.6
ALLC0803	4/15/2020 8:23	57.2	42.5	0.0	0.3	107.0	107.0	-9.2	-15.1
ALLC0803	4/16/2020 8:09	51.4	43.2	0.0	5.4	107.0	107.0	-15.5	-17.4
ALLC0803	4/20/2020 9:40	36.1	38.9	0.0	25.0	107.0	107.0	-19.8	-9.5
ALLC0803	4/21/2020 9:12	35.4	37.0	0.0	27.6	104.0	104.0	-5.6	-4.3
ALLC0803	4/22/2020 9:08	38.7	34.9	0.6	25.8	102.0	102.0	-2.7	-2.7
ALLC0803	4/23/2020 8:07	44.4	38.4	0.0	17.2	102.0	106.0	-1.5	-17.1
ALLC0803	4/23/2020 8:10	44.4	38.9	0.0	16.7	106.0	104.0	-17.7	-2.3
ALLC0803	4/29/2020 9:27	54.4	40.7	0.0	4.9	101.0	102.0	-6.9	-2.1
ALLC0804	4/8/2020 8:49	54.3	45.6	0.0	0.1	114.0	115.0	-1.4	-2.1
ALLC0804	4/13/2020 12:06	56.2	43.7	0.0	0.1	114.0	114.0	-3.0	-3.6
ALLC0804	4/15/2020 8:19	55.7	44.2	0.0	0.1	115.0	116.0	-4.8	-10.1
ALLC0804	4/16/2020 8:02	54.3	44.7	0.0	1.0	114.0	115.0	-10.5	-12.5
ALLC0804	4/20/2020 9:33	40.7	39.6	0.0	19.7	113.0	113.0	-13.7	-7.4
ALLC0804	4/21/2020 9:08	42.8	40.1	0.0	17.1	113.0	113.0	-5.1	-2.7
ALLC0804	4/22/2020 9:04	45.7	39.0	0.2	15.1	111.0	110.0	-1.7	-1.0
ALLC0804	4/23/2020 7:59	46.6	39.9	0.0	13.5	111.0	113.0	-0.6	-5.6
ALLC0804	4/23/2020 8:02	47.6	40.2	0.0	12.2	113.0	112.0	-5.4	-1.0

ALLC0804	4/29/2020 9:23	54.5	42.8	0.0	2.7	110.0	111.0	-0.7	-1.2
ALLC0805	4/8/2020 8:06	57.3	40.0	0.0	2.7	106.0	114.0	-8.6	-17.4
ALLC0806	4/8/2020 8:12	45.3	37.0	1.2	16.5	101.0	107.0	-1.6	-5.2
ALLC0806	4/8/2020 8:16	48.0	39.4	0.1	12.5	110.0	107.0	-8.4	-3.3
ALLC0807	4/8/2020 8:24	31.3	36.6	0.1	32.0	103.0	112.0	-2.2	-15.7
ALLC0807	4/8/2020 8:30	33.7	39.3	0.0	27.0	115.0	110.0	-15.6	-5.4
ALLC0808	4/8/2020 7:54	40.9	29.9	4.7	24.5	112.0	130.0	-7.3	-6.6
ALLC0808	4/8/2020 7:59	48.3	40.3	0.1	11.3	130.0	125.0	-7.7	-6.7
ALTA0003	4/22/2020 9:55	45.7	30.3	4.1	19.9	103.0	103.0	-90.4	-90.1
ALTA0053	4/23/2020 8:18	28.3	40.5	2.9	28.3	100.0	100.0	-2.2	-2.4
ALTA0054	4/27/2020 7:50	50.2	37.5	0.0	12.3	70.0	70.0	-40.4	-40.5
ALTA0056	4/23/2020 8:27	58.4	39.7	0.7	1.2	110.0	110.0	-64.1	-64.2
ALTA0059	4/23/2020 8:41	56.7	42.9	0.2	0.2	85.0	85.0	-86.4	-86.3
ALTA0087	4/17/2020 9:54	58.6	41.3	0.0	0.1	126.0	126.0	-79.2	-79.2
ALTA0087	4/22/2020 10:05	58.8	38.9	0.0	2.3	120.0	120.0	-85.7	-86.5
ALTA0108	4/23/2020 8:56	50.1	41.3	0.0	8.6	80.0	80.0	-2.7	-2.7
ALTA0201	4/26/2020 7:38	49.2	34.2	1.5	15.1	105.0	105.0	-91.4	-91.5
ALTA0472	4/21/2020 10:24	55.7	41.0	0.0	3.3	105.0	105.0	-74.1	-74.1
ALTA0483	4/17/2020 8:30	55.7	43.1	0.0	1.2	76.0	76.0	-80.4	-78.9
ALTA0488	4/17/2020 10:10	53.6	43.2	0.0	3.2	125.0	126.0	-82.6	-82.7
ALTA0490	4/17/2020 8:37	56.7	42.6	0.0	0.7	60.0	60.0	-53.0	-51.0
ALTA0491	4/15/2020 10:04	61.4	38.5	0.0	0.1	118.0	118.0	-70.9	-70.9
ALTA0508	4/15/2020 11:43	54.9	37.9	0.0	7.2	107.0	107.0	-56.7	-56.6
ALTA0517	4/6/2020 13:24	52.7	36.3	0.0	11.0	107.0	108.0	-62.0	-86.9
ALTA0517	4/7/2020 10:32	52.9	36.4	0.0	10.7	107.0	108.0	-89.0	-87.9
ALTA0517	4/13/2020 8:25	50.5	37.0	0.0	12.5	107.0	107.0	-88.9	-88.7
ALTA0517	4/15/2020 11:49	52.0	35.1	0.0	12.9	107.0	107.0	-71.8	-71.9
ALTA0518	4/26/2020 9:10	50.1	37.2	0.0	12.7	110.0	110.0	-3.9	-3.9
ALTA0529	4/22/2020 10:32	45.0	37.9	0.1	17.0	120.0	120.0	-17.8	-20.3
ALTA0534	4/22/2020 10:15	51.0	40.8	1.4	6.8	65.0	65.0	-87.6	-87.8
ALTA0535	4/17/2020 9:46	56.3	42.7	0.0	1.0	119.0	119.0	-82.4	-82.5
ALTA0539	4/26/2020 9:01	45.8	43.0	0.0	11.2	90.0	90.0	-39.9	-31.7
ALTA0541	4/15/2020 9:44	54.7	36.2	0.0	9.1	118.0	118.0	-19.9	-21.6
ALTA0545	4/17/2020 9:41	49.2	42.6	0.0	8.2	119.0	120.0	-5.4	-5.4
ALTA0551	4/14/2020 7:06	43.6	32.8	3.1	20.5	102.0	103.0	-40.9	-29.7
ALTA0566	4/13/2020 12:18	35.7	27.8	2.4	34.1	74.0	72.0	-62.5	-75.6
ALTA0578	4/22/2020 10:14	47.6	40.8	0.0	11.6	96.0	95.0	-5.0	-0.6
ALTA0579	4/22/2020 10:24	46.3	41.1	0.0	12.6	120.0	120.0	-74.4	-87.5
ALTA0580	4/17/2020 9:59	56.2	43.7	0.0	0.1	114.0	114.0	-73.3	-72.9
ALTA0580	4/22/2020 10:00	51.7	36.4	2.5	9.4	75.0	75.0	-80.2	-80.1
ALTA0589	4/13/2020 12:40	41.0	28.7	3.7	26.6	117.3	117.3	-25.1	-24.5
ALTA0589	4/13/2020 12:50	NSPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-SYSTEM EXPANDED. SVE1 INSTALLED.							
ALTA0590	4/14/2020 6:52	58.8	34.0	1.1	6.1	57.0	56.0	-73.8	-74.5
ALTA0590	4/14/2020 7:00	NSPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-WELL FIELD EXPANDED. SVE1 INSTALLED AND STARTED							
ALTA0611	4/17/2020 8:19	51.9	39.6	0.0	8.5	125.0	126.0	-26.0	-27.7
ALTA0612	4/17/2020 8:24	45.3	39.9	0.0	14.8	125.0	122.0	-17.3	-14.6
ALTA0624	4/14/2020 6:58	38.6	34.6	0.0	26.8	80.0	81.0	-30.2	-25.2
ALTA0629	4/17/2020 8:08	50.8	38.3	0.0	10.9	113.0	113.0	-23.7	-23.8
ALTA0639	4/22/2020 10:46	45.9	38.1	1.3	14.7	127.0	127.0	-40.3	-46.4
ALTA0650	4/22/2020 9:13	53.2	40.4	0.1	6.3	120.0	120.0	-90.2	-90.2

ALTA0651	4/22/2020 9:17	51.7	40.7	0.0	7.6	80.0	80.0	-86.7	-85.9
ALTA0652	4/22/2020 10:51	42.0	37.3	0.0	20.7	118.0	118.0	-17.5	-17.6
ALTA0654	4/21/2020 11:46	52.4	41.4	0.3	5.9	105.0	105.0	-80.9	-83.0
ALTA0660	4/21/2020 11:58	55.9	42.7	0.2	1.2	115.0	115.0	-82.4	-82.3
ALTA0661	4/22/2020 9:26	44.9	42.2	0.0	12.9	110.0	110.0	-85.4	-85.4
ALTA0664	4/22/2020 9:05	61.8	37.8	0.2	0.2	70.0	70.0	-90.5	-90.4
ALTA0665	4/26/2020 8:27	56.4	43.5	0.0	0.1	66.0	66.0	-22.8	-22.8
ALTA0668	4/21/2020 9:00	55.7	43.3	0.4	0.6	113.0	113.0	-84.5	-84.4
ALTA0669	4/17/2020 9:07	55.5	43.2	0.0	1.3	97.0	97.0	-82.0	-82.1
ALTA0678	4/21/2020 8:50	55.2	44.7	0.0	0.1	127.0	125.0	-83.4	-41.3
ALTA0681	4/26/2020 8:34	19.9	30.8	0.2	49.1	60.0	60.0	-64.1	-64.2
ALTA0682	4/13/2020 8:28	57.9	42.0	0.0	0.1	118.0	119.0	-24.4	-24.4
ALTA0683	4/26/2020 8:52	54.5	44.7	0.3	0.5	70.0	70.0	-86.0	-86.0
ALTA0685	4/13/2020 10:22	59.4	40.5	0.0	0.1	64.0	63.0	-19.0	-19.4
ALTA0685	4/21/2020 11:22	54.4	36.2	1.7	7.7	62.0	61.0	-11.3	-11.4
ALTA0686	4/17/2020 9:25	56.1	43.8	0.0	0.1	107.0	107.0	-81.0	-81.2
ALTA0688	4/26/2020 9:18	22.2	20.9	3.5	53.4	70.0	70.0	-87.1	-87.2
ALTA0712	4/13/2020 10:30	56.3	43.6	0.0	0.1	118.0	119.0	-56.0	-53.6
ALTA0713	4/13/2020 10:08	47.6	39.8	0.0	12.6	115.0	115.0	-55.6	-55.2
ALTA0714	4/13/2020 9:54	57.3	42.1	0.0	0.6	118.0	118.0	-58.6	-58.8
ALTA0715	4/13/2020 9:35	58.1	41.8	0.0	0.1	114.0	114.0	-88.0	-88.6
ALTA0716	4/13/2020 9:31	53.5	45.0	0.0	1.5	123.0	123.0	-82.9	-80.2
ALTA0717	4/13/2020 9:45	54.7	43.0	0.0	2.3	115.0	115.0	-50.6	-50.7
ALTA0719	4/21/2020 9:00	52.6	47.3	0.0	0.1	133.0	133.0	-79.6	-78.3
ALTA0719	4/21/2020 9:02	52.6	47.3	0.0	0.1	133.0	133.0	-82.2	-79.7
ALTA0721	4/26/2020 8:42	52.4	47.5	0.0	0.1	110.0	110.0	-73.8	-74.9
ALTA0732	4/13/2020 9:27	52.4	47.5	0.0	0.1	122.0	123.0	-80.2	-80.0
ALTA0733	4/26/2020 7:50	50.9	43.3	0.0	5.8	125.0	125.0	-9.0	-10.4
ALTA0751	4/26/2020 7:58	53.8	41.6	0.0	4.6	80.0	80.0	-1.7	-3.1
ALTA0753	4/21/2020 9:15	38.0	35.5	1.4	25.1	123.0	123.0	-65.3	-57.6
ALTA0755	4/21/2020 10:04	46.6	45.4	0.0	8.0	120.0	120.0	-5.9	-6.0
ALTA0756	4/26/2020 8:03	49.9	42.2	0.0	7.9	100.0	100.0	-71.5	-74.9
ALTA0759	4/13/2020 8:36	50.8	41.6	0.0	7.6	121.0	122.0	-16.3	-17.9
ALTA0760	4/13/2020 8:41	50.4	42.2	0.0	7.4	120.0	120.0	-56.3	-58.4
ALTA0761	4/13/2020 10:03	16.3	30.2	1.1	52.4	116.0	116.0	-5.3	-4.8
ALTA0762	4/13/2020 10:17	54.6	43.2	0.0	2.2	113.0	113.0	-42.0	-42.8
ALTA0763	4/21/2020 10:16	26.6	32.8	0.5	40.1	110.0	110.0	-5.5	-5.8
ALTA0764	4/21/2020 10:09	27.7	33.6	0.0	38.7	85.0	85.0	-4.9	-4.9
ALTA0765	4/15/2020 10:13	49.9	32.7	0.2	17.2	105.0	105.0	-21.2	-21.2
ALTA0766	4/26/2020 8:15	55.6	37.8	1.6	5.0	85.0	80.0	-88.6	-88.5
ALTA0767	4/21/2020 9:53	31.5	32.8	0.0	35.7	110.0	110.0	-17.0	-14.4
ALTA0768	4/21/2020 12:06	56.0	43.1	0.4	0.5	108.0	108.0	-83.1	-83.2
ALTA0769	4/21/2020 12:02	54.0	41.6	0.0	4.4	110.0	110.0	-85.4	-85.3
ALTA0770	4/13/2020 9:40	50.5	44.5	0.0	5.0	117.0	118.0	-1.3	-2.0
ALTA0771	4/13/2020 10:41	51.0	43.7	0.0	5.3	118.0	118.0	-10.5	-7.0
ALTA0772	4/22/2020 10:04	53.9	40.8	0.0	5.3	122.0	122.0	-3.3	-3.9
ALTA0773	4/27/2020 8:41	57.4	42.4	0.1	0.1	65.0	65.0	-79.3	-79.3

There are 132 vertical LFG wells, 3 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).A Well Decommissioning Notification Letter for eight vertical wells was submitted to the BAAQMD on February 1, 2020 as required by PTO Condition 19235 Part (1)(b)(v). A Well Starup Notification Letter for sixteen vertical wells was submitted to the BAAQMD on February 10, 2020 as required by PTO Condition 19235 Part (1)(b)(iv). A Well Starup Notification Letter for fourteen vertical wells was submitted to the BAAQMD on February 14, 2020 as required by PTO Condition 19235 Part (1)(b)(iv). A Well Starup Notification Letter for two horizontal wells was submitted to the BAAQMD on April 20, 2020 as required by PTO Condition 19235 Part (1)(b)(iv).

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below.

Wells Approved for Higher Operating Value for Temperature

Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

Altamont Landfill and Resource Recovery Facility

Wellfield Monitoring Report-May 2020
REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: 6/1/2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Wellhead ID Number	Date and Time	CH_4 (% by Volume)	CO_2 (% by Volume)	O_2 (% by Volume)	BALANCE GAS (% by Volume)	INITIAL TEMPERATURE (°F)	ADJUSTED TEMPERATURE (°F)	INITIAL STATIC PRESSURE ("WC)	ADJUSTED STATIC PRESSURE ("WC)
ALHC0809	5/1/2020 7:47	0.3	0.8	20.6	78.3	68.0	68.0	-0.6	-0.6
ALHC0809	5/1/2020 7:49	0.2	0.8	20.7	78.3	69.0	69.0	-0.6	-0.6
ALHC0809	5/12/2020 10:23	0.3	0.8	20.6	78.3	80.0	80.0	-1.0	-0.9
ALHC0809	5/12/2020 13:20	0.0	0.4	21.3	78.3	80.0	80.0	-0.7	-0.7
ALHC0810	5/1/2020 7:53	3.0	5.5	16.2	75.3	71.0	73.0	-1.0	-1.1
ALHC0810	5/1/2020 7:55	3.3	5.9	15.9	74.9	74.0	74.0	-1.1	-1.1
ALHC0810	5/4/2020 12:55	1.6	4.0	17.0	77.4	87.0	87.0	-1.1	-1.0
ALHC0810	5/4/2020 12:58	1.6	3.9	17.0	77.5	88.0	88.0	-1.1	-1.1
ALHC0810	5/12/2020 10:28	1.7	4.0	17.7	76.6	90.0	90.0	-1.7	-1.7
ALHC0810	5/12/2020 13:24	1.0	3.5	18.1	77.4	90.0	90.0	-1.5	-1.4
ALLC0695	5/13/2020 10:50	48.7	38.4	0.0	12.9	110.0	110.0	-35.1	-28.3
ALLC0695	5/17/2020 11:27	50.8	39.4	0.0	9.8	110.0	110.0	-11.8	-17.5
ALLC0698	5/11/2020 11:02	57.3	42.6	0.0	0.1	90.0	90.0	-49.5	-49.5
ALLC0699	5/11/2020 10:47	56.9	43.0	0.0	0.1	110.0	110.0	-3.2	-3.2
ALLC0700	5/11/2020 10:13	58.9	41.0	0.0	0.1	85.0	85.0	-71.4	-77.4
ALLC0700	5/11/2020 10:16	58.7	41.2	0.0	0.1	85.0	85.0	-77.3	-77.5
ALLC0703	5/5/2020 9:05	58.1	39.8	0.0	2.1	118.0	119.0	-0.7	-1.2
ALLC0704	5/5/2020 8:52	52.8	39.2	1.1	6.9	105.0	106.0	-41.3	-39.1
ALLC0704	5/17/2020 9:51	53.1	39.2	1.1	6.6	110.0	110.0	-47.2	-46.6
ALLC0709	5/13/2020 11:13	45.8	35.3	0.0	18.9	105.0	105.0	-4.8	-2.6
ALLC0734	5/5/2020 8:34	56.7	41.0	0.0	2.3	105.0	105.0	-66.6	-66.2
ALLC0736	5/5/2020 9:13	47.0	37.1	0.0	15.9	102.0	86.0	-14.6	-12.8
ALLC0737	5/5/2020 9:09	52.5	38.1	0.0	9.4	109.0	109.0	-84.6	-84.9
ALLC0738	5/12/2020 10:48	56.5	43.4	0.0	0.1	95.0	95.0	-89.1	-88.9
ALLC0739	5/10/2020 8:51	37.9	32.7	2.9	26.5	77.0	77.0	-88.4	-87.5
ALLC0739	5/17/2020 11:45	32.7	30.7	3.3	33.3	90.0	90.0	-88.1	-76.9
ALLC0740	5/10/2020 9:06	31.5	33.3	0.0	35.2	65.0	65.0	-5.2	-5.2
ALLC0740	5/17/2020 8:21	38.1	34.9	0.0	27.0	115.0	115.0	-4.6	-3.7
ALLC0743	5/12/2020 10:52	51.9	40.1	0.0	8.0	110.0	115.0	-29.1	-33.1
ALLC0743	5/17/2020 11:57	46.9	38.4	0.9	13.8	115.0	115.0	-36.0	-27.5
ALLC0744	5/10/2020 8:55	45.1	38.7	0.0	16.2	74.0	74.0	-28.0	-22.6
ALLC0745	5/10/2020 9:10	22.0	28.0	0.0	50.0	123.0	124.0	-10.1	-8.6
ALLC0746	5/10/2020 8:45	47.3	40.8	0.0	11.9	124.0	125.0	-23.9	-23.8
ALLC0747	5/11/2020 10:30	48.0	38.0	0.0	14.0	120.0	120.0	-20.7	-20.2
ALLC0748	5/11/2020 10:20	56.1	38.6	0.8	4.5	90.0	90.0	-75.2	-75.9
ALLC0749	5/11/2020 10:08	59.0	40.9	0.0	0.1	120.0	120.0	-2.2	-1.6
ALLC0775	5/11/2020 10:58	49.9	42.4	0.0	7.7	110.0	110.0	-4.1	-5.8
ALLC0775	5/17/2020 10:57	44.8	41.4	0.0	13.8	110.0	110.0	-6.6	-3.4
ALLC0776	5/11/2020 11:18	45.5	39.3	0.0	15.2	111.0	111.0	-28.9	-24.7
ALLC0777	5/10/2020 10:23	48.5	40.2	0.0	11.3	122.0	122.0	-61.7	-58.9
ALLC0777	5/17/2020 9:12	49.7	39.6	0.0	10.7	120.0	120.0	-59.3	-59.3
ALLC0778	5/10/2020 10:19	49.1	39.3	0.0	11.6	92.0	92.0	-78.1	-76.8

ALLC0779	5/1/2020 8:33	53.6	40.4	0.0	6.0	95.0	96.0	-2.6	-3.9
ALLC0780	5/1/2020 8:29	57.6	42.3	0.0	0.1	101.0	101.0	-5.7	-6.7
ALLC0780	5/5/2020 7:34	57.3	42.5	0.0	0.2	101.0	101.0	-7.5	-8.0
ALLC0781	5/1/2020 8:36	51.7	38.1	0.8	9.4	104.0	104.0	-2.7	-2.7
ALLC0781	5/5/2020 7:37	52.3	38.5	1.0	8.2	103.0	103.0	-2.7	-2.6
ALLC0782	5/1/2020 8:41	38.0	30.4	4.5	27.1	109.0	114.0	-3.1	-4.0
ALLC0782	5/1/2020 8:44	46.0	36.7	0.9	16.4	114.0	114.0	-4.2	-3.5
ALLC0783	5/1/2020 8:48	36.0	31.2	0.5	32.3	107.0	109.0	-1.2	-2.5
ALLC0783	5/1/2020 8:51	37.6	32.6	0.0	29.8	109.0	109.0	-2.5	-1.5
ALLC0784	5/1/2020 8:55	52.1	39.8	0.0	8.1	107.0	107.0	-7.0	-7.1
ALLC0784	5/5/2020 7:41	53.0	40.2	0.0	6.8	108.0	108.0	-7.6	-7.7
ALLC0785	5/1/2020 9:02	54.0	40.1	0.0	5.9	98.0	98.0	-9.6	-10.9
ALLC0786	5/1/2020 8:59	47.3	38.0	0.0	14.7	105.0	105.0	-3.1	-2.6
ALLC0787	5/1/2020 8:11	56.8	43.1	0.0	0.1	105.0	105.0	-9.3	-12.5
ALLC0787	5/4/2020 13:14	56.6	43.3	0.0	0.1	105.0	106.0	-14.9	-17.8
ALLC0787	5/5/2020 7:23	56.5	43.4	0.0	0.1	106.0	106.0	-19.0	-21.0
ALLC0787	5/20/2020 11:13	58.1	41.8	0.0	0.1	106.0	106.0	-23.6	-26.2
ALLC0788	5/1/2020 8:21	57.1	42.8	0.0	0.1	118.0	118.0	-15.9	-21.8
ALLC0788	5/4/2020 13:18	57.3	42.6	0.0	0.1	117.0	117.0	-29.9	-36.4
ALLC0788	5/5/2020 7:26	57.2	42.7	0.0	0.1	117.0	117.0	-43.9	-49.0
ALLC0788	5/20/2020 11:18	55.5	40.4	0.3	3.8	112.0	112.0	-71.6	-78.5
ALLC0789	5/1/2020 8:25	56.6	41.7	0.0	1.7	120.0	121.0	-13.1	-16.2
ALLC0789	5/5/2020 7:29	51.1	40.5	0.0	8.4	120.0	120.0	-22.3	-23.4
ALLC0789	5/17/2020 8:58	48.8	38.9	0.0	12.3	115.0	115.0	-20.3	-17.2
ALLC0789	5/20/2020 11:21	50.5	38.0	0.0	11.5	120.0	121.0	-16.1	-14.8
ALLC0790	5/10/2020 10:27	56.5	43.4	0.0	0.1	87.0	87.0	-65.3	-70.4
ALLC0791	5/5/2020 7:50	55.9	44.0	0.0	0.1	83.0	84.0	-7.9	-12.4
ALLC0791	5/17/2020 9:17	48.2	41.0	0.0	10.8	90.0	90.0	-14.3	-14.5
ALLC0791	5/20/2020 11:30	46.7	39.3	0.0	14.0	84.0	84.0	-15.1	-8.5
ALLC0792	5/10/2020 10:35	51.9	40.0	1.1	7.0	93.0	93.0	-3.0	-4.4
ALLC0792	5/17/2020 9:22	49.6	37.6	2.4	10.4	105.0	105.0	-5.6	-5.8
ALLC0793	5/10/2020 10:39	56.3	43.6	0.0	0.1	93.0	94.0	-76.6	-76.9
ALLC0794	5/10/2020 11:10	54.5	45.4	0.0	0.1	112.0	113.0	-1.4	-2.5
ALLC0794	5/14/2020 10:44	34.7	36.4	0.0	28.9	113.0	113.0	-3.7	-1.6
ALLC0794	5/17/2020 9:38	42.6	40.3	0.0	17.1	117.0	117.0	-0.6	-0.6
ALLC0795	5/10/2020 11:04	37.8	40.2	0.0	22.0	123.0	123.0	-12.0	-7.8
ALLC0795	5/17/2020 9:43	28.2	34.2	0.0	37.6	110.0	110.0	-7.1	-3.2
ALLC0796	5/10/2020 11:26	43.5	40.0	0.2	16.3	112.0	113.0	-2.9	-2.9
ALLC0796	5/17/2020 10:01	37.2	36.7	0.7	25.4	115.0	115.0	-2.4	-1.4
ALLC0797	5/5/2020 8:06	51.0	47.3	0.0	1.7	85.0	87.0	-2.2	-3.4
ALLC0797	5/17/2020 11:19	49.1	46.3	0.0	4.6	90.0	90.0	-4.5	-5.7
ALLC0798	5/10/2020 11:21	50.8	41.0	0.0	8.2	111.0	111.0	-0.8	-1.0
ALLC0799	5/10/2020 11:15	55.3	44.6	0.0	0.1	110.0	110.0	-0.3	-0.5
ALLC0799	5/17/2020 9:31	35.9	33.9	0.5	29.7	115.0	115.0	-0.3	-0.2
ALLC0800	5/5/2020 7:47	55.6	44.3	0.0	0.1	109.0	109.0	-6.9	-8.5
ALLC0800	5/20/2020 11:26	49.9	39.3	1.3	9.5	108.0	108.0	-9.7	-8.7
ALLC0801	5/10/2020 11:37	45.8	39.1	0.0	15.1	112.0	112.0	-6.1	-4.8
ALLC0802	5/10/2020 11:41	50.2	40.5	0.0	9.3	101.0	101.0	-8.5	-9.4
ALLC0802	5/17/2020 9:05	49.0	39.9	0.0	11.1	110.0	110.0	-10.5	-10.5
ALLC0803	5/1/2020 8:07	52.9	40.1	0.0	7.0	103.0	103.0	-2.8	-3.2

ALLC0803	5/4/2020 13:10	50.5	39.4	0.0	10.1	104.0	104.0	-4.1	-4.1
ALLC0803	5/5/2020 7:20	49.0	39.7	0.0	11.3	104.0	104.0	-4.2	-4.0
ALLC0803	5/20/2020 11:07	46.9	37.1	0.0	16.0	103.0	106.0	-3.0	-19.4
ALLC0803	5/20/2020 11:10	47.3	37.7	0.0	15.0	106.0	103.0	-19.5	-3.1
ALLC0804	5/1/2020 8:03	54.6	42.5	0.0	2.9	112.0	112.0	-1.6	-2.1
ALLC0804	5/4/2020 13:07	55.6	43.4	0.0	1.0	112.0	113.0	-2.4	-3.1
ALLC0804	5/5/2020 7:16	54.6	43.6	0.0	1.8	113.0	113.0	-3.0	-3.8
ALLC0804	5/14/2020 8:52	50.6	41.0	0.0	8.4	113.0	113.0	-4.1	-4.4
ALLC0805	5/10/2020 9:25	46.8	38.5	0.0	14.7	100.0	100.0	-55.2	-55.5
ALLC0806	5/10/2020 9:30	36.4	34.2	1.9	27.5	108.0	107.0	-9.0	-8.3
ALLC0806	5/17/2020 8:30	30.1	28.9	3.8	37.2	105.0	105.0	-9.4	-5.9
ALLC0807	5/10/2020 9:35	31.3	35.2	2.1	31.4	112.0	112.0	-19.3	-13.5
ALLC0808	5/10/2020 9:02	45.0	35.5	3.0	16.5	113.0	111.0	-53.7	-52.3
ALTA0003	5/7/2020 10:59	59.3	38.8	0.3	1.6	105.0	105.0	-44.8	-44.7
ALTA0053	5/7/2020 11:59	26.1	37.2	3.7	33.0	110.0	110.0	-1.0	-1.5
ALTA0054	5/7/2020 11:25	50.0	37.8	0.0	12.2	80.0	80.0	-22.3	-22.3
ALTA0056	5/7/2020 11:19	59.0	40.4	0.0	0.6	110.0	110.0	-32.2	-32.0
ALTA0059	5/7/2020 11:33	57.3	42.6	0.0	0.1	100.0	100.0	-43.0	-42.9
ALTA0087	5/7/2020 10:49	57.2	38.0	0.5	4.3	110.0	110.0	-43.0	-43.0
ALTA0108	5/7/2020 11:48	56.9	41.8	0.0	1.3	85.0	85.0	-1.5	-1.7
ALTA0201	5/14/2020 9:12	47.0	33.8	1.4	17.8	106.0	106.0	-90.9	-90.8
ALTA0201	5/19/2020 6:59	48.4	33.4	1.7	16.5	108.0	108.0	-91.7	-91.7
ALTA0472	5/10/2020 8:38	55.1	39.7	0.0	5.2	107.0	107.0	-74.0	-74.0
ALTA0483	5/13/2020 11:28	56.4	40.9	0.0	2.7	110.0	110.0	-83.2	-83.2
ALTA0488	5/11/2020 9:50	56.7	41.4	0.0	1.9	125.0	125.0	-87.1	-87.4
ALTA0490	5/13/2020 11:34	58.6	41.3	0.0	0.1	85.0	85.0	-49.7	-49.6
ALTA0491	5/14/2020 8:24	58.7	38.9	0.4	2.0	116.0	116.0	-85.0	-85.0
ALTA0508	5/5/2020 8:38	53.8	39.2	0.0	7.0	107.0	108.0	-68.1	-67.7
ALTA0517	5/5/2020 8:43	48.5	35.7	0.0	15.8	107.0	107.0	-87.4	-87.3
ALTA0518	5/7/2020 12:11	50.7	36.0	0.0	13.3	120.0	120.0	-1.9	-1.9
ALTA0529	5/11/2020 9:40	44.6	36.1	0.0	19.3	122.0	122.0	-35.4	-25.6
ALTA0534	5/7/2020 11:31	51.2	41.2	0.0	7.6	91.0	92.0	-45.9	-45.8
ALTA0535	5/7/2020 11:25	56.9	42.1	0.0	1.0	122.0	122.0	-48.5	-45.4
ALTA0539	5/13/2020 11:53	50.8	42.5	0.0	6.7	115.0	115.0	-27.7	-36.4
ALTA0541	5/13/2020 10:55	50.5	35.6	0.0	13.9	115.0	115.0	-24.9	-21.1
ALTA0545	5/13/2020 10:44	50.2	40.6	0.0	9.2	120.0	120.0	-5.6	-6.0
ALTA0551	5/7/2020 11:09	32.1	26.9	4.1	36.9	115.0	115.0	-25.7	-23.2
ALTA0566	5/1/2020 8:15	52.3	39.1	0.7	7.9	75.0	76.0	-81.7	-83.5
ALTA0578	5/11/2020 9:57	50.0	40.7	0.0	9.3	120.0	120.0	-3.1	-3.4
ALTA0579	5/7/2020 11:19	45.3	39.5	0.0	15.2	124.0	124.0	-33.3	-44.2
ALTA0580	5/7/2020 10:54	57.7	41.1	0.4	0.8	90.0	90.0	-39.8	-39.9
ALTA0589	5/14/2020 9:17	22.6	19.7	8.2	49.5	121.0	122.0	-72.1	-71.5
ALTA0589	5/14/2020 9:19	22.8	19.4	8.2	49.6	121.0	122.0	-71.0	-70.8
ALTA0589	5/21/2020 7:28	23.7	20.1	8.2	48.0	120.0	120.0	-73.8	-74.0
ALTA0590	5/14/2020 9:22	12.3	9.4	14.9	63.4	69.0	69.0	-75.6	-74.1
ALTA0590	5/14/2020 9:24	10.9	8.2	15.5	65.4	69.0	69.0	-75.2	-76.0
ALTA0590	5/21/2020 7:25	9.9	7.7	16.3	66.1	70.0	70.0	-77.2	-78.0
ALTA0611	5/13/2020 11:02	46.8	36.2	0.0	17.0	120.0	120.0	-27.4	-19.4
ALTA0612	5/13/2020 11:22	44.5	37.6	0.0	17.9	120.0	120.0	-4.5	-3.7
ALTA0624	5/7/2020 11:14	44.1	35.6	0.0	20.3	80.0	80.0	-10.6	-10.6

ALTA0629	5/13/2020 11:08	48.7	35.9	0.0	15.4	115.0	115.0	-24.1	-20.5
ALTA0639	5/12/2020 11:13	50.9	39.7	0.0	9.4	125.0	125.0	-56.0	-56.0
ALTA0650	5/11/2020 13:13	58.2	41.7	0.0	0.1	120.0	120.0	-89.6	-89.5
ALTA0651	5/11/2020 13:16	58.3	40.6	0.0	1.1	100.0	100.0	-84.5	-84.5
ALTA0652	5/12/2020 11:18	43.9	36.6	0.0	19.5	120.0	120.0	-16.3	-16.3
ALTA0654	5/12/2020 10:59	43.5	35.8	3.3	17.4	120.0	120.0	-80.0	-83.2
ALTA0660	5/7/2020 11:42	55.6	44.3	0.0	0.1	104.0	104.0	-43.7	-43.8
ALTA0661	5/7/2020 11:13	48.4	42.7	0.0	8.9	110.0	111.0	-44.1	-44.2
ALTA0664	5/11/2020 13:07	59.2	36.9	0.9	3.0	80.0	80.0	-90.3	-90.2
ALTA0665	5/10/2020 10:45	56.8	43.1	0.0	0.1	63.0	66.0	-15.4	-17.8
ALTA0668	5/10/2020 9:14	54.5	45.4	0.0	0.1	59.0	59.0	-84.0	-84.2
ALTA0669	5/11/2020 10:25	53.8	40.2	0.0	6.0	110.0	110.0	-85.6	-85.6
ALTA0678	5/10/2020 10:13	56.2	43.7	0.0	0.1	126.0	126.0	-82.8	-82.3
ALTA0681	5/10/2020 11:00	23.3	31.3	0.0	45.4	78.0	79.0	-61.6	-62.6
ALTA0682	5/5/2020 8:47	58.2	41.7	0.0	0.1	120.0	121.0	-21.1	-21.1
ALTA0683	5/5/2020 8:59	55.4	44.5	0.0	0.1	62.0	62.0	-11.1	-13.4
ALTA0685	5/11/2020 10:52	60.5	38.0	0.0	1.5	80.0	80.0	-3.2	-3.2
ALTA0686	5/11/2020 10:36	56.8	41.4	0.0	1.8	115.0	115.0	-85.7	-85.8
ALTA0688	5/14/2020 8:36	6.2	4.7	18.1	71.0	60.0	60.0	-89.2	-89.2
ALTA0688	5/14/2020 8:39	8.3	5.8	17.6	68.3	60.0	60.0	-89.3	-89.1
ALTA0688	5/22/2020 10:09	18.5	12.1	13.8	55.6	57.0	58.0	-90.0	-89.8
ALTA0688	5/22/2020 10:11	16.2	10.3	14.6	58.9	60.0	60.0	-91.6	-89.8
ALTA0712	5/11/2020 11:22	57.2	42.7	0.0	0.1	120.0	120.0	-48.9	-48.7
ALTA0713	5/11/2020 11:37	47.7	38.7	0.0	13.6	115.0	115.0	-48.1	-47.9
ALTA0714	5/13/2020 11:49	59.1	40.8	0.0	0.1	110.0	110.0	-52.3	-52.0
ALTA0715	5/13/2020 11:58	57.8	38.0	0.2	4.0	115.0	115.0	-84.9	-85.3
ALTA0716	5/14/2020 9:01	55.6	43.0	0.0	1.4	120.0	120.0	-80.5	-80.8
ALTA0717	5/13/2020 12:09	57.7	42.0	0.0	0.3	115.0	115.0	-44.9	-44.7
ALTA0719	5/10/2020 11:33	53.5	46.4	0.0	0.1	125.0	125.0	-74.3	-76.2
ALTA0721	5/5/2020 7:55	52.8	47.1	0.0	0.1	119.0	120.0	-81.7	-84.5
ALTA0732	5/5/2020 8:00	53.1	46.8	0.0	0.1	78.0	78.0	-82.5	-82.1
ALTA0733	5/7/2020 11:52	50.9	41.8	0.0	7.3	136.0	136.0	-11.0	-11.0
ALTA0733	5/7/2020 11:54	51.2	41.7	0.0	7.1	135.0	136.0	-15.9	-10.9
ALTA0751	5/14/2020 8:45	29.0	28.0	3.7	39.3	107.0	107.0	-2.2	-2.1
ALTA0753	5/10/2020 9:18	47.3	39.5	0.0	13.2	123.0	124.0	-42.3	-41.2
ALTA0755	5/10/2020 9:41	39.3	42.7	0.0	18.0	122.0	121.0	-14.4	-14.4
ALTA0755	5/17/2020 8:35	35.9	39.2	0.0	24.9	120.0	120.0	-13.4	-8.1
ALTA0756	5/10/2020 10:00	50.0	41.7	0.0	8.3	61.0	61.0	-74.7	-76.8
ALTA0759	5/10/2020 10:49	47.9	40.0	0.0	12.1	122.0	123.0	-17.9	-17.9
ALTA0760	5/10/2020 10:55	48.3	40.4	0.0	11.3	120.0	120.0	-56.9	-56.7
ALTA0761	5/11/2020 11:47	31.7	35.0	0.0	33.3	115.0	115.0	-7.1	-7.0
ALTA0761	5/17/2020 11:03	21.5	32.5	0.6	45.4	110.0	110.0	-5.1	-4.3
ALTA0762	5/11/2020 11:31	55.7	42.1	0.0	2.2	111.0	111.0	-40.0	-40.1
ALTA0763	5/10/2020 9:50	23.3	30.0	0.1	46.6	72.0	71.0	-6.7	-6.6
ALTA0763	5/17/2020 8:48	21.1	28.6	0.5	49.8	117.0	115.0	-6.2	-5.4
ALTA0764	5/10/2020 9:46	23.4	31.1	0.0	45.5	113.0	114.0	-11.2	-10.2
ALTA0764	5/17/2020 8:53	22.4	29.9	0.0	47.7	115.0	115.0	-6.2	-5.0
ALTA0765	5/14/2020 8:34	42.8	33.0	0.8	23.4	64.0	63.0	-20.0	-20.0
ALTA0766	5/10/2020 10:05	56.6	43.3	0.0	0.1	80.0	79.0	-88.3	-86.4
ALTA0767	5/10/2020 9:56	37.5	35.4	0.0	27.1	78.0	79.0	-9.9	-9.9

ALTA0767	5/17/2020 8:42	38.2	35.2	0.0	26.6	110.0	110.0	-7.4	-6.6
ALTA0768	5/12/2020 11:33	58.3	41.4	0.0	0.3	110.0	110.0	-84.2	-83.8
ALTA0769	5/7/2020 11:38	53.3	44.3	0.0	2.4	123.0	123.0	-44.4	-44.5
ALTA0769	5/12/2020 11:05	52.7	42.5	0.0	4.8	120.0	120.0	-84.7	-84.6
ALTA0770	5/13/2020 12:03	46.6	41.4	0.0	12.0	120.0	120.0	-0.6	-0.6
ALTA0771	5/11/2020 11:11	46.5	41.7	0.0	11.8	110.0	110.0	-8.2	-8.2
ALTA0771	5/17/2020 10:52	45.2	41.9	0.0	12.9	120.0	120.0	-3.9	-3.0
ALTA0772	5/11/2020 10:04	58.5	41.4	0.0	0.1	118.0	118.0	-1.7	-1.7
ALTA0773	5/10/2020 10:31	56.3	43.6	0.0	0.1	77.0	77.0	-77.4	-77.5

There are 132 vertical LFG wells, 3 horizontal LFG collection well, and 1 leachate cleanout riser system at ALRRF. A Well Decommissioning Notification Letter for one vertical well 724 was submitted to the BAAQMD on February 1, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 471 was submitted to the BAAQMD on February 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 524 was submitted to the BAAQMD on April 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 757 was submitted to the BAAQMD on May 7, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 680 and 774 was submitted to the BAAQMD on July 25, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for one vertical well 752 was submitted to the BAAQMD on September 11, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for three vertical wells 570, 677, and 726 was submitted to the BAAQMD on November 14, 2019 as required by PTO Condition 19235 Part (1)(b)(v). A Well Decommissioning Notification Letter for two vertical wells 697 and 718 was submitted to the BAAQMD on November 21, 2019 as required by PTO Condition 19235 Part (1)(b)(v).A Well Decommissioning Notification Letter for eight vertical wells was submitted to the BAAQMD on February 1, 2020 as required by PTO Condition 19235 Part (1)(b)(v). A Well Starup Notification Letter for sixteen vertical wells was submitted to the BAAQMD on February 10, 2020 as required by PTO Condition 19235 Part (1)(b)(iv). A Well Starup Notification Letter for fourteen vertical wells was submitted to the BAAQMD on February 14, 2020 as required by PTO Condition 19235 Part (1)(b)(iv). A Well Starup Notification Letter for two horizontal wells was submitted to the BAAQMD on April 20, 2020 as required by PTO Condition 19235 Part (1)(b)(iv).

% - percent CH_4 - methane CO_2 - carbon dioxide O_2 - oxygen °F - degrees Fahrenheit "WC - inches water column

*Wells permitted to be on the HOV list, summarized in the table below.

Wells Approved for Higher Operating Value for Temperature

Approved HOV Wells*	HOV Wells Approval/Notification Date
501, 559, ~~562~~, 565, 566, 570, ~~574~~, and ~~576~~	4/29/2010
~~564~~ and 571	5/25/2010
513, 579, 601, and 611	1/22/2011
~~500~~, ~~525~~, 569, 612	3/3/2011
~~633~~ and 639	12/10/2014
652	6/7/2016
654 and ~~667~~	1/16/2017
718, 719, ~~720~~, 721, 723, ~~724~~, and 732	3/21/2017
~~510~~ and 733	10/31/2017
661	3/7/2018
745	7/19/2018
589	10/1/2018
755	2/19/2019
740	6/10/2019

* ~~Crossed-out~~ wells have been decommissioned.

APPENDIX N
WELLHEAD DEVIATION REPORT

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

December 1, 2019 THROUGH May 31, 2020 WELLFIELD DEVIATION REPORT

REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: June 1, 2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Well ID	Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance Gas (%)	Initial Temperature (°F)	Adjusted Temperature (°F)	Initial Static Pressure ("WC)	Adjusted Static Pressure ("WC)	Comments	Duration of Exceedance (Days)
ALTA0589	12/30/2019 12:34	21.8	25.7	7.2	45.3	127	127	-71.7	-70.6	NSPS/EG CAI;Adj. for Probes	
ALTA0589	1/9/2020 7:44	21.3	18.5	9.6	50.6	126.0	126.0	-71.7	-71.6	NSPS/EG CAI;Surging;Adj. for Probes	
ALTA0589	2/24/2020 12:17	22.2	18.0	9.0	50.8	123.0	123.0	-73.1	-67.6	NSPS/EG CAI;Surging;Adj. for Probes	
ALTA0589	3/19/2020 9:17	20.6	18.4	9.6	51.4	122.3	122.3	-60.0	-59.8	NSPS/EG CAI;Dec. Flow/Vac.;Surging	
ALTA0589	4/13/2020 12:40	41.0	28.7	3.7	26.6	117.3	117.3	-25.1	-24.5		105
Comments: Well 589 had oxygen exceedance during the initial monitoring events. Exceedance was corrected after system expansion was completed.											
ALLC0702	1/29/2020 10:14	14.1	16.9	15.5	53.5	56.0	56.0	-92.0	-92.5	NSPS/EG CAI;Surging	
ALLC0702	2/10/2020 9:58	10.1	11.5	16.0	62.4	61.0	61.0	-86.8	-90.0	NSPS/EG CAI;Barely Open;Surging	45
Comments: Well 702 had oxygen exceedance during initial monitoring events. Well 702 was decommissioned on February 14, 2020. Notification was submitted on February 17, 2020.											
ALTA0053	1/29/2020 9:35	23.0	32.0	6.6	38.4	109.0	106.0	-2.1	-1.7	NSPS/EG CAI;Barely Open;Surging	
ALTA0053	2/3/2020 10:42	27.7	36.2	4.6	31.5	101.0	100.0	-0.6	-0.6	No Adj. Made	5
Comments: Well 53 had oxygen exceedance during the initial monitoring event in January 2020. Exceedance was corrected in during February 2020 monitoring event.											
ALLC0706	2/10/2020 8:12	32.4	28.2	7.8	31.6	73.0	73.0	-2.8	-3.6	NSPS/EG CAI;Barely Open;Surging	
ALLC0706	2/12/2020 10:35	37.4	31.2	6.0	25.4	91.0	91.0	-39.3	-35.4	NSPS/EG CAI;Surging	7
Comments: Well 706 had oxygen exceedance during the monitoring event in February 2020. Well 706 was decommissioned on February 17, 2020. Notification was submitted on February 17, 2020.											
ALLC0781	3/13/2020 10:46	36.0	30.0	7.1	26.9	101.0	101.0	-5.1	-5.0	NSPS/EG CAI;Barely Open	
ALLC0781	3/13/2020 10:49	52.8	39.9	1.5	5.8	102.0	103.0	-9.2	-9.0	Inc. Flow/Vac.	<1
Comments: Well 781 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALLC0786	3/13/2020 10:27	32.9	29.0	6.1	32.0	103.0	103.0	-2.4	-2.3	NSPS/EG CAI;Barely Open	
ALLC0786	3/13/2020 10:30	43.9	37.6	1.7	16.8	106.0	106.0	-9.1	-9.0	Inc. Flow/Vac.	<1
Comments: Well 786 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALLC0807	3/3/2020 14:28	30.2	29.9	6.3	33.6	106.0	110.0	-9.3	-31.0	NSPS/EG CAI;Inc. Flow/Vac.	
ALLC0807	3/3/2020 14:31	34.9	35.2	3.8	26.1	110.0	104.0	-32.7	-6.5	Dec. Flow/Vac.	<1
Comments: Well 807 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALLC0805	3/3/2020 14:12	18.3	16.9	10.2	54.6	105.0	90.0	-8.4	-63.9	NSPS/EG CAI;Fully Open;Inc. Flow/Vac.	
ALLC0805	3/3/2020 14:16	24.2	22.7	6.4	46.7	95.0	95.0	-64.5	-7.4	NSPS/EG CAI;Dec. Flow/Vac.	
ALLC0805	3/17/2020 9:05	56.6	40.1	0.1	3.2	55.6	109.1	-1.2	-10.8	Inc. Flow/Vac.	14
Comments: Well 805 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALLC0806	3/3/2020 14:20	26.4	25.9	6.5	41.2	102.0	102.0	-3.6	-16.6	NSPS/EG CAI;Inc. Flow/Vac.	
ALLC0806	3/3/2020 14:23	31.6	31.9	3.2	33.3	108.0	102.0	-4.5	-3.8	NSPS/EG CAI;Dec. Flow/Vac.	<1
Comments: Well 806 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALLC0806	3/17/2020 12:13	27.3	23.9	8.2	40.6	97.4	92.2	-2.7	-1.7	NSPS/EG CAI;Dec. Flow/Vac.	
ALLC0806	3/17/2020 15:54	36.2	31.4	4.3	28.1	104.9	104.9	-7.6	-7.6	Inc. Flow/Vac.	<1
Comments: Well 806 had oxygen exceedance during the monitoring event in March 2020. Adjustments were made and exceedance was corrected.											
ALTA0723	1/15/2020 9:17	31.5	25.8	9.1	33.6	51.0	51.0	-84.4	-83.8	Surging;Barely Open;NSPS/EG CAI	
ALTA0723	1/20/2020 7:48	34.0	30.6	7.9	27.5	41.0	41.0	-84.3	-84.0	NSPS/EG CAI;Surging	
ALTA0723	2/12/2020 10:42	58.5	41.2	0.1	0.2	78.0	77.0	-54.6	-54.6	Inc. Flow/Vac.;Surging	
Comments: Well 723 had oxygen exceedance during the initial monitoring event. Well 702 was decommissioned on February 17, 2020. Notification was submitted on February 17, 2020.											33
ALTA0590	2/24/2020 12:21	39.0	25.7	6.6	28.7	87.0	86.0	-78.5	-78.2	NSPS/EG CAI;Surging;Adj. for Probes	
ALTA0590	3/19/2020 9:07	15.4	10.9	15.5	58.2	56.6	56.9	-73.0	-73.1	NSPS/EG CAI;Dec. Flow/Vac.;Surging	
ALTA0590	4/14/2020 6:52	58.8	34.0	1.1	6.1	57.0	56.0	-73.8	-74.5	Fully Open;Surging;Adj. for Probes	
ALTA0590	4/14/2020 7:00	NSPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-WELL									50
Comments:Well 590 had oxygen exceedance during the initial monitoring events. Exceedance was corrected after system expansion was completed.											
ALHC0809	4/30/2020 10:54	0.4	0.9	20.1	78.6	76.0	76.0	-0.6	-0.6	NSPS/EG CAI;Dec. Flow/Vac.	
ALHC0809	5/12/2020 13:20	0.0	0.4	21.3	78.3	80.0	80.0	-0.7	-0.7	NSPS/EG CAI;Barely Open	>32
Comments:Horizontal collector 809 had oxygen exceedance during the initial monitoring events.											
ALHC0810	5/1/2020 7:53	3.0	5.5	16.2	75.3	71.0	73.0	-1.0	-1.1	NSPS/EG CAI;Barely Open;Dec. Flow/Vac.;Surging	
ALHC0810	5/12/2020 13:24	1.0	3.5	18.1	77.4	90.0	90.0	-1.5	-1.4	NSPS/EG CAI	>31
Comments:Horizontal collector 810 had oxygen exceedance during the initial monitoring event in May 2020.											

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

December 1, 2019 THROUGH May 31, 2020 WELLFIELD DEVIATION REPORT

REPORT PREPARED BY: Rajan Phadnis
UPDATED DATE: June 1, 2020
FLOW SENSING DEVICE: LANDTEC GEM
MODEL: 2000
DATE LAST CALIBRATED: DAILY

Well ID	Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance Gas (%)	Initial Temperature (°F)	Adjusted Temperature (°F)	Initial Static Pressure ("WC)	Adjusted Static Pressure ("WC)	Comments	Duration of Exceedance (Days)
ALTA0589	5/14/2020 9:17	22.6	19.7	8.2	49.5	121.0	122.0	-72.1	-71.5	NSPS/EG CAI;Surging;Adj. for Probes	
ALTA0589	5/21/2020 7:28	23.7	20.1	8.2	48.0	120.0	120.0	-73.8	-74.0	NSPS/EG CAI;Fully Open;Adj. for Probes	>17
Comments:Well 589 had oxygen exceedance during the initial monitoring event in May 2020.											
ALTA0590	5/14/2020 9:22	12.3	9.4	14.9	63.4	69.0	69.0	-75.6	-74.1	NSPS/EG CAI;Surging;Adj. for Probes	
ALTA0590	5/21/2020 7:25	9.9	7.7	16.3	66.1	70.0	70.0	-77.2	-78.0	Fully Open;NSPS/EG CAI;Surging;Adj. for Probes	>17
Comments:Well 590 had oxygen exceedance during the initial monitoring event in May 2020.											
ALTA0688	5/14/2020 8:36	6.2	4.7	18.1	71.0	60.0	60.0	-89.2	-89.2	NSPS/EG CAI;Dec. Flow/Vac.	
ALTA0688	5/22/2020 10:11	16.2	10.3	14.6	58.9	60.0	60.0	-91.6	-89.8	NSPS/EG CAI;Surging;Adj. for Probes	>17
Comments: Well 688 had oxygen exceedance during the initial monitoring event in May 2020.											
EG CAI= Emissions Guidelines Corrective Action Initiated											

APPENDIX O

CONTROL DEVICE MONTHLY LANDFILL GAS FLOW RATES AND CO EMISSION CALCULATIONS

ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY, Livermore, CA

MONTHLY LFG INPUT TO A-15 AND A-16 FLARES

A-15 (Flare) **2019-2020**

Month	Total Available Runtime (Hours)	Total Downtime (Hours)	Total Runtime (Hours)	Average Flow (scfm)	Average CH_4 (%)[2]	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBtu)	CO Emission Factor[2] (lb/MMBTU)	Total CO (Tons)
June-19	720.0	720.0	0.0	0	50.5	0	0	0	0.008	0.0000
July-19	744.0	744.0	0.0	0	50.5	0	0	0	0.008	0.0000
August-19	744.0	744.0	0.0	0	50.5	0	0	0	0.008	0.0000
September-19	720.0	720.0	0.0	0	50.5	0	0	0	0.008	0.0000
October-19	744.0	744.0	0.0	0	50.5	0	0	0	0.008	0.0000
November-19	721.0	721.0	0.0	0	50.5	0	0	0	0.008	0.0000
December-19	744.0	743.5	0.5	839	50.5	26,845	13,557	14	0.008	0.0001
January-20	744.0	744.0	0.0	0	50.5	0	0	0	0.008	0.0000
February-20	696.0	696.0	0.0	0	50.5	0	0	0	0.008	0.0000
March-20	743.0	731.0	12.0	1,387	50.5	995,601	502,779	502	0.008	0.0020
April-20	720.0	718.7	1.3	944	50.5	75,533	38,144	38	0.008	0.0002
May-20	744.0	744.0	0.0	0	47.7	0	0	0	0.002	0.0000
TOTAL/AVG 2019-2020	**8,784.0**	**8,770.2**	**13.8**	**1,057**	**50.3**	**1,097,979**	**554,479**	**553**	**0.008**	**0.0022**
TOTAL/AVG 2020-Partial	**3,647.0**	**3,633.7**	**13.3**	**1,165**	**49.9**	**1,071,134**	**540,923**	**540**	**0.007**	**0.0022**
December 1, 2019- May 31, 2020	**4,391.0**	**4,377.2**	**13.8**	**1,057**	**50.0**	**1,097,979**	**554,479**	**553**	**0.007**	**0.0022**

A-16 (Flare) **2019-2020**

Month	Total Available Runtime (Hours)	Total Downtime (Hours)	Total Runtime (Hours)	Average Flow (scfm)	Average CH_4 (%)[3]	LFG Volume (scf)	BPG Volume (scf)	Total Throughput (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBtu)	CO Emission Factor[6] (lb/MMBTU)	Total CO (Tons)
June-19	720.0	0.43	719.57	1,637	45.3	55,982,199	14,687,727	70,669,926	31,999,342	31,926	0.006	0.096
July-19	744.0	1.00	743.00	1,460	45.3	32,954,348	32,111,311	65,065,659	29,461,730	29,394	0.006	0.088
August-19	744.0	2.80	741.20	1,416	45.3	34,011,474	28,970,497	62,981,971	28,518,236	28,453	0.006	0.085
September-19	720.0	1.03	718.97	1,301	45.3	26,092,314	30,013,876	56,106,190	25,404,883	25,346	0.006	0.076
October-19	744.0	33.47	710.53	1,488	45.3	36,958,019	24,303,855	61,261,874	27,739,377	27,676	0.006	0.083
November-19	721.0	9.30	711.70	1,171	45.3	26,314,052	23,633,693	49,947,745	22,616,339	22,564	0.006	0.068
December-19	744.0	14.43	729.57	1,171	45.3	35,350,309	21,674,131	57,024,440	25,820,666	25,761	0.006	0.077
January-20	744.0	13.53	730.47	1,378	45.3	36,556,990	23,234,712	59,791,702	27,073,683	27,011	0.006	0.081
February-20	696.0	15.27	680.73	1,379	45.3	33,165,083	22,882,347	56,047,430	25,378,276	25,320	0.006	0.076
March-20	743.0	24.77	718.23	1,609	45.3	37,609,853	31,314,612	68,924,465	31,208,998	31,137	0.006	0.093
April-20	720.0	4.53	715.47	1,594	45.3	35,846,338	32,579,686	68,426,024	30,983,304	30,912	0.006	0.093
May-20	744.0	0.43	743.57	1,578	44.9	40,569,585	29,852,486	70,422,071	31,887,114	31,579	0.005	0.074
TOTAL/AVG 2019-2020	**8,784.0**	**121.0**	**8,663.0**	**1,432**	**45.3**	**431,410,564**	**315,258,933**	**746,669,497**	**338,091,948**	**337,080**	**0.006**	**0.990**
TOTAL/AVG 2020-Partial	**3,647.0**	**58.5**	**3,588.5**	**1,508**	**45.2**	**183,747,849**	**139,863,843**	**323,611,692**	**146,531,374**	**145,960**	**0.006**	**0.417**
December 1, 2019- May 31, 2020	**4,391.0**	**73.0**	**4,318.0**	**1,452**	**45.2**	**219,098,158**	**161,537,974**	**380,636,132**	**172,352,040**	**171,721**	**0.006**	**0.494**

NOT 1) Pursuant to Permit Condition No. 19235, Part 4, the yearly heat input limit to the A-15 and A-16 Flares are 621,785 and 1,156,320 MMBtu, respectively.

2) Starting May 2017, the average methane percentage from the March 16, 2017 source test will be used. It is an average of the methane percentages taken during the test. Starting May 2020, the average methane percentage from the March 12, 2020 source test will be used. It is an average of the methane percentages taken during the test.

3) Starting June 2019, the highest CO emission rate from the April 3 and 4, 2019 source test is used pursuant to PTO Condition Number 24373, Part 3(a)(i). Starting May 2020, the highest CO emission rate from the March 26 and 27, 2020 source test is used pursuant to PTO Condition Number 24373, Part 3(a)(i).

LFG - Landfill Gas **BPG** - By-Product Gas **scfm** - standard cubic feet per minute **%** - Percent **CH_4** - methane **scf** - standard cubic feet **MMBTU** - million British thermal units **CO** - carbon monoxide **lb** - pounds

MONTHLY LFG INPUT TO TURBINES (S-6 & S-7)

Altamont Landfill and Resource Recovery Facility, Livermore, CA

S-6 (Turbine) **2019-2020**

Month	Total Available Runtime (hours)	Total Downtime (hours)	Total Runtime (hours)	Average Flow (scfm)	Average CH_4 (%)	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBtu)	CO Emission Factor[2] (lb/MMBTU)	Total CO (Tons)
June-19	720.0	12.9	707.1	1,391	50.6	58,994,303	29,859,222	30,247	0.105	1.588
July-19	744.0	9.3	734.7	1,397	50.5	61,565,582	31,071,941	31,476	0.105	1.652
August-19	744.0	4.9	739.1	1,413	49.8	62,662,422	31,201,714	31,607	0.105	1.659
September-19	720.0	4.8	715.2	1,448	48.9	62,137,148	30,389,596	30,785	0.105	1.616
October-19	744.0	107.7	636.3	1,450	49.1	55,536,352	27,235,632	27,590	0.105	1.448
November-19	721.0	11.9	709.1	1,475	48.1	62,786,274	30,186,099	30,579	0.105	1.605
December-19	744.0	30.8	713.2	1,499	48.6	64,179,282	31,184,813	31,590	0.105	1.658
January-20	744.0	21.2	722.8	1,467	48.5	63,655,377	30,865,671	31,267	0.105	1.642
February-20	696.0	12.7	683.3	1,493	49.0	61,227,457	30,006,724	30,397	0.105	1.596
March-20	743.0	78.4	664.6	1,511	48.7	60,543,717	29,422,657	29,805	0.117	1.744
April-20	720.0	2.1	717.9	1,467	49.4	63,178,402	31,234,073	31,640	0.117	1.851
May-20	744.0	12.6	731.4	1,488	48.3	65,305,929	31,499,415	31,909	0.117	1.867
TOTAL/AVG 2019-2020	**8,784.0**	**309.4**	**8,474.6**	**1,458**	**49.1**	**741,772,245**	**364,157,557**	**368,892**	**0.108**	**19.927**
December 1, 2019- May 31, 2020	**4,391.0**	**157.8**	**4,233.2**	**1,488**	**48.8**	**378,090,164**	**184,213,353**	**186,608**	**0.111**	**10.357**
TOTAL/AVG 2020-Partial	**3,647.0**	**127.0**	**3,520.0**	**1,485**	**48.8**	**313,910,882**	**153,028,540**	**155,018**	**0.112**	**8.699**

S-7 (Turbine)

Month	Total Available Runtime (hours)	Total Downtime (hours)	Total Runtime (hours)	Average Flow (scfm)	Average CH_4 (%)	Total Throughput (scf)	Total CH_4 Volume (scf)	Total Heat Input (MMBtu)	CO Emission Factor[2] (lb/MMBTU)	Total CO (Tons)
June-19	720.0	11.8	708.2	1,334	50.6	56,689,390	28,681,604	29,054	0.065	0.944
July-19	744.0	11.5	732.5	1,346	50.5	59,153,395	29,857,977	30,246	0.065	0.983
August-19	744.0	4.6	739.4	1,366	49.8	60,629,174	30,188,869	30,581	0.065	0.994
September-19	720.0	13.0	707.0	1,404	48.9	59,577,352	29,132,045	29,511	0.065	0.959
October-19	744.0	65.5	678.5	1,409	49.1	57,529,156	28,207,374	28,574	0.065	0.929
November-19	721.0	17.9	703.1	1,460	48.1	61,605,257	29,617,377	30,002	0.065	0.975
December-19	744.0	25.2	718.8	1,475	48.6	63,646,045	30,924,781	31,327	0.065	1.018
January-20	744.0	25.3	718.7	1,477	48.5	63,768,370	30,903,520	31,305	0.065	1.017
February-20	696.0	13.3	682.7	1,434	49.0	58,738,797	28,787,394	29,162	0.065	0.948
March-20	743.0	46.2	696.8	1,477	48.7	61,757,890	30,085,198	30,476	0.076	1.158
April-20	720.0	32.7	687.3	1,433	49.4	59,113,667	29,232,644	29,613	0.076	1.125
May-20	744.0	19.9	724.1	1,429	48.3	62,113,921	29,957,211	30,347	0.076	1.153
TOTAL/AVG 2019-2020	**8,784.0**	**286.8**	**8,497.2**	**1,420**	**49.1**	**724,322,414**	**355,575,994**	**360,198**	**0.068**	**12.204**
December 1, 2019- May 31, 2020	**4,391.0**	**162.5**	**4,228.5**	**1,454**	**48.8**	**369,138,690**	**179,890,748**	**182,229**	**0.071**	**6.420**
TOTAL/AVG 2020-Partial	**3,647.0**	**137.3**	**3,509.7**	**1,450**	**48.8**	**305,492,645**	**148,965,967**	**150,903**	**0.072**	**5.402**

12-Month Combined Heat Input	**729,090**

Note 1) The 12-month consecutive heat input limit for both turbines combined pursuant to Permit Condition No. 18773, Part 8 is 838,480 MMBTU. The daily heat input limit for S-6 and S-7 pursuant to Permit Condition No. 18773, Part 8 is 1,378 MMBTU/day.

2) The CO Emission Factors for S-6 and S-7 were obtained from results of the source tests, pursuant to PTO Condition Number 24373 Part 3(a)(ii). Starting March 2020, results from the January 8, 2020 Source Test will be used. Starting March 2019, results from the January 10, 2019 Source Test will be used.

scfm - standard cubic feet per minute **%** - Percent **CH_4** - methane **scf** - standard cubic feet **MMBTU** - million British thermal units **CO** - carbon monoxide **lb** - pounds

12-MONTH CONSECUTIVE HEAT INPUT TO TURBINES (S-6 & S-7)

Altamont Landfill and Resource Recovery Facility, Livermore, CA

S-6 (Turbine) **2019-2020**

Month	Total Heat Input (MMBTU)	Consecutive Total (MMBTU)
June-19	30,247	220,158
July-19	31,476	251,633
August-19	31,607	283,241
September-19	30,785	314,025
October-19	27,590	341,615
November-19	30,579	372,194
December-19	31,590	339,724
January-20	31,267	370,990
February-20	30,397	338,530
March-20	29,805	368,336
April-20	31,640	336,983
May-20	31,909	368,892

S-7 (Turbine)

Month	Total Heat Input (MMBTU)	Consecutive Total (MMBTU)	Combined 12-Month Consecutive Total (MMBTU)
June-19	29,054	456,091	724,920
July-19	30,246	458,747	722,698
August-19	30,581	489,329	784,887
September-19	29,511	301,653	734,364
October-19	28,574	330,227	733,374
November-19	30,002	360,229	732,423
December-19	31,327	359,530	732,384
January-20	31,305	361,590	731,395
February-20	29,162	361,936	700,466
March-20	30,476	360,643	730,405
April-20	29,613	360,862	729,415
May-20	30,347	360,198	729,090

Note: The 12-month consecutive heat input limit for both turbines combined pursuant to Permit Condition No. 18773, Part 8 is 838,480 MMBTU.

MMBTU - million British thermal units

Altamont Landfill and Resource Recovery Facility
Consecutive Rolling 12-Month LNG Plant Summary Page
S-210 LNG Plant **2019-2020**

Month	Average CH_4 (%)	Maximum Daily Heat Input (MMBTU/day)	Total LFG Volume (scf)	Total CH4 Volume (scf)	Total Monthly Heat Input (MMBTU)
June-19	52.1	829	19,189,613	10,003,545	10,134
July-19	52.0	813	44,515,413	23,139,112	23,440
August-19	50.0	863	39,528,138	19,764,069	20,021
September-19	51.9	799	39,147,392	20,325,326	20,590
October-19	51.7	797	31,152,268	16,111,953	16,321
November-19	49.8	757	30,659,456	15,277,607	15,476
December-19	50.6	598	24,984,360	12,642,086	12,806
January-20	51.2	735	21,641,141	11,080,264	11,224
February-20	51.0	837	29,693,604	15,131,861	15,329
March-20	49.3	875	43,699,718	21,539,591	21,820
April-20	48.7	915	45,562,407	22,193,448	22,482
May-20	49.6	1,006	41,445,779	20,565,395	20,833
TOTAL/AVG 2019-2020	**50.7**	**1,006**	**411,219,289**	**207,774,257**	**210,475**
December 1, 2019- May 31, 2020	**50.1**	**1,006**	**207,027,009**	**103,152,646**	**104,494**

Not 1) The LNG Plant (S-210) heat input log is maintained pursuant to Permit Condition No. 24255, Part 4.

2) The daily heat input limit for S-210 pursuant to Permit Condition No. 24255, Part 2 is 1,950 MMBtu/Day.

3) According to correspondence between ALRRF and the BAAQMD, the LNG Plant commenced testing activities in August 3, 2009.

% - Percent **CH_4** - methane **MMBTU** - million British thermal units **scf** - standard cubic feet

APPENDIX P
BAAQMD CORRESPONDENCE

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

December 11, 2019

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Landfill Gas Well Installation and Start-up Notification Letter for four New Vertical Wells
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Alameda County, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the installation and start-up of four (4) new vertical landfill gas (LFG) collection wells located at the Altamont Landfill and Resource Recovery Facility (ALRRF), Plant #A2066. The new vertical LFG wells were installed during the December 2019 monthly wellfield monitoring event, pursuant to Permit to Operate (PTO) Condition Number 19235 Part 1(b).

This notification is being made pursuant to Waste Management of Alameda County, Inc.'s (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(iv), which states that a startup notice shall be submitted to the BAAQMD at least three days prior to the initiating operation of a new well.

Wells 775, 776, 777, and 778 are 4 new vertical LFG Wells. The anticipated initial start-up date for these 4 new LFG wells is December 16, 2019.

The following table shows the status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b).

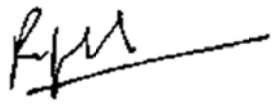
Action	**PTO Condition Number 19235 Part 1(b) as updated by AN 27839**	**After Installations and Replacements in this Notification (Remaining)**
New Vertical Well Installations	120	56
Vertical Well Decommissions	100	19
New Horizontal Collector Installations	25	22
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the November 21, 2019, LFG Well Startup Notification for two vertical LFG Wells the GCCS consisted of 106 vertical LFG collection wells, 1 horizontal collector, and 1 leachate cleanout riser system (LCRS). With the startup of additional 4 new wells (with anticipated start date of December 16, 2019) identified as Wells 775, 776, 777, and 778 as indicated in this Well Installation and Start-up Notification Letter, there will be 110 vertical LFG collection wells, 1 horizontal collector, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (925) 455-7305.

Thank you for your consideration.

Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

December 3, 2019

Ms. Loi Chau
Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Re: Facility Number A2066 - Waste Management of Alameda County, Inc.
Altamont Landfill and Resource Recovery Facility
Scope Revision Update to Previous Request for Limited Exemption for construction activities, submitted on November 1, 2019.

Dear Ms. Chau:

The Altamont Landfill and Resource Recovery Facility (ALRRF) submitted a notification on November 1, 2019, for Limited Exemption (for construction activities) from Regulation 8, Rule 34 (Solid Waste Disposal Sites), for proposed excavation and backfilling work for leachate repair work activities.

ALRRF initiated the project on November 11, 2019, as indicated in previously submitted notification dated November 1, 2019. However, due to adjustments to the construction scope (see attached map with additional location of repair), ALRRF is submitting this update notification. Attached is the revised construction plan with the revised scope.

If you have any questions, please do not hesitate to contact me at (925) 455-7305. Thank you for your consideration.

Sincerely,

Luis Rocha
Environmental Protection Specialist I
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)
Mr. Marcus Nettz (ALRRF)Ms.
Ms. Tianna Nourot (WMAC)

BAAQMD REGULATION 8, RULE 34 CONSTRUCTION PLAN

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

LEACHATE REPAIR WORK SCOPE UPDATE

November 11, 2019 through February 29, 2020

INTRODUCTION

This Construction Work Plan is submitted pursuant to Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 118: Limited Exemptions for Construction Activities. To obtain an exemption from BAAQMD Regulation 8, Rule 34, Section 303: Landfill Surface Requirements, the operator shall submit a construction plan in writing to the Air Pollution Control Officer (APCO) prior to beginning any construction activities.

BAAQMD Section 303 requires maintaining the concentration of organic compounds and methane below 500 parts per million by volume (ppmv) at all points on the landfill surface. Section 118 provides an exemption from the surface emission standard for *"….areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the express purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal systems."*

Pursuant to Regulation 8, Rule 34, Section 118, this work plan includes:

- Description of actions being taken;
- Description of landfill areas affected;
- Description of landfill gas (LFG) components affected;
- Map showing the affected areas and components;
- Reason requiring the action;
- Construction schedule; and
- Description of air quality mitigation measures planned.

ACTIONS BEING TAKEN

The work will consist of excavation of the affected areas to remove previously placed waste to improve the flow of liquids. The affected areas will be then backfilled with drainage material and covered.

AFFECTED LANDFILL AREAS

The construction activities will occur at locations in the Fill Area of the landfill. These areas are shown in the attached revised figure.

AFFECTED LFG COMPONENTS

It is anticipated that construction will have no significant impact on the routine operation of the existing GCCS. Excavation and backfilling is independent of the ongoing operations of the GCCS.

REASONS FOR ACTIONS

The construction work is for the excavation of the affected areas to remove previously placed waste to improve the flow of liquids. The repairs will be at north, west and south slopes of the landfill.

CONSTRUCTION SCHEDULE

The anticipated construction period will be between November 11, 2019 through February 29, 2020. The anticipated schedule for the construction activities is summarized in the table below:

Table 1 - Preliminary Construction Schedule

Task	Anticipated Project Duration
Mobilize crew, equipment, and materials to site	Up to 1 week
Excavation, backfilling and repair work	Up to 16 weeks
Clean-up and demobilize crew and materials	Up to 1 week

AIR QUALITY MITIGATION MEASURES

Emission of raw LFG will be minimized during construction. We anticipate minimal interruption of the overall site LFG extraction and control operations during the work. Air quality mitigation will be provided during the project work.

An Asbestos Dust Mitigation Plan will not be prepared pursuant to California Code of Regulation (CCR) Title 17, Section 93105 and 93106 because the ALRRF is not in a geographic ultramafic rock unit, no portion of the landfill has naturally- occurring asbestos or serpentine, and no wells will be constructed in the asbestos monofill designated for friable asbestos disposal.

Due to the minimal amount of excavation planned for this work, air quality impacts are also anticipated to be minimal. Emission of raw LFG will be minimized during construction. We anticipate minimal interruption of the overall site LFG extraction and control operations during the work. Air quality mitigation will be provided during the project.

During excavation through waste and cover, air emissions will be controlled by implementing the following measures:

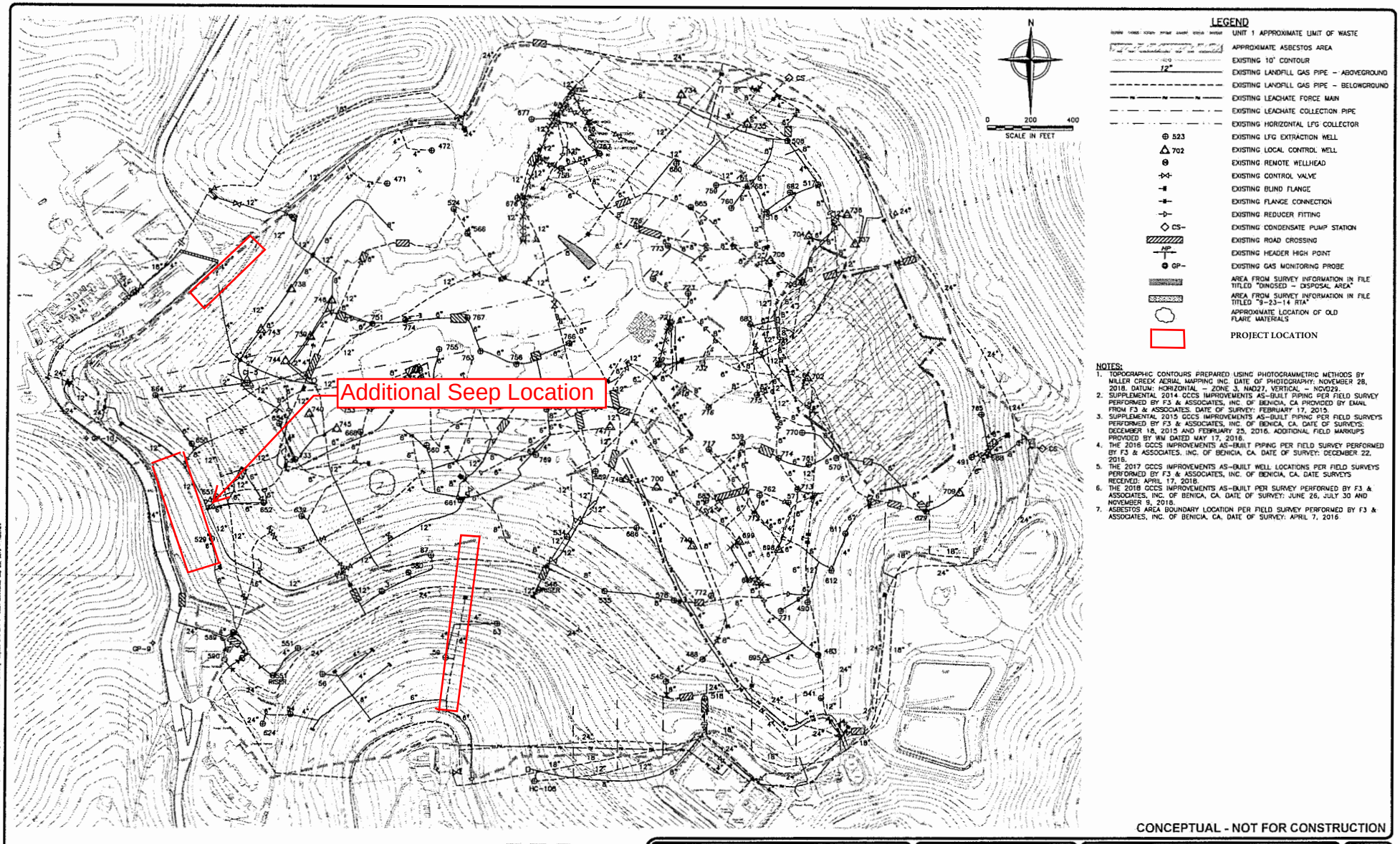
- Minimizing the quantity of excavations at any one time;
- Relocating excavated refuse to the active waste disposal area within 24 hours;
- The excavated area will be covered upon completion, minimizing the time that the area was exposed; and
- No piping will be disconnected during repairs.

RECORDKEEPING

The following records will be retained during the project:

- Constructions start and end dates.
- Shut down times for individual gas collection system components in accordance with the ALRRF's Startup, Shutdown, and Malfunction (SSM) Plan.
- Mitigation measures taken to minimize methane emissions and other potential air quality impacts will be documented.

Attachments: Figure 1 - GCCS Map- with update on repair location



NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING INC. DATE OF PHOTOGRAPHY: NOVEMBER 28, 2018. DATUM: HORIZONTAL – ZONE 3, NAD27, VERTICAL – NGVD29.
2. SUPPLEMENTAL 2014 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA PROVIDED BY EMAIL FROM F3 & ASSOCIATES. DATE OF SURVEY: FEBRUARY 17, 2015.
3. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICA, CA. DATE OF SURVEYS: DECEMBER 18, 2015 AND FEBRUARY 25, 2016. ADDITIONAL FIELD MARKUPS PROVIDED BY WM DATED MAY 17, 2016.
4. THE 2016 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: DECEMBER 22, 2016.
5. THE 2017 GCCS IMPROVEMENTS AS-BUILT WELL LOCATIONS PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE SURVEYS RECEIVED: APRIL 17, 2018.
6. THE 2018 GCCS IMPROVEMENTS AS-BUILT PER SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICA, CA. DATE OF SURVEY: JUNE 26, JULY 30 AND NOVEMBER 9, 2018.
7. ASBESTOS AREA BOUNDARY LOCATION PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: APRIL 7, 2016

CONCEPTUAL - NOT FOR CONSTRUCTION

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE: JUNE 2019
DRAWN BY: RAW
DESIGNED BY: JL
CHECKED BY: HLV
APPROVED BY: PJS

cornerstone
A TETRA TECH COMPANY

ALTAMONT LANDFILL AND
RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

GCCS PHASING PLANS
AREA 1 EXISTING CONDITIONS

SHEET NO. 1
PROJECT NO. 190483

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

December 17, 2019

Ms. Loi Chau
Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Re: Facility Number A2066 - Waste Management of Alameda County, Inc.
Altamont Landfill and Resource Recovery Facility
Schedule and Scope Revision Update to Previous Request for Limited Exemption for construction activities, submitted on July 11, 2019 and August 28, 2019.

Dear Ms. Chau:

The Altamont Landfill and Resource Recovery Facility (ALRRF) submitted a notification on July 11, 2019 and August 28, 2019, for Limited Exemption (for construction activities) from Regulation 8, Rule 34 (Solid Waste Disposal Sites), for proposed well and piping construction activities.

ALRRF initiated the project on August 5, 2019, as indicated in previously submitted notification dated July 11, 2019. However, due to adjustments to the construction schedule and construction scope, ALRRF is submitting this update notification. Attached is the revised construction plan with the revised schedule and scope.

If you have any questions, please do not hesitate to contact me at (925) 455-7305. Thank you for your consideration.

Sincerely,

Luis Rocha
Environmental Protection Specialist I
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

BAAQMD REGULATION 8, RULE 34 CONSTRUCTION PLAN

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

FILL AREA 1 LFG EXTRACTION WELLS AND PIPING AND FILL AREA II CONDENSATE TRENCH CONSTRUCTION WORK

August 5, 2019 through April 30, 2020

INTRODUCTION

This Construction Work Plan is submitted pursuant to Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 118: Limited Exemptions for Construction Activities. To obtain an exemption from BAAQMD Regulation 8, Rule 34, Section 303: Landfill Surface Requirements, the operator shall submit a construction plan in writing to the Air Pollution Control Officer (APCO) prior to beginning any construction activities.

BAAQMD Section 303 requires maintaining the concentration of organic compounds and methane below 500 parts per million by volume (ppmv) at all points on the landfill surface. Section 118 provides an exemption from the surface emission standard for *"….areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the express purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal systems."*

Pursuant to Regulation 8, Rule 34, Section 118, this work plan includes:

- Description of actions being taken;
- Description of landfill areas affected;
- Description of landfill gas (LFG) components affected;
- Map showing the affected areas and components;
- Reason requiring the action;
- Construction schedule; and
- Description of air quality mitigation measures planned.

ACTIONS BEING TAKEN

The work consists of installation of up to 36 LFG extraction wells and installation of additional pipelines that will connect the wells to the existing gas collection and control system (GCCS). In addition the work will include piping and trenching for condensate trench work in Fill Area 2 and excavation and backfilling activities with tires and/or soil at Fill Area 1 and 2.

AFFECTED LANDFILL AREAS

The construction activities will occur in the Fill Area 1 and Fill Area 2 of the landfill, as shown on the attached figures.

AFFECTED LFG COMPONENTS

It is anticipated that construction will have no significant impact on the routine operation of the existing GCCS. Installation of new wells is independent of the ongoing operations of the GCCS. When connecting new wells, isolation valves installed within the existing GCCS piping network will be used to minimize the number of existing wells offline at any given time while the newly installed wells are connected to the GCCS.

REASONS FOR ACTIONS

The proposed construction work is intended to:

- Install new collection wells;
- Install new piping;
- Increase LFG collection efficiency to further reduce the potential for surface emissions;
- Install condensate introduction system at Fill Area 2

CONSTRUCTION SCHEDULE

The anticipated construction period will be between August 5, 2019 through April 30, 2020. The anticipated schedule for the construction activities is summarized in the table below:

Table 1 - Preliminary Construction Schedule

Task	Project Week and Duration
Mobilize crew, equipment, and materials to site	1 week
Drilling of wells, Installation of pipes, trenching, excavation and backfilling work	Up to 37 weeks
Clean-up and demobilize crew and materials	1 week

AIR QUALITY MITIGATION MEASURES

Emission of raw LFG will be minimized during construction. We anticipate minimal interruption of the overall site LFG extraction and control operations during the work. Installation of new

wells is independent of ongoing operations of the existing GCCS. Air quality mitigation will be provided during the installation of wells and connection of wells to existing GCCS piping network.

An Asbestos Dust Mitigation Plan will not be prepared pursuant to California Code of Regulation (CCR) Title 17, Section 93105 and 93106 because the ALRRF is not in a geographic ultramafic rock unit, no portion of the landfill has naturally- occurring asbestos or serpentine, and no wells will be constructed in the asbestos monofill designated for friable asbestos disposal.

Due to the minimal amount of excavation planned for this work, air quality impacts are also anticipated to be minimal. Air quality mitigation will be provided during the following work tasks:

- Drilling of wells and installation of piping;
- Excavation and backfill of pipe trenches and excavation in waste; and
- Connection of new wells to existing piping.

During drilling and excavation through waste and soil cover, air emission will be controlled by implementing the following measures:

- Minimizing the installation time for each component;
- Minimizing the quantity of open borings or trench excavations at any one time;
- Relocating excavated refuse to the active waste disposal area within 24 hours; and
- Not leaving well borings open overnight or for more than 8 hours.

During connection of wells to the existing LFG piping, and installation of new piping, air emissions will be controlled by implementing the following measures:

- Capping or blind flanging of all pipes and collector openings, which will remain sealed until time of connection to a vacuum source;
- Using isolation valves;
- Minimizing installation time for making each connection; and
- Minimizing the amount of open pipe during each installation, by using flange joints and flexible couplings.

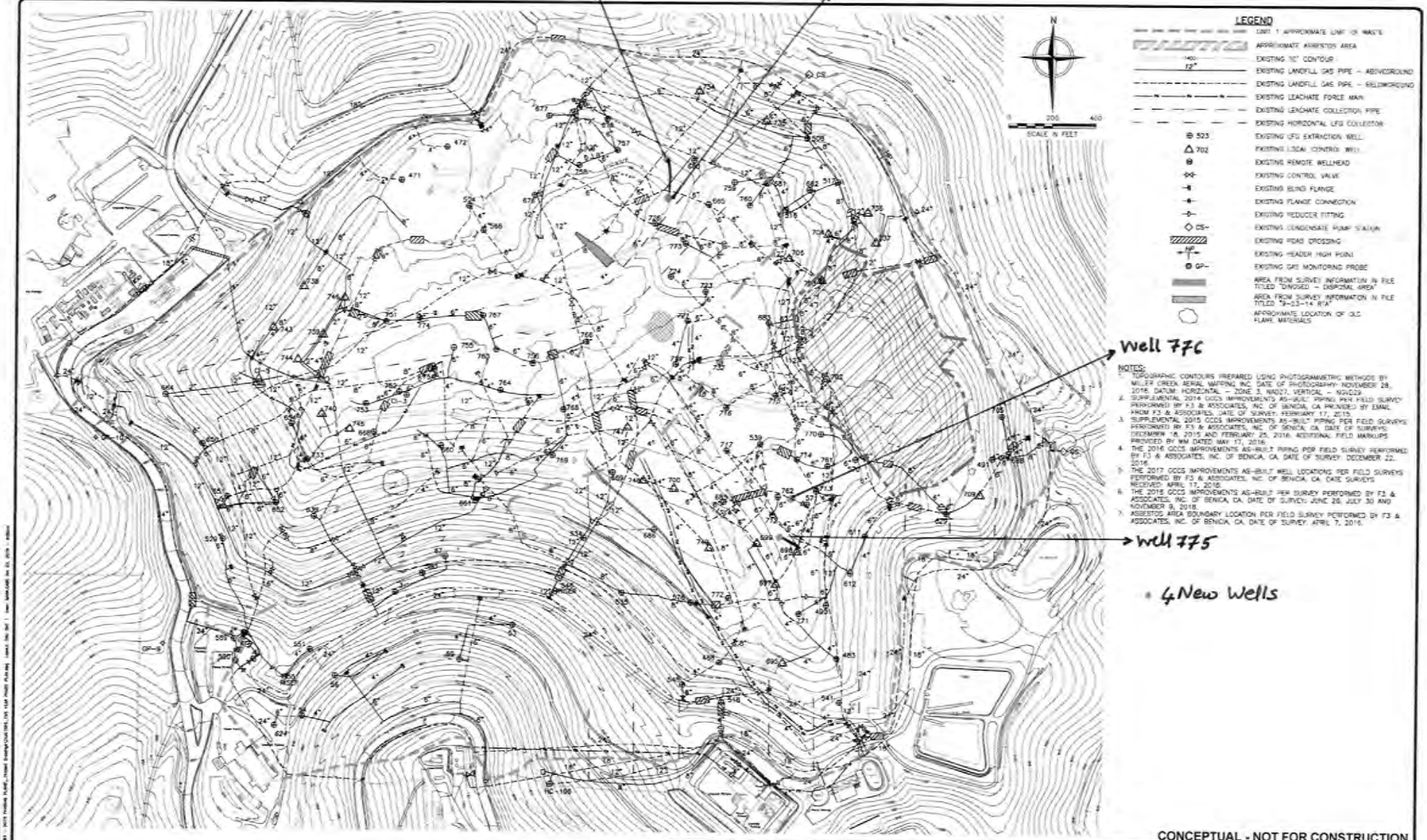
The construction and initial operating dates and times for each well shall be recorded pursuant to requirements for documenting individual well shutdown times in Regulation 8, Rule 34-502. Per the Permit to Operate (PTO) Condition Number 19235 Part 1(b)(iv), as updated by Application Number (AN) 27839 a start-up letter will be provided to the BAAQMD 3 days prior to applying a vacuum to the new wells.

RECORDKEEPING

The following records will be retained during the project:

- Construction start and end dates, projected and actual installation dates, and projected shut down times for individual gas collection system components.
- GCCS downtime and individual well shutdown times will be documented in accordance with the ALRRF's Startup, Shutdown, and Malfunction (SSM) Plan.
- Mitigation measures taken to minimize methane emissions and other potential air quality impacts will be documented.

Attachments: Figure 1 - Gas Collection and Control System Layout- Fill Area 1
Figure 2 – Condensate Trench Map-Fill Area 2



CONCEPTUAL - NOT FOR CONSTRUCTION

WASTE MANAGEMENT

cornerstone
A TETRA TECH COMPANY

ALTAMONT LANDFILL AND
RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

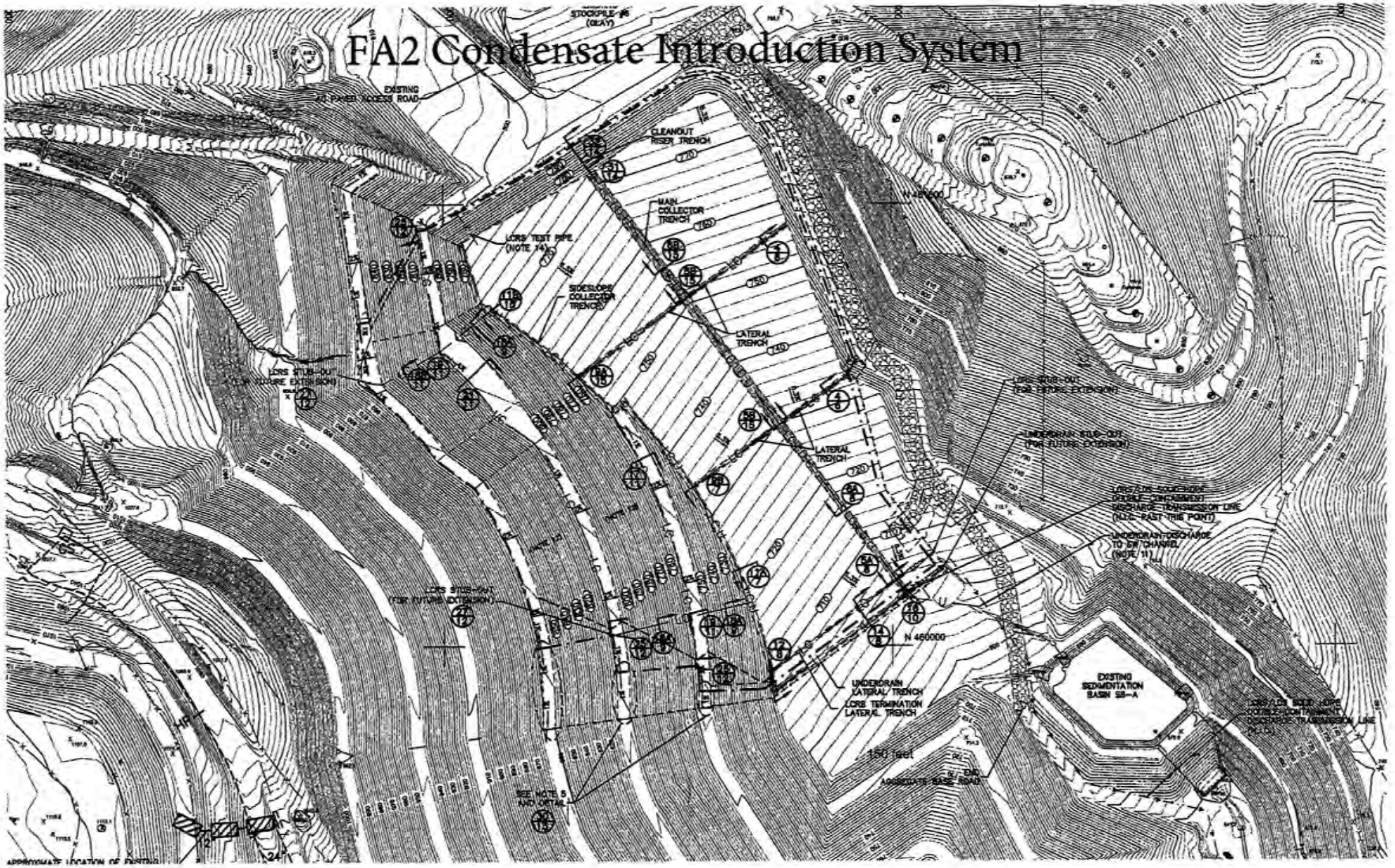
GCCS PHASING PLANS
AREA 1 EXISTING CONDITIONS

SHEET NO.
1

PROJECT NO.
190453

DATE OF ISSUE: JUNE 2019

FA2 Condensate Introduction System



Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

February 14, 2020

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Landfill Gas Well Installation and Start-up Notification Letter for fourteen New Vertical Wells
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Alameda County, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the installation and start-up of fourteen (14) new vertical landfill gas (LFG) collection wells located at the Altamont Landfill and Resource Recovery Facility (ALRRF), Plant #A2066. The new vertical LFG wells were to installed during February 2020 monthly wellfield monitoring event, pursuant to Permit to Operate (PTO) Condition Number 19235 Part 1(b).

This notification is being made pursuant to Waste Management of Alameda County, Inc.'s (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(iv), which states that a startup notice shall be submitted to the BAAQMD at least three days prior to the initiating operation of a new well.

Wells 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, and 808 are the 14 new vertical LFG Wells. The anticipated initial start-up date for these 14 new LFG wells is February 18, 2020.

The following table shows the status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b).

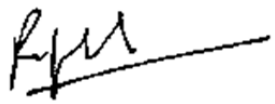
Action	**PTO Condition Number 19235 Part 1(b) as updated by AN 27839**	**After Installations and Replacements in this Notification (Remaining)**
New Vertical Well Installations	120	26
Vertical Well Decommissions	100	19
New Horizontal Collector Installations	25	22
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the February 10, 2020, LFG Well Startup Notification for 16 vertical LFG Wells the GCCS consisted of 126 vertical LFG collection wells, 1 horizontal collector, and 1 leachate cleanout riser system (LCRS). With the startup of additional 14 new wells (with anticipated start date of February 18, 2020) identified as Wells 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, and 808 as indicated in this Well Installation and Start-up Notification Letter, there will be 140 vertical LFG collection wells, 1 horizontal collector, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (510) 875-9338.

Thank you for your consideration.

Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

February 10, 2020

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Landfill Gas Well Installation and Start-up Notification Letter for Sixteen New Vertical Wells
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Alameda County, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the installation and start-up of sixteen (16) new vertical landfill gas (LFG) collection wells located at the Altamont Landfill and Resource Recovery Facility (ALRRF), Plant #A2066. The new vertical LFG wells are scheduled to be installed during February 2020 monthly wellfield monitoring event, pursuant to Permit to Operate (PTO) Condition Number 19235 Part 1(b).

This notification is being made pursuant to Waste Management of Alameda County, Inc.'s (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(iv), which states that a startup notice shall be submitted to the BAAQMD at least three days prior to the initiating operation of a new well.

Wells 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, and 794 are the 16 new proposed vertical LFG Wells. The anticipated initial start-up date for these 16 new LFG wells is February 13, 2020.

The following table shows the status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b).

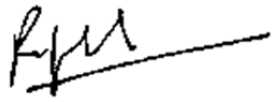
Action	**PTO Condition Number 19235 Part 1(b) as updated by AN 27839**	**After Installations and Replacements in this Notification (Remaining)**
New Vertical Well Installations	120	40
Vertical Well Decommissions	100	19
New Horizontal Collector Installations	25	22
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the December 11, 2019, LFG Well Startup Notification for 4 vertical LFG Wells the GCCS consisted of 110 vertical LFG collection wells, 1 horizontal collector, and 1 leachate cleanout riser system (LCRS). With the startup of additional 16 new wells (with anticipated start date of February 13, 2020) identified as Wells 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, and 794 as indicated in this Well Installation and Start-up Notification Letter, there will be 126 vertical LFG collection wells, 1 horizontal collector, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (510) 875-9338.

Thank you for your consideration.

Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

February 17, 2020

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Well Decommissioning Notification for Eight Vertical Landfill Gas Collection Wells
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Livermore, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the decommissioning of three vertical landfill gas (LFG) collection Wells 702, 516, 571, 676, 706, 723, 735, and 758, at the Altamont Landfill and Resource Recovery Facility (ALRRF) on February 14 and 17, 2020, pursuant to Permit to Operate (PTO) Condition Number 19235 Part 1(b) as updated by AN 27839.

This notification is being made pursuant to Waste Management of Alameda County, Inc. (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(v), which states that a decommissioning notice shall be submitted to the BAAQMD within three (3) working days of the component(s) having been disconnected from the system. Wells 702, 516, 571, 676, 706, 723, 735, and 758, were decommissioned on February 14 and 17, 2020, as outlined below:

Well ID	Date and Time Decommissioned	Reason	Type
ALTA702	2/14/2020; 7:39 AM	Low Flow	Vertical Gas Collection Well
ALTA516	2/17/2020; 11:11 AM	Low Flow	Vertical Gas Collection Well
ALTA571	2/17/2020; 11:26 AM	Low Flow	Vertical Gas Collection Well
ALTA676	2/17/2020; 11:01 AM	Low Flow	Vertical Gas Collection Well
ALTA706	2/17/2020; 11:15 AM	Low Flow	Vertical Gas Collection Well
ALTA723	2/17/2020; 11:07 AM	Low Flow	Vertical Gas Collection Well
ALTA735	2/17/2020; 10:47 AM	Low Flow	Vertical Gas Collection Well
ALTA758	2/17/2020; 10:57 AM	Low Flow	Vertical Gas Collection Well

PTO Condition 19235 Part (1)(b)(vii) states that if the Permit Holder has a net reduction of more than five (5) components within a 120-day period, the Permit Holder shall submit a more comprehensive notice to the BAAQMD. The time period starting 120 days prior to the original submittal date (2/17/2020) starts on

October 20, 2019. Since October 20, 2019, ALRRF has not installed 34 LFG wells. ALRRF has decommissioned total thirteen vertical LFG wells. The total net increase is therefore 21 LFG components.

The increase of LFG wells is not expected to result in surface emission leaks, as the GCCS will undergo tuning to accommodate the revised number of wells, and each remaining vertical LFG well will have the necessary vacuum applied to facilitate required LFG collection.

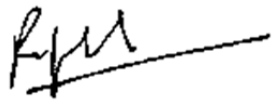
There were three (3) vertical LFG wells disconnected out of the five (5) wells allowed pursuant to BAAQMD Regulation 8-34-116 (Limited Exemption, Well Raising).

The following table shows the current status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b) as updated by AN 27839.

Action	**PTO Condition Number 19235 Part 1(b) as updated by AN 27839**	**After Installations and Replacements in this Notification (Remaining)**
New Vertical Well Installations	120	26
Vertical Well Decommissions	100	11
New Horizontal Collector Installations	25	22
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the February 17, 2020, LFG Well Startup Notification the GCCS consisted of 140 vertical LFG collection wells, 1 horizontal collector, and 1 leachate cleanout riser system (LCRS). With the decommissioning of eight vertical LFG Wells, 702, 516, 571, 676, 706, 723, 735, and 758, as indicated in this Well Decommissioning Notification Letter, there are currently 132 vertical LFG collection wells, 1 horizontal collector, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (510) 875-9338. Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

April 27, 2020

Ms. Loi Chau
Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Re: Facility Number A2066 - Waste Management of Alameda County, Inc.
Altamont Landfill and Resource Recovery Facility
Request for Limited Exemption (for construction activities) from Regulation 8, Rule 34 (Solid Waste Disposal Sites), Section 303 (Landfill Surface Requirements)- Well and piping construction work

Dear Ms. Chau:

This letter requests a limited exemption from the requirements of Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 303 (Landfill Surface Requirements) during wellfield and landfill construction activities to be conducted from May 6, 2020 through September 30, 2020, at the Altamont Landfill and Resource Recovery Facility (ALRRF), which is owned and operated by Waste Management of Alameda County, Inc. (WMAC). This notification is submitted pursuant to the BAAQMD Regulation 8, Rule 34, Section 118, "Limited Exemptions for Construction Activities." The work consists of installation of new landfill gas (LFG) wells to maintain compliance with the BAAQMD Regulation 8, Rule 34, and activities related to the piping work to be performed during the period of May 6, 2020 through September 30, 2020. The work to be completed is covered by BAAQMD Permit to Operate (PTO) Condition Number 19235 Part 1(b)(i), as updated by Application Number (AN) 27839.

The construction work is for the installation of new LFG extraction wells, and additional piping that will connect to the existing gas collection and control system (GCCS). The work for this project includes excavation and backfilling with soil. This letter also transmits the BAAQMD-required construction plan (work plan) for the proposed work. The work plan contains information required pursuant to Regulation 8, Rule 34, Section 118.1 and includes:

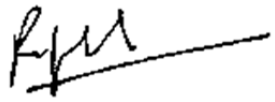
- Description of actions being taken;
- Description of landfill areas affected;
- Description of LFG components affected;
- Map showing the above areas and components;
- Reason requiring the action;
- Construction schedule; and
- Description of air quality mitigation measures planned.

No significant interruption of the current site LFG extraction and control operations is anticipated due to the work. The construction is anticipated to begin on or around May 6, 2020. We anticipate construction activities to conclude by September 30, 2020.

Unless notified otherwise, ALRRF will proceed in accordance with the attached work plan. We deem submittal of this plan as approval by the BAAQMD to take necessary action to ensure compliance with regulations, which may include taking additional wells offline for an extended period of time pursuant to Regulation 8, Rule 34, Section 118.

If you have any questions, please do not hesitate to contact me at (510) 875-9338. Thank you for your consideration.

Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

Attachment: BAAQMD Regulation 8, Rule 34 Construction Plan

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

BAAQMD REGULATION 8, RULE 34 CONSTRUCTION PLAN

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

LFG EXTRACTION WELLS AND PIPING

May 6, 2020 through September 30, 2020

INTRODUCTION

This Construction Work Plan is submitted pursuant to Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34, Section 118: Limited Exemptions for Construction Activities. To obtain an exemption from BAAQMD Regulation 8, Rule 34, Section 303: Landfill Surface Requirements, the operator shall submit a construction plan in writing to the Air Pollution Control Officer (APCO) prior to beginning any construction activities.

BAAQMD Section 303 requires maintaining the concentration of organic compounds and methane below 500 parts per million by volume (ppmv) at all points on the landfill surface. Section 118 provides an exemption from the surface emission standard for *"….areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the express purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal systems."*

Pursuant to Regulation 8, Rule 34, Section 118, this work plan includes:

- Description of actions being taken;
- Description of landfill areas affected;
- Description of landfill gas (LFG) components affected;
- Map showing the affected areas and components;
- Reason requiring the action;
- Construction schedule; and
- Description of air quality mitigation measures planned.

ACTIONS BEING TAKEN

The work consists of installation of up to 30 LFG extraction wells and installation of additional pipelines that will connect the wells to the existing gas collection and control system (GCCS). In addition the work will include the excavation and backfilling activities with tires and/or soil.

AFFECTED LANDFILL AREAS

The construction activities will occur in the Fill Area 1 and Fill Area 2 (Phase 1) of the landfill, as shown on the attached figure. The construction activities will be executed in phases.

AFFECTED LFG COMPONENTS

It is anticipated that construction will have no significant impact on the routine operation of the existing GCCS. Installation of new wells is independent of the ongoing operations of the GCCS. When connecting new wells, isolation valves installed within the existing GCCS piping network will be used to minimize the number of existing wells offline at any given time while the newly installed wells are connected to the GCCS.

REASONS FOR ACTIONS

The proposed construction work is intended to:

- Install new collection wells;
- Install new piping;
- Increase LFG collection efficiency to further reduce the potential for surface emissions;

CONSTRUCTION SCHEDULE

The anticipated construction period will be between May 6, 2020 through September 30, 2020. The construction will be executed in phases during this period. The anticipated schedule for the construction activities is summarized in the table below:

Table 1 - Preliminary Construction Schedule

Task	Project Week and Duration
Mobilize crew, equipment, and materials to site	1 week
Drilling of wells, Installation of pipes excavation and backfilling work.	Up to 20 weeks
Clean-up and demobilize crew and materials	1 week

AIR QUALITY MITIGATION MEASURES

Emission of raw LFG will be minimized during construction. We anticipate minimal interruption of the overall site LFG extraction and control operations during the work. Installation of new wells is independent of ongoing operations of the existing GCCS. Air quality mitigation will be provided during the installation of wells and connection of wells to existing GCCS piping network.

An Asbestos Dust Mitigation Plan will not be prepared pursuant to California Code of Regulation (CCR) Title 17, Section 93105 and 93106 because the ALRRF is not in a geographic ultramafic rock unit, no portion of the landfill has naturally- occurring asbestos or serpentine, and no wells will be constructed in the asbestos monofill designated for friable asbestos disposal.

Due to the minimal amount of excavation planned for this work, air quality impacts are also anticipated to be minimal. Air quality mitigation will be provided during the following work tasks:

- Drilling of wells and installation of piping;

- Excavation and backfill of pipe trenches and excavation in waste; and
- Connection of new wells to existing piping.

During drilling and excavation through waste and soil cover, air emission will be controlled by implementing the following measures:

- Minimizing the installation time for each component;
- Minimizing the quantity of open borings or trench excavations at any one time;
- Relocating excavated refuse to the active waste disposal area within 24 hours; and
- Not leaving well borings open overnight or for more than 8 hours.

During connection of wells to the existing LFG piping, and installation of new piping, air emissions will be controlled by implementing the following measures:

- Capping or blind flanging of all pipes and collector openings, which will remain sealed until time of connection to a vacuum source;
- Using isolation valves;
- Minimizing installation time for making each connection; and
- Minimizing the amount of open pipe during each installation, by using flange joints and flexible couplings.

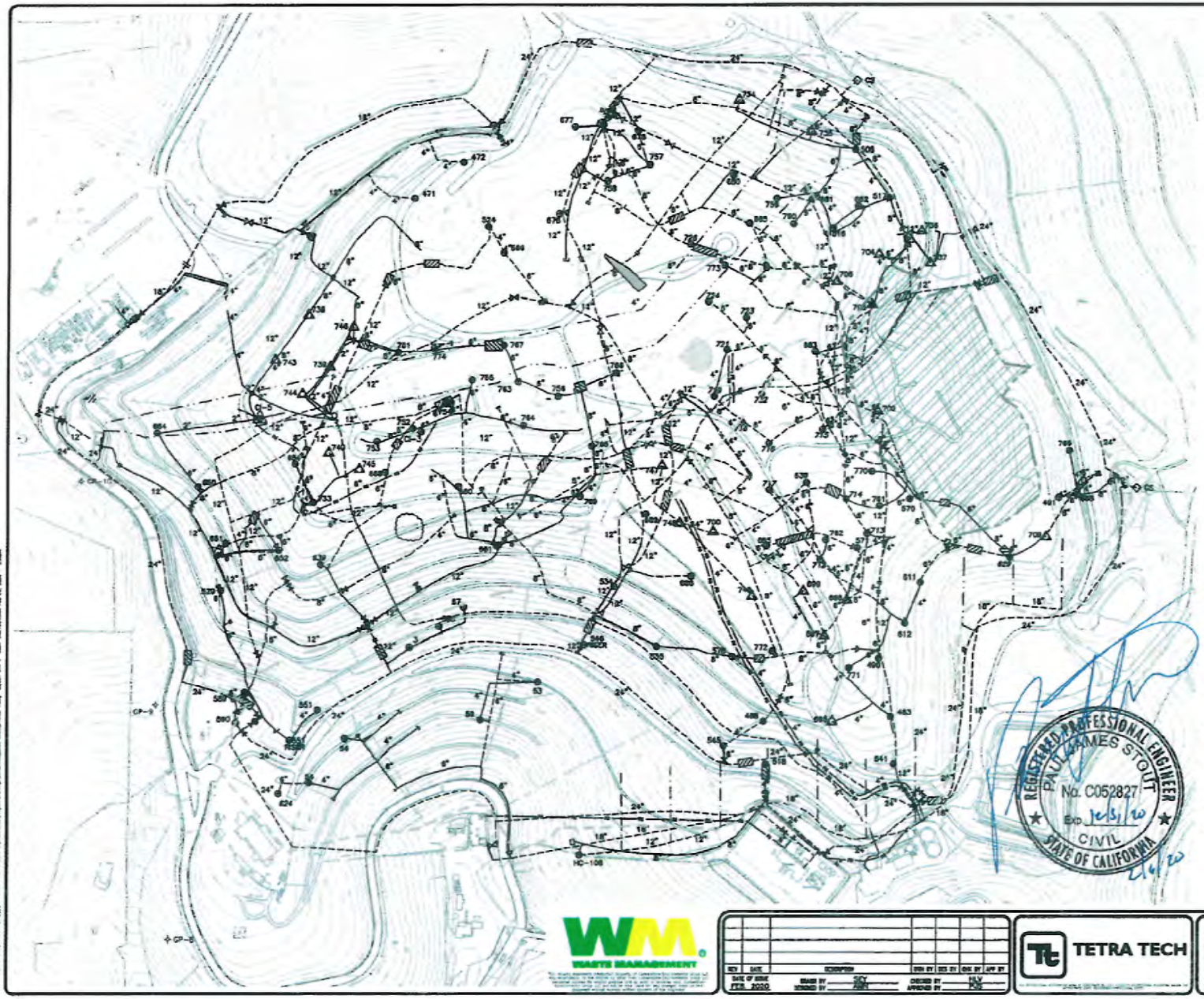
The construction and initial operating dates and times for each well shall be recorded pursuant to requirements for documenting individual well shutdown times in Regulation 8, Rule 34-502. Per the Permit to Operate (PTO) Condition Number 19235 Part 1(b)(iv), as updated by Application Number (AN) 27839 a start-up letter will be provided to the BAAQMD 3 days prior to applying a vacuum to the new wells.

RECORDKEEPING

The following records will be retained during the project:

- Construction start and end dates, projected and actual installation dates, and projected shut down times for individual gas collection system components.
- GCCS downtime and individual well shutdown times will be documented in accordance with the ALRRF's Startup, Shutdown, and Malfunction (SSM) Plan.
- Mitigation measures taken to minimize methane emissions and other potential air quality impacts will be documented.

Attachments: Figure 1 – FA1- Gas Collection and Control System Layout
Figure 2 – FA2- Fill Sequence Phase 1 Drawing



LEGEND

- UNIT 1 APPROXIMATE LIMIT OF WASTE
- UNIT 2 APPROXIMATE LINER BOUNDARY
- APPROXIMATE ASBESTOS AREA BOUNDARY
- EXISTING 10' CONTOUR
- 12" EXISTING LANDFILL GAS PIPE – ABOVEGROUND
- EXISTING LANDFILL GAS PIPE – BELOWGROUND
- EXISTING LEACHATE COLLECTION PIPE
- EXISTING HORIZONTAL LFG COLLECTOR
- FM EXISTING FORCE MAIN PIPE
- ⊕ 523 EXISTING LFG EXTRACTION WELL
- ▲ CI-1 EXISTING CONDENSATE INJECTION WELL
- △ 601 EXISTING LOCAL CONTROL WELL
- EXISTING REMOTE WELLHEAD
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER FITTING
- ◇ CS- EXISTING CONDENSATE PUMP STATION
- EXISTING ROAD CROSSING
- EXISTING HEADER HIGH POINT
- ✧ GP-10 EXISTING GAS MONITORING PROBE
- AREA FROM SURVEY INFORMATION IN FILE TITLED "DWGSED – DISPOSAL AREA"
- AREA FROM SURVEY INFORMATION IN FILE TITLED "9-23-14 RTA"
- APPROXIMATE LOCATION OF OLD FLARE MATERIALS

N

0 200 400

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING INC. DATE OF PHOTOGRAPHY: JUNE 11, 2019. DATUM: HORIZONTAL – ZONE 3, NAD27, VERTICAL – NGVD29.
2. SUPPLEMENTAL 2014 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA PROVIDED BY EMAIL FROM F3 & ASSOCIATES DATE OF SURVEY: FEBRUARY 17, 2015
3. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEYS: DECEMBER 18, 2015 AND FEBRUARY 25, 2016. ADDITIONAL FIELD MARKUPS PROVIDED BY WM DATED MAY 17, 2016.
4. THE 2016 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: DECEMBER 22, 2016.
5. THE 2017 GCCS IMPROVEMENTS AS-BUILT WELL LOCATIONS PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE SURVEYS RECEIVED APRIL 17, 2018.
6. THE 2018 GCCS IMPROVEMENTS AS-BUILT PER SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: JUNE 26 AND JULY 30, 2018.
7. ASBESTOS AREA BOUNDARY LOCATION PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: APRIL 7, 2016.

REGISTERED PROFESSIONAL ENGINEER
PAUL JAMES STOUT
No. C052827
Exp. 12/31/20
CIVIL
STATE OF CALIFORNIA

2/6/20

ISSUED FOR CONSTRUCTION

WM WASTE MANAGEMENT

NO.	DATE	DESCRIPTION	DSN BY	DES BY	CHK BY	APP BY
DATE OF ISSUE FEB. 2020		DRAWN BY: SCV DESIGNED BY: ABH		DESIGN BY: HLV APPROVED BY: PJS		

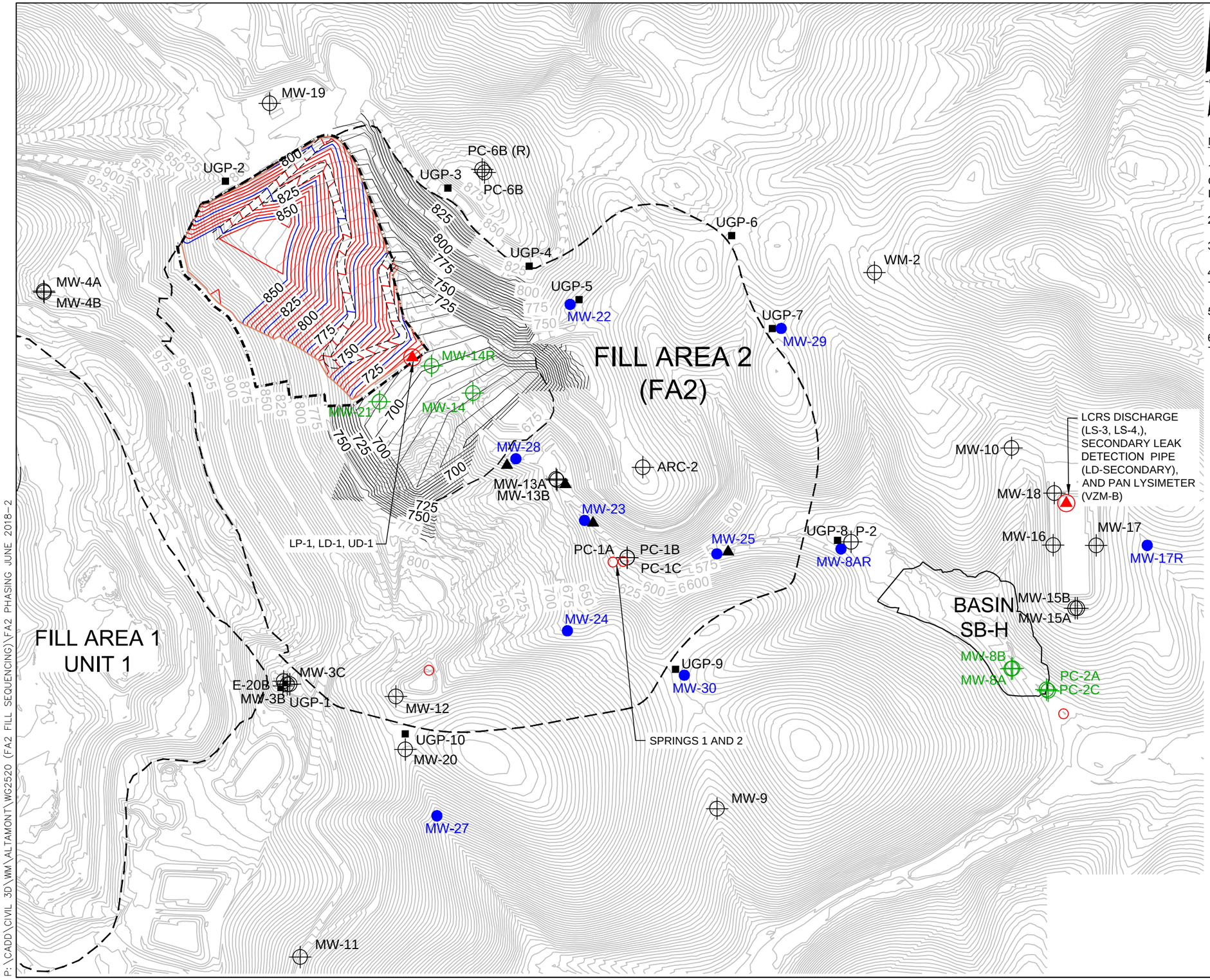
TETRA TECH

ALTAMONT LANDFILL AND
RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

2020 GCCS IMPROVEMENTS
GCCS AS-BUILT SITE PLAN

SHEET NO. 1

PROJECT NO. 200000



NOTES:

1. EXISTING GROUND TOPOGRAPHY PROVIDED BY MILLER CREEK AERIAL MAPPING, LLC. AERIAL PHOTO DATED DECEMBER 29, 2017.

2. ALL BOUNDARIES AND LIMITS ARE APPROXIMATE.

3. ASSUMED ANNUAL WASTE INTAKE IS 1,700,000 TONS.

4. ASSUMED AIRSPACE UTILIZATION FACTOR IS 0.956 TONS/CY (HISTORICAL OPERATIONAL AUF).

5. APPROXIMATE CAPACITY OF PHASE 1 IS 1,350,000 CY.

6. WELLS, PIEZOMETERS, GAS PROBES AND BOREHOLES THAT WILL BE DESTROYED ARE SHOWN IN GREEN COLOR.

LEGEND

- 1270 — EXISTING GROUND ELEVATION (25-FT CONTOUR)
- EXISTING GROUND ELEVATION (5-FT CONTOUR)
- 1210 — INTERIM FILL GRADE (25-FT CONTOUR)
- INTERIM FILL GRADE (5-FT CONTOUR)
- 1210 — PHASE 2 BASE GRADE (25-FT CONTOUR)
- PHASE 2 BASE GRADE (5-FT CONTOUR)
- APPROXIMATE LIMIT OF WASTE
- APPROXIMATE PHASE 1 LINER LIMIT
- EDGE OF ACCESS ROAD
- EXISTING MONITORING WELL AND PIEZOMETER LOCATION (NOTE 6)
- EXISTING GAS PROBE LOCATION (NOTE 6)
- PROPOSED MONITORING WELL LOCATION (NOTE 6)
- PROPOSED GAS PROBE LOCATION (NOTE 6)
- PROPOSED TEMPORARY BOREHOLE GAS SAMPLE LOCATION (NOTE 6)
- LEACHATE MONITORING / UNSATURATED ZONE LOCATION
- SURFACE WATER MONITORING LOCATION

FILL AREA 2 - PHASE 1
CONCEPTUAL INTERIM FILL PLAN
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY

Geosyntec consultants

PROJECT NO: WG2520 | AUGUST 2018 | FIGURE 3

P:\CADD\CIVIL 3D\WM\ALTAMONT\WG2520 (FA2 FILL SEQUENCING)\FA2 PHASING JUNE 2018-2

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

April 20, 2020

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Landfill Gas Well Installation and Start-up Notification Letter for two New Horizontal Collectors
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Alameda County, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the installation and start-up of two (2) new horizontal landfill gas (LFG) collectors located at the Altamont Landfill and Resource Recovery Facility (ALRRF), Plant #A2066.

This notification is being made pursuant to Waste Management of Alameda County, Inc.'s (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(iv), which states that a startup notice shall be submitted to the BAAQMD at least three days prior to the initiating operation of a new wells.

Horizontal collectors ALHC809 and ALHC810 are the 2 new horizontal LFG collectors. The anticipated initial start-up date for these 2 new horizontal LFG collectors is April 23, 2020.

The following table shows the status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b).

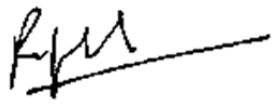
Action	**PTO Condition Number 19235 Part 1(b) as updated by AN 27839**	**After Installations and Replacements in this Notification (Remaining)**
New Vertical Well Installations	120	26
Vertical Well Decommissions	100	11
New Horizontal Collector Installations	25	20
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the February 17, 2020, LFG Well Decommissioning Notification for 8 vertical LFG Wells the GCCS consisted of 132 vertical LFG collection wells, 1 horizontal collector, and 1 leachate cleanout riser system (LCRS). With the startup of additional 2 new horizontal collectors (with anticipated start date of April 23, 2020) identified as horizontal LFG collectors, ALHC809 and ALHC810 as indicated in this Well Installation and Start-up Notification Letter, there will be 132 vertical LFG collection wells, 3 horizontal collectors, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (510) 875-9338.

Thank you for your consideration.

Sincerely,



Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill & Resource Recovery Facility
10840 Altamont Pass Road, Livermore, CA 94551

June 5, 2020

Ms. Loi Chau
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California, 94105

Re: Well Decommissioning Notification for One Vertical Landfill Gas Collection Well
Plant Number A2066
Altamont Landfill and Resource Recovery Facility, Livermore, California

Dear Ms. Chau,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the decommissioning of one vertical landfill gas (LFG) collection Well 683, at the Altamont Landfill and Resource Recovery Facility (ALRRF) on June 4, 2020, pursuant to Permit to Operate (PTO) Condition Number 19235 Part 1(b) as updated by AN 27839.

This notification is being made pursuant to Waste Management of Alameda County, Inc. (WMAC) Permit to Operate (PTO) Condition 19235 Parts (1)(b)(v), which states that a decommissioning notice shall be submitted to the BAAQMD within three (3) working days of the component(s) having been disconnected from the system. Well 683 was decommissioned on June 4, 2020, as outlined below:

Well ID	Date and Time Decommissioned	Reason	Type
ALTA683	6/4/2020; 9:21 AM	Low Flow	Vertical Gas Collection Well

PTO Condition 19235 Part (1)(b)(vii) states that if the Permit Holder has a net reduction of more than five (5) components within a 120-day period, the Permit Holder shall submit a more comprehensive notice to the BAAQMD. The time period starting 120 days prior to the original submittal date (6/5/2020) starts on February 6, 2020. Since February 6, 2020, ALRRF has installed 30 LFG wells and 2 horizontal collectors. ALRRF has decommissioned total nine vertical LFG wells. The total net increase is therefore 23 LFG components.

The increase of LFG wells is not expected to result in surface emission leaks, as the GCCS will undergo tuning to accommodate the revised number of wells, and each remaining vertical LFG well will have the necessary vacuum applied to facilitate required LFG collection.

There were no vertical LFG wells disconnected out of the five (5) wells allowed pursuant to BAAQMD Regulation 8-34-116 (Limited Exemption, Well Raising).

The following table shows the current status of replacements, decommissions, and installations for PTO Condition Number 19235 Part 1(b) as updated by AN 27839.

Action	PTO Condition Number 19235 Part 1(b) as updated by AN 27839	After Installations and Replacements in this Notification (Remaining)
New Vertical Well Installations	120	26
Vertical Well Decommissions	100	10
New Horizontal Collector Installations	25	20
Horizontal Collector Decommissions	15	11
Vertical Well Replacements	Unlimited	Unlimited

Pursuant to the April 20, 2020, LFG Well Startup Notification the GCCS consisted of 132 vertical LFG collection wells, 3 horizontal collectors, and 1 leachate cleanout riser system (LCRS). With the decommissioning of one vertical LFG Well 683 as indicated in this Well Decommissioning Notification Letter, there are currently 131 vertical LFG collection wells, 3 horizontal collectors, and 1 LCRS connected to the GCCS at the ALRRF.

If you have any questions, please do not hesitate to contact me at (510) 875-9338.

Sincerely,

Rajan Phadnis
Environmental Protection Specialist
Waste Management of Alameda County, Inc.

CC: Mr. William Louis (ALRRF)
Mr. Mark McKeever (ALRRF)

Altamont Landfill and Resource Recovery Facility
Kirby Canyon Recycling and Disposal Facility
Guadalupe Recycling and Disposal Facility
Tri-Cities Recycling and Disposal Facility
Redwood Landfill, Inc

(Submitted via email: Compliance@baaqmd.gov and r9.aeo@epa.gov)

April 27, 2020

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

Director of the Air Division
USEPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105
Attn: TRI & Air Section/Air-3

SUBJECT: Notification of Submittal of Title V Semi-Annual and Annual Compliance Reports via Email for Title V Facilities in the Bay Area, California

Guadalupe Recycling & Disposal Facility, Facility Number A3294
Kirby Canyon Recycling & Disposal Facility, Facility Number A1812
Altamont Landfill and Resource Recovery Facility, Facility Number A2066.
Redwood Landfill, Inc., Facility Number A1179
Tri-Cities Recycling and Disposal Facility, Facility Number A2246

Dear Sir or Madam:

Waste Management (WM) with the landfill sites at Guadalupe Recycling & Disposal Facility (GRDF); Kirby Canyon Recycling & Disposal Facility (KCRDF); Altamont Landfill and Resource Recovery Facility (ALRRF); Redwood Landfill, Inc. (RLI); and Tri-Cities Recycling and Disposal Facility (TCRDF), is in the process of submitting the Combined Title V Semi-Annual and Partial 8-34 Annual Reports for the periods of October 1, 2019 through March 31, 2020; November 1, 2019 through April 30, 2020; and December 1, 2019 through May 31, 2020, pursuant to the requirements of the GRDF Title V Permit listed in Title V Permit Condition Number 6188 Part 22 and Standard Condition I.F.; pursuant to the requirements of the ALRRF Title V Permit listed in Condition Number 19235, Part 23 and Standard Condition I.F. pursuant to the requirements of the KCRDF Title V Permit listed in Condition Number 1437 Part 16 and Standard Condition I.F.; pursuant to the requirements of the RLI Title V Permit Condition Number 19867 Part 32 and Standard Condition I.F.; and pursuant to the requirements of the TCRDF Title V Permit Condition Number 8366, Part 19 and Standard Condition I.F.

Due to the COVID-19 pandemic shelter-in-place order for Bay Area counties, and as a safety precaution for its staff, WM (GRDF, KCRDF, ALRRF, RLI, and TCRDF) would like to submit e-copies of the Title V reports instead of sending hard copies (some reports are typically 500+

pages). WM will submit the Title V compliance reports to the Bay Area Air Quality Management District (BAAQMD) and Environmental Protection Agency Region ((EPA) via email attachments in PDF format in place of postal mail. WM will limit the file sizes and split the reports in multiple emails as needed.

Based on information in the ALRRF Title V facility permit, WM proposes to submit the Title V reports for the listed facilities to BAAQMD as PDF attachments to the email: compliance@baaqmd.gov and to the EPA to the email: r9.aeo@epa.gov.

WM (GRDC, KCRDF, ALRRF, RLI, and TCRDF) deems submittal of the Title V reports via email satisfies the requirements of the Title V Permit.

Sincerely,
Waste Management

Tianna Nourot
Area Sr. Environmental Protection Manager
Northern California-Nevada

CC: Mr. Enrique Perez, GRDC and KCRDF District Manager
Mr. Marcus Nettz, ALRRF District Manager
Mr. Ramin Khany, RLI District Manager
Mr. Patrick Madej, TCRDF District Manager
Ms. Tamiko Endow, Permit Division, BAAQMD
Ms. Loi Chau, Permit Division, BAAQMD
Ms. Simrun Dhoot, Permit Division, BAAQMD
Mr. Ryan Atterbury, Permit Division, BAAQMD

Environmental Consultants
and Contractors

3117 Fite Circle
Suite 108
Sacramento, CA 95827

916 361-1297
FAX 916 361-1299
www.scsengineers.com

SCS ENGINEERS

June 19, 2020
Project No. 01201101.02, Task 60

Loi Chau
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

SUBJECT: 2020 ANNUAL REASSESSMENT OF FUGITIVE POC EMISSIONS; ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY (FACILITY A2066)

Dear Ms. Chau,

On behalf of Waste Management of Alameda County, Inc. (WMAC), SCS Engineers (SCS) has prepared this letter to the Bay Area Air Quality Management District (BAAQMD or District) to present information associated with current and projected fugitive emissions of precursor organic compounds (POCs) from the Altamont Landfill and Resource Recovery Facility (ALRRF). This report has been prepared pursuant to requirements specified in Condition #19235 of ALRRF's Major Facility Review Permit (Permit Condition), which calls for reassessing fugitive POC emissions on an annual basis (Condition Part 17.b). A copy of the excerpt of Condition #19235 applicable to this letter is attached.

This requirement was triggered by the commencement of waste placement in Fill Area 2 (FA2) in March 2019. Condition Part 17.b specifies that the first reassessment is due the first July 1st after FA2 waste placement commences. As such, an initial POC reassessment report was submitted in June 2019. This report represents the second annual POC reassessment performed for ALRRF. The Permit Condition specifies that the reassessment shall be submitted to the District Engineering Division to the attention of the permit engineer assigned to ALRRF.

As specified in the Permit Condition, a LandGEM model (LandGEM), updated with actual annual decomposable material tonnage data through 2019, was run using the inputs and assumptions indicated in the Permit Condition. The resulting annual non-methane organic compound (NMOC) generation values from the LandGEM were then used to calculate annual fugitive POC emissions, based on the methodology and assumptions specified in the Permit Condition. The LandGEM Summary Report is attached.

The LandGEM input for the NMOC concentration in the ALRRF landfill gas (LFG) was determined, as specified in the Permit Condition, by calculating a 3-year average concentration based on compilation of all available ALRRF NMOC test data obtained over the past three calendar years (2017 through 2019). These NMOC data were obtained as part of the required annual source testing of the various LFG combustion devices operating at ALRRF, as well as

from samples collected from two header locations, one adjacent to the turbine plant (S-6 and S-7) and the second adjacent to flare A-16.

The tested devices include two LFG flares, and two LFG-fired turbines. Use of two LFG-fired engines (S-23 and S-24) was discontinued in 2017, so no NMOC data was obtained from that testing in 2018 or 2019. The testing and sampling data were compiled on a quarterly basis over the 3-year period to obtain an average NMOC concentration of 1,262 parts per million by volume expressed as hexane (ppmv–C6) (See attached Data Summary Table).

Note that, historically, annual testing of all the ALRRF LFG-combustion devices has been conducted only during the first and second quarters (Q1 and Q2). The header sampling was conducted during 2019 in the third and fourth quarters, so that data from all four quarters is included in the 3-year NMOC averaging. In subsequent years, header sampling will continue to be conducted during the appropriate quarters to ensure all four quarters continue to be represented in the 3-year averaging.

Note also that all LFG sampled thus far, including for all NMOC results presented in this report, is from FA1. ALRRF is in the process of installing a gas collection system in FA2, which is expected to commence operation during the third quarter of 2020.

Reassessments Results

The annual NMOC generation rates derived from the LandGEM are presented in attached Table 1, along with the annual POC fugitive emissions calculated from the NMOC values. As specified in the Permit Condition, the calculations assume 25% of the generated NMOC is emitted from the landfill surface, and 98% of the NMOC is POCs. The NMOC and POC values from 2020 through the peak emission year (determined by the LandGEM to be 2043) are shown in Table 1. Peak POC fugitive emissions in 2043 are projected to be 236 tons per year (tpy).

The Permit Condition specifies that this reassessed peak fugitive POC emissions rate be compared to the peak rate shown on the table in Condition Part 17.a.v; which is 112 tpy, rounded to the nearest ton. The Permit Condition further specifies that if the reassessed POC value is projected to exceed the value in the table, the Permit Holder must submit a permit application to request an increase of this limit by no later than October 1st of the year of the POC reassessment; in this case, October 1, 2020. Note that incremental and peak-year fugitive POC limits from the Condition Part 17.a.v table have been added to Table 1.

Discussion

ALRRF previously submitted an application for a change of condition. This application was submitted on June 18, 2017, and proposed to revise the FA1 baseline POC emissions and to set a new peak year POC limit, as well as to establish a revised schedule for providing emission reduction credits associated with fugitive POCs. Proposed incremental and peak-year fugitive POC limits from the application have been added to Table 1. The new peak POC limit proposed in this application was 183 tpy, rounded to the nearest ton. This application is still under District

review; however, it is ALRRF's understanding that the application satisfied the requirement to submit an application to increase the peak POC limit for 2019. A new or updated application (if the District has not acted on the existing) will be prepared and submitted by October 1, 2020 to address POC emissions included in this submittal. The FA1 baseline POC emissions, revised in the 2017 application, will be further revised to reflect the upward trending average NMOC concentration documented since 2017. The application (or addendum to the 2017 application) will include a request to incorporate the revised FA1 baseline as well as to establish a higher fugitive POC emission limit and a revised POC ERC schedule, which will include a higher assumed NMOC concentration.

Closing

We trust that this letter includes all of the information required to satisfy the requirements in ALRRF's permit associated with annual fugitive POC emissions reassessment, triggered by commencement of waste placement in FA2 in March 2019.

Please contact the undersigned at (707) 236-3791 or at moconnor@scsengineers.com if you have any questions or require any additional information

Sincerely,

Michael O'Connor, CAPP
Project Manager
SCS ENGINEERS

CC: Raj Phadnis, Waste Management

Tables: Table 1 – LandGEM NMOC Results and Calculated Fugitive POC Emissions
Table 2 – NMOC Test Data and Determination of 3-yr Average

Attachments:

ALRRF Permit Condition #19235 excerpt (Subparts 14 through 17)
LandGEM Summary Report
Application for a Change of Condition to Re-permit Fill Area No. 2 (June 18, 2017)

TABLES

TABLE 1. LANDGEM NMOC RESULTS AND CALCULATED FUGITIVE POC EMISSIONS
ALRRF 2020 FUGITIVE POC EMISSIONS REASSESSMENT - FUGITIVE POC

2020 POC Re-Assessment

	LandGEM	Calculated	From Cond 17.v Table		From FA2 COC App (6/18/17)	
Year	NMOC Generation (tpy)	Fugitive POC (tpy)	ERC Due Date	Fugitive POC Limit (tpy)	ERC Due Date	Fugitive POC Limit (tpy)
					Revised FA1 Baseline	142.94
			Prior to FA2 Fill	73.654	Prior to FA2 Fill	152.605
2019	568	139	1/2/2019	84.54		
2020	572	140				
2021	587	144	1/2/2021	87.884		
2022	601	147				
2023	616	151	1/2/2023	91.098		
2024	630	154				
2025	643	158	1/2/2025	94.185		
2026	657	161				
2027	670	164	1/2/2027	97.152		
2028	683	167				
2029	696	170	1/2/2029	100.002	1/1/2029	167.71
2030	708	174				
2031	721	177	1/2/2031	102.74		
2032	732	179				
2033	744	182	1/2/2033	105.371		
2034	756	185				
2035	767	188	1/2/2035	107.899	1/1/1935	**182.704**
2036	778	191				
2037	789	193	1/2/2037	**111.506**		
2038	800	196				
2039	810	198				
2040	820	201				
2041	830	203				
2042	840	206				
2043	847	**207**				
Peak Year		**207.413**		**111.506**		**182.704**

Table 2. Landfill Gas Header - Lab Data Summary for 2017, 2018, & 2019										
Sample Date	**Description**	**Methane Gas [%Vol]**	**Oxygen Gas [%Vol]**	**Carbon Dioxide Gas [%Vol]**	**Nitrogen Gas [%Vol]**	**$NMOC_1$ (ppm)**	**$NMOC_1$ (ppm) Corrected to 50%**	**Quarterly Average $NMOC_1$, (ppm) Corrected**	**Quarterly Average $NMOC_6$, (ppm) Corrected**	**Comments**
2/2/2017	2017 Source Test S7	49.8	0.9	38.7	7.7	8,686	8,721			
2/2/2017	2017 Source Test S7	50.2	0.9	38.8	7.8	8,422	8,388			
2/2/2017	2017 Source Test S7	50.3	0.9	39.0	7.7	8,020	7,972			
2/2/2017	2017 Source Test S6	50.2	0.9	38.9	7.8	11,900	11,853			
2/2/2017	2017 Source Test S6	50.1	1.1	38.5	8.3	7,401	7,386			
2/2/2017	2017 Source Test S6	50.4	1.0	39.0	7.8	9,198	9,125			
3/16/2017	2017 Source Test A15	50.5	1.6	36.6	11.5	8,905	8,817			
3/16/2017	2017 Source Test A15	50.4	1.7	36.2	11.7	10,080	10,000			
3/16/2017	2017 Source Test A15	50.6	1.8	35.6	11.6	10,639	10,513	9,197	1,533	
5/4/2017	2017 Source Test A16	52.4	1.6	35.9	10.3	3,785	3,612			were
5/4/2017	2017 Source Test A16	52.5	1.6	35.6	10.3	4,750	4,524			normalized to 1.72% Oxygen
5/4/2017	2017 Source Test A16	52.1	1.6	35.1	10.3	3,777	3,625			were
5/4/2017	2017 Source Test A16	51.2	1.6	34.8	10.3	4,306	4,205			normalized to 1.72% Oxygen
5/4/2017	2017 Source Test A16	52	1.6	35.3	10.3	3,964	3,812			were
5/4/2017	2017 Source Test A16	50.9	1.7	34.3	10.3	2,330	2,289	3,678	613	normalized to 1.72% Oxygen
1/24/2018	2018 Source Test S7	50.2	1.6	36.4	11.1	6,579	6,553			
1/24/2018	2018 Source Test S7	49.9	1.8	36.2	11.5	6,454	6,467			
1/24/2018	2018 Source Test S7	50.1	1.7	36.3	11.2	6,347	6,334			
1/24/2018	2018 Source Test S6	48.7	2.2	35.3	13.1	6,608	6,784			
1/24/2018	2018 Source Test S6	47.5	2.7	34.4	14.7	6,394	6,731			
1/24/2018	2018 Source Test S6	50.3	1.6	36.4	11.0	6,713	6,673	6,590	1,098	
4/26/2018	2018 Source Test A16	51.7	1.0	37.0	7.3	7,231	6,993			
4/26/2018	2018 Source Test A16	52.3	1.0	37.2	7.5	8,329	7,963			
4/26/2018	2018 Source Test A16	52.6	0.7	37.2	6.5	7,670	7,291			
4/26/2018	2018 Source Test A16	52.0	0.8	36.3	7.5	7,522	7,233			
4/26/2018	2018 Source Test A16	52.6	0.7	36.3	6.5	8,403	7,988			
4/26/2018	2018 Source Test A16	52.7	0.7	36.2	6.6	8,317	7,891	7,560	1,260	
1/6/2019	2019 Source Test S6	51.6	0.9	37.5	9.9	7,956	7,709			
1/6/2019	2019 Source Test S6	40.4	5.3	29.0	25.2	6,349	7,858			
1/6/2019	2019 Source Test S6	43.7	4.0	31.5	20.7	6,596	7,547			
1/6/2019	2019 Source Test S7	26.0	11.0	18.4	44.5	4,460	8,577			
1/6/2019	2019 Source Test S7	29.0	9.9	20.7	40.4	5,318	9,169			
1/6/2019	2019 Source Test S7	28.7	10.0	20.6	40.7	5,064	8,822	8,280	1,380	
4/3/2019	2019 Source Test A16	50.5	1.8	35.7	11.9	7,602	7,527			
4/3/2019	2019 Source Test A16	50.3	1.9	35.5	12.2	7,517	7,472			
4/3/2019	2019 Source Test A16	51.4	1.5	36.0	11.0	7,581	7,375			
4/3/2019	2019 Source Test A16	50.7	1.7	35.8	11.7	6,165	6,080			
4/3/2019	2019 Source Test A16	50.8	1.7	35.7	11.6	7,170	7,057			
4/3/2019	2019 Source Test A16	50.7	1.8	35.5	11.9	6,701	6,608	7,020	1,170	
9/6/2019	Inlet Sample S6/S7 3Q2019	49.6	1.1	36.8	12.3	13,189	13,295			
9/6/2019	Inlet Sample S6/S7 3Q2019	49.7	1.1	36.7	12.3	13,175	13,255			
9/6/2019	Inlet Sample A16 3Q2019	49.4	1.5	34.2	14.8	6,346	6,423			
9/6/2019	Inlet Sample A16 3Q2019	49.7	1.4	34.5	14.3	6,013	6,049	9,756	1,626	
11/11/2019	Inlet Sample S6/S7 4Q2019	47.6	1.9	34.6	15.8	8,770	9,212			
11/11/2019	Inlet Sample S6/S7 4Q2019	46.3	2.2	34.7	16.7	10,447	11,282			
11/11/2019	Inlet Sample A16 4Q2019	46.8	2.0	31.9	19.2	6,592	7,043			
11/11/2019	Inlet Sample A16 4Q2019	47.5	1.8	31.6	19.0	6,142	6,465	8,501	1,417	
				Three Year Rolling Average						
				$NMOC_1$= 7,573						
				$NMOC_6$= 1,262						

ALRRF Permit Condition #19235 excerpt
(Subparts 14 through 17)

Plant# 2066

*** PERMIT CONDITIONS ***

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Toluene
Trichloroethylene
vinyl chloride
xylenes

b. The Permit Holder shall demonstrate compliance with the landfill gas NMOC concentration limit in part 17a by measuring the NMOC concentration in landfill gas collected from the S-2 Altamont Landfill at least twice during each calendar year. One of the two required annual tests shall be conducted concurrent with subpart a above. For each consecutive three-year period, the sample collection dates for the second annual sample shall be varied to ensure that at least one sample is collected during each quarter of a year (one sample shall be collected during January-March, one during April-June, one during July-September, and one during October-December). Analytical results from District approved source tests that were conducted for other purposes may be used to satisfy the requirements of this part provided the sample was tested for both total NMOC concentration and methane concentration using APCO approved test methods. The measured NMOC concentration shall be corrected to 50% methane using the following equation:

corrected NMOC concentration = 0.5 * measured NMOC concentration / measured methane concentration.

For each landfill gas NMOC concentration test, the Permit Holder shall maintain records of the sample date, the measured NMOC concentration, the measured methane concentration, and the corrected NMOC concentration. The Permit Holder shall determine and record the average of the corrected NMOC concentration for each calendar quarter (if multiple tests are available for any one particular quarter) and the rolling three-year average of these quarterly average NMOC concentrations. All records shall be maintained on site or shall be made readily available to District staff upon request for at least 5 years from the date

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE
FEB 1, 2020

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of entry.

15. In order to demonstrate compliance with the above conditions, the Permit Holder shall maintain the following records in a District approved logbook. All records shall be maintained on site or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These record keeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations.
(Basis: Offsets, Cumulative Increase, 2-6- 501, 8-34-301, and 8-34-501)
    a. For the Landfill Gas Flares (A-15 and A-16), record the date and time for each start-up and shut-down of a flare and the reason for each shut-down.
    b. Summarize the operating hours for each Landfill Gas Flare (A-15 and A- 16), on a daily basis.
    c. Calculate and record, on a monthly basis, the maximum daily and total monthly heat input to each Landfill Gas Flare (A-15 and A-16) based on operating hours for each flare, the landfill gas flow rate recorded pursuant to Part 6, the average methane concentration in the landfill gas as determined by the most recent source test, and a high heating value for methane of 997.7 BTU/ft3 of landfill gas at 68 degrees F and 1 atmosphere.
    d. Record the total amount of condensate (gallons per day) injected into each Landfill Gas Flare for each day that condensate is injected into a flare, and summarize these records on a monthly basis.
    e. Maintain records of all test dates and test results performed to maintain compliance with Parts 12 and 13 or with any applicable rule or regulation.

16. DELETED

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE
FEB 1, 2020

Plant# 2066

*** PERMIT CONDITIONS ***

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17. This part becomes effective upon the date of the District's approval of a Change of Conditions for the Fill Area 2 Expansion of the S-2 Altamont Landfill. In order to assure compliance with District offsetting requirements for precursor organic compound (POC) emission increases at the S-2 Altamont Landfill, the Permit Holder shall submit the required amount of District approved POC emission reduction credits (ERC) in accordance with the schedule identified in Part 17a and shall comply with all associated limits, monitoring, record keeping, and reporting requirements in Parts 17a. The fugitive POC emissions, the associated amount of ERC credits due, and other related limits shall be reviewed and, if necessary, modified, in accordance with the procedures specified in Part 17b. (Basis: Regulation 2-2-302)

a. The Permit Holder shall comply with all requirements and limits identified in the table below, unless the Permit Holder has submitted, in accordance with the provisions of Part 17b, a permit application to request a modification of a specific ERC amount or due date or a specific limit. This permit application submittal will temporarily suspend the specific ERC requirement or limit from the date of the application submittal until the District makes a final decision on the change request. The permit application submittal does not suspend any monitoring, record keeping, or reporting requirements in this subpart.

i) By no later than the due date specified in column 1 of the table, the Permit Holder shall surrender the total amount of POC ERCs indicated in column 2 of the table. These ERCs shall be in the form of District approved banking certificates for POC emission reduction credits. The banking certificate submittal shall be addressed to the attention of the Director of the Engineering Division,

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*** PERMIT CONDITIONS ***

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BAAQMD, 375 Beale Street, Suite 600, San Francisco, CA 94105.

ii) The limits identified in columns 3 through 6 of the table apply to the S-2 Altamont Landfill (Fill Areas 1 and 2 combined). These limits become effective upon the date identified in column 1 and remain in effect until the Permit Holder has surrendered the amount of ERCs required for the subsequent set of limits, unless the limit has been temporarily suspended as specified in Part 17a.

iii) The Permit Holder shall demonstrate compliance with the fugitive POC emission limits in column 3 of the table by complying with: the limits in columns 4, 5, and 6, the record keeping requirements in Part 22i, the monitoring requirements in Part 14b, and the fugitive POC emissions reassessment requirements of Part 17b.

iv) For the purposes of the decomposable material placement limits in columns 4 and 5, decomposable materials are as defined in Part 22i. The Permit Holder shall demonstrate compliance with the cumulative decomposable placement limit in column 4 using the record keeping and reporting procedures in Part 22. The annual decomposable material placement limit in column 5 applies to each calendar year. The Permit Holder shall demonstrate compliance with these limits using the record keeping and reporting procedures in Part 22. Prior to exceeding a cumulative or annual decomposable material placement limit, the Permit Holder shall either surrender the amount of ERCs required for the next subsequent set of limits or submit a permit application to request a change of conditions. Each permit application submittal shall include a reassessment of

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*** PERMIT CONDITIONS ***

the fugitive POC emissions conducted in accordance with Parts 17b(ii-iv).

v) The landfill gas NMOC concentration limit applies on a rolling three-year average basis. The Permit Holder shall demonstrate compliance with this limit using the monitoring and record keeping requirements in Part 14b. If testing indicates that the three-year average NMOC concentration in landfill gas collected from S-2 has or will exceed the limit in column 6, the Permit Holder shall submit a permit application to request an increase of this NMOC concentration limit, within 45 days of recording the exceedance. The permit application submittal shall include a reassessment of the fugitive POC emissions conducted in accordance with Parts 17b(ii-iv).

ERC Due Date & Effective Date for New Limits	Amount of ERCs Due tons/yr of POC	Fugitive Emission Limit tons/yr of POC	Cumulatv Decomp. Material Placement Limit tons/yr	Annual Decomp. Material Placement Limit tons/yr	NMOC in LFG (3-yr) avg as C6 at 50% CH4 ppmv
*	11.114	73.654	48.337	1,630,000	600
1/2/15	4.349	77.436	51.557	1,610,000	600
1/2/17	4.167	81.059	54.777	1,610,000	600
1/2/19	4.003	84.540	57.997	1,610,000	600
1/2/21	3.846	87.884	61.217	1,610,000	600
1/2/23	3.695	91.098	64.437	1,610,000	600
1/2/25	3.551	94.185	67.657	1,610,000	600
1/2/27	3.411	97.152	70.877	1,610,000	600
1/2/29	3.278	100.002	74.097	1,610,000	600
1/2/31	3.149	102.740	77.317	1,610,000	600
1/2/33	3.026	105.371	80.537	1,610,000	600
1/2/35	2.907	107.899	83.757	1,610,000	600
1/2/37	4.148	111.506	88.000	1,610,000	600

* These limits and all subsequent limits are effective upon commencement of waste disposal

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in Fill Area 2.

b. The Permit Holder shall conduct a fugitive POC emissions reassessment for the S-2 Altamont Landfill in accordance with the schedule and procedures identified below.

i) A reassessment of the annual fugitive POC emission rate from the S-2 Altamont Landfill (Fill Areas 1 and 2 combined) shall be submitted to the District each year by no later than July 1st. The first reassessment is due the first July 1st after waste placement in Fill Area 2 commences. The reassessment shall be addressed to the attention of the District permit engineer assigned to this site, Engineering Division, BAAQMD, 375 Beale Street, Suite 600, San Francisco, CA 94105.

ii) The fugitive POC emissions reassessment shall use the EPA LANDGEM program to determine the projected amount of landfill gas (scfm) and NMOC (tons/year) that will be generated by S-2 (Fill Areas 1 and 2 combined) for each year from 1980 through at least 2080. The Permit Holder shall use the following LANDGEM User Input Data:

methane generation rate (k) = 0.02 year-1, potential methane generation capacity (L0) = 100 m3/Mg, methane content = 50%.

The Permit Holder shall use the best available data for the amount of decomposable materials placed in the landfill from 1980 through 2008. For calendar year 2009 and later, the Permit Holder shall use the annual decomposable material placement data recorded pursuant to Part 22. For the user-specified NMOC concentration in LANDGEM, the Permit Holder shall use the most recent three-year average NMOC concentration data

*** PERMIT CONDITIONS ***

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(ppmv of NMOC expressed as hexane and corrected to 50% methane) recorded pursuant to Part 14b.

iii) Each reassessment report shall include the fugitive POC emission rate determined for the current calendar year and for each subsequent year through the projected peak landfill gas generation year. Fugitive POC emissions shall be determined using the following equation:

POCfugitive = NMOCgenerated * 0.25 * 0.98

Where: POCfugitive is the projected amount of fugitive POC emissions (tons/year) for a particular calendar year NMOCgenerated is the projected amount of NMOC generated (tons/year) as determined by LANDGEM using the User-Input Data discussed above. 0.25 is the assumed fugitive emission fraction (75% captured and 25% fugitive) for the total NMOC generated 0.98 is the assumed POC fraction (by weight) of the total NMOC emission rate

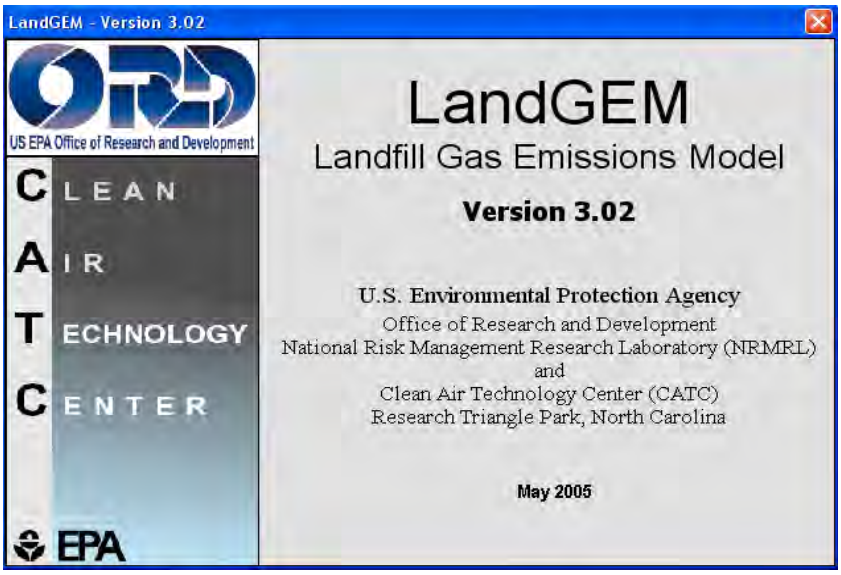
iv) The current and projected annual fugitive POC emission rates determined per Part 17b(iii) shall be compared to the fugitive POC emission limits in the table in Part 17a. If the projected peak fugitive POC emission rate for the landfill is less than the maximum POC emissions limit in the table, the Permit Holder may, at his or her discretion, request that the District modify the Part 17a table limits and ERC submittal requirements based on the updated fugitive POC emissions calculations. This condition change request shall be submitted in the form of a District permit application, and the District will handle the request as an administrative permit condition change. If the peak fugitive POC emissions for S-2 are

*** PERMIT CONDITIONS ***

projected to exceed the maximum fugitive POC emission limit of 111.506 tons/year, the Permit Holder must submit a permit application to request an increase of this limit by no later than October 1st of the year in which the fugitive POC emissions reassessment was due. In this latter case, the permit application cannot be handled administratively, but the District will review the circumstances leading to the need to increase the maximum fugitive POC emissions for the landfill to determine if the change constitutes an alteration or a modification of S-2.

18. The Permit Holder shall comply with the following waste acceptance and disposal limits and shall obtain the appropriate New Source Review permit, if one of the following limits is exceeded:
    a. Total waste accepted and placed at the landfill shall not exceed 11,150 tons in any day (except during temporary emergency situations approved by the Local Enforcement Agency).
    (Basis: Regulation 2-1-301)
    b. The amount of non-hazardous sludge accepted and placed at the landfill shall not exceed 5,000 tons in any day.
    (Basis: Regulation 2-1-301)
    c. The maximum design capacity of the landfill (total volume of solid waste placed in the landfill where solid waste has the same meaning as the definition in 40 CFR Part 60.751) shall not exceed 124,400,000 cubic yards.
    (Basis: Regulation 2-1-301)
    d. The total cumulative amount of all decomposable materials placed in Fill Area 1 of the landfill shall not exceed 51,020,000 tons. Exceedance of the cumulative tonnage limit is not a violation of the permit and does not trigger the requirement to obtain a

LandGEM Summary Report



Summary Report

Landfill Name or Identifier: ALRRF Combined FA1 and FA2, Closure in 2042

Date: Friday, June 19, 2020

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,

Q_{CH4} = annual methane generation in the year of the calculation ($m^3/year$)

i = 1-year time increment

n = (year of the calculation) - (initial year of waste acceptance)

j = 0.1-year time increment

k = methane generation rate ($year^{-1}$)

L_o = potential methane generation capacity (m^3/Mg)

M_i = mass of waste accepted in the i^{th} year (Mg)

t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (*decimal years*, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landflpg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year	**1980**	
Landfill Closure Year (with 80-year limit)	**2042**	
Actual Closure Year (without limit)	***2042***	
Have Model Calculate Closure Year?	**Yes**	
Waste Design Capacity	**88,000,000**	*short tons*

MODEL PARAMETERS

Methane Generation Rate, k	**0.020**	*year $^{-1}$*
Potential Methane Generation Capacity, L_o	**100**	*m^3/Mg*
NMOC Concentration	**1,262**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1980	45,000	49,500	0	0
1981	558,727	614,600	45,000	49,500
1982	621,273	683,400	603,727	664,100
1983	734,000	807,400	1,225,000	1,347,500
1984	1,229,091	1,352,000	1,959,000	2,154,900
1985	1,286,364	1,415,000	3,188,091	3,506,900
1986	1,379,091	1,517,000	4,474,455	4,921,900
1987	1,446,364	1,591,000	5,853,545	6,438,900
1988	1,440,909	1,585,000	7,299,909	8,029,900
1989	1,551,818	1,707,000	8,740,818	9,614,900
1990	1,782,727	1,961,000	10,292,636	11,321,900
1991	1,860,388	2,046,427	12,075,364	13,282,900
1992	1,301,501	1,431,651	13,935,752	15,329,327
1993	1,387,627	1,526,390	15,237,253	16,760,978
1994	1,365,639	1,502,203	16,624,880	18,287,368
1995	1,421,351	1,563,486	17,990,519	19,789,571
1996	1,339,079	1,472,987	19,411,870	21,353,057
1997	1,372,387	1,509,626	20,750,949	22,826,044
1998	1,395,035	1,534,539	22,123,336	24,335,670
1999	1,330,907	1,463,998	23,518,372	25,870,209
2000	1,369,725	1,506,697	24,849,279	27,334,207
2001	1,367,823	1,504,605	26,219,004	28,840,904
2002	1,286,251	1,414,876	27,586,826	30,345,509
2003	1,278,851	1,406,736	28,873,077	31,760,385
2004	1,274,609	1,402,070	30,151,928	33,167,121
2005	1,219,471	1,341,418	31,426,537	34,569,191
2006	1,215,687	1,337,256	32,646,008	35,910,609
2007	1,203,513	1,323,864	33,861,695	37,247,865
2008	1,116,710	1,228,381	35,065,208	38,571,729
2009	978,655	1,076,520	36,181,918	39,800,110
2010	984,745	1,083,219	37,160,573	40,876,630
2011	1,029,486	1,132,435	38,145,317	41,959,849
2012	1,061,502	1,167,652	39,174,804	43,092,284
2013	1,066,515	1,173,166	40,236,305	44,259,936
2014	1,061,600	1,167,760	41,302,820	45,433,102
2015	1,007,253	1,107,978	42,364,420	46,600,862
2016	699,046	768,951	43,371,673	47,708,840
2017	780,224	858,246	44,070,719	48,477,791
2018	816,819	898,501	44,850,943	49,336,037
2019	836,272	919,899	45,667,762	50,234,538

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2020	1,463,636	1,610,000	46,504,034	51,154,437
2021	1,463,636	1,610,000	47,967,670	52,764,437
2022	1,463,636	1,610,000	49,431,307	54,374,437
2023	1,463,636	1,610,000	50,894,943	55,984,437
2024	1,463,636	1,610,000	52,358,579	57,594,437
2025	1,463,636	1,610,000	53,822,216	59,204,437
2026	1,463,636	1,610,000	55,285,852	60,814,437
2027	1,463,636	1,610,000	56,749,488	62,424,437
2028	1,463,636	1,610,000	58,213,125	64,034,437
2029	1,463,636	1,610,000	59,676,761	65,644,437
2030	1,463,636	1,610,000	61,140,398	67,254,437
2031	1,463,636	1,610,000	62,604,034	68,864,437
2032	1,463,636	1,610,000	64,067,670	70,474,437
2033	1,463,636	1,610,000	65,531,307	72,084,437
2034	1,463,636	1,610,000	66,994,943	73,694,437
2035	1,463,636	1,610,000	68,458,579	75,304,437
2036	1,463,636	1,610,000	69,922,216	76,914,437
2037	1,463,636	1,610,000	71,385,852	78,524,437
2038	1,463,636	1,610,000	72,849,488	80,134,437
2039	1,463,636	1,610,000	74,313,125	81,744,437
2040	1,463,636	1,610,000	75,776,761	83,354,437
2041	1,463,636	1,610,000	77,240,398	84,964,437
2042	1,295,966	1,425,563	78,704,034	86,574,437
2043	0	0	80,000,000	88,000,000
2044	0	0	80,000,000	88,000,000
2045	0	0	80,000,000	88,000,000
2046	0	0	80,000,000	88,000,000
2047	0	0	80,000,000	88,000,000
2048	0	0	80,000,000	88,000,000
2049	0	0	80,000,000	88,000,000
2050	0	0	80,000,000	88,000,000
2051	0	0	80,000,000	88,000,000
2052	0	0	80,000,000	88,000,000
2053	0	0	80,000,000	88,000,000
2054	0	0	80,000,000	88,000,000
2055	0	0	80,000,000	88,000,000
2056	0	0	80,000,000	88,000,000
2057	0	0	80,000,000	88,000,000
2058	0	0	80,000,000	88,000,000
2059	0	0	80,000,000	88,000,000

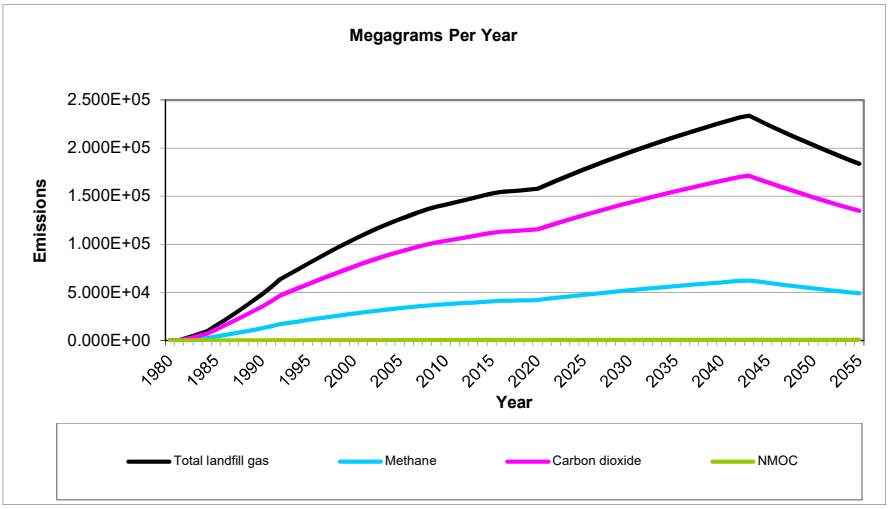
Pollutant Parameters

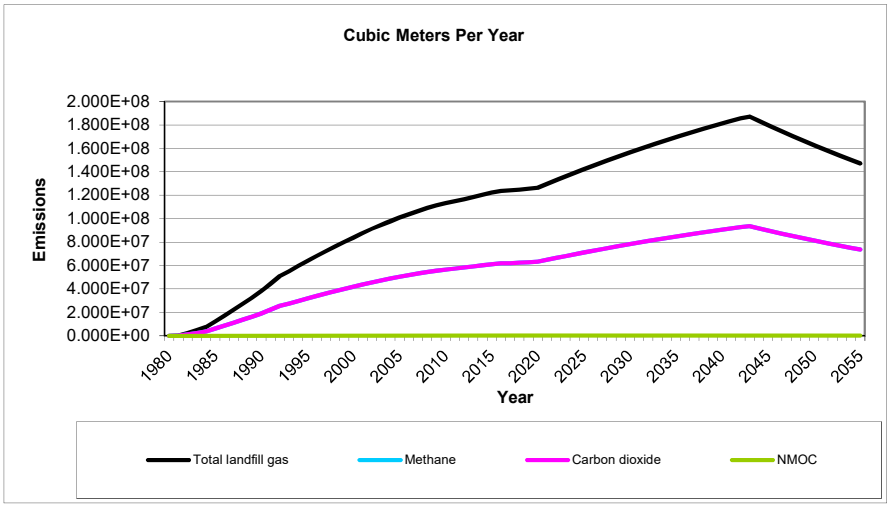
		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Gases	Total landfill gas		0.00		
	Methane		16.04		
	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
Pollutants	1,1,1-Trichloroethane (methyl chloroform) - HAP	0.48	133.41		
	1,1,2,2-Tetrachloroethane - HAP/VOC	1.1	167.85		
	1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	2.4	98.97		
	1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.20	96.94		
	1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	0.41	98.96		
	1,2-Dichloropropane (propylene dichloride) - HAP/VOC	0.18	112.99		
	2-Propanol (isopropyl alcohol) - VOC	50	60.11		
	Acetone	7.0	58.08		
	Acrylonitrile - HAP/VOC	6.3	53.06		
	Benzene - No or Unknown Co-disposal - HAP/VOC	1.9	78.11		
	Benzene - Co-disposal - HAP/VOC	11	78.11		
	Bromodichloromethane - VOC	3.1	163.83		
	Butane - VOC	5.0	58.12		
	Carbon disulfide - HAP/VOC	0.58	76.13		
	Carbon monoxide	140	28.01		
	Carbon tetrachloride - HAP/VOC	4.0E-03	153.84		
	Carbonyl sulfide - HAP/VOC	0.49	60.07		
	Chlorobenzene - HAP/VOC	0.25	112.56		
	Chlorodifluoromethane	1.3	86.47		
	Chloroethane (ethyl chloride) - HAP/VOC	1.3	64.52		
	Chloroform - HAP/VOC	0.03	119.39		
	Chloromethane - VOC	1.2	50.49		
	Dichlorobenzene - (HAP for para isomer/VOC)	0.21	147		
	Dichlorodifluoromethane	16	120.91		
	Dichlorofluoromethane - VOC	2.6	102.92		
	Dichloromethane (methylene chloride) - HAP	14	84.94		
	Dimethyl sulfide (methyl sulfide) - VOC	7.8	62.13		
	Ethane	890	30.07		
	Ethanol - VOC	27	46.08		

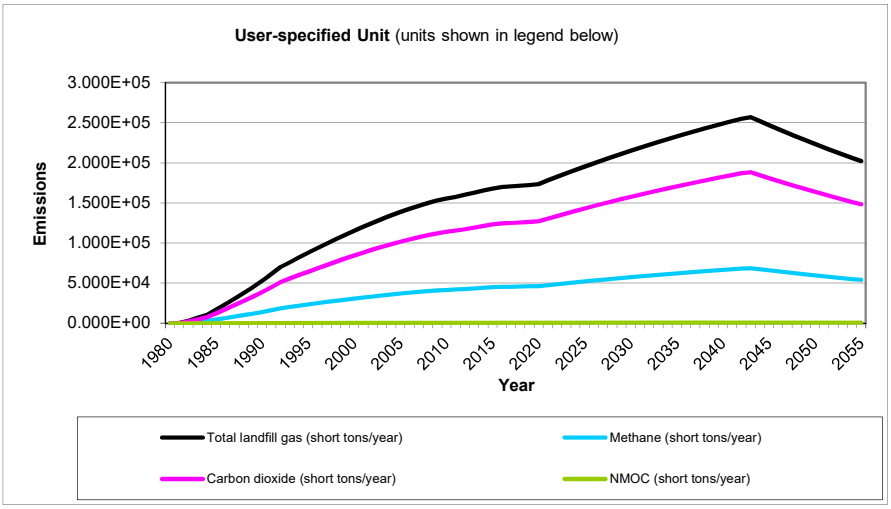
Pollutant Parameters (Continued)

		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Pollutants	Ethyl mercaptan (ethanethiol) - VOC	2.3	62.13		
	Ethylbenzene - HAP/VOC	4.6	106.16		
	Ethylene dibromide - HAP/VOC	1.0E-03	187.88		
	Fluorotrichloromethane - VOC	0.76	137.38		
	Hexane - HAP/VOC	6.6	86.18		
	Hydrogen sulfide	36	34.08		
	Mercury (total) - HAP	2.9E-04	200.61		
	Methyl ethyl ketone - HAP/VOC	7.1	72.11		
	Methyl isobutyl ketone - HAP/VOC	1.9	100.16		
	Methyl mercaptan - VOC	2.5	48.11		
	Pentane - VOC	3.3	72.15		
	Perchloroethylene (tetrachloroethylene) - HAP	3.7	165.83		
	Propane - VOC	11	44.09		
	t-1,2-Dichloroethene - VOC	2.8	96.94		
	Toluene - No or Unknown Co-disposal - HAP/VOC	39	92.13		
	Toluene - Co-disposal - HAP/VOC	170	92.13		
	Trichloroethylene (trichloroethene) - HAP/VOC	2.8	131.40		
	Vinyl chloride - HAP/VOC	7.3	62.50		
	Xylenes - HAP/VOC	12	106.16		

Graphs


Megagrams Per Year
Emissions
2.500E+05
2.000E+05
1.500E+05
1.000E+05
5.000E+04
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
2.000E+08
1.800E+08
1.600E+08
1.400E+08
1.200E+08
1.000E+08
8.000E+07
6.000E+07
4.000E+07
2.000E+07
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
3.000E+05
2.500E+05
2.000E+05
1.500E+05
1.000E+05
5.000E+04
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas (short tons/year)
Methane (short tons/year)
Carbon dioxide (short tons/year)
NMOC (short tons/year)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1980	0	0	0	0	0	0
1981	2.228E+02	1.784E+05	2.451E+02	5.951E+01	8.920E+04	6.546E+01
1982	2.984E+03	2.390E+06	3.283E+03	7.972E+02	1.195E+06	8.769E+02
1983	6.001E+03	4.805E+06	6.601E+03	1.603E+03	2.403E+06	1.763E+03
1984	9.516E+03	7.620E+06	1.047E+04	2.542E+03	3.810E+06	2.796E+03
1985	1.541E+04	1.234E+07	1.695E+04	4.117E+03	6.171E+06	4.528E+03
1986	2.148E+04	1.720E+07	2.362E+04	5.736E+03	8.598E+06	6.310E+03
1987	2.788E+04	2.232E+07	3.067E+04	7.446E+03	1.116E+07	8.191E+03
1988	3.449E+04	2.761E+07	3.793E+04	9.212E+03	1.381E+07	1.013E+04
1989	4.094E+04	3.278E+07	4.503E+04	1.093E+04	1.639E+07	1.203E+04
1990	4.781E+04	3.828E+07	5.259E+04	1.277E+04	1.914E+07	1.405E+04
1991	5.569E+04	4.459E+07	6.126E+04	1.487E+04	2.230E+07	1.636E+04
1992	6.379E+04	5.108E+07	7.017E+04	1.704E+04	2.554E+07	1.874E+04
1993	6.897E+04	5.523E+07	7.587E+04	1.842E+04	2.762E+07	2.027E+04
1994	7.448E+04	5.964E+07	8.193E+04	1.989E+04	2.982E+07	2.188E+04
1995	7.976E+04	6.387E+07	8.774E+04	2.131E+04	3.194E+07	2.344E+04
1996	8.522E+04	6.824E+07	9.374E+04	2.276E+04	3.412E+07	2.504E+04
1997	9.016E+04	7.220E+07	9.918E+04	2.408E+04	3.610E+07	2.649E+04
1998	9.517E+04	7.621E+07	1.047E+05	2.542E+04	3.810E+07	2.796E+04
1999	1.002E+05	8.023E+07	1.102E+05	2.676E+04	4.012E+07	2.944E+04
2000	1.048E+05	8.392E+07	1.153E+05	2.799E+04	4.196E+07	3.079E+04
2001	1.095E+05	8.769E+07	1.205E+05	2.925E+04	4.384E+07	3.217E+04
2002	1.141E+05	9.137E+07	1.255E+05	3.048E+04	4.569E+07	3.353E+04
2003	1.182E+05	9.466E+07	1.300E+05	3.158E+04	4.733E+07	3.473E+04
2004	1.222E+05	9.786E+07	1.344E+05	3.264E+04	4.893E+07	3.591E+04
2005	1.261E+05	1.010E+08	1.387E+05	3.368E+04	5.049E+07	3.705E+04
2006	1.296E+05	1.038E+08	1.426E+05	3.463E+04	5.190E+07	3.809E+04
2007	1.331E+05	1.066E+08	1.464E+05	3.555E+04	5.329E+07	3.910E+04
2008	1.364E+05	1.092E+08	1.501E+05	3.644E+04	5.462E+07	4.008E+04
2009	1.392E+05	1.115E+08	1.532E+05	3.719E+04	5.575E+07	4.091E+04
2010	1.413E+05	1.132E+08	1.555E+05	3.775E+04	5.658E+07	4.152E+04
2011	1.434E+05	1.148E+08	1.577E+05	3.830E+04	5.742E+07	4.213E+04
2012	1.457E+05	1.166E+08	1.602E+05	3.891E+04	5.832E+07	4.280E+04
2013	1.480E+05	1.185E+08	1.628E+05	3.954E+04	5.927E+07	4.349E+04
2014	1.504E+05	1.204E+08	1.654E+05	4.017E+04	6.021E+07	4.418E+04
2015	1.527E+05	1.222E+08	1.679E+05	4.078E+04	6.112E+07	4.485E+04
2016	1.546E+05	1.238E+08	1.701E+05	4.130E+04	6.191E+07	4.543E+04
2017	1.550E+05	1.241E+08	1.705E+05	4.141E+04	6.207E+07	4.555E+04
2018	1.558E+05	1.248E+08	1.714E+05	4.162E+04	6.238E+07	4.578E+04
2019	1.568E+05	1.255E+08	1.724E+05	4.188E+04	6.277E+07	4.606E+04
2020	1.578E+05	1.264E+08	1.736E+05	4.215E+04	6.318E+07	4.637E+04
2021	1.619E+05	1.297E+08	1.781E+05	4.325E+04	6.483E+07	4.758E+04
2022	1.660E+05	1.329E+08	1.826E+05	4.433E+04	6.645E+07	4.876E+04
2023	1.699E+05	1.361E+08	1.869E+05	4.539E+04	6.803E+07	4.993E+04
2024	1.738E+05	1.392E+08	1.912E+05	4.643E+04	6.959E+07	5.107E+04
2025	1.776E+05	1.422E+08	1.954E+05	4.744E+04	7.111E+07	5.219E+04
2026	1.813E+05	1.452E+08	1.995E+05	4.844E+04	7.261E+07	5.328E+04
2027	1.850E+05	1.481E+08	2.035E+05	4.941E+04	7.407E+07	5.436E+04
2028	1.886E+05	1.510E+08	2.074E+05	5.037E+04	7.550E+07	5.541E+04
2029	1.921E+05	1.538E+08	2.113E+05	5.131E+04	7.691E+07	5.644E+04

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2030	1.955E+05	1.566E+08	2.151E+05	5.223E+04	7.829E+07	5.745E+04
2031	1.989E+05	1.593E+08	2.188E+05	5.313E+04	7.964E+07	5.844E+04
2032	2.022E+05	1.619E+08	2.224E+05	5.401E+04	8.096E+07	5.942E+04
2033	2.055E+05	1.645E+08	2.260E+05	5.488E+04	8.226E+07	6.037E+04
2034	2.086E+05	1.671E+08	2.295E+05	5.573E+04	8.353E+07	6.130E+04
2035	2.117E+05	1.696E+08	2.329E+05	5.656E+04	8.478E+07	6.222E+04
2036	2.148E+05	1.720E+08	2.363E+05	5.738E+04	8.600E+07	6.311E+04
2037	2.178E+05	1.744E+08	2.396E+05	5.818E+04	8.720E+07	6.399E+04
2038	2.207E+05	1.767E+08	2.428E+05	5.896E+04	8.837E+07	6.485E+04
2039	2.236E+05	1.791E+08	2.460E+05	5.973E+04	8.953E+07	6.570E+04
2040	2.264E+05	1.813E+08	2.491E+05	6.048E+04	9.065E+07	6.653E+04
2041	2.292E+05	1.835E+08	2.521E+05	6.122E+04	9.176E+07	6.734E+04
2042	2.319E+05	1.857E+08	2.551E+05	6.194E+04	9.284E+07	6.813E+04
2043	2.337E+05	1.871E+08	2.571E+05	6.243E+04	9.357E+07	6.867E+04
2044	2.291E+05	1.834E+08	2.520E+05	6.119E+04	9.172E+07	6.731E+04
2045	2.246E+05	1.798E+08	2.470E+05	5.998E+04	8.991E+07	6.598E+04
2046	2.201E+05	1.762E+08	2.421E+05	5.879E+04	8.812E+07	6.467E+04
2047	2.157E+05	1.728E+08	2.373E+05	5.763E+04	8.638E+07	6.339E+04
2048	2.115E+05	1.693E+08	2.326E+05	5.649E+04	8.467E+07	6.214E+04
2049	2.073E+05	1.660E+08	2.280E+05	5.537E+04	8.299E+07	6.091E+04
2050	2.032E+05	1.627E+08	2.235E+05	5.427E+04	8.135E+07	5.970E+04
2051	1.992E+05	1.595E+08	2.191E+05	5.320E+04	7.974E+07	5.852E+04
2052	1.952E+05	1.563E+08	2.147E+05	5.214E+04	7.816E+07	5.736E+04
2053	1.914E+05	1.532E+08	2.105E+05	5.111E+04	7.661E+07	5.622E+04
2054	1.876E+05	1.502E+08	2.063E+05	5.010E+04	7.510E+07	5.511E+04
2055	1.838E+05	1.472E+08	2.022E+05	4.911E+04	7.361E+07	5.402E+04
2056	1.802E+05	1.443E+08	1.982E+05	4.814E+04	7.215E+07	5.295E+04
2057	1.766E+05	1.414E+08	1.943E+05	4.718E+04	7.072E+07	5.190E+04
2058	1.731E+05	1.386E+08	1.905E+05	4.625E+04	6.932E+07	5.087E+04
2059	1.697E+05	1.359E+08	1.867E+05	4.533E+04	6.795E+07	4.987E+04
2060	1.664E+05	1.332E+08	1.830E+05	4.443E+04	6.660E+07	4.888E+04
2061	1.631E+05	1.306E+08	1.794E+05	4.355E+04	6.528E+07	4.791E+04
2062	1.598E+05	1.280E+08	1.758E+05	4.269E+04	6.399E+07	4.696E+04
2063	1.567E+05	1.254E+08	1.723E+05	4.185E+04	6.272E+07	4.603E+04
2064	1.536E+05	1.230E+08	1.689E+05	4.102E+04	6.148E+07	4.512E+04
2065	1.505E+05	1.205E+08	1.656E+05	4.021E+04	6.027E+07	4.423E+04
2066	1.475E+05	1.181E+08	1.623E+05	3.941E+04	5.907E+07	4.335E+04
2067	1.446E+05	1.158E+08	1.591E+05	3.863E+04	5.790E+07	4.249E+04
2068	1.418E+05	1.135E+08	1.559E+05	3.786E+04	5.676E+07	4.165E+04
2069	1.389E+05	1.113E+08	1.528E+05	3.711E+04	5.563E+07	4.083E+04
2070	1.362E+05	1.091E+08	1.498E+05	3.638E+04	5.453E+07	4.002E+04
2071	1.335E+05	1.069E+08	1.469E+05	3.566E+04	5.345E+07	3.923E+04
2072	1.309E+05	1.048E+08	1.439E+05	3.495E+04	5.239E+07	3.845E+04
2073	1.283E+05	1.027E+08	1.411E+05	3.426E+04	5.135E+07	3.769E+04
2074	1.257E+05	1.007E+08	1.383E+05	3.358E+04	5.034E+07	3.694E+04
2075	1.232E+05	9.868E+07	1.356E+05	3.292E+04	4.934E+07	3.621E+04
2076	1.208E+05	9.673E+07	1.329E+05	3.227E+04	4.836E+07	3.549E+04
2077	1.184E+05	9.481E+07	1.302E+05	3.163E+04	4.741E+07	3.479E+04
2078	1.161E+05	9.294E+07	1.277E+05	3.100E+04	4.647E+07	3.410E+04
2079	1.138E+05	9.110E+07	1.251E+05	3.039E+04	4.555E+07	3.343E+04
2080	1.115E+05	8.929E+07	1.227E+05	2.979E+04	4.465E+07	3.276E+04

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2081	1.093E+05	8.752E+07	1.202E+05	2.920E+04	4.376E+07	3.211E+04
2082	1.071E+05	8.579E+07	1.179E+05	2.862E+04	4.290E+07	3.148E+04
2083	1.050E+05	8.409E+07	1.155E+05	2.805E+04	4.205E+07	3.086E+04
2084	1.029E+05	8.243E+07	1.132E+05	2.750E+04	4.121E+07	3.024E+04
2085	1.009E+05	8.079E+07	1.110E+05	2.695E+04	4.040E+07	2.965E+04
2086	9.890E+04	7.919E+07	1.088E+05	2.642E+04	3.960E+07	2.906E+04
2087	9.694E+04	7.763E+07	1.066E+05	2.589E+04	3.881E+07	2.848E+04
2088	9.502E+04	7.609E+07	1.045E+05	2.538E+04	3.804E+07	2.792E+04
2089	9.314E+04	7.458E+07	1.025E+05	2.488E+04	3.729E+07	2.737E+04
2090	9.130E+04	7.311E+07	1.004E+05	2.439E+04	3.655E+07	2.682E+04
2091	8.949E+04	7.166E+07	9.844E+04	2.390E+04	3.583E+07	2.629E+04
2092	8.772E+04	7.024E+07	9.649E+04	2.343E+04	3.512E+07	2.577E+04
2093	8.598E+04	6.885E+07	9.458E+04	2.297E+04	3.442E+07	2.526E+04
2094	8.428E+04	6.748E+07	9.270E+04	2.251E+04	3.374E+07	2.476E+04
2095	8.261E+04	6.615E+07	9.087E+04	2.207E+04	3.307E+07	2.427E+04
2096	8.097E+04	6.484E+07	8.907E+04	2.163E+04	3.242E+07	2.379E+04
2097	7.937E+04	6.355E+07	8.731E+04	2.120E+04	3.178E+07	2.332E+04
2098	7.780E+04	6.230E+07	8.558E+04	2.078E+04	3.115E+07	2.286E+04
2099	7.626E+04	6.106E+07	8.388E+04	2.037E+04	3.053E+07	2.241E+04
2100	7.475E+04	5.985E+07	8.222E+04	1.997E+04	2.993E+07	2.196E+04
2101	7.327E+04	5.867E+07	8.059E+04	1.957E+04	2.933E+07	2.153E+04
2102	7.182E+04	5.751E+07	7.900E+04	1.918E+04	2.875E+07	2.110E+04
2103	7.039E+04	5.637E+07	7.743E+04	1.880E+04	2.818E+07	2.068E+04
2104	6.900E+04	5.525E+07	7.590E+04	1.843E+04	2.763E+07	2.027E+04
2105	6.763E+04	5.416E+07	7.440E+04	1.807E+04	2.708E+07	1.987E+04
2106	6.629E+04	5.309E+07	7.292E+04	1.771E+04	2.654E+07	1.948E+04
2107	6.498E+04	5.203E+07	7.148E+04	1.736E+04	2.602E+07	1.909E+04
2108	6.369E+04	5.100E+07	7.006E+04	1.701E+04	2.550E+07	1.871E+04
2109	6.243E+04	4.999E+07	6.868E+04	1.668E+04	2.500E+07	1.834E+04
2110	6.120E+04	4.900E+07	6.732E+04	1.635E+04	2.450E+07	1.798E+04
2111	5.999E+04	4.803E+07	6.598E+04	1.602E+04	2.402E+07	1.763E+04
2112	5.880E+04	4.708E+07	6.468E+04	1.571E+04	2.354E+07	1.728E+04
2113	5.763E+04	4.615E+07	6.340E+04	1.539E+04	2.308E+07	1.693E+04
2114	5.649E+04	4.524E+07	6.214E+04	1.509E+04	2.262E+07	1.660E+04
2115	5.537E+04	4.434E+07	6.091E+04	1.479E+04	2.217E+07	1.627E+04
2116	5.428E+04	4.346E+07	5.970E+04	1.450E+04	2.173E+07	1.595E+04
2117	5.320E+04	4.260E+07	5.852E+04	1.421E+04	2.130E+07	1.563E+04
2118	5.215E+04	4.176E+07	5.736E+04	1.393E+04	2.088E+07	1.532E+04
2119	5.112E+04	4.093E+07	5.623E+04	1.365E+04	2.047E+07	1.502E+04
2120	5.010E+04	4.012E+07	5.511E+04	1.338E+04	2.006E+07	1.472E+04

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1980	0	0	0	0	0	0
1981	1.633E+02	8.920E+04	1.796E+02	8.070E-01	2.251E+02	8.877E-01
1982	2.187E+03	1.195E+06	2.406E+03	1.081E+01	3.016E+03	1.189E+01
1983	4.398E+03	2.403E+06	4.838E+03	2.174E+01	6.064E+03	2.391E+01
1984	6.974E+03	3.810E+06	7.672E+03	3.447E+01	9.616E+03	3.792E+01
1985	1.130E+04	6.171E+06	1.243E+04	5.583E+01	1.557E+04	6.141E+01
1986	1.574E+04	8.598E+06	1.731E+04	7.779E+01	2.170E+04	8.557E+01
1987	2.043E+04	1.116E+07	2.247E+04	1.010E+02	2.817E+04	1.111E+02
1988	2.527E+04	1.381E+07	2.780E+04	1.249E+02	3.485E+04	1.374E+02
1989	3.000E+04	1.639E+07	3.300E+04	1.483E+02	4.137E+04	1.631E+02
1990	3.504E+04	1.914E+07	3.854E+04	1.732E+02	4.831E+04	1.905E+02
1991	4.081E+04	2.230E+07	4.489E+04	2.017E+02	5.627E+04	2.219E+02
1992	4.675E+04	2.554E+07	5.143E+04	2.311E+02	6.447E+04	2.542E+02
1993	5.055E+04	2.762E+07	5.561E+04	2.498E+02	6.970E+04	2.748E+02
1994	5.458E+04	2.982E+07	6.004E+04	2.698E+02	7.526E+04	2.968E+02
1995	5.846E+04	3.194E+07	6.430E+04	2.889E+02	8.061E+04	3.178E+02
1996	6.246E+04	3.412E+07	6.870E+04	3.087E+02	8.612E+04	3.396E+02
1997	6.608E+04	3.610E+07	7.269E+04	3.266E+02	9.111E+04	3.593E+02
1998	6.975E+04	3.810E+07	7.673E+04	3.447E+02	9.618E+04	3.792E+02
1999	7.343E+04	4.012E+07	8.077E+04	3.629E+02	1.013E+05	3.992E+02
2000	7.681E+04	4.196E+07	8.449E+04	3.796E+02	1.059E+05	4.176E+02
2001	8.025E+04	4.384E+07	8.828E+04	3.967E+02	1.107E+05	4.363E+02
2002	8.363E+04	4.569E+07	9.199E+04	4.133E+02	1.153E+05	4.547E+02
2003	8.664E+04	4.733E+07	9.530E+04	4.282E+02	1.195E+05	4.710E+02
2004	8.956E+04	4.893E+07	9.852E+04	4.427E+02	1.235E+05	4.869E+02
2005	9.241E+04	5.049E+07	1.017E+05	4.568E+02	1.274E+05	5.024E+02
2006	9.501E+04	5.190E+07	1.045E+05	4.696E+02	1.310E+05	5.165E+02
2007	9.754E+04	5.329E+07	1.073E+05	4.821E+02	1.345E+05	5.303E+02
2008	9.997E+04	5.462E+07	1.100E+05	4.941E+02	1.379E+05	5.435E+02
2009	1.020E+05	5.575E+07	1.123E+05	5.044E+02	1.407E+05	5.548E+02
2010	1.036E+05	5.658E+07	1.139E+05	5.119E+02	1.428E+05	5.631E+02
2011	1.051E+05	5.742E+07	1.156E+05	5.194E+02	1.449E+05	5.714E+02
2012	1.068E+05	5.832E+07	1.174E+05	5.276E+02	1.472E+05	5.804E+02
2013	1.085E+05	5.927E+07	1.193E+05	5.362E+02	1.496E+05	5.898E+02
2014	1.102E+05	6.021E+07	1.212E+05	5.447E+02	1.520E+05	5.992E+02
2015	1.119E+05	6.112E+07	1.231E+05	5.530E+02	1.543E+05	6.083E+02
2016	1.133E+05	6.191E+07	1.247E+05	5.601E+02	1.563E+05	6.161E+02
2017	1.136E+05	6.207E+07	1.250E+05	5.615E+02	1.567E+05	6.177E+02
2018	1.142E+05	6.238E+07	1.256E+05	5.644E+02	1.575E+05	6.208E+02
2019	1.149E+05	6.277E+07	1.264E+05	5.679E+02	1.584E+05	6.247E+02
2020	1.157E+05	6.318E+07	1.272E+05	5.716E+02	1.595E+05	6.288E+02
2021	1.187E+05	6.483E+07	1.305E+05	5.866E+02	1.636E+05	6.452E+02
2022	1.216E+05	6.645E+07	1.338E+05	6.012E+02	1.677E+05	6.613E+02
2023	1.245E+05	6.803E+07	1.370E+05	6.155E+02	1.717E+05	6.771E+02
2024	1.274E+05	6.959E+07	1.401E+05	6.296E+02	1.756E+05	6.925E+02
2025	1.302E+05	7.111E+07	1.432E+05	6.434E+02	1.795E+05	7.077E+02
2026	1.329E+05	7.261E+07	1.462E+05	6.569E+02	1.833E+05	7.226E+02
2027	1.356E+05	7.407E+07	1.491E+05	6.701E+02	1.869E+05	7.371E+02
2028	1.382E+05	7.550E+07	1.520E+05	6.831E+02	1.906E+05	7.514E+02
2029	1.408E+05	7.691E+07	1.549E+05	6.958E+02	1.941E+05	7.654E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2030	1.433E+05	7.829E+07	1.576E+05	7.083E+02	1.976E+05	7.791E+02
2031	1.458E+05	7.964E+07	1.604E+05	7.205E+02	2.010E+05	7.926E+02
2032	1.482E+05	8.096E+07	1.630E+05	7.325E+02	2.043E+05	8.057E+02
2033	1.506E+05	8.226E+07	1.656E+05	7.442E+02	2.076E+05	8.186E+02
2034	1.529E+05	8.353E+07	1.682E+05	7.557E+02	2.108E+05	8.313E+02
2035	1.552E+05	8.478E+07	1.707E+05	7.670E+02	2.140E+05	8.437E+02
2036	1.574E+05	8.600E+07	1.732E+05	7.781E+02	2.171E+05	8.559E+02
2037	1.596E+05	8.720E+07	1.756E+05	7.889E+02	2.201E+05	8.678E+02
2038	1.618E+05	8.837E+07	1.779E+05	7.995E+02	2.231E+05	8.795E+02
2039	1.639E+05	8.953E+07	1.803E+05	8.100E+02	2.260E+05	8.909E+02
2040	1.659E+05	9.065E+07	1.825E+05	8.202E+02	2.288E+05	9.022E+02
2041	1.680E+05	9.176E+07	1.848E+05	8.302E+02	2.316E+05	9.132E+02
2042	1.700E+05	9.284E+07	1.869E+05	8.400E+02	2.343E+05	9.240E+02
2043	1.713E+05	9.357E+07	1.884E+05	8.466E+02	2.362E+05	9.312E+02
2044	1.679E+05	9.172E+07	1.847E+05	8.298E+02	2.315E+05	9.128E+02
2045	1.646E+05	8.991E+07	1.810E+05	8.134E+02	2.269E+05	8.947E+02
2046	1.613E+05	8.812E+07	1.774E+05	7.973E+02	2.224E+05	8.770E+02
2047	1.581E+05	8.638E+07	1.739E+05	7.815E+02	2.180E+05	8.596E+02
2048	1.550E+05	8.467E+07	1.705E+05	7.660E+02	2.137E+05	8.426E+02
2049	1.519E+05	8.299E+07	1.671E+05	7.509E+02	2.095E+05	8.259E+02
2050	1.489E+05	8.135E+07	1.638E+05	7.360E+02	2.053E+05	8.096E+02
2051	1.460E+05	7.974E+07	1.606E+05	7.214E+02	2.013E+05	7.936E+02
2052	1.431E+05	7.816E+07	1.574E+05	7.071E+02	1.973E+05	7.778E+02
2053	1.402E+05	7.661E+07	1.543E+05	6.931E+02	1.934E+05	7.624E+02
2054	1.375E+05	7.510E+07	1.512E+05	6.794E+02	1.895E+05	7.473E+02
2055	1.347E+05	7.361E+07	1.482E+05	6.659E+02	1.858E+05	7.325E+02
2056	1.321E+05	7.215E+07	1.453E+05	6.528E+02	1.821E+05	7.180E+02
2057	1.295E+05	7.072E+07	1.424E+05	6.398E+02	1.785E+05	7.038E+02
2058	1.269E+05	6.932E+07	1.396E+05	6.272E+02	1.750E+05	6.899E+02
2059	1.244E+05	6.795E+07	1.368E+05	6.147E+02	1.715E+05	6.762E+02
2060	1.219E+05	6.660E+07	1.341E+05	6.026E+02	1.681E+05	6.628E+02
2061	1.195E+05	6.528E+07	1.315E+05	5.906E+02	1.648E+05	6.497E+02
2062	1.171E+05	6.399E+07	1.289E+05	5.789E+02	1.615E+05	6.368E+02
2063	1.148E+05	6.272E+07	1.263E+05	5.675E+02	1.583E+05	6.242E+02
2064	1.125E+05	6.148E+07	1.238E+05	5.562E+02	1.552E+05	6.119E+02
2065	1.103E+05	6.027E+07	1.213E+05	5.452E+02	1.521E+05	5.998E+02
2066	1.081E+05	5.907E+07	1.189E+05	5.344E+02	1.491E+05	5.879E+02
2067	1.060E+05	5.790E+07	1.166E+05	5.239E+02	1.461E+05	5.762E+02
2068	1.039E+05	5.676E+07	1.143E+05	5.135E+02	1.433E+05	5.648E+02
2069	1.018E+05	5.563E+07	1.120E+05	5.033E+02	1.404E+05	5.536E+02
2070	9.982E+04	5.453E+07	1.098E+05	4.933E+02	1.376E+05	5.427E+02
2071	9.784E+04	5.345E+07	1.076E+05	4.836E+02	1.349E+05	5.319E+02
2072	9.590E+04	5.239E+07	1.055E+05	4.740E+02	1.322E+05	5.214E+02
2073	9.400E+04	5.135E+07	1.034E+05	4.646E+02	1.296E+05	5.111E+02
2074	9.214E+04	5.034E+07	1.014E+05	4.554E+02	1.271E+05	5.010E+02
2075	9.032E+04	4.934E+07	9.935E+04	4.464E+02	1.245E+05	4.910E+02
2076	8.853E+04	4.836E+07	9.738E+04	4.376E+02	1.221E+05	4.813E+02
2077	8.678E+04	4.741E+07	9.545E+04	4.289E+02	1.197E+05	4.718E+02
2078	8.506E+04	4.647E+07	9.356E+04	4.204E+02	1.173E+05	4.624E+02
2079	8.337E+04	4.555E+07	9.171E+04	4.121E+02	1.150E+05	4.533E+02
2080	8.172E+04	4.465E+07	8.990E+04	4.039E+02	1.127E+05	4.443E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2081	8.011E+04	4.376E+07	8.812E+04	3.959E+02	1.105E+05	4.355E+02
2082	7.852E+04	4.290E+07	8.637E+04	3.881E+02	1.083E+05	4.269E+02
2083	7.696E+04	4.205E+07	8.466E+04	3.804E+02	1.061E+05	4.184E+02
2084	7.544E+04	4.121E+07	8.298E+04	3.729E+02	1.040E+05	4.101E+02
2085	7.395E+04	4.040E+07	8.134E+04	3.655E+02	1.020E+05	4.020E+02
2086	7.248E+04	3.960E+07	7.973E+04	3.582E+02	9.994E+04	3.941E+02
2087	7.105E+04	3.881E+07	7.815E+04	3.511E+02	9.796E+04	3.863E+02
2088	6.964E+04	3.804E+07	7.660E+04	3.442E+02	9.602E+04	3.786E+02
2089	6.826E+04	3.729E+07	7.509E+04	3.374E+02	9.412E+04	3.711E+02
2090	6.691E+04	3.655E+07	7.360E+04	3.307E+02	9.226E+04	3.638E+02
2091	6.558E+04	3.583E+07	7.214E+04	3.242E+02	9.043E+04	3.566E+02
2092	6.429E+04	3.512E+07	7.071E+04	3.177E+02	8.864E+04	3.495E+02
2093	6.301E+04	3.442E+07	6.931E+04	3.114E+02	8.689E+04	3.426E+02
2094	6.177E+04	3.374E+07	6.794E+04	3.053E+02	8.517E+04	3.358E+02
2095	6.054E+04	3.307E+07	6.660E+04	2.992E+02	8.348E+04	3.292E+02
2096	5.934E+04	3.242E+07	6.528E+04	2.933E+02	8.183E+04	3.226E+02
2097	5.817E+04	3.178E+07	6.399E+04	2.875E+02	8.021E+04	3.162E+02
2098	5.702E+04	3.115E+07	6.272E+04	2.818E+02	7.862E+04	3.100E+02
2099	5.589E+04	3.053E+07	6.148E+04	2.762E+02	7.706E+04	3.038E+02
2100	5.478E+04	2.993E+07	6.026E+04	2.708E+02	7.554E+04	2.978E+02
2101	5.370E+04	2.933E+07	5.907E+04	2.654E+02	7.404E+04	2.919E+02
2102	5.263E+04	2.875E+07	5.790E+04	2.601E+02	7.257E+04	2.862E+02
2103	5.159E+04	2.818E+07	5.675E+04	2.550E+02	7.114E+04	2.805E+02
2104	5.057E+04	2.763E+07	5.563E+04	2.499E+02	6.973E+04	2.749E+02
2105	4.957E+04	2.708E+07	5.452E+04	2.450E+02	6.835E+04	2.695E+02
2106	4.859E+04	2.654E+07	5.345E+04	2.401E+02	6.699E+04	2.642E+02
2107	4.762E+04	2.602E+07	5.239E+04	2.354E+02	6.567E+04	2.589E+02
2108	4.668E+04	2.550E+07	5.135E+04	2.307E+02	6.437E+04	2.538E+02
2109	4.576E+04	2.500E+07	5.033E+04	2.262E+02	6.309E+04	2.488E+02
2110	4.485E+04	2.450E+07	4.934E+04	2.217E+02	6.184E+04	2.438E+02
2111	4.396E+04	2.402E+07	4.836E+04	2.173E+02	6.062E+04	2.390E+02
2112	4.309E+04	2.354E+07	4.740E+04	2.130E+02	5.942E+04	2.343E+02
2113	4.224E+04	2.308E+07	4.646E+04	2.088E+02	5.824E+04	2.296E+02
2114	4.140E+04	2.262E+07	4.554E+04	2.046E+02	5.709E+04	2.251E+02
2115	4.058E+04	2.217E+07	4.464E+04	2.006E+02	5.596E+04	2.206E+02
2116	3.978E+04	2.173E+07	4.376E+04	1.966E+02	5.485E+04	2.163E+02
2117	3.899E+04	2.130E+07	4.289E+04	1.927E+02	5.376E+04	2.120E+02
2118	3.822E+04	2.088E+07	4.204E+04	1.889E+02	5.270E+04	2.078E+02
2119	3.746E+04	2.047E+07	4.121E+04	1.852E+02	5.166E+04	2.037E+02
2120	3.672E+04	2.006E+07	4.039E+04	1.815E+02	5.063E+04	1.996E+02

Application for a Change of Condition to Re-permit Fill Area No. 2 (June 18, 2017)

Environmental Consultants
and Contractors

3117 Fite Circle
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SCS ENGINEERS

June 18, 2017
Project No. 01201101.02 Task 45

Carol S. Allen
Permit Services Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

SUBJECT: APPLICATION FOR A CHANGE OF CONDITION TO RE-PERMIT FILL AREA NO. 2, ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY, LIVERMORE, CALIFORNIA (PLANT NO. A2066)

Dear Ms. Allen:

On behalf of Waste Management of Alameda County, Inc. (WMAC), SCS Engineers (SCS) has prepared this application for a change of condition (COC) to re-permit conditions for Fill Area No. 2 (FA2) at the Altamont Landfill and Resource Recovery Facility (ALRRF or Site). This application letter has been prepared for submittal to the Bay Area Quality Management District (BAAQMD or District).

BACKGROUND

Condition No. 19235 of ALRRF's Permit to Operate (PTO) includes several parts specific to commencing operation in the expansion area of the Site, FA2, including Condition Part #17. This Part includes a table showing a schedule for payment of emission reduction credits (ERCs) for the increase in precursor organic compounds (POC) emissions from fugitive POC emissions associated with FA2. This table (Part 17(a)(v)) specifies a non-methane organic compounds (NMOC) limit of 600 parts per million by volume (expressed as hexane) in the FA2 landfill gas (LFG). This limit is used to calculate expected emissions of fugitive POCs upon which the ERC schedule is based. We are proposing to establish a higher FA2 NMOC, as well as to revise the FA1 baseline fugitive POC emissions for determination of ERCs required for FA2. This COC application will re-establish permit conditions for the FA2 expansion area.

Testing of the LFG at ALRRF has documented increased concentrations of NMOC since 2007. As changes in NMOC concentration are not under the control of ALRRF, it is necessary to revise the permit to accommodate these higher concentrations. See attached **Table 4** for a summary of recent NMOC test results.

In addition, as shown on **Table 4**, ALRRF has observed that the NMOC concentrations documented have fluctuated significantly, not only from year to year, but more importantly, among the many LFG combustion devices operating at the site. This is important because the relative amounts of LFG burned in the various devices is highly variable, with some devices, most notable flare A-15, rarely used. If the NMOC concentrations documented during testing of each of the devices were given equal weight in determining the overall NMOC concentration for the facility, then it could potentially give a very inaccurate result for site-wide NMOC. As such, we are also requesting District approval of a procedure for determining a weighted NMOC average for the Site for calculating revised FA1 baseline fugitive POC emissions and annual fugitive POC emissions for comparison to the values in the Part 17 ERC table (ERC table). We are also proposing to revise the current ERC table.

This application includes updated LFG generation models for both FA1 baseline and for the combined FA1 and FA2 up to maximum capacity (**Appendices B and C**); calculations of actual and potential fugitive POC emissions (attached **Table 3**), weighted NMOC concentration calculations (attached **Table 4**), and an update of the ERC table in the current PTO (**Table 2**). Condition Part 17, with proposed changes tracked, is provided as **Appendix A**.

LANDFILL GAS GENERATION MODEL

The waste tonnage, POC emission, and ERC values shown in the Part 17 ERC table are based on LFG generation modeling submitted as part of the original FA2 permitting. Updated gas models have been performed using actual waste placement data through 2016. For future years, the projected fill rates from the original FA2 permitting have been retained. The updated LFG generation rates were used to calculate the fugitive POC emissions values shown in the updated ERC table. The updated cumulative waste tonnage values are also shown in the ERC table.

Results of the two updated gas models, FA1 Baseline and FA1 + FA2, are provided as **Appendices B and C**, respectively.

Note that 3.27 million tons of the permitted FA2 decomposable material capacity was approved by the District in a 2015 COC to be transferred to FA1. However, we are still assuming, for this application, this tonnage is part of FA2, and thus subject to offset requirements, and the attached gas models reflect this assumption.

DETERMINING ANNUAL AVERAGE NMOC CONCENTRATION

Because of the variability of the NMOC concentration test results from one device to the next, we are proposing to establish the use of calculated weighted average NMOC concentrations for determining fugitive POC emissions. For determining the current NMOC concentration, for use in calculating a revised baseline POC emissions value for FA1, an average NMOC concentration for each individual device was determined for the past 4 years of test results. Then the relative amounts of LFG that were burned in each device over the same period as the tests was

determined. These two sets of data were then combined to calculate a factional NMOC concentration for each; which were then added together to get a final weighted average.

The attached **Table 4** shows the 4-year NMOC concentration values as well as the unweighted and weighted average concentrations. Attached **Table 5** shows LFG data for the 4-year averaging period as well as the determination of the fractional flow from each individual control device.

For the 4-year period of 2013 through 2016, the weighted NMOC concentration was determined to be (7,154 parts per million by volume [ppmv] as methane [equivalent to 1,192 ppmv as hexane]). We propose to use this NMOC concentration to update the FA1 baseline fugitive POC emissions, as discussed in the following section of this application. We also propose to use this same procedure to determine a new rolling 3-year average NMOC concentration for comparison to the NMOC limit in the ERC table, as specified in Condition Part 17(a)(v).

FILL AREA 1 BASELINE FUGITIVE POC EMISSIONS

The FA2 ERC table in the current permit provides a schedule of ERCs due based on the increasing fugitive POC emissions totals shown in the table. ERCs are required for FA2 based on an increase over the FA1 emissions. However, the table assumes maximum POC emission (FA1 filled to capacity) of approximately 64 tons per year (tpy). As indicated in the table, this emission total assumes an NMOC concentration of 600 ppmv. However, based on the documented LFG NMOC concentrations in the recent past, this baseline POC emission value significantly understates actual POC emissions. The previously discussed weighted NMOC concentration was used to calculate POC emissions for FA1 at full capacity. This new calculated baseline POC value is approximately 143 tpy.

Because emissions associated with the existing landfill capacity (FA1) are not subject to District offsetting requirements, it is appropriate to use this revised FA1 POC baseline as the basis for determining subsequent POC offsetting requirements associated with FA2. For determining the revised FA1 baseline POC emissions, the original FA1 capacity (47,750,000 tons) was used.

NEW FILL AREA 2 NMOC CONCENTRATION LIMIT

As previously discussed, the best estimate of the current NMOC concentration in the ALRRF LFG is 1,192 ppmv as methane, based on site test data and weighted for each individual combustion device. For FA2, we propose to continue to utilize the same weighting methodology. However, the FA1 concentration is significantly higher than what is found at an average landfill site. Due to increasingly stringent waste diversion requirements, it is likely that the FA2 waste stream will be different from the historical FA1 waste stream. As such, we propose a FA2 NMOC limit of 1,000 ppmv as hexane. This limit is above the current FA1 limit, but somewhat less than the calculated concentration used to determine FA1 baseline emissions. We propose to use this new limit in the revised ERC table.

REVISED EMISSION REDUCTION CREDIT TABLE

We propose to revise the Condition Part 17 ERC table based on the previously discussed updated gas modeling, NMOC concentrations, and FA1 baseline emissions. The FA1 baseline of 143 tpy of POC is shown in the first row of revised table, from which increases in POC emissions are determined. We are also proposing to simply the ERC payment process by reducing the table in the permit from 13 ERC payment increments to 3 increments, per the District's prior request in communications with SCS. The revised table is shown in the Offsets section (Table 2) as well as in the Proposed Change of Condition (Appendix A).

DISCUSSION OF EMISSIONS

As previously discussed, fugitive POC emissions were recalculated for this application. The revised emissions are summarized and compared to the current assumed emissions in **Table 1**, below. A detailed summary of these data is provided in the attached **Table 3**.

Table 1. POC Emissions Summary

	NMOC	Fugitive POC
	ppmv as C6	Tons/yr
Current		
FA1 Baseline	600	64
FA1 + FA2 PTE	600	111.506
Increase		47.506
Proposed		
FA1 Baseline	1,192	142.940
FA1 + FA2 PTE	1,000	182.704
Increase		39.764
(with 1.15 multiplier)		45.728

DISCUSSION OF OFFSETS

Fugitive POC emissions associated with the FA2 expansion are subject to District Rule 2-2 offset requirements. As shown on the table above, the emissions as proposed that are subject to offsets would total 39.764 tons over the life of the landfill. With the Rule 2-2 multiplier of 1.15, the offsets required for FA would be 45.728 tons. The current permit includes a FA2 offsets schedule. As currently permitted, these offsets are due on the incremental schedule shown in the table in Condition #19235, Part 17(a)(v)(a), with 11.114 tons due prior to commencing disposal in FA2. This initial amount has already been provided by WMAC. We propose to revise this table to reflect the changes in baseline and future POC emissions and to decrease the overall number of increments. The revised table is presented below (**Table 2**).

Table 2. Revised ERC Table

ERC Due Date and Effective Date for New Limits	Amount of ERCs Due (tons)	Fugitive POC Increase (tons)	Fugitive POC Emission Limit (tpy)	Cumulative Decomposable Material Placement Limit (million tons)	Annual Decomposable Material Placement Limit (tpy)	LFG NMOC Concentration Limit, rolling 3-yr average (ppmv as C6 @ 50% CH4)
New FA1 Baseline			**142.940**	47.750	1,600,000	
Prior FA2 Fill	11.114*	9.664	152.605	67.278	1,600,000	1,000
1/1/2029	17.371	15.105	167.710	76.878	1,600,000	1,000
1/1/2035	17.243	14.994	182.704	88.000	1,600,000	1,000
1/1/2042			182.704	88.000	1,600,000	1,000

Offset values include 1.15 multiplier, per Rule 2-2.
* Offsets already provided.

APPLICATION FORMS AND FEES

District Forms P101B and (CEQA) have been completed and are attached **Appendix D**.

Section 5 of Form P101-B states that the five items listed in the section must be addressed in all applications. These items are addressed as follows: (1) this is not a new site; therefore, no site location map is required; (2) no change in location of any of the Site emission sources or Site configuration is proposed; therefore, a facility map showing the proposed project location is not required; (3) the required forms are attached; (4) a description of the proposed operation is included in the application; and (5) emissions for the proposed operation are discussed in the application; and calculations are provided in the attached tables.

SCS estimated the required fees for this application based on District Regulation 3.

The permit processing fees for this project were calculated as follows:

District Fees:

Fee Type	Amount
Filing Fee	$ 462
Initial Fee (Schedule K)	$ 4,028
Total District Fees	**$4,490**

WMAC requests that upon final determination of fees by the District, an invoice be sent to the following individual by mail or email:

Tianna Nourot
Environmental Protection Specialist
Waste Management of Alameda County, Inc.
10840 Altamont Pass Road
Livermore, California 94551
TNourot@wm.com

CLOSING

If you have any require any additional information or wish to discuss this application, please contact Michael O'Connor at (707) 546-9461.

Sincerely,

Michael O'Connor
Senior Project Professional
SCS ENGINEERS

Patrick S. Sullivan, REA, CPP, BCES
Senior Vice President
SCS ENGINEERS

cc: Tianna Nourot, WMAC
Marcus Nettz, WMAC

Attached Tables

3 – Landfill Gas Fugitive POC Emissions (with Offsets)
4 – ALRRF Source Test Results – NMOC Summary (2013-2016)
5 – ALRRF Control Device Monthly and Total Landfill Gas Data (2013- 2016)

Appendices

Appendix A: Proposed Changes of Condition (changes tracked)
Appendix B: LandGEM Model Results – FA1 Baseline
Appendix C: LandGEM Model Results – FA1 + FA2
Appendix D: Application Forms

TABLES

Table 3. Landfill Gas Fugitive POC Emissions (With Offsets)
Altamont Landfill

	Pollutant	Molecular Weight	NMOC Concentration In LFG	POC Generated in LFG [2]	Fugitive POC Emissions	POC Emission Increase from Revised FA1 Baseline	POC Offsets (Per increase over Revised FA1 Baseline)
	Criteria Air Pollutants	**(g/mol)**	**(ppmv)**	**(tons/year)**	**(tons/year)**	**(tons/year)**	**(tons/year)**
Current FA1 Scenario							
Baseline (per current FA2 permit)	POC as Hexane		600		64		
PTE (per current FA2 permit)	POC as Hexane		600		111.506		
Revised FA1 Baseline							
Baseline FA1 Full Capacity (weighted NMOC concentration)	POC as Hexane	86.18	1,192	572	**142.940**		
Revised FA2 PTE							
PTE (NMOC @ 6000 ppmv as methane)	POC as Hexane	86.18	1,000	731	182.704	39.764	45.728

MODEL INPUT VARIABLES		
	ppmv as methane	ppmv as hexane
Baseline - Weighted NMOC concentration in landfill gas	7,154	1,192
Baseline - Weighted POC concentration in landfill gas		1,168
PTE NMOC concentration in landfill gas	6,000	1,000

FA1 Full Original Capacity for Baseline Landfill Gas Generation Rate	8319	scfm (max in 2016, from LandGEM model)
PTE Landfill Gas Generation Rate	12678	scfm LFG generation in 2042, from LandGEM model)
LFG Collection Rate	75%	

Table 4. ALRRF Source Test Results - NMOC Concentration Summary (2013 - 2016)

Altamont Landfill

Source	Condition	Parts per million by volume (as methane) [ppmv]						(ppmv)
Year		2013	2014	2015	2016	Average 2013-2016	Proportion of Total LFG Combustion	Weighted Fractional Concentrations
Turbine S6	Normal	7,438	9,852	10,205	6,940	8,609	0.279	2,405
Turbine S7	Normal	9,294	6,906	8,675	5,849	7,681	0.278	2,133
ICE S23	Normal	9,105	8,483	7,773	3,925	7,322	0.035	258
ICSS24	Normal	9,826	8,729	7,943	3,726	7,556	0.032	241
Flare A16	LFG + LNG Tailgas	5,587	3,850	7,890	5,059	5,597	0.374	2,096
Flare A15	Cond. Off	21,897	18,513	14,959	11,169	16,635	0.001	21
Non-weighted Averages -->		10,525	9,389	9,574	6,111	8,900	1.000	
						Weighted Concentration -->		7,154

Table 5. ALRRF Control Device Annual Landfill Gas Flow Data (2013- 2016)

Altamont Landfill

	Turbine-S6	Turbine-S7	ICE-S23	ICE-S24	Flare-A15	Flare -A16 (LFG + LNG Tailgas)	Annual Total
2013							
TOTALS (SCF/Yr)	729,993,370	714,409,450	156,344,533	140,419,211	3,297,445	986,363,201	2,730,827,209
Fraction of Total Collected	0.267	0.262	0.057	0.051	0.001	0.361	1.000
2014							
TOTALS (SCF/Yr)	739,459,176	727,125,971	17,805,930	17,663,400	4,606,941	936,191,171	2,442,852,589
Fraction	0.303	0.298	0.007	0.007	0.002	0.383	1.000
2015							
TOTALS (SCF/Yr)	719,089,239	743,788,500	125,463,802	126,800,381	839,136	959,724,531	2,675,705,588
Fraction	0.269	0.278	0.047	0.047	0.000	0.359	1.000
2016							
TOTALS (SCF/Yr)	738,013,355	725,158,325	78,513,370	57,474,352	4,118,653	1,045,263,543	2,648,541,599
Fraction	0.279	0.274	0.030	0.022	0.002	0.395	1.000
2013-16 Average Fraction of Total Collected	**0.279**	**0.278**	**0.035**	**0.032**	**0.001**	**0.374**	**1.000**

APPENDIX A

PROPOSED CHANGES OF CONDITIONS
(Changes Tracked)

VI. Permit Conditions

Condition # 19235

FOR: S-2 ALTAMONT LANDFILL - WASTE DECOMPOSITION PROCESS, EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM, AND ABATED BY A-15 LANDFILL GAS FLARE AND A-16 LANDFILL GAS FLARE;
S-43 ALTAMONT LANDFILL - WASTE AND COVER MATERIAL DUMPING; AND
S-44 ALTAMONT LANDFILL - EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES:

17. This part becomes effective upon the date of the District's approval of a Change of Conditions for the Fill Area 2 Expansion of the S-2 Altamont Landfill. In order to assure compliance with District offsetting requirements for precursor organic compound (POC) emission increases at the S-2 Altamont Landfill, the Permit Holder shall submit the required amount of District approved POC emission reduction credits (ERC) in accordance with the schedule identified in Part 17a and shall comply with all associated limits, monitoring, record keeping, and reporting requirements in Parts 17a. The fugitive POC emissions, the associated amount of ERC credits due, and other related limits shall be reviewed and, if necessary, modified, in accordance with the procedures specified in Part 17b. (Basis: Regulation 2-2-302)
    a. The Permit Holder shall comply with all requirements and limits identified in the table below, unless the Permit Holder has submitted, in accordance with the provisions of Part 17b, a permit application to request a modification of a specific ERC amount or due date or a specific limit. This permit application submittal will temporarily suspend the specific ERC requirement or limit from the date of the application submittal until the District makes a final decision on the change request. The permit application submittal does not suspend any monitoring, record keeping, or reporting requirements in this subpart.
        i. By no later than the due date specified in column 1 of the table, the Permit Holder shall surrender the total amount of POC ERCs indicated in column 2 of the table. These ERCs shall be in the form of District approved banking certificates for POC emission reduction credits. The banking certificate submittal shall be addressed to the attention of the Director of the Engineering Division, BAAQMD, 939 Ellis Street, San Francisco, CA 94109.
        ii. The limits identified in columns 3 through 6 of the table apply to the S-2 Altamont Landfill (Fill Areas 1 and 2 combined). These limits become effective upon the date identified in column 1 and remain in effect until the Permit Holder has surrendered the amount of ERCs required for the subsequent set of limits, unless the limit has been temporarily suspended as specified in Part 17a.

iii. The Permit Holder shall demonstrate compliance with the fugitive POC emission limits in column 3 of the table by complying with: the limits in columns 4, 5, and 6, the record keeping requirements in Part 22i, the monitoring requirements in Part 14b, and the fugitive POC emissions reassessment requirements of Part 17b.

iv. For the purposes of the decomposable material placement limits in columns 4 and 5, decomposable materials are as defined in Part 22i. The Permit Holder shall demonstrate compliance with the cumulative decomposable placement limit in column 4 using the record keeping and reporting procedures in Part 22. The annual decomposable material placement limit in column 5 applies to each calendar year. The Permit Holder shall demonstrate compliance with these limits using the record keeping and reporting procedures in Part 22. Prior to exceeding a cumulative or annual decomposable material placement limit, the Permit Holder shall either surrender the amount of ERCs required for the next subsequent set of limits or submit a permit application to request a change of conditions. Each permit application submittal shall include a reassessment of the fugitive POC emissions conducted in accordance with Parts 17b(ii-iv).

v. The landfill gas NMOC concentration limit applies on a rolling three-year weighted average basis. The weighted average is determined based on the relative proportion of landfill gas burned in each of the permitted landfill gas combustion devices and the NMOC concentration in the gas going to each device. The Permit Holder shall demonstrate compliance with this limit using the monitoring and record keeping requirements in Part 14b. If testing indicates that the three-year weighted average NMOC concentration in landfill gas collected S-2 has or will exceed the limit in column 6, the Permit Holder shall submit a permit application to request an increase of this NMOC concentration limit, within 45 days of recording the exceedance. The permit application submittal shall include a reassessment of the fugitive POC emissions conducted in accordance with Parts 17b(ii-iv).

~~ERC Due Date and Effective Date for New Limits~~	~~Amount of ERCs Due tons/year of POC~~	~~Fugitive Emission Limit tons/year of POC~~	~~Cumulative Decomposable Material Placement Limit million tons~~	~~Annual Decomposable Material Placement Limit tons/year~~	~~Landfill Gas Concentration Limit ppmv NMOC (rolling 3-year average, expressed as C_6 and corrected to 50% CH_4)~~
~~*~~	~~11.114~~	~~73.654~~	~~48.337~~	~~1,630,000~~	~~600~~
~~1/2/15~~	~~4.349~~	~~77.436~~	~~51.557~~	~~1,610,000~~	~~600~~
~~1/2/17~~	~~4.167~~	~~81.059~~	~~54.777~~	~~1,610,000~~	~~600~~
~~1/2/19~~	~~4.003~~	~~84.540~~	~~57.997~~	~~1,610,000~~	~~600~~
~~1/2/21~~	~~3.846~~	~~87.884~~	~~61.217~~	~~1,610,000~~	~~600~~
~~1/2/23~~	~~3.695~~	~~91.098~~	~~64.437~~	~~1,610,000~~	~~600~~
~~1/2/25~~	~~3.551~~	~~94.185~~	~~67.657~~	~~1,610,000~~	~~600~~
~~1/2/27~~	~~3.411~~	~~97.152~~	~~70.877~~	~~1,610,000~~	~~600~~
~~1/2/29~~	~~3.278~~	~~100.002~~	~~74.097~~	~~1,610,000~~	~~600~~
~~1/2/31~~	~~3.149~~	~~102.740~~	~~77.317~~	~~1,610,000~~	~~600~~
~~1/2/33~~	~~3.026~~	~~105.371~~	~~80.537~~	~~1,610,000~~	~~600~~
~~1/2/35~~	~~2.907~~	~~107.899~~	~~83.757~~	~~1,610,000~~	~~600~~
~~1/2/37~~	~~4.148~~	~~111.506~~	~~88.000~~	~~1,610,000~~	~~600~~

~~* These limits and all subsequent limits are effective upon commencement of waste disposal in Fill Area 2.~~

ERC Due Date and Effective Date for New Limits	Amount of ERCs Due (tons)	Fugitive POC Emission Limit (tpy)	Cumulative Decomposable Material Placement Limit (million tons)	Annual Decomposable Material Placement Limit (tpy)	LFG NMOC Concentration Limit, rolling 3-yr average (ppmv as C6 @ 50% CH4)
New FA1 Baseline		**142.940**	47.750	1,600,000	
Prior FA2 Fill	11.114*	152.605	67.278	1,600,000	1,000
1/1/2029	17.371	167.710	76.878	1,600,000	1,000
1/1/2035	17.243	182.704	88.000	1,600,000	1,000
1/2/2042		182.704	88.000	1,600,000	1,000

These limits and all subsequent limits are effective upon commencement of waste disposal in Fill Area 2.

Offset values include 1.15 multiplier, per Rule 2-2.

* Offsets already provided.

b. The Permit Holder shall conduct a fugitive POC emissions reassessment for the S-2 Altamont Landfill in accordance with the schedule and procedures identified below.

i. A reassessment of the annual fugitive POC emission rate from the S-2 Altamont Landfill (Fill Areas 1 and 2 combined) shall be submitted to the District each year by no later than July 1st. The first reassessment is due the first July 1st after waste placement in Fill Area 2 commences. The reassessment shall be addressed to the attention of the District permit engineer assigned to this site, Engineering Division, BAAQMD, 939 Ellis St., San Francisco, CA 94109.

ii. The fugitive POC emissions reassessment shall use the EPA LANDGEM program to determine the projected amount of landfill gas (scum) and NMOC (tons/year) that will be generated by S-2 (Fill Areas 1 and 2 combined) for each year from 1980 through at least 2080. The Permit Holder shall use the following LANDGEM User Input Data: methane generation rate (k) = 0.02 year-1, potential methane generation capacity (L_0) = 100 m^3/Mg, methane content = 50%. The Permit Holder shall use the best available data for the amount of decomposable materials placed in the landfill from 1980 through ~~2008~~ 2016. For calendar year ~~2009~~ 2017 and later, the Permit Holder shall use the annual decomposable material placement data recorded pursuant to Part 22. For the user- specified NMOC concentration in LANDGEM, the Permit Holder shall use the most recent three-year weighted average NMOC concentration data (ppmv of NMOC expressed as hexane and corrected to 50% methane) recorded pursuant to Part 14b.

iii. Each reassessment report shall include the fugitive POC emission rate determined for the current calendar year and for each subsequent year through the projected peak landfill gas generation year. Fugitive POC emissions shall be determined using the following equation:

$$POC_{fugitive} = NMOC_{generated} * 0.25 * 0.98$$

where: $POC_{fugitive}$ is the projected amount of fugitive POC emissions (tons/year) for a particular calendar year $NMOC_{generated}$ is the projected amount of NMOC generated (tons/year) as determined by LANDGEM using the User- Input Data discussed above.

0.25 is the assumed fugitive emission fraction (75% captured and 25% fugitive) for the total NMOC generated 0.98 is the assumed POC fraction (by weight) of the total NMOC emission rate

iv. The current and projected annual fugitive POC emission rates determined per Part 17b(iii) shall be compared to the fugitive POC emission limits in the table in Part 17a. If the projected peak fugitive POC emission rate for the landfill is less than the maximum POC emissions limit in the table, the Permit Holder may, at his or her discretion, request that the District modify the Part 17a table limits and ERC submittal requirements based on the updated fugitive POC emissions calculations. This condition change request shall be submitted in the form of a District permit application, and the District will handle the request as an administrative permit condition change. If the peak fugitive POC emissions for S-2 are projected to exceed the maximum fugitive POC emission limit of ~~111.506~~ 182.704 tons/year, the Permit Holder must submit a permit application to request an increase of this limit by no later than October 1st of the year in which the fugitive POC emissions reassessment was due. In this latter case, the permit application cannot be handled administratively, but the District will review the circumstances leading to the need to increase the maximum fugitive POC emissions for the landfill to determine if the change constitutes an alteration or a modification of S-2.

18. The Permit Holder shall comply with the following waste acceptance and disposal limits and shall obtain the appropriate New Source Review permit, if one of the following limits is exceeded:

a. Total waste accepted and placed at the landfill shall not exceed 11,150 tons in any day (except during temporary emergency situations approved by the Local Enforcement Agency). (Basis: Regulation 2-1-301)

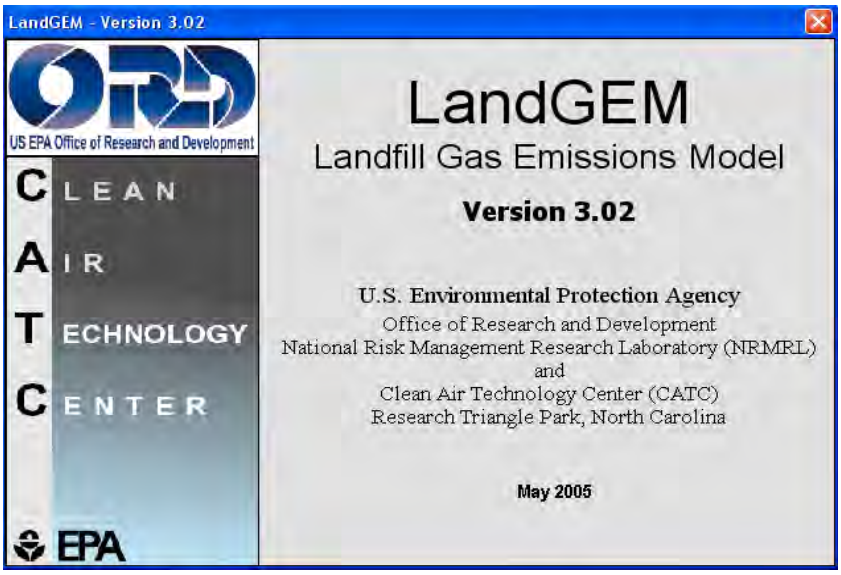
b. The amount of non-hazardous sludge accepted and placed at the landfill shall not exceed 5,000 tons in any day. (Basis: Regulation 2-1-301)

c. The maximum design capacity of the landfill (total volume of solid waste placed in the landfill where solid waste has the same meaning as the definition in 40 CFR Part 60.751) shall not exceed 124,400,000 cubic yards. (Basis: Regulation 2-1-301)

d. The total cumulative amount of all waste placed in Fill Area 1 of the landfill shall not exceed ~~47,100,000~~ 51,020,000 tons. Exceedance of the cumulative tonnage limit is not a violation of the permit and does not trigger the requirement to obtain a New Source review permit, if the operator can, within 30 days of the date of discovery of the exceedance, provide documentation to the District demonstrating, in accordance with BAAQMD Regulation 2-1-234.3, that the limit should be higher. (Basis: Regulation 2-1-234.3)

APPENDIX B

LANDGEM MODEL RESULTS – FA1 BASELINE



Summary Report

Landfill Name or Identifier: ALRRF FA1 Revised Baseline

Date: Tuesday, May 30, 2017

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,

Q_{CH4} = annual methane generation in the year of the calculation ($m^3/year$)
i = 1-year time increment
n = (year of the calculation) - (initial year of waste acceptance)
j = 0.1-year time increment
k = methane generation rate ($year^{-1}$)
L_o = potential methane generation capacity (m^3/Mg)
M_i = mass of waste accepted in the i^{th} year (Mg)
t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (*decimal years*, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landflpg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year	**1980**	
Landfill Closure Year (with 80-year limit)	**2016**	
Actual Closure Year (without limit)	***2016***	
Have Model Calculate Closure Year?	**No**	
Waste Design Capacity		*short tons*

MODEL PARAMETERS

Methane Generation Rate, k	**0.020**	*year $^{-1}$*
Potential Methane Generation Capacity, L_o	**100**	*m^3/Mg*
NMOC Concentration	**1,192**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

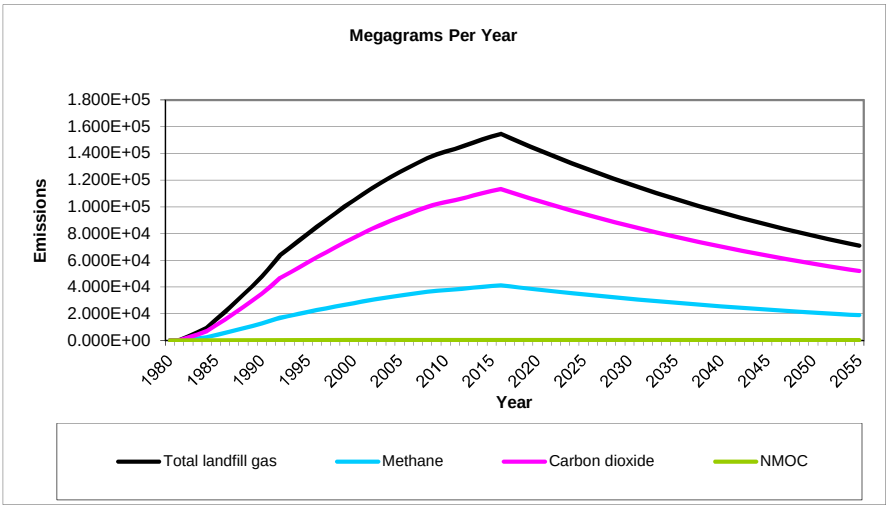
WASTE ACCEPTANCE RATES

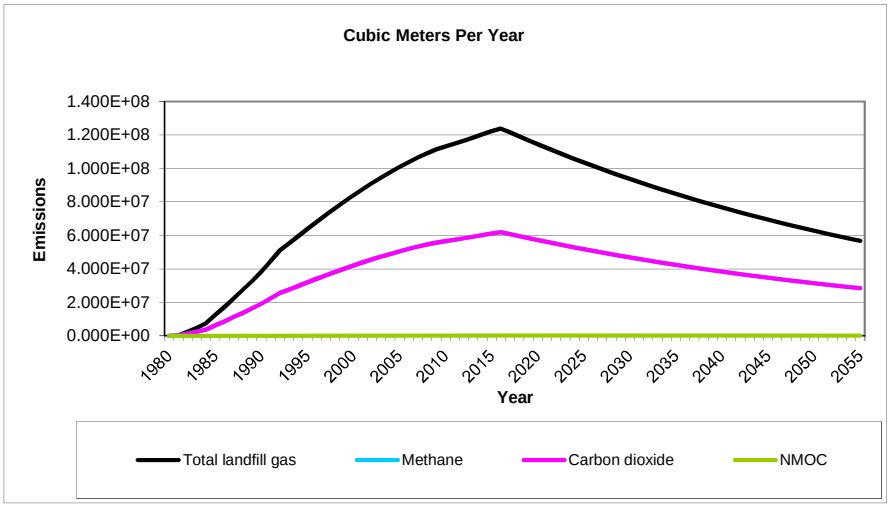
Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1980	45,000	49,500	0	0
1981	558,727	614,600	45,000	49,500
1982	621,273	683,400	603,727	664,100
1983	734,000	807,400	1,225,000	1,347,500
1984	1,229,091	1,352,000	1,959,000	2,154,900
1985	1,286,364	1,415,000	3,188,091	3,506,900
1986	1,379,091	1,517,000	4,474,455	4,921,900
1987	1,446,364	1,591,000	5,853,545	6,438,900
1988	1,440,909	1,585,000	7,299,909	8,029,900
1989	1,551,818	1,707,000	8,740,818	9,614,900
1990	1,782,727	1,961,000	10,292,636	11,321,900
1991	1,860,388	2,046,427	12,075,364	13,282,900
1992	1,301,501	1,431,651	13,935,752	15,329,327
1993	1,387,627	1,526,390	15,237,253	16,760,978
1994	1,365,639	1,502,203	16,624,880	18,287,368
1995	1,421,351	1,563,486	17,990,519	19,789,571
1996	1,339,079	1,472,987	19,411,870	21,353,057
1997	1,372,387	1,509,626	20,750,949	22,826,044
1998	1,395,035	1,534,539	22,123,336	24,335,670
1999	1,330,907	1,463,998	23,518,372	25,870,209
2000	1,369,725	1,506,697	24,849,279	27,334,207
2001	1,367,823	1,504,605	26,219,004	28,840,904
2002	1,286,251	1,414,876	27,586,826	30,345,509
2003	1,278,851	1,406,736	28,873,077	31,760,385
2004	1,274,609	1,402,070	30,151,928	33,167,121
2005	1,219,471	1,341,418	31,426,537	34,569,191
2006	1,215,687	1,337,256	32,646,008	35,910,609
2007	1,203,513	1,323,864	33,861,695	37,247,865
2008	1,116,710	1,228,381	35,065,208	38,571,729
2009	978,655	1,076,520	36,181,918	39,800,110
2010	984,745	1,083,219	37,160,573	40,876,630
2011	1,029,486	1,132,435	38,145,317	41,959,849
2012	1,061,502	1,167,652	39,174,804	43,092,284
2013	1,066,515	1,173,166	40,236,305	44,259,936
2014	1,061,600	1,167,760	41,302,820	45,433,102
2015	1,007,253	1,107,978	42,364,420	46,600,862
2016	37,418	41,160	43,371,673	47,708,840
2017	0	0	43,409,091	47,750,000
2018	0	0	43,409,091	47,750,000
2019	0	0	43,409,091	47,750,000

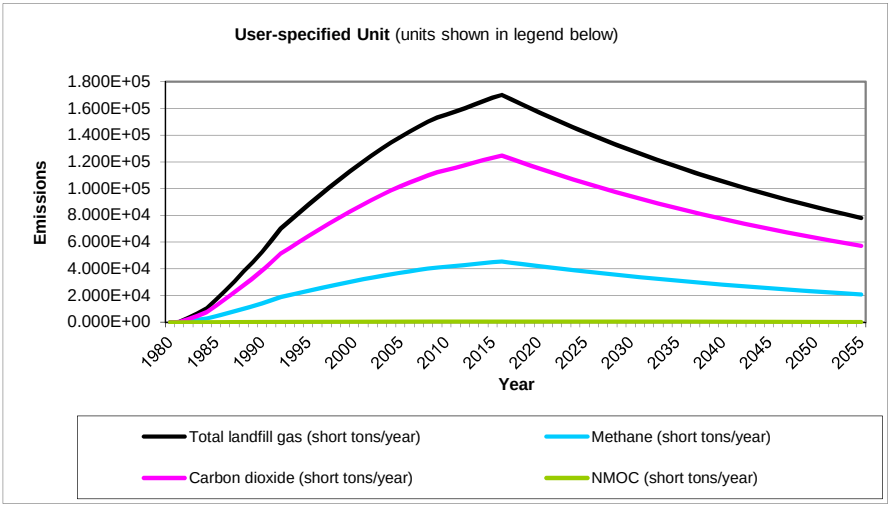
WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2020	0	0	43,409,091	47,750,000
2021	0	0	43,409,091	47,750,000
2022	0	0	43,409,091	47,750,000
2023	0	0	43,409,091	47,750,000
2024	0	0	43,409,091	47,750,000
2025	0	0	43,409,091	47,750,000
2026	0	0	43,409,091	47,750,000
2027	0	0	43,409,091	47,750,000
2028	0	0	43,409,091	47,750,000
2029	0	0	43,409,091	47,750,000
2030	0	0	43,409,091	47,750,000
2031	0	0	43,409,091	47,750,000
2032	0	0	43,409,091	47,750,000
2033	0	0	43,409,091	47,750,000
2034	0	0	43,409,091	47,750,000
2035	0	0	43,409,091	47,750,000
2036	0	0	43,409,091	47,750,000
2037	0	0	43,409,091	47,750,000
2038	0	0	43,409,091	47,750,000
2039	0	0	43,409,091	47,750,000
2040	0	0	43,409,091	47,750,000
2041	0	0	43,409,091	47,750,000
2042	0	0	43,409,091	47,750,000
2043	0	0	43,409,091	47,750,000
2044	0	0	43,409,091	47,750,000
2045	0	0	43,409,091	47,750,000
2046	0	0	43,409,091	47,750,000
2047	0	0	43,409,091	47,750,000
2048	0	0	43,409,091	47,750,000
2049	0	0	43,409,091	47,750,000
2050	0	0	43,409,091	47,750,000
2051	0	0	43,409,091	47,750,000
2052	0	0	43,409,091	47,750,000
2053	0	0	43,409,091	47,750,000
2054	0	0	43,409,091	47,750,000
2055	0	0	43,409,091	47,750,000
2056	0	0	43,409,091	47,750,000
2057	0	0	43,409,091	47,750,000
2058	0	0	43,409,091	47,750,000
2059	0	0	43,409,091	47,750,000

Graphs


Megagrams Per Year
Emissions
1.800E+05
1.600E+05
1.400E+05
1.200E+05
1.000E+05
8.000E+04
6.000E+04
4.000E+04
2.000E+04
0.000E+00
1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
1.400E+08
1.200E+08
1.000E+08
8.000E+07
6.000E+07
4.000E+07
2.000E+07
0.000E+00
1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
1.800E+05
1.600E+05
1.400E+05
1.200E+05
1.000E+05
8.000E+04
6.000E+04
4.000E+04
2.000E+04
0.000E+00
1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055
Year
Total landfill gas (short tons/year)
Methane (short tons/year)
Carbon dioxide (short tons/year)
NMOC (short tons/year)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1980	0	0	0	0	0	0
1981	2.228E+02	1.784E+05	1.199E+01	5.951E+01	8.920E+04	5.993E+00
1982	2.984E+03	2.390E+06	1.606E+02	7.972E+02	1.195E+06	8.028E+01
1983	6.001E+03	4.805E+06	3.229E+02	1.603E+03	2.403E+06	1.614E+02
1984	9.516E+03	7.620E+06	5.120E+02	2.542E+03	3.810E+06	2.560E+02
1985	1.541E+04	1.234E+07	8.292E+02	4.117E+03	6.171E+06	4.146E+02
1986	2.148E+04	1.720E+07	1.155E+03	5.736E+03	8.598E+06	5.777E+02
1987	2.788E+04	2.232E+07	1.500E+03	7.446E+03	1.116E+07	7.499E+02
1988	3.449E+04	2.761E+07	1.855E+03	9.212E+03	1.381E+07	9.277E+02
1989	4.094E+04	3.278E+07	2.202E+03	1.093E+04	1.639E+07	1.101E+03
1990	4.781E+04	3.828E+07	2.572E+03	1.277E+04	1.914E+07	1.286E+03
1991	5.569E+04	4.459E+07	2.996E+03	1.487E+04	2.230E+07	1.498E+03
1992	6.379E+04	5.108E+07	3.432E+03	1.704E+04	2.554E+07	1.716E+03
1993	6.897E+04	5.523E+07	3.711E+03	1.842E+04	2.762E+07	1.856E+03
1994	7.448E+04	5.964E+07	4.007E+03	1.989E+04	2.982E+07	2.004E+03
1995	7.976E+04	6.387E+07	4.292E+03	2.131E+04	3.194E+07	2.146E+03
1996	8.522E+04	6.824E+07	4.585E+03	2.276E+04	3.412E+07	2.293E+03
1997	9.016E+04	7.220E+07	4.851E+03	2.408E+04	3.610E+07	2.426E+03
1998	9.517E+04	7.621E+07	5.121E+03	2.542E+04	3.810E+07	2.560E+03
1999	1.002E+05	8.023E+07	5.391E+03	2.676E+04	4.012E+07	2.695E+03
2000	1.048E+05	8.392E+07	5.638E+03	2.799E+04	4.196E+07	2.819E+03
2001	1.095E+05	8.769E+07	5.892E+03	2.925E+04	4.384E+07	2.946E+03
2002	1.141E+05	9.137E+07	6.139E+03	3.048E+04	4.569E+07	3.070E+03
2003	1.182E+05	9.466E+07	6.360E+03	3.158E+04	4.733E+07	3.180E+03
2004	1.222E+05	9.786E+07	6.575E+03	3.264E+04	4.893E+07	3.288E+03
2005	1.261E+05	1.010E+08	6.784E+03	3.368E+04	5.049E+07	3.392E+03
2006	1.296E+05	1.038E+08	6.975E+03	3.463E+04	5.190E+07	3.487E+03
2007	1.331E+05	1.066E+08	7.160E+03	3.555E+04	5.329E+07	3.580E+03
2008	1.364E+05	1.092E+08	7.339E+03	3.644E+04	5.462E+07	3.670E+03
2009	1.392E+05	1.115E+08	7.491E+03	3.719E+04	5.575E+07	3.746E+03
2010	1.413E+05	1.132E+08	7.604E+03	3.775E+04	5.658E+07	3.802E+03
2011	1.434E+05	1.148E+08	7.715E+03	3.830E+04	5.742E+07	3.858E+03
2012	1.457E+05	1.166E+08	7.837E+03	3.891E+04	5.832E+07	3.918E+03
2013	1.480E+05	1.185E+08	7.964E+03	3.954E+04	5.927E+07	3.982E+03
2014	1.504E+05	1.204E+08	8.091E+03	4.017E+04	6.021E+07	4.045E+03
2015	1.527E+05	1.222E+08	8.213E+03	4.078E+04	6.112E+07	4.107E+03
2016	1.546E+05	1.238E+08	8.319E+03	4.130E+04	6.191E+07	4.160E+03
2017	1.517E+05	1.215E+08	8.164E+03	4.053E+04	6.075E+07	4.082E+03
2018	1.487E+05	1.191E+08	8.003E+03	3.973E+04	5.955E+07	4.001E+03
2019	1.458E+05	1.167E+08	7.844E+03	3.894E+04	5.837E+07	3.922E+03
2020	1.429E+05	1.144E+08	7.689E+03	3.817E+04	5.722E+07	3.844E+03
2021	1.401E+05	1.122E+08	7.537E+03	3.742E+04	5.608E+07	3.768E+03
2022	1.373E+05	1.099E+08	7.387E+03	3.668E+04	5.497E+07	3.694E+03
2023	1.346E+05	1.078E+08	7.241E+03	3.595E+04	5.388E+07	3.621E+03
2024	1.319E+05	1.056E+08	7.098E+03	3.524E+04	5.282E+07	3.549E+03
2025	1.293E+05	1.035E+08	6.957E+03	3.454E+04	5.177E+07	3.479E+03
2026	1.267E+05	1.015E+08	6.819E+03	3.386E+04	5.075E+07	3.410E+03
2027	1.242E+05	9.948E+07	6.684E+03	3.319E+04	4.974E+07	3.342E+03
2028	1.218E+05	9.751E+07	6.552E+03	3.253E+04	4.876E+07	3.276E+03
2029	1.194E+05	9.558E+07	6.422E+03	3.188E+04	4.779E+07	3.211E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2030	1.170E+05	9.369E+07	6.295E+03	3.125E+04	4.685E+07	3.148E+03
2031	1.147E+05	9.184E+07	6.170E+03	3.063E+04	4.592E+07	3.085E+03
2032	1.124E+05	9.002E+07	6.048E+03	3.003E+04	4.501E+07	3.024E+03
2033	1.102E+05	8.823E+07	5.928E+03	2.943E+04	4.412E+07	2.964E+03
2034	1.080E+05	8.649E+07	5.811E+03	2.885E+04	4.324E+07	2.906E+03
2035	1.059E+05	8.477E+07	5.696E+03	2.828E+04	4.239E+07	2.848E+03
2036	1.038E+05	8.310E+07	5.583E+03	2.772E+04	4.155E+07	2.792E+03
2037	1.017E+05	8.145E+07	5.473E+03	2.717E+04	4.073E+07	2.736E+03
2038	9.970E+04	7.984E+07	5.364E+03	2.663E+04	3.992E+07	2.682E+03
2039	9.773E+04	7.826E+07	5.258E+03	2.610E+04	3.913E+07	2.629E+03
2040	9.579E+04	7.671E+07	5.154E+03	2.559E+04	3.835E+07	2.577E+03
2041	9.390E+04	7.519E+07	5.052E+03	2.508E+04	3.759E+07	2.526E+03
2042	9.204E+04	7.370E+07	4.952E+03	2.458E+04	3.685E+07	2.476E+03
2043	9.022E+04	7.224E+07	4.854E+03	2.410E+04	3.612E+07	2.427E+03
2044	8.843E+04	7.081E+07	4.758E+03	2.362E+04	3.540E+07	2.379E+03
2045	8.668E+04	6.941E+07	4.663E+03	2.315E+04	3.470E+07	2.332E+03
2046	8.496E+04	6.803E+07	4.571E+03	2.269E+04	3.402E+07	2.286E+03
2047	8.328E+04	6.669E+07	4.481E+03	2.224E+04	3.334E+07	2.240E+03
2048	8.163E+04	6.537E+07	4.392E+03	2.180E+04	3.268E+07	2.196E+03
2049	8.001E+04	6.407E+07	4.305E+03	2.137E+04	3.204E+07	2.152E+03
2050	7.843E+04	6.280E+07	4.220E+03	2.095E+04	3.140E+07	2.110E+03
2051	7.688E+04	6.156E+07	4.136E+03	2.053E+04	3.078E+07	2.068E+03
2052	7.535E+04	6.034E+07	4.054E+03	2.013E+04	3.017E+07	2.027E+03
2053	7.386E+04	5.915E+07	3.974E+03	1.973E+04	2.957E+07	1.987E+03
2054	7.240E+04	5.797E+07	3.895E+03	1.934E+04	2.899E+07	1.948E+03
2055	7.097E+04	5.683E+07	3.818E+03	1.896E+04	2.841E+07	1.909E+03
2056	6.956E+04	5.570E+07	3.743E+03	1.858E+04	2.785E+07	1.871E+03
2057	6.818E+04	5.460E+07	3.668E+03	1.821E+04	2.730E+07	1.834E+03
2058	6.683E+04	5.352E+07	3.596E+03	1.785E+04	2.676E+07	1.798E+03
2059	6.551E+04	5.246E+07	3.525E+03	1.750E+04	2.623E+07	1.762E+03
2060	6.421E+04	5.142E+07	3.455E+03	1.715E+04	2.571E+07	1.727E+03
2061	6.294E+04	5.040E+07	3.386E+03	1.681E+04	2.520E+07	1.693E+03
2062	6.169E+04	4.940E+07	3.319E+03	1.648E+04	2.470E+07	1.660E+03
2063	6.047E+04	4.842E+07	3.254E+03	1.615E+04	2.421E+07	1.627E+03
2064	5.928E+04	4.747E+07	3.189E+03	1.583E+04	2.373E+07	1.595E+03
2065	5.810E+04	4.653E+07	3.126E+03	1.552E+04	2.326E+07	1.563E+03
2066	5.695E+04	4.560E+07	3.064E+03	1.521E+04	2.280E+07	1.532E+03
2067	5.582E+04	4.470E+07	3.003E+03	1.491E+04	2.235E+07	1.502E+03
2068	5.472E+04	4.382E+07	2.944E+03	1.462E+04	2.191E+07	1.472E+03
2069	5.363E+04	4.295E+07	2.886E+03	1.433E+04	2.147E+07	1.443E+03
2070	5.257E+04	4.210E+07	2.829E+03	1.404E+04	2.105E+07	1.414E+03
2071	5.153E+04	4.126E+07	2.773E+03	1.376E+04	2.063E+07	1.386E+03
2072	5.051E+04	4.045E+07	2.718E+03	1.349E+04	2.022E+07	1.359E+03
2073	4.951E+04	3.965E+07	2.664E+03	1.322E+04	1.982E+07	1.332E+03
2074	4.853E+04	3.886E+07	2.611E+03	1.296E+04	1.943E+07	1.306E+03
2075	4.757E+04	3.809E+07	2.559E+03	1.271E+04	1.905E+07	1.280E+03
2076	4.663E+04	3.734E+07	2.509E+03	1.245E+04	1.867E+07	1.254E+03
2077	4.570E+04	3.660E+07	2.459E+03	1.221E+04	1.830E+07	1.230E+03
2078	4.480E+04	3.587E+07	2.410E+03	1.197E+04	1.794E+07	1.205E+03
2079	4.391E+04	3.516E+07	2.363E+03	1.173E+04	1.758E+07	1.181E+03
2080	4.304E+04	3.447E+07	2.316E+03	1.150E+04	1.723E+07	1.158E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2081	4.219E+04	3.378E+07	2.270E+03	1.127E+04	1.689E+07	1.135E+03
2082	4.136E+04	3.312E+07	2.225E+03	1.105E+04	1.656E+07	1.113E+03
2083	4.054E+04	3.246E+07	2.181E+03	1.083E+04	1.623E+07	1.090E+03
2084	3.973E+04	3.182E+07	2.138E+03	1.061E+04	1.591E+07	1.069E+03
2085	3.895E+04	3.119E+07	2.095E+03	1.040E+04	1.559E+07	1.048E+03
2086	3.818E+04	3.057E+07	2.054E+03	1.020E+04	1.528E+07	1.027E+03
2087	3.742E+04	2.996E+07	2.013E+03	9.995E+03	1.498E+07	1.007E+03
2088	3.668E+04	2.937E+07	1.973E+03	9.797E+03	1.469E+07	9.867E+02
2089	3.595E+04	2.879E+07	1.934E+03	9.603E+03	1.439E+07	9.672E+02
2090	3.524E+04	2.822E+07	1.896E+03	9.413E+03	1.411E+07	9.480E+02
2091	3.454E+04	2.766E+07	1.858E+03	9.227E+03	1.383E+07	9.292E+02
2092	3.386E+04	2.711E+07	1.822E+03	9.044E+03	1.356E+07	9.108E+02
2093	3.319E+04	2.658E+07	1.786E+03	8.865E+03	1.329E+07	8.928E+02
2094	3.253E+04	2.605E+07	1.750E+03	8.689E+03	1.302E+07	8.751E+02
2095	3.189E+04	2.553E+07	1.716E+03	8.517E+03	1.277E+07	8.578E+02
2096	3.126E+04	2.503E+07	1.682E+03	8.349E+03	1.251E+07	8.408E+02
2097	3.064E+04	2.453E+07	1.648E+03	8.183E+03	1.227E+07	8.242E+02
2098	3.003E+04	2.405E+07	1.616E+03	8.021E+03	1.202E+07	8.078E+02
2099	2.944E+04	2.357E+07	1.584E+03	7.863E+03	1.179E+07	7.918E+02
2100	2.885E+04	2.310E+07	1.552E+03	7.707E+03	1.155E+07	7.762E+02
2101	2.828E+04	2.265E+07	1.522E+03	7.554E+03	1.132E+07	7.608E+02
2102	2.772E+04	2.220E+07	1.491E+03	7.405E+03	1.110E+07	7.457E+02
2103	2.717E+04	2.176E+07	1.462E+03	7.258E+03	1.088E+07	7.310E+02
2104	2.663E+04	2.133E+07	1.433E+03	7.114E+03	1.066E+07	7.165E+02
2105	2.611E+04	2.091E+07	1.405E+03	6.973E+03	1.045E+07	7.023E+02
2106	2.559E+04	2.049E+07	1.377E+03	6.835E+03	1.025E+07	6.884E+02
2107	2.508E+04	2.009E+07	1.350E+03	6.700E+03	1.004E+07	6.748E+02
2108	2.459E+04	1.969E+07	1.323E+03	6.567E+03	9.844E+06	6.614E+02
2109	2.410E+04	1.930E+07	1.297E+03	6.437E+03	9.649E+06	6.483E+02
2110	2.362E+04	1.892E+07	1.271E+03	6.310E+03	9.458E+06	6.355E+02
2111	2.315E+04	1.854E+07	1.246E+03	6.185E+03	9.271E+06	6.229E+02
2112	2.270E+04	1.817E+07	1.221E+03	6.062E+03	9.087E+06	6.106E+02
2113	2.225E+04	1.781E+07	1.197E+03	5.942E+03	8.907E+06	5.985E+02
2114	2.181E+04	1.746E+07	1.173E+03	5.825E+03	8.731E+06	5.866E+02
2115	2.137E+04	1.712E+07	1.150E+03	5.709E+03	8.558E+06	5.750E+02
2116	2.095E+04	1.678E+07	1.127E+03	5.596E+03	8.388E+06	5.636E+02
2117	2.054E+04	1.644E+07	1.105E+03	5.485E+03	8.222E+06	5.525E+02
2118	2.013E+04	1.612E+07	1.083E+03	5.377E+03	8.059E+06	5.415E+02
2119	1.973E+04	1.580E+07	1.062E+03	5.270E+03	7.900E+06	5.308E+02
2120	1.934E+04	1.549E+07	1.041E+03	5.166E+03	7.743E+06	5.203E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1980	0	0	0	0	0	0
1981	1.633E+02	8.920E+04	1.796E+02	7.622E-01	2.126E+02	8.384E-01
1982	2.187E+03	1.195E+06	2.406E+03	1.021E+01	2.849E+03	1.123E+01
1983	4.398E+03	2.403E+06	4.838E+03	2.053E+01	5.728E+03	2.258E+01
1984	6.974E+03	3.810E+06	7.672E+03	3.256E+01	9.083E+03	3.581E+01
1985	1.130E+04	6.171E+06	1.243E+04	5.273E+01	1.471E+04	5.800E+01
1986	1.574E+04	8.598E+06	1.731E+04	7.348E+01	2.050E+04	8.082E+01
1987	2.043E+04	1.116E+07	2.247E+04	9.538E+01	2.661E+04	1.049E+02
1988	2.527E+04	1.381E+07	2.780E+04	1.180E+02	3.292E+04	1.298E+02
1989	3.000E+04	1.639E+07	3.300E+04	1.401E+02	3.907E+04	1.541E+02
1990	3.504E+04	1.914E+07	3.854E+04	1.636E+02	4.563E+04	1.799E+02
1991	4.081E+04	2.230E+07	4.489E+04	1.905E+02	5.315E+04	2.096E+02
1992	4.675E+04	2.554E+07	5.143E+04	2.183E+02	6.089E+04	2.401E+02
1993	5.055E+04	2.762E+07	5.561E+04	2.360E+02	6.584E+04	2.596E+02
1994	5.458E+04	2.982E+07	6.004E+04	2.548E+02	7.109E+04	2.803E+02
1995	5.846E+04	3.194E+07	6.430E+04	2.729E+02	7.614E+04	3.002E+02
1996	6.246E+04	3.412E+07	6.870E+04	2.916E+02	8.134E+04	3.207E+02
1997	6.608E+04	3.610E+07	7.269E+04	3.085E+02	8.606E+04	3.393E+02
1998	6.975E+04	3.810E+07	7.673E+04	3.256E+02	9.084E+04	3.582E+02
1999	7.343E+04	4.012E+07	8.077E+04	3.428E+02	9.563E+04	3.771E+02
2000	7.681E+04	4.196E+07	8.449E+04	3.586E+02	1.000E+05	3.944E+02
2001	8.025E+04	4.384E+07	8.828E+04	3.747E+02	1.045E+05	4.121E+02
2002	8.363E+04	4.569E+07	9.199E+04	3.904E+02	1.089E+05	4.294E+02
2003	8.664E+04	4.733E+07	9.530E+04	4.045E+02	1.128E+05	4.449E+02
2004	8.956E+04	4.893E+07	9.852E+04	4.181E+02	1.166E+05	4.599E+02
2005	9.241E+04	5.049E+07	1.017E+05	4.314E+02	1.204E+05	4.746E+02
2006	9.501E+04	5.190E+07	1.045E+05	4.435E+02	1.237E+05	4.879E+02
2007	9.754E+04	5.329E+07	1.073E+05	4.553E+02	1.270E+05	5.009E+02
2008	9.997E+04	5.462E+07	1.100E+05	4.667E+02	1.302E+05	5.134E+02
2009	1.020E+05	5.575E+07	1.123E+05	4.764E+02	1.329E+05	5.240E+02
2010	1.036E+05	5.658E+07	1.139E+05	4.835E+02	1.349E+05	5.319E+02
2011	1.051E+05	5.742E+07	1.156E+05	4.906E+02	1.369E+05	5.397E+02
2012	1.068E+05	5.832E+07	1.174E+05	4.984E+02	1.390E+05	5.482E+02
2013	1.085E+05	5.927E+07	1.193E+05	5.065E+02	1.413E+05	5.571E+02
2014	1.102E+05	6.021E+07	1.212E+05	5.145E+02	1.435E+05	5.660E+02
2015	1.119E+05	6.112E+07	1.231E+05	5.223E+02	1.457E+05	5.745E+02
2016	1.133E+05	6.191E+07	1.247E+05	5.290E+02	1.476E+05	5.819E+02
2017	1.112E+05	6.075E+07	1.223E+05	5.192E+02	1.448E+05	5.711E+02
2018	1.090E+05	5.955E+07	1.199E+05	5.089E+02	1.420E+05	5.598E+02
2019	1.069E+05	5.837E+07	1.175E+05	4.988E+02	1.392E+05	5.487E+02
2020	1.047E+05	5.722E+07	1.152E+05	4.889E+02	1.364E+05	5.378E+02
2021	1.027E+05	5.608E+07	1.129E+05	4.793E+02	1.337E+05	5.272E+02
2022	1.006E+05	5.497E+07	1.107E+05	4.698E+02	1.311E+05	5.167E+02
2023	9.864E+04	5.388E+07	1.085E+05	4.605E+02	1.285E+05	5.065E+02
2024	9.668E+04	5.282E+07	1.064E+05	4.513E+02	1.259E+05	4.965E+02
2025	9.477E+04	5.177E+07	1.042E+05	4.424E+02	1.234E+05	4.867E+02
2026	9.289E+04	5.075E+07	1.022E+05	4.337E+02	1.210E+05	4.770E+02
2027	9.105E+04	4.974E+07	1.002E+05	4.251E+02	1.186E+05	4.676E+02
2028	8.925E+04	4.876E+07	9.817E+04	4.166E+02	1.162E+05	4.583E+02
2029	8.748E+04	4.779E+07	9.623E+04	4.084E+02	1.139E+05	4.492E+02

Results (Continued)

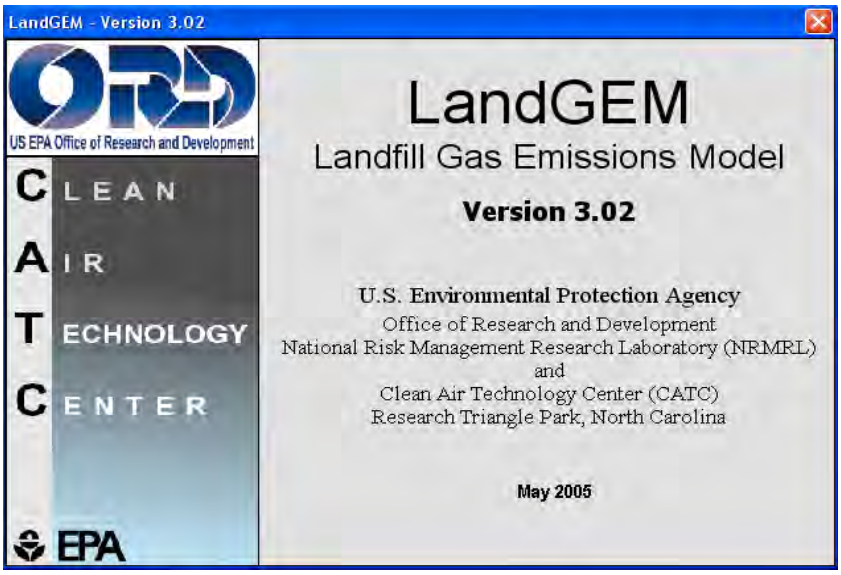
Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2030	8.575E+04	4.685E+07	9.433E+04	4.003E+02	1.117E+05	4.403E+02
2031	8.405E+04	4.592E+07	9.246E+04	3.924E+02	1.095E+05	4.316E+02
2032	8.239E+04	4.501E+07	9.063E+04	3.846E+02	1.073E+05	4.231E+02
2033	8.076E+04	4.412E+07	8.883E+04	3.770E+02	1.052E+05	4.147E+02
2034	7.916E+04	4.324E+07	8.707E+04	3.695E+02	1.031E+05	4.065E+02
2035	7.759E+04	4.239E+07	8.535E+04	3.622E+02	1.011E+05	3.984E+02
2036	7.605E+04	4.155E+07	8.366E+04	3.550E+02	9.905E+04	3.905E+02
2037	7.455E+04	4.073E+07	8.200E+04	3.480E+02	9.709E+04	3.828E+02
2038	7.307E+04	3.992E+07	8.038E+04	3.411E+02	9.517E+04	3.752E+02
2039	7.162E+04	3.913E+07	7.879E+04	3.344E+02	9.328E+04	3.678E+02
2040	7.021E+04	3.835E+07	7.723E+04	3.277E+02	9.144E+04	3.605E+02
2041	6.882E+04	3.759E+07	7.570E+04	3.213E+02	8.962E+04	3.534E+02
2042	6.745E+04	3.685E+07	7.420E+04	3.149E+02	8.785E+04	3.464E+02
2043	6.612E+04	3.612E+07	7.273E+04	3.087E+02	8.611E+04	3.395E+02
2044	6.481E+04	3.540E+07	7.129E+04	3.025E+02	8.441E+04	3.328E+02
2045	6.353E+04	3.470E+07	6.988E+04	2.966E+02	8.273E+04	3.262E+02
2046	6.227E+04	3.402E+07	6.849E+04	2.907E+02	8.110E+04	3.198E+02
2047	6.103E+04	3.334E+07	6.714E+04	2.849E+02	7.949E+04	3.134E+02
2048	5.983E+04	3.268E+07	6.581E+04	2.793E+02	7.792E+04	3.072E+02
2049	5.864E+04	3.204E+07	6.451E+04	2.738E+02	7.637E+04	3.011E+02
2050	5.748E+04	3.140E+07	6.323E+04	2.683E+02	7.486E+04	2.952E+02
2051	5.634E+04	3.078E+07	6.198E+04	2.630E+02	7.338E+04	2.893E+02
2052	5.523E+04	3.017E+07	6.075E+04	2.578E+02	7.193E+04	2.836E+02
2053	5.413E+04	2.957E+07	5.955E+04	2.527E+02	7.050E+04	2.780E+02
2054	5.306E+04	2.899E+07	5.837E+04	2.477E+02	6.911E+04	2.725E+02
2055	5.201E+04	2.841E+07	5.721E+04	2.428E+02	6.774E+04	2.671E+02
2056	5.098E+04	2.785E+07	5.608E+04	2.380E+02	6.640E+04	2.618E+02
2057	4.997E+04	2.730E+07	5.497E+04	2.333E+02	6.508E+04	2.566E+02
2058	4.898E+04	2.676E+07	5.388E+04	2.287E+02	6.379E+04	2.515E+02
2059	4.801E+04	2.623E+07	5.281E+04	2.241E+02	6.253E+04	2.465E+02
2060	4.706E+04	2.571E+07	5.177E+04	2.197E+02	6.129E+04	2.417E+02
2061	4.613E+04	2.520E+07	5.074E+04	2.153E+02	6.008E+04	2.369E+02
2062	4.522E+04	2.470E+07	4.974E+04	2.111E+02	5.889E+04	2.322E+02
2063	4.432E+04	2.421E+07	4.875E+04	2.069E+02	5.772E+04	2.276E+02
2064	4.344E+04	2.373E+07	4.779E+04	2.028E+02	5.658E+04	2.231E+02
2065	4.258E+04	2.326E+07	4.684E+04	1.988E+02	5.546E+04	2.187E+02
2066	4.174E+04	2.280E+07	4.591E+04	1.949E+02	5.436E+04	2.143E+02
2067	4.091E+04	2.235E+07	4.500E+04	1.910E+02	5.328E+04	2.101E+02
2068	4.010E+04	2.191E+07	4.411E+04	1.872E+02	5.223E+04	2.059E+02
2069	3.931E+04	2.147E+07	4.324E+04	1.835E+02	5.119E+04	2.019E+02
2070	3.853E+04	2.105E+07	4.238E+04	1.799E+02	5.018E+04	1.979E+02
2071	3.777E+04	2.063E+07	4.154E+04	1.763E+02	4.919E+04	1.939E+02
2072	3.702E+04	2.022E+07	4.072E+04	1.728E+02	4.821E+04	1.901E+02
2073	3.629E+04	1.982E+07	3.991E+04	1.694E+02	4.726E+04	1.863E+02
2074	3.557E+04	1.943E+07	3.912E+04	1.660E+02	4.632E+04	1.826E+02
2075	3.486E+04	1.905E+07	3.835E+04	1.628E+02	4.541E+04	1.790E+02
2076	3.417E+04	1.867E+07	3.759E+04	1.595E+02	4.451E+04	1.755E+02
2077	3.350E+04	1.830E+07	3.685E+04	1.564E+02	4.362E+04	1.720E+02
2078	3.283E+04	1.794E+07	3.612E+04	1.533E+02	4.276E+04	1.686E+02
2079	3.218E+04	1.758E+07	3.540E+04	1.502E+02	4.191E+04	1.653E+02
2080	3.155E+04	1.723E+07	3.470E+04	1.473E+02	4.108E+04	1.620E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2081	3.092E+04	1.689E+07	3.401E+04	1.443E+02	4.027E+04	1.588E+02
2082	3.031E+04	1.656E+07	3.334E+04	1.415E+02	3.947E+04	1.556E+02
2083	2.971E+04	1.623E+07	3.268E+04	1.387E+02	3.869E+04	1.526E+02
2084	2.912E+04	1.591E+07	3.203E+04	1.359E+02	3.793E+04	1.495E+02
2085	2.854E+04	1.559E+07	3.140E+04	1.333E+02	3.717E+04	1.466E+02
2086	2.798E+04	1.528E+07	3.078E+04	1.306E+02	3.644E+04	1.437E+02
2087	2.742E+04	1.498E+07	3.017E+04	1.280E+02	3.572E+04	1.408E+02
2088	2.688E+04	1.469E+07	2.957E+04	1.255E+02	3.501E+04	1.380E+02
2089	2.635E+04	1.439E+07	2.898E+04	1.230E+02	3.432E+04	1.353E+02
2090	2.583E+04	1.411E+07	2.841E+04	1.206E+02	3.364E+04	1.326E+02
2091	2.532E+04	1.383E+07	2.785E+04	1.182E+02	3.297E+04	1.300E+02
2092	2.481E+04	1.356E+07	2.730E+04	1.158E+02	3.232E+04	1.274E+02
2093	2.432E+04	1.329E+07	2.676E+04	1.135E+02	3.168E+04	1.249E+02
2094	2.384E+04	1.302E+07	2.623E+04	1.113E+02	3.105E+04	1.224E+02
2095	2.337E+04	1.277E+07	2.571E+04	1.091E+02	3.044E+04	1.200E+02
2096	2.291E+04	1.251E+07	2.520E+04	1.069E+02	2.983E+04	1.176E+02
2097	2.245E+04	1.227E+07	2.470E+04	1.048E+02	2.924E+04	1.153E+02
2098	2.201E+04	1.202E+07	2.421E+04	1.027E+02	2.866E+04	1.130E+02
2099	2.157E+04	1.179E+07	2.373E+04	1.007E+02	2.810E+04	1.108E+02
2100	2.115E+04	1.155E+07	2.326E+04	9.872E+01	2.754E+04	1.086E+02
2101	2.073E+04	1.132E+07	2.280E+04	9.676E+01	2.699E+04	1.064E+02
2102	2.032E+04	1.110E+07	2.235E+04	9.484E+01	2.646E+04	1.043E+02
2103	1.991E+04	1.088E+07	2.191E+04	9.297E+01	2.594E+04	1.023E+02
2104	1.952E+04	1.066E+07	2.147E+04	9.113E+01	2.542E+04	1.002E+02
2105	1.913E+04	1.045E+07	2.105E+04	8.932E+01	2.492E+04	9.825E+01
2106	1.875E+04	1.025E+07	2.063E+04	8.755E+01	2.443E+04	9.631E+01
2107	1.838E+04	1.004E+07	2.022E+04	8.582E+01	2.394E+04	9.440E+01
2108	1.802E+04	9.844E+06	1.982E+04	8.412E+01	2.347E+04	9.253E+01
2109	1.766E+04	9.649E+06	1.943E+04	8.245E+01	2.300E+04	9.070E+01
2110	1.731E+04	9.458E+06	1.904E+04	8.082E+01	2.255E+04	8.890E+01
2111	1.697E+04	9.271E+06	1.867E+04	7.922E+01	2.210E+04	8.714E+01
2112	1.663E+04	9.087E+06	1.830E+04	7.765E+01	2.166E+04	8.542E+01
2113	1.630E+04	8.907E+06	1.793E+04	7.611E+01	2.123E+04	8.373E+01
2114	1.598E+04	8.731E+06	1.758E+04	7.461E+01	2.081E+04	8.207E+01
2115	1.567E+04	8.558E+06	1.723E+04	7.313E+01	2.040E+04	8.044E+01
2116	1.535E+04	8.388E+06	1.689E+04	7.168E+01	2.000E+04	7.885E+01
2117	1.505E+04	8.222E+06	1.656E+04	7.026E+01	1.960E+04	7.729E+01
2118	1.475E+04	8.059E+06	1.623E+04	6.887E+01	1.921E+04	7.576E+01
2119	1.446E+04	7.900E+06	1.591E+04	6.751E+01	1.883E+04	7.426E+01
2120	1.417E+04	7.743E+06	1.559E+04	6.617E+01	1.846E+04	7.279E+01

APPENDIX C

LANDGEM MODEL RESULTS – FA1 + FA2



Summary Report

Landfill Name or Identifier: ALRRF Combined FA1 and FA2, Closure in 2041

Date: Tuesday, May 30, 2017

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,

Q_{CH4} = annual methane generation in the year of the calculation ($m^3/year$)
i = 1-year time increment
n = (year of the calculation) - (initial year of waste acceptance)
j = 0.1-year time increment
k = methane generation rate ($year^{-1}$)
L_o = potential methane generation capacity (m^3/Mg)
M_i = mass of waste accepted in the i^{th} year (Mg)
t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (*decimal years*, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landflpg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year	**1980**	
Landfill Closure Year (with 80-year limit)	**2041**	
Actual Closure Year (without limit)	***2041***	
Have Model Calculate Closure Year?	**No**	
Waste Design Capacity		*short tons*

MODEL PARAMETERS

Methane Generation Rate, k	**0.020**	$year^{-1}$
Potential Methane Generation Capacity, L_o	**100**	m^3/Mg
NMOC Concentration	**1,000**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

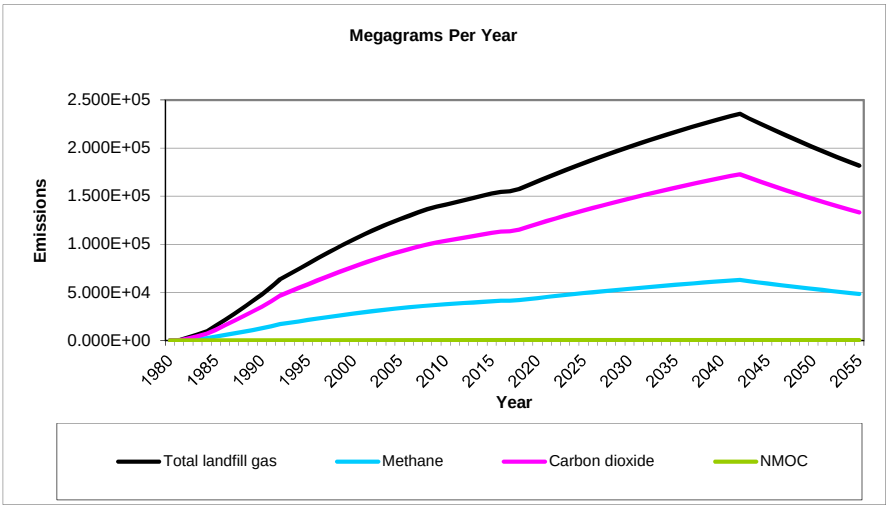
WASTE ACCEPTANCE RATES

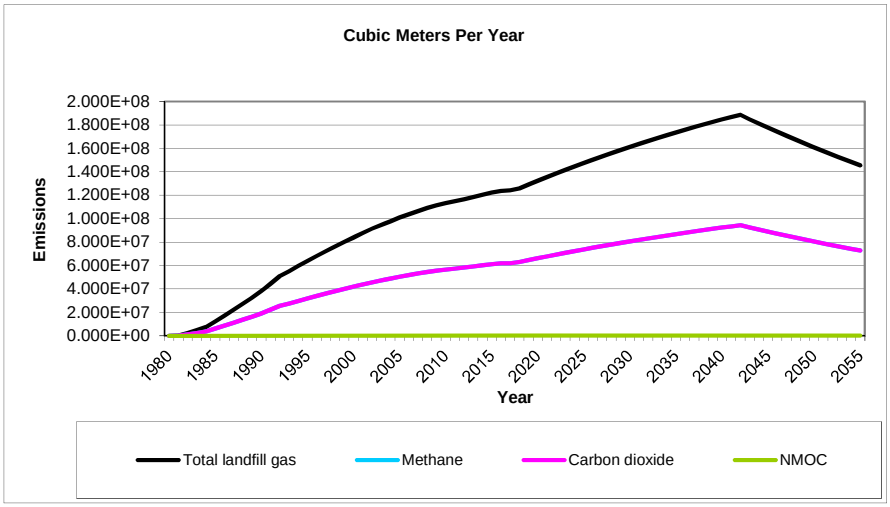
Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1980	45,000	49,500	0	0
1981	558,727	614,600	45,000	49,500
1982	621,273	683,400	603,727	664,100
1983	734,000	807,400	1,225,000	1,347,500
1984	1,229,091	1,352,000	1,959,000	2,154,900
1985	1,286,364	1,415,000	3,188,091	3,506,900
1986	1,379,091	1,517,000	4,474,455	4,921,900
1987	1,446,364	1,591,000	5,853,545	6,438,900
1988	1,440,909	1,585,000	7,299,909	8,029,900
1989	1,551,818	1,707,000	8,740,818	9,614,900
1990	1,782,727	1,961,000	10,292,636	11,321,900
1991	1,860,388	2,046,427	12,075,364	13,282,900
1992	1,301,501	1,431,651	13,935,752	15,329,327
1993	1,387,627	1,526,390	15,237,253	16,760,978
1994	1,365,639	1,502,203	16,624,880	18,287,368
1995	1,421,351	1,563,486	17,990,519	19,789,571
1996	1,339,079	1,472,987	19,411,870	21,353,057
1997	1,372,387	1,509,626	20,750,949	22,826,044
1998	1,395,035	1,534,539	22,123,336	24,335,670
1999	1,330,907	1,463,998	23,518,372	25,870,209
2000	1,369,725	1,506,697	24,849,279	27,334,207
2001	1,367,823	1,504,605	26,219,004	28,840,904
2002	1,286,251	1,414,876	27,586,826	30,345,509
2003	1,278,851	1,406,736	28,873,077	31,760,385
2004	1,274,609	1,402,070	30,151,928	33,167,121
2005	1,219,471	1,341,418	31,426,537	34,569,191
2006	1,215,687	1,337,256	32,646,008	35,910,609
2007	1,203,513	1,323,864	33,861,695	37,247,865
2008	1,116,710	1,228,381	35,065,208	38,571,729
2009	978,655	1,076,520	36,181,918	39,800,110
2010	984,745	1,083,219	37,160,573	40,876,630
2011	1,029,486	1,132,435	38,145,317	41,959,849
2012	1,061,502	1,167,652	39,174,804	43,092,284
2013	1,066,515	1,173,166	40,236,305	44,259,936
2014	1,061,600	1,167,760	41,302,820	45,433,102
2015	1,007,253	1,107,978	42,364,420	46,600,862
2016	699,046	768,951	43,371,673	47,708,840
2017	1,090,909	1,200,000	44,070,719	48,477,791
2018	1,454,545	1,600,000	45,161,628	49,677,791
2019	1,454,545	1,600,000	46,616,174	51,277,791

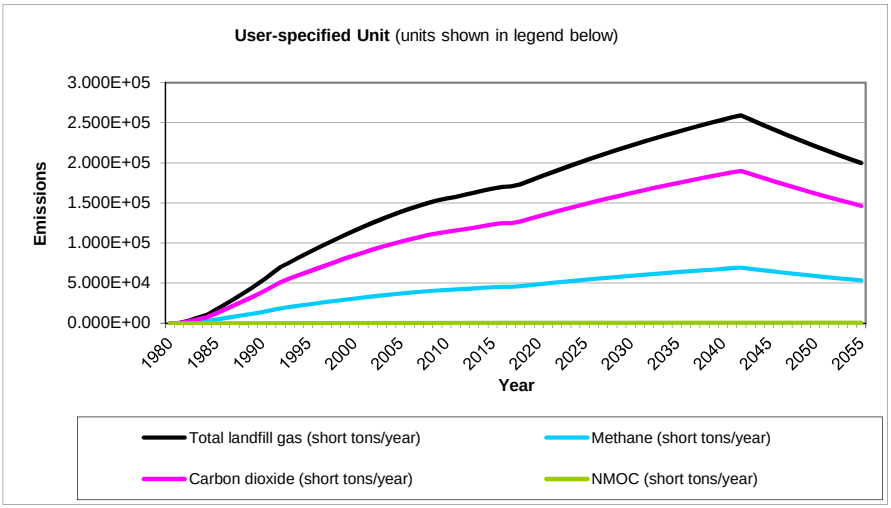
WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2020	1,454,545	1,600,000	48,070,719	52,877,791
2021	1,454,545	1,600,000	49,525,265	54,477,791
2022	1,454,545	1,600,000	50,979,810	56,077,791
2023	1,454,545	1,600,000	52,434,356	57,677,791
2024	1,454,545	1,600,000	53,888,901	59,277,791
2025	1,454,545	1,600,000	55,343,447	60,877,791
2026	1,454,545	1,600,000	56,797,992	62,477,791
2027	1,454,545	1,600,000	58,252,538	64,077,791
2028	1,454,545	1,600,000	59,707,083	65,677,791
2029	1,454,545	1,600,000	61,161,628	67,277,791
2030	1,454,545	1,600,000	62,616,174	68,877,791
2031	1,454,545	1,600,000	64,070,719	70,477,791
2032	1,454,545	1,600,000	65,525,265	72,077,791
2033	1,454,545	1,600,000	66,979,810	73,677,791
2034	1,454,545	1,600,000	68,434,356	75,277,791
2035	1,454,545	1,600,000	69,888,901	76,877,791
2036	1,454,545	1,600,000	71,343,447	78,477,791
2037	1,454,545	1,600,000	72,797,992	80,077,791
2038	1,454,545	1,600,000	74,252,538	81,677,791
2039	1,454,545	1,600,000	75,707,083	83,277,791
2040	1,454,545	1,600,000	77,161,628	84,877,791
2041	1,383,826	1,522,209	78,616,174	86,477,791
2042	0	0	80,000,000	88,000,000
2043	0	0	80,000,000	88,000,000
2044	0	0	80,000,000	88,000,000
2045	0	0	80,000,000	88,000,000
2046	0	0	80,000,000	88,000,000
2047	0	0	80,000,000	88,000,000
2048	0	0	80,000,000	88,000,000
2049	0	0	80,000,000	88,000,000
2050	0	0	80,000,000	88,000,000
2051	0	0	80,000,000	88,000,000
2052	0	0	80,000,000	88,000,000
2053	0	0	80,000,000	88,000,000
2054	0	0	80,000,000	88,000,000
2055	0	0	80,000,000	88,000,000
2056	0	0	80,000,000	88,000,000
2057	0	0	80,000,000	88,000,000
2058	0	0	80,000,000	88,000,000
2059	0	0	80,000,000	88,000,000

Graphs


Megagrams Per Year
Emissions
2.500E+05
2.000E+05
1.500E+05
1.000E+05
5.000E+04
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
2.000E+08
1.800E+08
1.600E+08
1.400E+08
1.200E+08
1.000E+08
8.000E+07
6.000E+07
4.000E+07
2.000E+07
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
3.000E+05
2.500E+05
2.000E+05
1.500E+05
1.000E+05
5.000E+04
0.000E+00
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2055
Year
Total landfill gas (short tons/year)
Methane (short tons/year)
Carbon dioxide (short tons/year)
NMOC (short tons/year)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1980	0	0	0	0	0	0
1981	2.228E+02	1.784E+05	1.199E+01	5.951E+01	8.920E+04	5.993E+00
1982	2.984E+03	2.390E+06	1.606E+02	7.972E+02	1.195E+06	8.028E+01
1983	6.001E+03	4.805E+06	3.229E+02	1.603E+03	2.403E+06	1.614E+02
1984	9.516E+03	7.620E+06	5.120E+02	2.542E+03	3.810E+06	2.560E+02
1985	1.541E+04	1.234E+07	8.292E+02	4.117E+03	6.171E+06	4.146E+02
1986	2.148E+04	1.720E+07	1.155E+03	5.736E+03	8.598E+06	5.777E+02
1987	2.788E+04	2.232E+07	1.500E+03	7.446E+03	1.116E+07	7.499E+02
1988	3.449E+04	2.761E+07	1.855E+03	9.212E+03	1.381E+07	9.277E+02
1989	4.094E+04	3.278E+07	2.202E+03	1.093E+04	1.639E+07	1.101E+03
1990	4.781E+04	3.828E+07	2.572E+03	1.277E+04	1.914E+07	1.286E+03
1991	5.569E+04	4.459E+07	2.996E+03	1.487E+04	2.230E+07	1.498E+03
1992	6.379E+04	5.108E+07	3.432E+03	1.704E+04	2.554E+07	1.716E+03
1993	6.897E+04	5.523E+07	3.711E+03	1.842E+04	2.762E+07	1.856E+03
1994	7.448E+04	5.964E+07	4.007E+03	1.989E+04	2.982E+07	2.004E+03
1995	7.976E+04	6.387E+07	4.292E+03	2.131E+04	3.194E+07	2.146E+03
1996	8.522E+04	6.824E+07	4.585E+03	2.276E+04	3.412E+07	2.293E+03
1997	9.016E+04	7.220E+07	4.851E+03	2.408E+04	3.610E+07	2.426E+03
1998	9.517E+04	7.621E+07	5.121E+03	2.542E+04	3.810E+07	2.560E+03
1999	1.002E+05	8.023E+07	5.391E+03	2.676E+04	4.012E+07	2.695E+03
2000	1.048E+05	8.392E+07	5.638E+03	2.799E+04	4.196E+07	2.819E+03
2001	1.095E+05	8.769E+07	5.892E+03	2.925E+04	4.384E+07	2.946E+03
2002	1.141E+05	9.137E+07	6.139E+03	3.048E+04	4.569E+07	3.070E+03
2003	1.182E+05	9.466E+07	6.360E+03	3.158E+04	4.733E+07	3.180E+03
2004	1.222E+05	9.786E+07	6.575E+03	3.264E+04	4.893E+07	3.288E+03
2005	1.261E+05	1.010E+08	6.784E+03	3.368E+04	5.049E+07	3.392E+03
2006	1.296E+05	1.038E+08	6.975E+03	3.463E+04	5.190E+07	3.487E+03
2007	1.331E+05	1.066E+08	7.160E+03	3.555E+04	5.329E+07	3.580E+03
2008	1.364E+05	1.092E+08	7.339E+03	3.644E+04	5.462E+07	3.670E+03
2009	1.392E+05	1.115E+08	7.491E+03	3.719E+04	5.575E+07	3.746E+03
2010	1.413E+05	1.132E+08	7.604E+03	3.775E+04	5.658E+07	3.802E+03
2011	1.434E+05	1.148E+08	7.715E+03	3.830E+04	5.742E+07	3.858E+03
2012	1.457E+05	1.166E+08	7.837E+03	3.891E+04	5.832E+07	3.918E+03
2013	1.480E+05	1.185E+08	7.964E+03	3.954E+04	5.927E+07	3.982E+03
2014	1.504E+05	1.204E+08	8.091E+03	4.017E+04	6.021E+07	4.045E+03
2015	1.527E+05	1.222E+08	8.213E+03	4.078E+04	6.112E+07	4.107E+03
2016	1.546E+05	1.238E+08	8.319E+03	4.130E+04	6.191E+07	4.160E+03
2017	1.550E+05	1.241E+08	8.340E+03	4.141E+04	6.207E+07	4.170E+03
2018	1.574E+05	1.260E+08	8.466E+03	4.203E+04	6.300E+07	4.233E+03
2019	1.614E+05	1.293E+08	8.686E+03	4.312E+04	6.464E+07	4.343E+03
2020	1.654E+05	1.325E+08	8.901E+03	4.419E+04	6.624E+07	4.451E+03
2021	1.694E+05	1.356E+08	9.112E+03	4.524E+04	6.781E+07	4.556E+03
2022	1.732E+05	1.387E+08	9.319E+03	4.627E+04	6.935E+07	4.660E+03
2023	1.770E+05	1.417E+08	9.522E+03	4.727E+04	7.086E+07	4.761E+03
2024	1.807E+05	1.447E+08	9.721E+03	4.826E+04	7.234E+07	4.861E+03
2025	1.843E+05	1.476E+08	9.916E+03	4.923E+04	7.379E+07	4.958E+03
2026	1.879E+05	1.504E+08	1.011E+04	5.018E+04	7.521E+07	5.054E+03
2027	1.913E+05	1.532E+08	1.029E+04	5.111E+04	7.661E+07	5.147E+03
2028	1.947E+05	1.559E+08	1.048E+04	5.202E+04	7.797E+07	5.239E+03
2029	1.981E+05	1.586E+08	1.066E+04	5.291E+04	7.931E+07	5.329E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2030	2.014E+05	1.612E+08	1.083E+04	5.379E+04	8.062E+07	5.417E+03
2031	2.046E+05	1.638E+08	1.101E+04	5.465E+04	8.191E+07	5.504E+03
2032	2.077E+05	1.663E+08	1.118E+04	5.549E+04	8.317E+07	5.588E+03
2033	2.108E+05	1.688E+08	1.134E+04	5.631E+04	8.441E+07	5.671E+03
2034	2.138E+05	1.712E+08	1.151E+04	5.712E+04	8.562E+07	5.753E+03
2035	2.168E+05	1.736E+08	1.167E+04	5.791E+04	8.681E+07	5.833E+03
2036	2.197E+05	1.759E+08	1.182E+04	5.869E+04	8.797E+07	5.911E+03
2037	2.226E+05	1.782E+08	1.197E+04	5.945E+04	8.911E+07	5.987E+03
2038	2.254E+05	1.805E+08	1.213E+04	6.020E+04	9.023E+07	6.063E+03
2039	2.281E+05	1.827E+08	1.227E+04	6.093E+04	9.133E+07	6.136E+03
2040	2.308E+05	1.848E+08	1.242E+04	6.165E+04	9.240E+07	6.209E+03
2041	2.334E+05	1.869E+08	1.256E+04	6.235E+04	9.346E+07	6.279E+03
2042	2.356E+05	1.887E+08	1.268E+04	6.294E+04	9.435E+07	6.339E+03
2043	2.310E+05	1.850E+08	1.243E+04	6.170E+04	9.248E+07	6.214E+03
2044	2.264E+05	1.813E+08	1.218E+04	6.048E+04	9.065E+07	6.091E+03
2045	2.219E+05	1.777E+08	1.194E+04	5.928E+04	8.885E+07	5.970E+03
2046	2.175E+05	1.742E+08	1.170E+04	5.810E+04	8.709E+07	5.852E+03
2047	2.132E+05	1.707E+08	1.147E+04	5.695E+04	8.537E+07	5.736E+03
2048	2.090E+05	1.674E+08	1.124E+04	5.583E+04	8.368E+07	5.622E+03
2049	2.049E+05	1.640E+08	1.102E+04	5.472E+04	8.202E+07	5.511E+03
2050	2.008E+05	1.608E+08	1.080E+04	5.364E+04	8.040E+07	5.402E+03
2051	1.968E+05	1.576E+08	1.059E+04	5.258E+04	7.881E+07	5.295E+03
2052	1.929E+05	1.545E+08	1.038E+04	5.153E+04	7.725E+07	5.190E+03
2053	1.891E+05	1.514E+08	1.017E+04	5.051E+04	7.572E+07	5.087E+03
2054	1.854E+05	1.484E+08	9.973E+03	4.951E+04	7.422E+07	4.987E+03
2055	1.817E+05	1.455E+08	9.776E+03	4.853E+04	7.275E+07	4.888E+03
2056	1.781E+05	1.426E+08	9.582E+03	4.757E+04	7.131E+07	4.791E+03
2057	1.746E+05	1.398E+08	9.392E+03	4.663E+04	6.989E+07	4.696E+03
2058	1.711E+05	1.370E+08	9.206E+03	4.571E+04	6.851E+07	4.603E+03
2059	1.677E+05	1.343E+08	9.024E+03	4.480E+04	6.715E+07	4.512E+03
2060	1.644E+05	1.316E+08	8.845E+03	4.391E+04	6.582E+07	4.423E+03
2061	1.612E+05	1.290E+08	8.670E+03	4.305E+04	6.452E+07	4.335E+03
2062	1.580E+05	1.265E+08	8.499E+03	4.219E+04	6.324E+07	4.249E+03
2063	1.548E+05	1.240E+08	8.330E+03	4.136E+04	6.199E+07	4.165E+03
2064	1.518E+05	1.215E+08	8.165E+03	4.054E+04	6.076E+07	4.083E+03
2065	1.488E+05	1.191E+08	8.004E+03	3.974E+04	5.956E+07	4.002E+03
2066	1.458E+05	1.168E+08	7.845E+03	3.895E+04	5.838E+07	3.923E+03
2067	1.429E+05	1.145E+08	7.690E+03	3.818E+04	5.723E+07	3.845E+03
2068	1.401E+05	1.122E+08	7.538E+03	3.742E+04	5.609E+07	3.769E+03
2069	1.373E+05	1.100E+08	7.388E+03	3.668E+04	5.498E+07	3.694E+03
2070	1.346E+05	1.078E+08	7.242E+03	3.595E+04	5.389E+07	3.621E+03
2071	1.319E+05	1.057E+08	7.099E+03	3.524E+04	5.283E+07	3.549E+03
2072	1.293E+05	1.036E+08	6.958E+03	3.454E+04	5.178E+07	3.479E+03
2073	1.268E+05	1.015E+08	6.820E+03	3.386E+04	5.075E+07	3.410E+03
2074	1.243E+05	9.950E+07	6.685E+03	3.319E+04	4.975E+07	3.343E+03
2075	1.218E+05	9.753E+07	6.553E+03	3.253E+04	4.876E+07	3.276E+03
2076	1.194E+05	9.560E+07	6.423E+03	3.189E+04	4.780E+07	3.212E+03
2077	1.170E+05	9.370E+07	6.296E+03	3.126E+04	4.685E+07	3.148E+03
2078	1.147E+05	9.185E+07	6.171E+03	3.064E+04	4.592E+07	3.086E+03
2079	1.124E+05	9.003E+07	6.049E+03	3.003E+04	4.501E+07	3.025E+03
2080	1.102E+05	8.825E+07	5.929E+03	2.944E+04	4.412E+07	2.965E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2081	1.080E+05	8.650E+07	5.812E+03	2.885E+04	4.325E+07	2.906E+03
2082	1.059E+05	8.479E+07	5.697E+03	2.828E+04	4.239E+07	2.848E+03
2083	1.038E+05	8.311E+07	5.584E+03	2.772E+04	4.155E+07	2.792E+03
2084	1.017E+05	8.146E+07	5.473E+03	2.717E+04	4.073E+07	2.737E+03
2085	9.972E+04	7.985E+07	5.365E+03	2.664E+04	3.992E+07	2.683E+03
2086	9.774E+04	7.827E+07	5.259E+03	2.611E+04	3.913E+07	2.629E+03
2087	9.581E+04	7.672E+07	5.155E+03	2.559E+04	3.836E+07	2.577E+03
2088	9.391E+04	7.520E+07	5.053E+03	2.508E+04	3.760E+07	2.526E+03
2089	9.205E+04	7.371E+07	4.953E+03	2.459E+04	3.686E+07	2.476E+03
2090	9.023E+04	7.225E+07	4.855E+03	2.410E+04	3.613E+07	2.427E+03
2091	8.844E+04	7.082E+07	4.758E+03	2.362E+04	3.541E+07	2.379E+03
2092	8.669E+04	6.942E+07	4.664E+03	2.316E+04	3.471E+07	2.332E+03
2093	8.497E+04	6.804E+07	4.572E+03	2.270E+04	3.402E+07	2.286E+03
2094	8.329E+04	6.670E+07	4.481E+03	2.225E+04	3.335E+07	2.241E+03
2095	8.164E+04	6.537E+07	4.393E+03	2.181E+04	3.269E+07	2.196E+03
2096	8.003E+04	6.408E+07	4.306E+03	2.138E+04	3.204E+07	2.153E+03
2097	7.844E+04	6.281E+07	4.220E+03	2.095E+04	3.141E+07	2.110E+03
2098	7.689E+04	6.157E+07	4.137E+03	2.054E+04	3.078E+07	2.068E+03
2099	7.536E+04	6.035E+07	4.055E+03	2.013E+04	3.017E+07	2.027E+03
2100	7.387E+04	5.915E+07	3.975E+03	1.973E+04	2.958E+07	1.987E+03
2101	7.241E+04	5.798E+07	3.896E+03	1.934E+04	2.899E+07	1.948E+03
2102	7.098E+04	5.683E+07	3.819E+03	1.896E+04	2.842E+07	1.909E+03
2103	6.957E+04	5.571E+07	3.743E+03	1.858E+04	2.785E+07	1.872E+03
2104	6.819E+04	5.461E+07	3.669E+03	1.822E+04	2.730E+07	1.834E+03
2105	6.684E+04	5.352E+07	3.596E+03	1.785E+04	2.676E+07	1.798E+03
2106	6.552E+04	5.246E+07	3.525E+03	1.750E+04	2.623E+07	1.763E+03
2107	6.422E+04	5.143E+07	3.455E+03	1.715E+04	2.571E+07	1.728E+03
2108	6.295E+04	5.041E+07	3.387E+03	1.681E+04	2.520E+07	1.693E+03
2109	6.170E+04	4.941E+07	3.320E+03	1.648E+04	2.470E+07	1.660E+03
2110	6.048E+04	4.843E+07	3.254E+03	1.616E+04	2.422E+07	1.627E+03
2111	5.928E+04	4.747E+07	3.190E+03	1.584E+04	2.374E+07	1.595E+03
2112	5.811E+04	4.653E+07	3.126E+03	1.552E+04	2.327E+07	1.563E+03
2113	5.696E+04	4.561E+07	3.065E+03	1.521E+04	2.281E+07	1.532E+03
2114	5.583E+04	4.471E+07	3.004E+03	1.491E+04	2.235E+07	1.502E+03
2115	5.473E+04	4.382E+07	2.944E+03	1.462E+04	2.191E+07	1.472E+03
2116	5.364E+04	4.295E+07	2.886E+03	1.433E+04	2.148E+07	1.443E+03
2117	5.258E+04	4.210E+07	2.829E+03	1.404E+04	2.105E+07	1.414E+03
2118	5.154E+04	4.127E+07	2.773E+03	1.377E+04	2.064E+07	1.386E+03
2119	5.052E+04	4.045E+07	2.718E+03	1.349E+04	2.023E+07	1.359E+03
2120	4.952E+04	3.965E+07	2.664E+03	1.323E+04	1.983E+07	1.332E+03

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1980	0	0	0	0	0	0
1981	1.633E+02	8.920E+04	1.796E+02	6.394E-01	1.784E+02	7.034E-01
1982	2.187E+03	1.195E+06	2.406E+03	8.566E+00	2.390E+03	9.423E+00
1983	4.398E+03	2.403E+06	4.838E+03	1.722E+01	4.805E+03	1.895E+01
1984	6.974E+03	3.810E+06	7.672E+03	2.731E+01	7.620E+03	3.004E+01
1985	1.130E+04	6.171E+06	1.243E+04	4.424E+01	1.234E+04	4.866E+01
1986	1.574E+04	8.598E+06	1.731E+04	6.164E+01	1.720E+04	6.780E+01
1987	2.043E+04	1.116E+07	2.247E+04	8.002E+01	2.232E+04	8.802E+01
1988	2.527E+04	1.381E+07	2.780E+04	9.898E+01	2.761E+04	1.089E+02
1989	3.000E+04	1.639E+07	3.300E+04	1.175E+02	3.278E+04	1.292E+02
1990	3.504E+04	1.914E+07	3.854E+04	1.372E+02	3.828E+04	1.509E+02
1991	4.081E+04	2.230E+07	4.489E+04	1.598E+02	4.459E+04	1.758E+02
1992	4.675E+04	2.554E+07	5.143E+04	1.831E+02	5.108E+04	2.014E+02
1993	5.055E+04	2.762E+07	5.561E+04	1.980E+02	5.523E+04	2.178E+02
1994	5.458E+04	2.982E+07	6.004E+04	2.138E+02	5.964E+04	2.352E+02
1995	5.846E+04	3.194E+07	6.430E+04	2.289E+02	6.387E+04	2.518E+02
1996	6.246E+04	3.412E+07	6.870E+04	2.446E+02	6.824E+04	2.691E+02
1997	6.608E+04	3.610E+07	7.269E+04	2.588E+02	7.220E+04	2.847E+02
1998	6.975E+04	3.810E+07	7.673E+04	2.732E+02	7.621E+04	3.005E+02
1999	7.343E+04	4.012E+07	8.077E+04	2.876E+02	8.023E+04	3.163E+02
2000	7.681E+04	4.196E+07	8.449E+04	3.008E+02	8.392E+04	3.309E+02
2001	8.025E+04	4.384E+07	8.828E+04	3.143E+02	8.769E+04	3.457E+02
2002	8.363E+04	4.569E+07	9.199E+04	3.275E+02	9.137E+04	3.603E+02
2003	8.664E+04	4.733E+07	9.530E+04	3.393E+02	9.466E+04	3.732E+02
2004	8.956E+04	4.893E+07	9.852E+04	3.508E+02	9.786E+04	3.858E+02
2005	9.241E+04	5.049E+07	1.017E+05	3.619E+02	1.010E+05	3.981E+02
2006	9.501E+04	5.190E+07	1.045E+05	3.721E+02	1.038E+05	4.093E+02
2007	9.754E+04	5.329E+07	1.073E+05	3.820E+02	1.066E+05	4.202E+02
2008	9.997E+04	5.462E+07	1.100E+05	3.915E+02	1.092E+05	4.307E+02
2009	1.020E+05	5.575E+07	1.123E+05	3.997E+02	1.115E+05	4.396E+02
2010	1.036E+05	5.658E+07	1.139E+05	4.056E+02	1.132E+05	4.462E+02
2011	1.051E+05	5.742E+07	1.156E+05	4.116E+02	1.148E+05	4.528E+02
2012	1.068E+05	5.832E+07	1.174E+05	4.181E+02	1.166E+05	4.599E+02
2013	1.085E+05	5.927E+07	1.193E+05	4.249E+02	1.185E+05	4.674E+02
2014	1.102E+05	6.021E+07	1.212E+05	4.316E+02	1.204E+05	4.748E+02
2015	1.119E+05	6.112E+07	1.231E+05	4.382E+02	1.222E+05	4.820E+02
2016	1.133E+05	6.191E+07	1.247E+05	4.438E+02	1.238E+05	4.882E+02
2017	1.136E+05	6.207E+07	1.250E+05	4.450E+02	1.241E+05	4.894E+02
2018	1.153E+05	6.300E+07	1.269E+05	4.516E+02	1.260E+05	4.968E+02
2019	1.183E+05	6.464E+07	1.301E+05	4.634E+02	1.293E+05	5.097E+02
2020	1.212E+05	6.624E+07	1.334E+05	4.749E+02	1.325E+05	5.223E+02
2021	1.241E+05	6.781E+07	1.365E+05	4.861E+02	1.356E+05	5.347E+02
2022	1.269E+05	6.935E+07	1.396E+05	4.972E+02	1.387E+05	5.469E+02
2023	1.297E+05	7.086E+07	1.427E+05	5.080E+02	1.417E+05	5.588E+02
2024	1.324E+05	7.234E+07	1.457E+05	5.186E+02	1.447E+05	5.705E+02
2025	1.351E+05	7.379E+07	1.486E+05	5.290E+02	1.476E+05	5.819E+02
2026	1.377E+05	7.521E+07	1.514E+05	5.392E+02	1.504E+05	5.931E+02
2027	1.402E+05	7.661E+07	1.543E+05	5.492E+02	1.532E+05	6.041E+02
2028	1.427E+05	7.797E+07	1.570E+05	5.590E+02	1.559E+05	6.149E+02
2029	1.452E+05	7.931E+07	1.597E+05	5.686E+02	1.586E+05	6.254E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2030	1.476E+05	8.062E+07	1.623E+05	5.780E+02	1.612E+05	6.358E+02
2031	1.499E+05	8.191E+07	1.649E+05	5.872E+02	1.638E+05	6.459E+02
2032	1.522E+05	8.317E+07	1.675E+05	5.963E+02	1.663E+05	6.559E+02
2033	1.545E+05	8.441E+07	1.700E+05	6.051E+02	1.688E+05	6.656E+02
2034	1.567E+05	8.562E+07	1.724E+05	6.138E+02	1.712E+05	6.752E+02
2035	1.589E+05	8.681E+07	1.748E+05	6.223E+02	1.736E+05	6.845E+02
2036	1.610E+05	8.797E+07	1.771E+05	6.307E+02	1.759E+05	6.937E+02
2037	1.631E+05	8.911E+07	1.794E+05	6.388E+02	1.782E+05	7.027E+02
2038	1.652E+05	9.023E+07	1.817E+05	6.469E+02	1.805E+05	7.115E+02
2039	1.672E+05	9.133E+07	1.839E+05	6.547E+02	1.827E+05	7.202E+02
2040	1.691E+05	9.240E+07	1.861E+05	6.624E+02	1.848E+05	7.287E+02
2041	1.711E+05	9.346E+07	1.882E+05	6.700E+02	1.869E+05	7.370E+02
2042	1.727E+05	9.435E+07	1.900E+05	6.764E+02	1.887E+05	7.440E+02
2043	1.693E+05	9.248E+07	1.862E+05	6.630E+02	1.850E+05	7.293E+02
2044	1.659E+05	9.065E+07	1.825E+05	6.499E+02	1.813E+05	7.148E+02
2045	1.626E+05	8.885E+07	1.789E+05	6.370E+02	1.777E+05	7.007E+02
2046	1.594E+05	8.709E+07	1.754E+05	6.244E+02	1.742E+05	6.868E+02
2047	1.563E+05	8.537E+07	1.719E+05	6.120E+02	1.707E+05	6.732E+02
2048	1.532E+05	8.368E+07	1.685E+05	5.999E+02	1.674E+05	6.599E+02
2049	1.501E+05	8.202E+07	1.652E+05	5.880E+02	1.640E+05	6.468E+02
2050	1.472E+05	8.040E+07	1.619E+05	5.764E+02	1.608E+05	6.340E+02
2051	1.443E+05	7.881E+07	1.587E+05	5.650E+02	1.576E+05	6.215E+02
2052	1.414E+05	7.725E+07	1.555E+05	5.538E+02	1.545E+05	6.091E+02
2053	1.386E+05	7.572E+07	1.525E+05	5.428E+02	1.514E+05	5.971E+02
2054	1.359E+05	7.422E+07	1.494E+05	5.321E+02	1.484E+05	5.853E+02
2055	1.332E+05	7.275E+07	1.465E+05	5.215E+02	1.455E+05	5.737E+02
2056	1.305E+05	7.131E+07	1.436E+05	5.112E+02	1.426E+05	5.623E+02
2057	1.279E+05	6.989E+07	1.407E+05	5.011E+02	1.398E+05	5.512E+02
2058	1.254E+05	6.851E+07	1.379E+05	4.911E+02	1.370E+05	5.403E+02
2059	1.229E+05	6.715E+07	1.352E+05	4.814E+02	1.343E+05	5.296E+02
2060	1.205E+05	6.582E+07	1.325E+05	4.719E+02	1.316E+05	5.191E+02
2061	1.181E+05	6.452E+07	1.299E+05	4.625E+02	1.290E+05	5.088E+02
2062	1.158E+05	6.324E+07	1.273E+05	4.534E+02	1.265E+05	4.987E+02
2063	1.135E+05	6.199E+07	1.248E+05	4.444E+02	1.240E+05	4.889E+02
2064	1.112E+05	6.076E+07	1.224E+05	4.356E+02	1.215E+05	4.792E+02
2065	1.090E+05	5.956E+07	1.199E+05	4.270E+02	1.191E+05	4.697E+02
2066	1.069E+05	5.838E+07	1.176E+05	4.185E+02	1.168E+05	4.604E+02
2067	1.048E+05	5.723E+07	1.152E+05	4.102E+02	1.145E+05	4.513E+02
2068	1.027E+05	5.609E+07	1.129E+05	4.021E+02	1.122E+05	4.423E+02
2069	1.006E+05	5.498E+07	1.107E+05	3.942E+02	1.100E+05	4.336E+02
2070	9.865E+04	5.389E+07	1.085E+05	3.864E+02	1.078E+05	4.250E+02
2071	9.670E+04	5.283E+07	1.064E+05	3.787E+02	1.057E+05	4.166E+02
2072	9.478E+04	5.178E+07	1.043E+05	3.712E+02	1.036E+05	4.083E+02
2073	9.291E+04	5.075E+07	1.022E+05	3.639E+02	1.015E+05	4.002E+02
2074	9.107E+04	4.975E+07	1.002E+05	3.566E+02	9.950E+04	3.923E+02
2075	8.926E+04	4.876E+07	9.819E+04	3.496E+02	9.753E+04	3.845E+02
2076	8.749E+04	4.780E+07	9.624E+04	3.427E+02	9.560E+04	3.769E+02
2077	8.576E+04	4.685E+07	9.434E+04	3.359E+02	9.370E+04	3.695E+02
2078	8.406E+04	4.592E+07	9.247E+04	3.292E+02	9.185E+04	3.622E+02
2079	8.240E+04	4.501E+07	9.064E+04	3.227E+02	9.003E+04	3.550E+02
2080	8.077E+04	4.412E+07	8.884E+04	3.163E+02	8.825E+04	3.480E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2081	7.917E+04	4.325E+07	8.709E+04	3.101E+02	8.650E+04	3.411E+02
2082	7.760E+04	4.239E+07	8.536E+04	3.039E+02	8.479E+04	3.343E+02
2083	7.606E+04	4.155E+07	8.367E+04	2.979E+02	8.311E+04	3.277E+02
2084	7.456E+04	4.073E+07	8.201E+04	2.920E+02	8.146E+04	3.212E+02
2085	7.308E+04	3.992E+07	8.039E+04	2.862E+02	7.985E+04	3.148E+02
2086	7.163E+04	3.913E+07	7.880E+04	2.805E+02	7.827E+04	3.086E+02
2087	7.022E+04	3.836E+07	7.724E+04	2.750E+02	7.672E+04	3.025E+02
2088	6.883E+04	3.760E+07	7.571E+04	2.695E+02	7.520E+04	2.965E+02
2089	6.746E+04	3.686E+07	7.421E+04	2.642E+02	7.371E+04	2.906E+02
2090	6.613E+04	3.613E+07	7.274E+04	2.590E+02	7.225E+04	2.849E+02
2091	6.482E+04	3.541E+07	7.130E+04	2.539E+02	7.082E+04	2.792E+02
2092	6.353E+04	3.471E+07	6.989E+04	2.488E+02	6.942E+04	2.737E+02
2093	6.228E+04	3.402E+07	6.850E+04	2.439E+02	6.804E+04	2.683E+02
2094	6.104E+04	3.335E+07	6.715E+04	2.391E+02	6.670E+04	2.630E+02
2095	5.983E+04	3.269E+07	6.582E+04	2.343E+02	6.537E+04	2.578E+02
2096	5.865E+04	3.204E+07	6.451E+04	2.297E+02	6.408E+04	2.527E+02
2097	5.749E+04	3.141E+07	6.324E+04	2.251E+02	6.281E+04	2.477E+02
2098	5.635E+04	3.078E+07	6.198E+04	2.207E+02	6.157E+04	2.428E+02
2099	5.523E+04	3.017E+07	6.076E+04	2.163E+02	6.035E+04	2.379E+02
2100	5.414E+04	2.958E+07	5.955E+04	2.120E+02	5.915E+04	2.332E+02
2101	5.307E+04	2.899E+07	5.838E+04	2.078E+02	5.798E+04	2.286E+02
2102	5.202E+04	2.842E+07	5.722E+04	2.037E+02	5.683E+04	2.241E+02
2103	5.099E+04	2.785E+07	5.609E+04	1.997E+02	5.571E+04	2.197E+02
2104	4.998E+04	2.730E+07	5.498E+04	1.957E+02	5.461E+04	2.153E+02
2105	4.899E+04	2.676E+07	5.389E+04	1.919E+02	5.352E+04	2.110E+02
2106	4.802E+04	2.623E+07	5.282E+04	1.881E+02	5.246E+04	2.069E+02
2107	4.707E+04	2.571E+07	5.177E+04	1.843E+02	5.143E+04	2.028E+02
2108	4.614E+04	2.520E+07	5.075E+04	1.807E+02	5.041E+04	1.988E+02
2109	4.522E+04	2.470E+07	4.974E+04	1.771E+02	4.941E+04	1.948E+02
2110	4.433E+04	2.422E+07	4.876E+04	1.736E+02	4.843E+04	1.910E+02
2111	4.345E+04	2.374E+07	4.779E+04	1.702E+02	4.747E+04	1.872E+02
2112	4.259E+04	2.327E+07	4.685E+04	1.668E+02	4.653E+04	1.835E+02
2113	4.175E+04	2.281E+07	4.592E+04	1.635E+02	4.561E+04	1.798E+02
2114	4.092E+04	2.235E+07	4.501E+04	1.603E+02	4.471E+04	1.763E+02
2115	4.011E+04	2.191E+07	4.412E+04	1.571E+02	4.382E+04	1.728E+02
2116	3.931E+04	2.148E+07	4.325E+04	1.540E+02	4.295E+04	1.694E+02
2117	3.854E+04	2.105E+07	4.239E+04	1.509E+02	4.210E+04	1.660E+02
2118	3.777E+04	2.064E+07	4.155E+04	1.479E+02	4.127E+04	1.627E+02
2119	3.702E+04	2.023E+07	4.073E+04	1.450E+02	4.045E+04	1.595E+02
2120	3.629E+04	1.983E+07	3.992E+04	1.421E+02	3.965E+04	1.563E+02

APPENDIX D

APPLICATION FORMS

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 Ellis Street, San Francisco, CA 94109
Engineering Division (415) 749-4990
www.baaqmd.gov fax (415) 749-5030

Form P-101B
Authority to Construct/
Permit to Operate

1. Application Information

BAAQMD Plant No. A2066 Company Name Waste Management of Alameda County, Inc

Equipment/Project Description Change of Condition - Re-permitting Fill Area 2 (Condition No. 19235)

2. Plant Information

If you have not previously been assigned a Plant Number by the District or if you want to update any plant data that you have previously supplied to the District, please complete this section.

Equipment Location 10840 Altamont Pass Road

City Livermore Zip Code 94551

Mail Address 10840 Altamont Pass Road

City Livermore State CA Zip Code 94551

Plant Contact Marcus Nettz Title Senior District Manager

Telephone (925) 455-7323 Fax ( ) Email

NAICS (North American Industry Classification System) see www.census.gov/epcd/naics02/naico602.htm 562212

3. Proximity to a School (K-12)

The sources in this permit application (*check one*) ☐ Are ☒ Are not within 1,000 ft of the outer boundary of the nearest school.

4. Application Contact Information

All correspondence from the District regarding this application will be sent to the plant contact unless you wish to designate a different contact for this application.

Application Contact Tianna Nourot Title Environmental Protection Manager

Mail Address 10840 Altamont Pass Road

City Livermore State CA Zip Code 94551

Telephone (925) 448-7008 Fax ( ) Email TNourot@wm.com

5. Additional Information

The following additional information is required for all permit applications and should be included with your submittal. Failure to provide this information may delay the review of your application. Please indicate that each item has been addressed by checking the box. Contact the Engineering Division if you need assistance.

☒ If a new Plant, a local street map showing the location of your business

☒ A facility map, drawn roughly to scale, that locates the equipment and its emission points

☒ Completed data form(s) and a pollutant flow diagram for each piece of equipment. (See www.baaqmd.gov/pmt/forms/)

☒ Project/equipment description, manufacturer's data

☒ Discussion and/or calculations of the emissions of air pollutants from the equipment

6. Trade Secrets

Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to a third party. If you wish to keep certain items separate as specified in Regulation 2, Rule 1, Section 202.7, please complete the following steps.

☐ Each page containing trade secret information must be labeled "trade secret" with the trade secret information clearly marked.

☐ A second copy, with trade secret information blanked out, marked "public copy" must be provided.

☐ For each item asserted to be trade secret, you must provide a statement which provides the basis for your claim.

7. Small Business Certification *You are entitled to a reduced permit fee if you qualify as a small business as defined in Regulation 3. In order to qualify, you must certify that your business meets all of the following criteria:*

☐ The business does not employ more than 10 persons and its gross annual income does not exceed $600,000.

☐ And the business is not an affiliate of a non-small business. (Note: a non-small business employs more than 10 persons and/or its gross income exceeds $600,000.)

8. Accelerated Permitting *The Accelerated Permitting Program entitles you to install and operate qualifying sources of air pollution and abatement equipment* ***without waiting for the District to issue a Permit to Operate****. To participate in this program you must certify that your project will meet all of the following criteria. Please acknowledge each item by checking each box.*

☐ Uncontrolled emissions of any single pollutant are each less than 10 lb/highest day, or the equipment has been precertified by the BAAQMD.

☐ Emissions of toxic compounds do not exceed the trigger levels identified in Table 2-5-1 (see Regulation 2, Rule 5).

☐ The project is not subject to public notice requirements (the source is either more than 1000 ft. from the nearest school, or the source does not emit any toxic compound in Table 2-5-1).

☐ For replacement of abatement equipment, the new equipment must have an equal or greater overall abatement efficiency for all pollutants than the equipment being replaced.

☐ For alterations of existing sources, for all pollutants the alteration does not result in an increase in emissions.

☒ Payment of applicable fees (the minimum permit fee to install and operate each source). See Regulation 3 or contact the Engineering Division for help in determining your fees.

9. CEQA *Please answer the following questions pertaining to CEQA (California Environmental Quality Act).*

A. Has another public agency prepared, required preparation of, or issued a notice regarding preparation of a California Environmental Quality Act (CEQA) document (initial study, negative declaration, environmental impact report, or other CEQA document) that analyzes impacts of this project or another project of which it is a part or to which it is related? ☐YES ☒NO If no, go to section 9B.

Describe the document or notice, preparer, and date of document or expected date of completion:

B. List and describe any other permits or agency approvals required for this project by city, regional, state or federal agencies:

C. List and describe all other prior or current projects for which either of the following statements is true: (1) the project that is the subject of this application could not be undertaken without the project listed below, (2) the project listed below could not be undertaken without the project that is the subject of this application:

10. Certification *I hereby certify that all information contained herein is true and correct. (Please sign and date this form)*

Marcus Nettz	Senior District Manager		6/14/2017
Name of person certifying (print)	Title of person certifying	Signature of person certifying	Date

Send all application materials to the **BAAQMD Engineering Division, 939 Ellis Street, San Francisco, CA 94109.**

Form Appendix H

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 Ellis Street . . . San Francisco, CA 94109. . . (415) 749-4990 . . . FAX (415) 749-5030
Website: www.baaqmd.gov

APPENDIX H

ENVIRONMENTAL INFORMATION FORM

(To Be Completed By Applicant)

Date Filed: 6/6/17

General Information

1. Name and address of developer or project sponsor:
   Altamont Landfill & Recycling & Recovery Facility, 10840 Altamont Pass Road
2. Address of project: 10840 Altamont Pass Road

   Assessor's Block and Lot Number: _____
3. Name, address, and telephone number of person to be contacted concerning this project:
   Tianna Nourot; 10840 Altamont Pass Road (925) 448-7008
4. Indicate number of the permit application for the project to which this form pertains:
   TBD
5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state, and federal agencies:
   NA
6. Existing zoning district: Ag / Open Space
7. Proposed use of site (Project for which this form is filed):
   Altamont Landfill Fill Area 2 change of condition

Project Description

8. Site size.
9. Square footage.
10. Number of floors of construction.
11. Amount of off-street parking provided.
12. Attach plans.
13. Proposed scheduling.
14. Associated project.
15. Anticipated incremental development.

16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rents, and type of household size expected.

17. If commercial, indicate the type, whether neighborhood, city or regionally oriented, square footage of sales area, and loading facilities.

18. If industrial, indicate type, estimated employment per shift, and loading facilities

19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project.

20. If the project involves a variance, conditional use or rezoning application, state this and indicate clearly why the application is required.

Are the following items applicable to the project or its effects? Discuss below all items checked yes. Attach additional sheets as necessary.

	Yes	No
21. Change in existing features of any bays, tidelands, beaches, or hills, or substantial alteration of ground contours.	☐	☒
22. Change in scenic views or vistas from existing residential areas or public lands or roads.	☐	☒
23. Change in pattern, scale or character of general area of project.	☐	☒
24. Significant amounts of solid waste or litter.	☐	☒
25. Change in dust, ash, smoke, fumes or odors in vicinity.	☐	☒
26. Change in ocean, bay, lake, stream or groundwater quality or quantity, or alteration of existing drainage patterns.	☐	☒
27. Substantial change in existing noise or vibration levels in the vicinity.	☐	☒
28. Site on filled land or on slope of 10 percent or more.	☐	☒
29. Use of disposal of potentially hazardous materials, such as toxic substances, flammables or explosives.	☐	☒
30. Substantial change in demand for municipal services (police, fire, water, sewage, etc.).	☐	☒
31. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.).	☐	☒
32. Relationship to a larger project or series of projects.	☐	☒

Environmental Setting

33. Describe the project site as is exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

34. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

6/14/2017
Date

Signature

For _____

(Note: This is only a suggested form. Public agencies are free to devise their own format for initial studies.)

APPENDIX Q
LFG CONDENSATE INJECTION DATA (A-15 AND A-16 FLARES)

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

December-19

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
12/01/19	0	0.00	0.0
12/02/19	0	0.00	0.0
12/03/19	0	0.00	0.0
12/04/19	0	0.00	0.0
12/05/19	0	0.00	0.0
12/06/19	0	0.00	0.0
12/07/19	0	0.00	0.0
12/08/19	0	0.00	0.0
12/09/19	0	0.00	0.0
12/10/19	0	0.00	0.0
12/11/19	0	0.00	0.0
12/12/19	0	0.00	0.0
12/13/19	0	0.00	0.0
12/14/19	0	0.00	0.0
12/15/19	0	0.00	0.0
12/16/19	0	0.00	0.0
12/17/19	0	0.00	0.0
12/18/19	0	0.00	0.0
12/19/19	0	0.00	0.0
12/20/19	0	0.00	0.0
12/21/19	0	0.00	0.0
12/22/19	0	0.00	0.0
12/23/19	0	0.00	0.0
12/24/19	0	0.00	0.0
12/25/19	0	0.00	0.0
12/26/19	0	0.00	0.0
12/27/19	0	0.00	0.0
12/28/19	0	0.00	0.0
12/29/19	0	0.00	0.0
12/30/19	0	0.00	0.0
12/31/19	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

January-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
01/01/20	0	0.00	0.0
01/02/20	0	0.00	0.0
01/03/20	0	0.00	0.0
01/04/20	0	0.00	0.0
01/05/20	0	0.00	0.0
01/06/20	0	0.00	0.0
01/07/20	0	0.00	0.0
01/08/20	0	0.00	0.0
01/09/20	0	0.00	0.0
01/10/20	0	0.00	0.0
01/11/20	0	0.00	0.0
01/12/20	0	0.00	0.0
01/13/20	0	0.00	0.0
01/14/20	0	0.00	0.0
01/15/20	0	0.00	0.0
01/16/20	0	0.00	0.0
01/17/20	0	0.00	0.0
01/18/20	0	0.00	0.0
01/19/20	0	0.00	0.0
01/20/20	0	0.00	0.0
01/21/20	0	0.00	0.0
01/22/20	0	0.00	0.0
01/23/20	0	0.00	0.0
01/24/20	0	0.00	0.0
01/25/20	0	0.00	0.0
01/26/20	0	0.00	0.0
01/27/20	0	0.00	0.0
01/28/20	0	0.00	0.0
01/29/20	0	0.00	0.0
01/30/20	0	0.00	0.0
01/31/20	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

February-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
02/01/20	0	0.00	0.0
02/02/20	0	0.00	0.0
02/03/20	0	0.00	0.0
02/04/20	0	0.00	0.0
02/05/20	0	0.00	0.0
02/06/20	0	0.00	0.0
02/07/20	0	0.00	0.0
02/08/20	0	0.00	0.0
02/09/20	0	0.00	0.0
02/10/20	0	0.00	0.0
02/11/20	0	0.00	0.0
02/12/20	0	0.00	0.0
02/13/20	0	0.00	0.0
02/14/20	0	0.00	0.0
02/15/20	0	0.00	0.0
02/16/20	0	0.00	0.0
02/17/20	0	0.00	0.0
02/18/20	0	0.00	0.0
02/19/20	0	0.00	0.0
02/20/20	0	0.00	0.0
02/21/20	0	0.00	0.0
02/22/20	0	0.00	0.0
02/23/20	0	0.00	0.0
02/24/20	0	0.00	0.0
02/25/20	0	0.00	0.0
02/26/20	0	0.00	0.0
02/27/20	0	0.00	0.0
02/28/20	0	0.00	0.0
02/29/20	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

March-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
03/01/20	0	0.00	0.0
03/02/20	0	0.00	0.0
03/03/20	0	0.00	0.0
03/04/20	0	0.00	0.0
03/05/20	0	0.00	0.0
03/06/20	0	0.00	0.0
03/07/20	0	0.00	0.0
03/08/20	0	0.00	0.0
03/09/20	0	0.00	0.0
03/10/20	0	0.00	0.0
03/11/20	0	0.00	0.0
03/12/20	0	0.00	0.0
03/13/20	0	0.00	0.0
03/14/20	0	0.00	0.0
03/15/20	0	0.00	0.0
03/16/20	0	0.00	0.0
03/17/20	0	0.00	0.0
03/18/20	0	0.00	0.0
03/19/20	0	0.00	0.0
03/20/20	0	0.00	0.0
03/21/20	0	0.00	0.0
03/22/20	0	0.00	0.0
03/23/20	0	0.00	0.0
03/24/20	0	0.00	0.0
03/25/20	0	0.00	0.0
03/26/20	0	0.00	0.0
03/27/20	0	0.00	0.0
03/28/20	0	0.00	0.0
03/29/20	0	0.00	0.0
03/30/20	0	0.00	0.0
03/31/20	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

April-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
04/01/20	0	0.00	0.0
04/02/20	0	0.00	0.0
04/03/20	0	0.00	0.0
04/04/20	0	0.00	0.0
04/05/20	0	0.00	0.0
04/06/20	0	0.00	0.0
04/07/20	0	0.00	0.0
04/08/20	0	0.00	0.0
04/09/20	0	0.00	0.0
04/10/20	0	0.00	0.0
04/11/20	0	0.00	0.0
04/12/20	0	0.00	0.0
04/13/20	0	0.00	0.0
04/14/20	0	0.00	0.0
04/15/20	0	0.00	0.0
04/16/20	0	0.00	0.0
04/17/20	0	0.00	0.0
04/18/20	0	0.00	0.0
04/19/20	0	0.00	0.0
04/20/20	0	0.00	0.0
04/21/20	0	0.00	0.0
04/22/20	0	0.00	0.0
04/23/20	0	0.00	0.0
04/24/20	0	0.00	0.0
04/25/20	0	0.00	0.0
04/26/20	0	0.00	0.0
04/27/20	0	0.00	0.0
04/28/20	0	0.00	0.0
04/29/20	0	0.00	0.0
04/30/20	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-15 Flare)

May-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
05/01/20	0	0.00	0.0
05/02/20	0	0.00	0.0
05/03/20	0	0.00	0.0
05/04/20	0	0.00	0.0
05/05/20	0	0.00	0.0
05/06/20	0	0.00	0.0
05/07/20	0	0.00	0.0
05/08/20	0	0.00	0.0
05/09/20	0	0.00	0.0
05/10/20	0	0.00	0.0
05/11/20	0	0.00	0.0
05/12/20	0	0.00	0.0
05/13/20	0	0.00	0.0
05/14/20	0	0.00	0.0
05/15/20	0	0.00	0.0
05/16/20	0	0.00	0.0
05/17/20	0	0.00	0.0
05/18/20	0	0.00	0.0
05/19/20	0	0.00	0.0
05/20/20	0	0.00	0.0
05/21/20	0	0.00	0.0
05/22/20	0	0.00	0.0
05/23/20	0	0.00	0.0
05/24/20	0	0.00	0.0
05/25/20	0	0.00	0.0
05/26/20	0	0.00	0.0
05/27/20	0	0.00	0.0
05/28/20	0	0.00	0.0
05/29/20	0	0.00	0.0
05/30/20	0	0.00	0.0
05/31/20	0	0.00	0.0
Total/Average	**0**	**0.00**	**0.00**
	Max	**0.00**	**0.00**

Note: The landfill gas condensate injection rate pursuant to Permit

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

December-19

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
12/01/19	1,376	2.90	3,989
12/02/19	1,432	2.92	4,177
12/03/19	1,440	2.92	4,208
12/04/19	1,370	3.04	4,170
12/05/19	1,440	2.98	4,292
12/06/19	1,440	2.90	4,178
12/07/19	1,440	2.89	4,156
12/08/19	1,440	2.89	4,161
12/09/19	1,318	2.80	3,690
12/10/19	972	2.78	2,701
12/11/19	1,352	2.74	3,701
12/12/19	1,440	2.72	3,922
12/13/19	1,440	2.66	3,837
12/14/19	1,440	2.80	4,026
12/15/19	1,436	2.87	4,125
12/16/19	1,440	2.74	3,944
12/17/19	1,440	2.78	4,007
12/18/19	1,440	2.94	4,234
12/19/19	1,440	2.79	4,024
12/20/19	1,272	2.98	3,794
12/21/19	1,356	2.93	3,974
12/22/19	1,440	2.79	4,015
12/23/19	1,440	2.98	4,294
12/24/19	1,440	3.06	4,402
12/25/19	1,440	2.93	4,222
12/26/19	1,440	2.77	3,994
12/27/19	1,440	2.78	4,009
12/28/19	1,440	2.82	4,057
12/29/19	1,440	2.76	3,979
12/30/19	1,440	2.85	4,111
12/31/19	1,440	2.74	3,947
Total/Average	**43,564**	**2.85**	**124,340**
Max	**1,440**	**3.06**	**4,402**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

January-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
01/01/20	1,440	2.57	3,703
01/02/20	1,434	2.88	4,130
01/03/20	1,432	2.84	4,061
01/04/20	1,440	2.88	4,150
01/05/20	1,440	2.73	3,930
01/06/20	1,440	2.72	3,924
01/07/20	1,440	2.71	3,906
01/08/20	1,440	2.72	3,918
01/09/20	1,440	2.83	4,071
01/10/20	1,418	2.75	3,902
01/11/20	1,440	2.68	3,856
01/12/20	1,440	2.68	3,858
01/13/20	1,440	2.70	3,892
01/14/20	1,440	2.90	4,182
01/15/20	1,440	2.84	4,095
01/16/20	1,440	2.78	4,008
01/17/20	1,370	2.93	4,017
01/18/20	1,440	2.90	4,171
01/19/20	1,404	2.70	3,790
01/20/20	1,440	2.74	3,947
01/21/20	1,440	2.75	3,965
01/22/20	1,440	2.72	3,912
01/23/20	674	2.87	1,934
01/24/20	1,440	2.68	3,865
01/25/20	1,420	2.66	3,777
01/26/20	1,440	2.73	3,927
01/27/20	1,440	2.77	3,984
01/28/20	1,440	2.92	4,200
01/29/20	1,440	3.11	4,477
01/30/20	1,398	3.08	4,299
01/31/20	1,370	3.06	4,190
Total/Average	**43,600**	**2.80**	**122,038**
Max	**1,440**	**3.11**	**4,477**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

February-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
02/01/20	1,440	2.99	4,307
02/02/20	1,440	2.84	4,088
02/03/20	1,440	3.00	4,316
02/04/20	1,440	2.94	4,228
02/05/20	1,440	2.88	4,146
02/06/20	1,440	2.88	4,152
02/07/20	1,440	3.15	4,536
02/08/20	1,278	3.05	3,904
02/09/20	1,440	3.03	4,364
02/10/20	1,440	3.02	4,345
02/11/20	936	3.02	2,822
02/12/20	1,440	2.99	4,312
02/13/20	1,410	2.99	4,213
02/14/20	1,440	3.13	4,510
02/15/20	1,440	3.12	4,499
02/16/20	1,440	2.89	4,158
02/17/20	1,440	2.96	4,255
02/18/20	1,440	3.00	4,324
02/19/20	1,140	2.93	3,338
02/20/20	1,440	3.06	4,403
02/21/20	1,440	3.05	4,398
02/22/20	1,432	3.01	4,316
02/23/20	1,440	3.01	4,341
02/24/20	1,440	3.01	4,337
02/25/20	1,440	2.95	4,250
02/26/20	1,012	2.97	3,003
02/27/20	1,440	2.93	4,214
02/28/20	1,440	2.86	4,117
02/29/20	1,440	2.89	4,166
Total/Average	**40,328**	**2.98**	**120,360**
Max	**1,440**	**3.15**	**4,536**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

March-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
03/01/20	1,440	2.90	4,183
03/02/20	1,440	3.04	4,381
03/03/20	1,440	3.00	4,326
03/04/20	1,440	3.00	4,317
03/05/20	1,440	2.93	4,225
03/06/20	1,440	2.87	4,128
03/07/20	1,440	3.06	4,409
03/08/20	1,380	3.15	4,349
03/09/20	1,440	3.11	4,473
03/10/20	1,440	3.07	4,424
03/11/20	1,440	3.12	4,491
03/12/20	1,440	3.07	4,427
03/13/20	1,440	3.09	4,443
03/14/20	1,222	2.51	3,069
03/15/20	578	2.89	1,669
03/16/20	1,440	1.39	2,008
03/17/20	1,440	2.25	3,239
03/18/20	1,440	2.20	3,167
03/19/20	1,320	2.75	3,629
03/20/20	1,440	3.11	4,474
03/21/20	1,440	3.03	4,364
03/22/20	1,440	2.90	4,182
03/23/20	1,440	2.83	4,074
03/24/20	1,440	2.19	3,152
03/25/20	1,440	1.77	2,547
03/26/20	1,388	2.26	3,132
03/27/20	1,440	3.04	4,383
03/28/20	1,440	3.00	4,316
03/29/20	1,440	3.01	4,331
03/30/20	1,440	3.10	4,461
03/31/20	1,440	3.04	4,381
Total/Average	**43,328**	**2.80**	**121,154**
Max	**1,440**	**3.15**	**4,491**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

April-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
04/01/20	1,440	3.04	4,378
04/02/20	1,440	3.04	4,378
04/03/20	1,440	3.11	4,482
04/04/20	1,440	3.17	4,563
04/05/20	1,440	3.27	4,707
04/06/20	1,440	3.13	4,506
04/07/20	1,440	3.16	4,545
04/08/20	1,440	3.09	4,444
04/09/20	1,440	2.88	4,149
04/10/20	1,440	2.97	4,278
04/11/20	1,440	3.02	4,352
04/12/20	1,440	3.02	4,346
04/13/20	1,440	3.05	4,385
04/14/20	1,314	3.17	4,161
04/15/20	1,402	2.97	4,166
04/16/20	1,408	0.00	0
04/17/20	1,440	0.00	0
04/18/20	1,440	0.00	0
04/19/20	1,440	0.00	0
04/20/20	1,440	0.00	0
04/21/20	1,440	0.00	0
04/22/20	1,440	0.00	0
04/23/20	614	2.77	1,699
04/24/20	1,440	2.69	3,869
04/25/20	1,440	2.67	3,843
04/26/20	1,440	2.58	3,712
04/27/20	1,440	2.56	3,688
04/28/20	1,440	2.65	3,810
04/29/20	1,440	2.91	4,190
04/30/20	1,440	3.05	4,388
Total/Average	**42,178**	**2.26**	**95,038**
Max	**1,440**	**3.27**	**4,707**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

Altamont Landfill and Resource Recovery Facility

CONDENSATE INJECTION (A-16 Flare)

May-20

Start Date	Total Injection Time (min.)	Average GPM	Total Gallons
05/01/20	1,440	2.93	4,220
05/02/20	1,440	2.77	3,989
05/03/20	1,436	2.78	3,993
05/04/20	1,440	2.56	3,690
05/05/20	1,440	2.80	4,037
05/06/20	1,438	3.00	4,316
05/07/20	1,440	2.97	4,272
05/08/20	1,430	2.98	4,260
05/09/20	1,440	3.02	4,343
05/10/20	1,436	3.07	4,408
05/11/20	1,440	3.03	4,363
05/12/20	1,440	3.07	4,416
05/13/20	1,412	3.00	4,230
05/14/20	1,368	2.92	3,999
05/15/20	1,440	2.85	4,100
05/16/20	1,440	2.79	4,014
05/17/20	1,440	2.86	4,119
05/18/20	1,440	2.83	4,079
05/19/20	1,440	2.89	4,158
05/20/20	1,440	2.87	4,139
05/21/20	1,402	2.92	4,095
05/22/20	1,030	2.90	2,990
05/23/20	1,402	2.86	4,004
05/24/20	1,404	2.85	4,001
05/25/20	1,440	2.65	3,815
05/26/20	1,432	2.78	3,979
05/27/20	1,440	2.98	4,295
05/28/20	1,440	2.86	4,116
05/29/20	1,236	2.52	3,112
05/30/20	1,190	2.60	3,089
05/31/20	1,440	2.92	4,199
Total/Average	**43,536**	**2.86**	**124,841**
Max	**1,440**	**3.07**	**4,416**

Note: The landfill gas condensate injection rate pursuant to

min. - minute **GPM** - gallons per minute

APPENDIX R
S-99 GASOLINE DISPENSING FACILITY RECORDS

Form 1

Summary of Source Test Data

Static Pressure Performance Test

GDF Name and Address:
Altamont Resource and Recovery Facility
Waste MAnagement of Alameda County Inc.
Facility #A2066
10840 Altamont Pass Rd.
Livermore, CA 94551

GDF Representative and Title:
Luis Rocha

GDF Phone #: 925.455.7305

GDF # _____

Manifolded? Y or N

Number of nozzles - 1

PHASE II SYSTEM TYPE
(Check One)

Balance X
VacAssist _____
Other _____

Manufacturer: VST/ VST - EVR

Permit Conditions:

TANK # :	1	2	3	4
1. Product Grade	87			
2. Actual Tank Capacity, gallons	1000			
3. Gasoline Volume	500			
4. Ullage, gallons (ullage = capacity-volume)	500			
5. Initial Pressure (inches water column)	2.00			
6. Pressure After 1 Minute	2.00			
7. Pressure After 2 Minutes	2.03			
8. Pressure After 3 Minutes	2.04			
9. Pressure After 4 Minutes	2.06			
10. Final Pressure After 5 Minutes	2.08			
11. Allowable Final Pressure	1.28			
	Pass			

Test Conducted by:
Douglas Nunn ICC 5238716

Date of Test: 11/6/2019

Test Company: Superior Underground Tank Service
P.O. Box 1487
San Ramon, CA 94583
925-551-7887

S-99 - Gasoline Dispensing Facility
Log of Fuel Usage per Title V (BAAQMD) - Permit Condition# 20813
Limit: 30,000 gallons per 12-month period

Month	Meter Reading	Date of Reading	Monthly Usage (Gallons)	12 Month Rolling Total (Gallons)
June-19	32690	30-Jun	1259	15010
July-19	33903	31-Jul	1213	15067
August-19	35296	31-Aug	1393	15230
September-19	36421	30-Sep	1125	15041
October-19	37719	31-Oct	1298	14814
November-19	38933	30-Nov	1214	14876
December-19	39955	31-Dec	1022	14788
January-20	41284	31-Jan	1330	14868
February-20	42401	29-Feb	1116	14778
March-20	43573	31-Mar	1173	14637
April-20	44828	30-Apr	1255	14575
May-20	46143	31-May	1315	14712
			6-Month Total Usage	**Rolling 12-Month Max**
			7,210	**15,230**

APPENDIX S
VOC LADEN SOIL RECORDS

ALRRF SOIL-Low VOC Data

For Period of Dec 1, 2019 to May 31, 2020

Date	Total Daily Tons	Daily lbs VOCs
12/13/2019	37	0.2
12/16/2019	123	0.7
12/17/2019	646	12.3
12/18/2019	703	13.4
12/19/2019	445	8.5
12/27/2019	8	0.1
1/8/2020	228	10.6
1/9/2020	154	12.6
1/10/2020	154	12.4
1/23/2020	16	0.6
1/27/2020	153	0.4
1/28/2020	44	0.1
2/3/2020	780	14.8
2/10/2020	3290	7.9
2/12/2020	1578	10.4
2/13/2020	861	4.9
2/14/2020	230	0.8
2/17/2020	216	0.6
2/20/2020	137	0.4
2/24/2020	195	0.6
2/27/2020	3600	8.6
2/28/2020	54	0.1
3/2/2020	119	0.3
3/3/2020	592	7.0
3/4/2020	1631	20.5
3/5/2020	1258	16.4
3/6/2020	1931	25.1
3/9/2020	70	0.2
3/10/2020	653	7.3
3/11/2020	250	1.1
3/13/2020	65	0.2
3/26/2020	139	1.2
4/9/2020	15	0.3
5/7/2020	568	10.8
5/21/2020	132	2.4
5/22/2020	12	0.3
5/27/2020	11	0.3
5/29/2020	13	0.4

APPENDIX T
TRANSFER TANK (S-19) OPERATING RECORDS

ALTAMONT LANDFILL RESOURCE & RECOVERY FACILITY
S-19 Transfer Tank
FOURTH QUARTER 2019 INSPECTION AND LEAK CHECK

Technician: **Juan Baracio** **Instrument:** **Photovac MicroFID**
Date: **10/18/2019** **Serial Number:** **CZPD312**

S-19 Component	Good Condition	Fair Condition	Repairs Needed	Date Repairs Made	Leak Check (500 ppmv Limit)	Comments
Body of Tank	X				ND	
End Weldings	X				ND	
Top Weldings	X				ND	
Center Opening Weldings	X				ND	
24" Gasket (center opening)	X				ND	
4" Gasket (center opening)	X				ND	
Level Gauge Connections	-	X			ND	
Influent Pipe Connections	X				ND	
Effluent Pipe Connections	X				ND	
Level Indicator	-	X			ND	

ppmv - parts per million by volume ND- Non-Detect

ALTAMONT LANDFILL RESOURCE & RECOVERY FACILITY
S-19 Transfer Tank
FIRST QUARTER 2020 INSPECTION AND LEAK CHECK

Technician: **Dan San Jose** **Instrument:** **Photovac MicroFID**
Date: **3/11/2020** **Serial Number:** **CZPD312**

S-19 Component	Good Condition	Fair Condition	Repairs Needed	Date Repairs Made	Leak Check (500 ppmv Limit)	Comments
Body of Tank	X				ND	
End Weldings	X				ND	
Top Weldings	X				ND	
Center Opening Weldings	X				ND	
24" Gasket (center opening)	X				ND	
4" Gasket (center opening)	X				ND	
Level Gauge Connections	-	X			ND	
Influent Pipe Connections	X				ND	
Effluent Pipe Connections	X				ND	
Level Indicator	-	X			ND	

ppmv - parts per million by volume ND- Non-Detect

APPENDIX u
DIESEL ENGINES RECORDS

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Log of Diesel Engine Use – Emergency Standby Generators – Hours of Operation

2019-2020	S-199		S-200		S-201		Nature of Emergency*
	Began Operation in March 2008						
	Flare Station (903323)		WWTP (903322)		Maintenance (903321)		
	EMERGENCY	TOTAL/RRA	EMERGENCY	TOTAL/RRA	EMERGENCY	TOTAL/RRA	
June-19	0	1.00	0	0.00	0	1.00	
July-19	1	0.00	36	0.00	2	1.00	
August-19	0	1.00	0	0.00	0	1.00	
September-19	0	1.00	0	0.00	0	1.00	
October-19	2	0.00	3	0.00	20	0.00	
November-19	0	1.00	0	1.00	0	1.00	
December-19	4	0.00	3	0.00	2	0.00	
January-20	1	0.00	3	0.00	0	1.00	
February-20	13	0.00	8	0.00	10	0.00	
March-20	0	1.00	0	1.00	0	1.00	
April-20	0	1.00	0	1.00	0	1.00	
May-20	0	1.00	0	1.00	0	1.00	
Total Hours (June 1-2019-May 31, 2020):	21	7	53	4	34	9	
Total Hours (December 1-2019-May 31,2020):	18	3	14	3	12	4	
		(ATCM) 50		(ATCM) 50		(ATCM) 50	

Notes:
* See permit condition # 22580 for description of qualifying emergency conditions and reliability related activities (RRA).

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Log of Diesel Engine Use and Fuel Consumption for S-193, S-197, and S-198

2019-2020	S-193			S-197*		S-198*	
	Fire Pump at Gas Plant (#89) (951358)			Portable Generator Break Trailer (#78)		Vacuum Truck Pump (#31)	
	EMERGENCY Hours	TOTAL/RRA Hours	Gallons Fuel	Hours	Gallons Fuel	Hours	Gallons Fuel
June-19	0.0	0.4	0.0				
July-19	0.0	0.5	0.0				
August-19	0.0	0.4	0.0				
September-19	0.0	0.4	0.0				
October-19	0.0	0.4	0.0				
November-19	0.0	0.4	0.0				
December-19	0.0	0.4	0.0				
January-20	0.0	0.5	0.0				
February-20	0.0	0.4	0.0				
March-20	0.0	0.6	0.0				
April-20	0.0	0.4	0.0				
May-20	0.0	0.5	0.0				
Total Hours (June 1-2019-May 31, 2020):	0.0	5.3	0.0				
Total Hours (December 1-2019-May 31,2020):	0.0	2.8	0.0				
Fuel Limits (gal/yr) (Condition No. 20801, Part 1)			62,196				

*WM surrendered its permits for the S-197 and S-198 diesel engines on December 29, 2009.

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Log of Diesel Engine Use and Fuel Consumption for S-221, S-228, S-224, and S-225

2019-2020	S-221		S-222/S-228		S-224		S-225		S-221, S-224, S-225 and S-228	
	Tipper #83 (855031)		Tipper #70 -T4 Diesel Engine (855029)		Tipper #5113 SF's (Replaced Old Tipper #71)		Tipper #5117 SF's (Replaced Old Tipper #93)		Total Monthly Hours	Rolling 12-Month Hours
			CARB PERP Permits Initial Issuance April 2020							
			PERP Registration No. 187512		PERP Registration No. 187514		PERP Registration No. 187513			
	Hours	Gallons Fuel	Hours	Gallons Fuel	Hours	Gallons Fuel	Hours	Gallons Fuel		
June-19	45	0	266	335	143	177	215	217	669	8,576
July-19	0	0	348	402	408	475	0	0	756	8,620
August-19	103	65	273	247	382	428	119	157	877	8,637
September-19	33	312	11	0	310	335	376	361	730	8,809
October-19	35	75	3	15	445	475	381	469	864	9,097
November-19	34	75	0	0	361	465	333	425	728	9,195
December-19	62	263	1	11	356	511	426	543	845	9,405
January-20	58	190	153	212	398	456	176	265	785	9,380
February-20	45	137	13	20	289	423	388	515	735	9,339
March-20	99	0	236	371	113	144	424	563	872	9,479
April-20	54	112	261	314	206	315	284	332	805	9,468
May-20	50	0	0	0	318	334	404	372	772	9,438
Total Hours (June 1-2019-May 31, 2020):	618	1,229	1,565	1,927	3,729	4,538	3,526	4,219	9,438	
Total Hours (December 1-2019-May 31,2020):	368	702	664	928	1,680	2,183	2,102	2,590	4,814	
Limits	Combined S-224 and S-225 :14,600 Hours and Individual S-221 and S-228 :7,300 Hours, during consecutive 12-Months									

*WM submitted surrender notification for S 208 for Tipper #70 in June 2014 and S206 for Tipper # 83 in January 201
*WM submitted surrender notification for S 218 for Tipper #93 in March 2016 and S217 for Tipper # 71 in March 201
*WM submitted startup notification for new Tippers S-224 and S-225 in March 2016
*WM submitted COC for replacement of S-222 (CNG Tipper #70) with new T4.4 engine in January 2018. BAAQMD Assigned new Source Number S-22
*WM submitted startup notification for new Tippers S-228 on June 13, 2018
* WM submitted PERP application June 2019. CARB issues PERP permits in April 2020. Initial inspection email to District Inspector was sent on May 15, 2020. BAAQMD initial Inspection was conducted on June 4, 2020.

APPENDIX V

PORTABLE ENGINES CO EMISSION CALCULATIONS

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
December 2019

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	4	1.34	0.001
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	3	2.31	0.003
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	2	2.31	0.002
S-221	CNG Engine for Tipper #83	Diesel	2007	193	62	0.97	0.013
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	1	0.97	0.000
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	356	0.97	0.048
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	426	0.97	0.058
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	140	4.10	0.020
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	11	6.00	0.001

WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000
WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	36	6.00	0.002
WM# 903660	XQ20-4 Generator	Diesel	2010	27	0	4.90	0.000
WM# 905025	Light Unit	Diesel	2009	10.5	108.0	6.000	0.008
WM# 905068	Light Unit	Diesel	2010	10.5	126.0	6.000	0.009
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	8	6.00	0.001
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	0	6.00	0.000
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	313	6.00	0.024
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	279	6.00	0.019
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	18	6.00	0.001
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	179	6.00	0.012
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	277	6.00	0.019
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
					Monthly Total CO Emissions		0.242

No The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010. Therefore, the greenwaste grinding operation, including the S-31 Portable Diesel Engine for the Greenwaste Grinder, was not used in January 2010 and will not be used in the future.

2) Diesel Engine S-196 is no longer in use as of August 2009.

3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29, 2009.

4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
January 2020

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	1	1.34	0.000
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	3	2.31	0.003
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	1	2.31	0.001
S-221	CNG Engine for Tipper #83	Diesel	2007	193	58	0.97	0.012
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	153	0.97	0.018
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	398	0.97	0.054
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	176	0.97	0.024
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	17	4.10	0.002
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	0	6.00	0.000

WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000
WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	48	6.00	0.003
WM# 903660	XQ20-4 Generator	Diesel	2010	27	20	4.90	0.003
WM# 905025	Light Unit	Diesel	2009	10.5	21.0	6.000	0.001
WM# 905068	Light Unit	Diesel	2010	10.5	63.0	6.000	0.004
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	0	6.00	0.000
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	23	6.00	0.002
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	315	6.00	0.024
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	270	6.00	0.019
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	346	6.00	0.024
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	285	6.00	0.020
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	412	6.00	0.029
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
					Monthly Total CO Emissions		0.245

Not The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010. Therefore, the greenwaste grinding operation, including the S-31 Portable Diesel Engine for the Greenwaste Grinder, was not used in January 2010 and will not be used in the future.

2) Diesel Engine S-196 is no longer in use as of August 2009.

3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29,

4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

Altamont Landfill and Resource Recovery Facility, Livermore, CA

Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
February 2020

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	13	1.34	0.004
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	8	2.31	0.009
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	10	2.31	0.011
S-221	CNG Engine for Tipper #83	Diesel	2007	193	45	0.97	0.009
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	13	0.97	0.002
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	289	0.97	0.039
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	388	0.97	0.053
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	17	4.10	0.002
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	0	6.00	0.000
WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000

WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	131	6.00	0.009
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	40	6.00	0.003
WM# 903660	XQ20-4 Generator	Diesel	2010	27	0	4.90	0.000
WM# 905025	Light Unit	Diesel	2009	10.5	73.0	6.000	0.005
WM# 905068	Light Unit	Diesel	2010	10.5	191.0	6.000	0.013
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	325	6.00	0.025
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	181	6.00	0.013
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	53	6.00	0.004
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	210	6.00	0.015
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	336	6.00	0.023
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	343	6.00	0.024
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	330	6.00	0.023
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
					Monthly Total CO Emissions		0.285

No The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010.
2) Diesel Engine S-196 is no longer in use as of August 2009.
3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29,
4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
March 2020

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	1	1.34	0.000
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	1	2.31	0.001
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	1	2.31	0.001
S-221	CNG Engine for Tipper #83	Diesel	2007	193	99	0.97	0.020
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	236	0.97	0.028
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	113	0.97	0.015
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	424	0.97	0.058
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	0	4.10	0.000
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	0	6.00	0.000
WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000

WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	14	6.00	0.001
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	54	6.00	0.004
WM# 903660	XQ20-4 Generator	Diesel	2010	27	0	4.90	0.000
WM# 905025	Light Unit	Diesel	2009	10.5	208.0	6.000	0.014
WM# 905068	Light Unit	Diesel	2010	10.5	288.0	6.000	0.020
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	20	6.00	0.002
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	316	6.00	0.022
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	48	6.00	0.004
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	216	6.00	0.015
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	169	6.00	0.012
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	313	6.00	0.022
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	238	6.00	0.017
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
					Monthly Total CO Emissions		0.256

Not The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010.

2) Diesel Engine S-196 is no longer in use as of August 2009.

3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29, 2009.

4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
April 2020

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	1	1.34	0.000
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	1	2.31	0.001
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	1	2.31	0.001
S-221	CNG Engine for Tipper #83	Diesel	2007	193	54	0.97	0.011
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	261	0.97	0.031
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	206	0.97	0.028
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	284	0.97	0.039
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	0	4.10	0.000
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	0	6.00	0.000
WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000

WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	110	6.00	0.007
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	7	6.00	0.000
WM# 903660	XQ20-4 Generator	Diesel	2010	27	0	4.90	0.000
WM# 905025	Light Unit	Diesel	2009	10.5	370.0	6.000	0.026
WM# 905068	Light Unit	Diesel	2010	10.5	226.0	6.000	0.016
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	264	6.00	0.020
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	248	6.00	0.017
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	0	6.00	0.000
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	0	6.00	0.000
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	50	6.00	0.003
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	204	6.00	0.014
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	97	6.00	0.007
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
						Monthly Total CO Emissions	0.223

No The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010. Therefore, the greenwaste grinding operation, including the S-31 Portable Diesel Engine for the Greenwaste Grinder, was not used in January 2010 and will not be used in the future.

2) Diesel Engine S-196 is no longer in use as of August 2009.

3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29, 2009.

4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

Altamont Landfill and Resource Recovery Facility, Livermore, CA
Portable Engines Operational Hours and Carbon Monoxide (CO) Emissions
May 2020

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.70	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	1	3.03	0.001
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.03	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.90	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.03	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	1	1.34	0.000
S-200	Emergency Standby Diesel Generator Set (WWP)	Diesel	2007	420	1	2.31	0.001
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	1	2.31	0.001
S-221	CNG Engine for Tipper #83	Diesel	2007	193	50	0.97	0.010
S-207[4]	Diesel Engine for Tipper #93	Diesel	2004	215	N/A	0.37	N/A
S-222/S-228	Diesel T4 Engine for Tipper #70	Diesel	2007	112	0	0.97	0.000
S-209[4]	Diesel Engine for Tipper #71	Diesel	2004	12	N/A	0.37	N/A
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.03	N/A
S-217[4]	Diesel Engine for Tipper #71	Diesel	2007	127	N/A	0.97	N/A
S-218[4]	Diesel Engine for Tipper #93	Diesel	2007	127	N/A	0.97	N/A
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2007	127	318	0.97	0.043
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2007	127	404	0.97	0.055
WM# 741474	130 Air Compressor	Diesel	2000	48	0	4.10	0.000
WM# 900767	Portable Pressure Washer	Diesel	1991	10	0	3.03	0.000
WM# 900768	Track Cleaning Generator	Diesel	1994	10	0	3.03	0.000
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	0	4.10	0.000
WM# 902340	Light Unit	Diesel	1999	10.5	0	3.03	0.000
WM# 902341	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902342	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902343	Light Unit	Diesel	2000	10.5	0	6.00	0.000
WM# 902344	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902345	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 902346	Light Unit	Diesel	1998	10.5	0	3.03	0.000
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	0	6.00	0.000
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	0	6.00	0.000
WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	0	6.00	0.000

WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	145	6.00	0.010
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	44	6.00	0.003
WM# 903660	XQ20-4 Generator	Diesel	2010	27	0	4.90	0.000
WM# 905025	Light Unit	Diesel	2009	10.5	0.0	6.000	0.000
WM# 905068	Light Unit	Diesel	2010	10.5	87.0	6.000	0.006
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	124	6.00	0.010
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	224	6.00	0.016
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	0	6.00	0.000
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	0	6.00	0.000
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	232	6.00	0.016
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	0	409.40	0.000
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2006	10.5	20	6.00	0.001
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2006	10.5	189	6.00	0.013
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2006	10.5	57	6.00	0.004
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	0	4.10	0.000
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	0	410.00	0.000
WM# 951361	Portable Supv. Generator	Unleaded Gasoline	2002	11	0	410.00	0.000
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	0	409.40	0.000
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	0	347.50	0.000
SN 3625101631	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	0	273.68	0.000
						Monthly Total CO Emissions	0.190

Not The Total CO emissions are calculated pursuant Permit Condition Number 24373, Part 3.a(iv and v)

1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010.

2) Diesel Engine S-196 is no longer in use as of August 2009.

3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29,

4) The S-206 Tipper Engine was replaced by the S-222 Tipper CNG Engine and the S-208Tipper Engine was replaced by the S-221 Tipper CNG Engine.

5) The S-217 Tipper was replaced by new Diesel engine Tipper S-224 and the S-218 was replaced by new Diesel engine Tipper S-225.

6) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

g/bhp-hr - Grams per brake horsepower-hour

WASTE MANAGEMENT of ALAMEDA COUNTY
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
BAAQMD PLANT NO. 2066

PORTABLE ENGINES POTENTIAL CARBON MONOXIDE (CO) EMISSIONS

Source / Asset	Engine Name	Fuel Used	Model Year	Capacity (bhp)	Annual Potential Runtime (Hours)	CO Emission Factor (g/bhp-hr)	Annual Potential Total CO (Tons)	Monthly Potential Total CO (Tons)
S-31[1]	Diesel Engine for Green Waste Grinder	Diesel	2000	860	N/A	0.700	N/A	N/A
S-193	Diesel Engine for Fire Pump at Gas Plant	Diesel	N/A	159	100.0	3.030	0.053	0.004
S-196[2]	Standby Diesel Engine Generator for Scale House	Diesel	1990	78	N/A	3.030	N/A	N/A
S-197[3]	Standby Diesel Engine Generator for Break Trailer	Diesel	2000	78	N/A	6.900	N/A	N/A
S-198[3]	Diesel Engine for Vacuum Truck Pump	Diesel	1974	177	N/A	3.030	N/A	N/A
S-199	Emergency Standby Diesel Generator Set (Flare Station)	Diesel	2007	230	50.0	1.342	0.017	0.001
S-200	Emergency Standby Diesel Generator Set (WWTP)	Diesel	2007	420	50.0	2.312	0.054	0.004
S-201	Emergency Standby Diesel Generator Set (Maintenance Shop)	Diesel	2007	420	50.0	2.312	0.054	0.004
S-206[4]/S--221	CNG Engine for Tipper #83	Diesel	2007	127	7,300.0	0.969	0.991	0.083
S-207[4,5]	Diesel Engine for Tipper #93	Diesel	2004	137.4	0.0	0.373	0.000	0.000
S-208[4]/S-222/S-228	Diesel Engine for Tipper #70	Diesel	2017	127	7,300.0	0.969	1.189	0.099
S-209[4,5]	Diesel Engine for Tipper #71	Diesel	2004	137.4	0.0	0.373	0.000	0.000
S-214[3]	Portable Diesel Engine for Air Compressor	Diesel	1998	60	N/A	3.030	N/A	N/A
S-217[4,5]	Diesel Engine for Tipper #93	Diesel	2007	127	0.0	0.969	0.000	0.000
S-218[4,5]	Diesel Engine for Tipper #71	Diesel	2007	127	0.0	0.969	0.000	0.000
S-224[5]	Diesel Engine for Tipper #5113	Diesel	2015	124	7,300.0	0.969	0.967	0.081
S-225[5]	Diesel Engine for Tipper #5117	Diesel	2015	124	7,300.0	0.969	1.189	0.099
WM# 741474	130 Air Compressor	Diesel	2000	48	N/A	4.100	N/A	N/A
WM# 900767	Portable Pressure Washer	Diesel	1991	10	8,760.0	3.030	0.293	0.024
WM# 900768	Track Cleaning Generator	Diesel	1994	10	8,760.0	3.030	0.293	0.024
WM# 901653	MultiQuip 25 Gen Set	Diesel	1999	31	8,760.0	4.100	1.227	0.102
WM# 902340	Light Unit	Diesel	1999	10.5	8,760.0	3.030	0.307	0.026
WM# 902341	Light Unit	Diesel	2000	10.5	8,760.0	6.000	0.608	0.051
WM# 902342	Light Unit	Diesel	2000	10.5	8,760.0	6.000	0.608	0.051
WM# 902343	Light Unit	Diesel	2000	10.5	8,760.0	6.000	0.608	0.051
WM# 902344	Light Unit	Diesel	1998	10.5	8,760.0	3.030	0.307	0.026
WM# 902345	Light Unit	Diesel	1998	10.5	8,760.0	3.030	0.307	0.026
WM# 902346	Light Unit	Diesel	1998	10.5	8,760.0	3.030	0.307	0.026
WM# 903178	4000 Watt Diesel Light Tower	Diesel	2006	10.5	8,760.0	6.000	0.608	0.051
WM# 903255	Magnum Pro Light Unit	Diesel	2003	10.5	8,760.0	6.000	0.608	0.051
WM# 903304	Nite0Lite Pro 4000 Watt	Diesel	2008	10	8,760.0	6.000	0.579	0.048
WM# 903305	Nite0Lite Pro 4000 Watt	Diesel	2008	10	8,760.0	6.000	0.579	0.048
WM# 903306	Nite0Lite Pro 4000 Watt	Diesel	2008	10	8,760.0	6.000	0.579	0.048
WM# 903660	XQ20-4 Generator	Diesel	2010	27	8,760.0	4.900	1.278	0.106
WM# 905025	Light Unit	Diesel	2009	10.5	8,760.0	6.000	0.608	0.051
WM# 905068	Light Unit	Diesel	2010	10.5	8,760.0	6.000	0.608	0.051
WM# 904858	Magnum MLT3060 Light Unit	Diesel	2016	11.7	8,760.0	6.000	0.579	0.048
WM# 904981	4000 Watt Diesel Light Tower Terex	Diesel	2016	10.5	8,760.0	6.000	0.608	0.051
WM# 904982	Magnum MLT3060 Light Unit	Diesel	2016	11.7	8,760.0	6.000	0.579	0.048
WM# 904983	60Hz Light Unit	Diesel	2016	13.6	8,760.0	6.000	0.579	0.048
WM# 904984	60Hz Light Unit	Diesel	2016	10.5	8,760.0	6.000	0.579	0.048
WM# 903686	24CFM-GX90 Air Compressor - Landfill	Unleaded Gasoline	2010	13	8,760.0	409.396	51.392	4.283
WM# 905025	Light Unit	Diesel	2009	10.5	8,760.0	6.000	0.608	0.051
WM# 905068	Light Unit	Diesel	2010	10.5	8,760.0	6.000	0.608	0.051
WM# 951359	Back-up Lube Compressor	Diesel	2003	48	8,760.0	4.100	1.900	0.158
WM# 904662	4000 Watt Diesel Light Tower	Diesel	2015	10.5	8,760.0	6.000	0.608	0.051
WM# 904663	4000 Watt Diesel Light Tower	Diesel	2015	10.5	8,760.0	6.000	0.608	0.051
WM# 904664	4000 Watt Diesel Light Tower	Diesel	2015	10.5	8,760.0	6.000	0.608	0.051
WM# 951360	3500 Wt Portable Magnet	Unleaded Gasoline	2003	10	8,760.0	410.000	39.591	3.299
WM# 951361	Postable Supv. Generator	Unleaded Gasoline	2002	11	8,760.0	410.000	43.550	3.629
SN GCAFT2524206: 9A-A	Honda GX160 Air Compressor	Unleaded Gasoline	2009	4.8	8,760.0	409.396	19.085	1.590
SN GCAFT2285062: 89-J	Honda GX160 Air Compressor	Unleaded Gasoline	2008	4.8	8,760.0	347.502	16.199	1.350
SN 3625101631[6]	Kohler Command Pro 13 Air Compressor	Unleaded Gasoline	2006	13.0	8,760.0	273.676	34.355	2.863
						Total	226.867	18.906

Note: 1) Pursuant to ALRRF's October 2009 Compliance Plan to satisfy Alameda County Ordinance 2008-01 ("Alameda County Plant Debris Landfill Ban"), ALRRF no longer receives plant debris as of January 1, 2010. Therefore,

2) Diesel Engine S-196 is no longer in use as of August 2009.
3) The S-197 Portable Generator, the S-198 Vacuum Truck Pump and the S-214 Portable Air Compressor were removed from service in December 2009. WM submitted a permit surrender letter on December 29, 2009.
4) Pursuant to PTO Condition 24578, Tippers 70, 71, 83, and 93 are limited to 29,200 hours per consecutive 12-hour period. The maximum potential operating hours are the worst case scenario of each tipper operating all
5) The S-207 Tipper Engine was replaced by the S-218 Tipper Engine and the S-209 Tipper Engine was replaced by the S-217 Tipper Engine in September 2010. S-224 replaced S-217 and S-225 replaced S-218 in 2015.
6) The Kohler air compresssor with SN 3625101631 was put first put into use in April 2011.
7) The S-222 Tipper was replaced by new Diesel engine Tipper S-228.

N/A - Not Applicable SN - Serial Number

g/bhp-hr - Grams per brake horsepower-hour

APPENDIX W

ROLLING 12-MONTH AND MAXIMUM POTENTIAL CO EMISSIONS PERMIT RECORD

WASTE MANAGEMENT of ALAMEDA COUNTY
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
BAAQMD PLANT NO. 2066

ROLLING 12- MONTH CO EMISSIONS
PERMIT RECORD

For Month/Year	A-15 Flare (Tons)	A-16 Flare (Tons)	S-6 Turbine (Tons)	S-7 Turbine (Tons)	Portable Engines (Tons)	Monthly Total CO Emissions (Tons)	Rolling 12-Month Total CO Emissions (Tons)
June-19	0.00000	0.096	1.588	0.944	0.143	2.771	36.331
July-19	0.00000	0.088	1.652	0.983	0.183	2.907	35.886
August-19	0.00000	0.085	1.659	0.994	0.192	2.930	36.188
September-19	0.00000	0.076	1.616	0.959	0.181	2.832	35.908
October-19	0.00000	0.083	1.448	0.929	0.234	2.694	35.650
November-19	0.00000	0.068	1.605	0.975	0.191	2.839	35.331
December-19	0.00005	0.077	1.658	1.018	0.242	2.996	35.010
January-20	0.00000	0.081	1.642	1.017	0.245	2.985	34.808
February-20	0.00000	0.076	1.596	0.948	0.285	2.905	34.670
March-20	0.00201	0.093	1.744	1.158	0.256	3.253	34.935
April-20	0.00015	0.093	1.851	1.125	0.223	3.292	35.364
May-20	0.00000	0.074	1.867	1.153	0.190	3.284	35.688
12-Month Total	**0.002**	**0.990**	**19.927**	**12.204**	**2.565**	**35.688**	
Rolling 12- Month Total Permit Limit (Cond. No. 24373, Parts 1 and 2)	93.268	115.632	56.064	56.064		225.000	

Not 1) The Rolling 12-month CO Emissions Permit Record is maintained pursuant to Permit Condition No. 24373, Part 3.
2) The A-16 Flare was started up on July 16, 2009.
3) Pursuant to PTO Condition# 24373, Part 2, the rolling 12-month site-wide CO emissions did not exceed 225.00 Tons.

APPENDIX X

S-140/S-141 VOC RESULTS AND FLOW RECORDS

ALTAMONT LANDFILL MONTHLY CONDENSATE AND LEACHATE FLOW REPORT
2019
GALLONS BY SOURCE

MONTH	THROUGH		UNIT 2		GWIB	GWIB	LFG	LFG	LFG	LFG	UNIT 1 &	VALLEY SD	LSI 1	LSI 2	WWTP AV	EFFLUENT
	DATE	SUBDRAIN	LCRS	VADOSE		DAILY AVG	COND. To WWTP	COND. To FLARE A15	COND. To FLARE A16	COND. TOTAL	VALLEY SD	DAILY AVG	INFLUENT	INFLUENT	DAILY EFF	DISCHARGED
JAN	31-Jan	102,579	210,117	0	N/A	N/A	294,819	0	127,664	422,483	75,048	2,421	387,744	0	NA	NA
FEB	28-Feb	122,212	204,844	0	N/A	N/A	229,985	0	113,993	343,978	262,144	9,362	589,200	0	NA	NA
MAR	31-Mar	168,703	219,835	4,077	N/A	N/A	453,040	0	133,773	586,813	264,823	8,543	653361	0	NA	NA
QUARTER	***Total***	***393,494***	***634,796***	***4,077***	***-***	***-***	***977,844***	***0***	***375,430***	***1,353,274***	***602,015***	***20,326***	***1630305***	***0***		***-***
APR	30-Apr	167,538	208,748	0	N/A	N/A	323,525	0	122,091	445,616	194,613	6,487	570,899	0	NA	NA
MAY	31-May	164,691	209,094	0	N/A	N/A	239,676	0	125,171	364,847	146,791	4,735	520,576	5,109	NA	NA
JUN	30-Jun	148,463	206,232	0	N/A	N/A	229,460	0	126,631	356,091	125,038	4,168	479,733	11,176	NA	NA
QUARTER	***Total***	***480,692***	***624,074***	***0***	***0***	***0***	***792,661***	***0***	***373,893***	***1,166,554***	***466,442***	***15,390***	***1,571,208***	***16,285***	***-***	***-***
JUL	31-Jul	139,479	206,682	0	N/A	N/A	258,699	0	131,164	389,863	129,925	4,191	476,086	18,839	NA	NA
AUG	31-Aug	135,841	211,798	0	N/A	N/A	238,260	0	130,119	368,379	169,466	5,467	517,105	12,826	NA	NA
SEP	30-Sep	119,322	195,283	0	N/A	N/A	303,613	0	121,812	425,425	139,427	4,648	454,032	10,650	NA	NA
QUARTER	***Total***	***394,642***	***613,763***	***0***	***0***	***0***	***800,572***	***0***	***383,096***	***1,183,668***	***438,818***	***14,305***	***1,447,223***	***42,315***	***-***	***-***
OCT	31-Oct	116,446	203,727	0	N/A	N/A	210,256	0	114,146	324,402	127,323	4,107	447,496	12,075	NA	NA
NOV	30-Nov	110,944	196,898	0	N/A	N/A	220,938	0	126,384	347,322	125,149	4,172	432,991	8,500	NA	NA
DEC	31-Dec	107,144	197,062	0	N/A	N/A	262,835	0	124,340	387,175	299,653	9,666	603,859	5,800	NA	NA
QUARTER	***Total***	***334,534***	***597,687***	***0***	***0***	***0***	***694,029***	***0***	***364,870***	***1,058,899***	***552,125***	***17,945***	***1,484,346***	***26,375***	***-***	***-***
ANNUAL		**1,603,362**	**2,470,320**	**4,077**	**0**	**0**	**3,265,106**	**0**	**1,497,288**	**4,762,394**	**2,059,400**	**67,966**	**6,133,082**	**84,975**	**0**	**0**

NOTES:
2019 revised data included
N/A: Liquids no longer pumped from GWIB

ALTAMONT LANDFILL MONTHLY CONDENSATE AND LEACHATE FLOW REPORT
2020
GALLONS BY SOURCE

MONTH	THROUGH	UNIT 2			GWIB	GWIB	LFG	LFG	LFG	LFG	UNIT 1 &	VALLEY SD	LSI 1	LSI 2	WWTP AV	EFFLUENT
	DATE	SUBDRAIN	LCRS	VADOSE		DAILY AVG	COND. To WWTP	COND. To FLARE A15	COND. To FLARE A16	COND. TOTAL	VALLEY SD	DAILY AVG	INFLUENT	INFLUENT	DAILY EFF	DISCHARGED
JAN	31-Jan	106,626	184,959	0	N/A	N/A	298,832	0	122,038	420,870	233,006	7,516	524591	9,700	NA	NA
FEB	29-Feb	97,101	185,429	0	N/A	N/A	230,116	0	120,360	350,476	340,965	11,757	623495	4,400	NA	NA
MAR	31-Mar	95,744	218,142	0	N/A	N/A	240,860	0	121,154	362,014	297,789	9,606	611675	14,000	NA	NA
QUARTER	***Total***	***299,471***	***588,530***	***0***	***-***	***-***	***769,808***	***0***	***363,552***	***1,133,360***	***871,760***	***28,880***	***1759761***	***28100***		***-***
APR	30-Apr	90,687	227,982	0	N/A	N/A	284,151	0	95,038	379,189	214,854	7,162	533523	16,900	NA	NA
MAY	31-May	96,752	233,997	19,516	N/A	N/A	258,003	0	124,841	382,844	187,415	6,046	518164	18,400	NA	NA
QUARTER	***Total***	***187,439***	***461,979***	***19,516***	***0***	***0***	***542,154***	***0***	***219,878***	***762,032***	***402,269***	***13,207***	***1,051,687***	***35,300***	***-***	***-***
QUARTER	***Total***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***-***	***-***	***-***
QUARTER	***Total***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***-***	***-***	***-***
ANNUAL		**486,910**	**1,050,509**	**19,516**	**0**	**0**	**1,311,962**	**0**	**583,430**	**1,895,392**	**1,274,029**	**42,087**	**2,811,448**	**63,400**	**0**	**0**

NOTES:
N/A: Liquids no longer pumped from GWIB

Altamont Landfill and Resource Recovery Facility, Livermore, CA
S-140 and S-141 Analytical Results

	Quarter 2, 2019	Quarter 2, 2019	Quarter 3, 2019	Quarter 3, 2019	Quarter 4, 2019	Quarter 4, 2019	Quarter 1, 2020	Quarter 1, 2020	First Quarter 2020	Annual 2019-2020
	5/24/2019	5/24/2019	8/28/2019	8/28/2019	11/21/2019	11/21/2019	2/24/2020	2/24/2020	Quarter Average	Average
	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	(ppb)	(ppb)
Compound	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)	Concentration (ppbw)
Acetone	56.0					85.0				70.5
1,1,1,2-Tetrachloroethane										
1,1,1-Trichloroethane										
1,1,2,2-Tetrachloroethane										
1,1,2-Trichloroethane										
1,1-Dichloroethane										
1,1-Dichloroethene										
1,1-Dichloropropene										
1,2,3-Trichlorobenzene										
1,2,4-Trichlorobenzene										
1,2,4-Trimethylbenzene							0.6		0.6	0.6
1,2-Dibromo-3-chloropropane										
1,2-Dibromoethane										
1,2-Dichlorobenzene										
1,2-Dibromoethane										
1,2-Dichloroethane										
1,2-Dichloropropane										
1,3,5-Trimethylbenzene										
1,3-Dichlorobenzene										
1,3-Dichloropropane										
1,4-Dichlorobenzene	5.7		2.8		3.0		4.3		4.3	4.0
2,2-Dichloropropane										
2-Butanone(MEK)						57.0				57.0
2-Chloroethylvinyl ether										
2-Chlorotoluene										
2-Hexanone										
4-Chlorotoluene										
4-Methyl-2-pentanone (MIBK)										
Benzene	1.6		0.7		0.9		1.3		1.3	1.1
Bromobenzene										
Bromochloromethane										
Bromodichloromethane										
Bromoform										
Bromomethane										
Carbon disulfide										
Carbon tetrachloride										
Chlorobenzene										
Chloroethane										
Chloroform										
Chloromethane										
cis-1,2-Dichloroethene										
cis-1,3-Dichloropropene										
Dibromochloromethane										
Dibromomethane										
Dichlorodifluoromethane										
Ethylbenzene	3.4		1.4		1.6		2.2		2.2	2.2
Hexachlorobutadiene										
Isopropylbenzene	0.5									0.5
Methylene chloride										
MTBE	1.2		0.6		0.7		0.9		0.9	0.9
Naphthalene	2.6		1.3		1.1		1.4		1.4	1.6
n-Butylbenzene										
n-Propylbenzene										
p-Isopropyltoluene										
4-Isopropyltoluene										
sec-Butylbenzene										
Styrene										
tert-Butylbenzene										
Tetrachloroethene										
Toluene	2.6		1.1		1.3		1.8		1.8	1.7
Total xylenes	4.7		1.7		1.7		2.7		2.7	2.7
trans-1,2-Dichloroethene										
trans-1,3-Dichloropropene										
Trichloroethene										
Trichlorofluoromethane										
Trichlorotrifluoroethane										
Vinyl acetate										
Vinyl chloride										
Total TOC Concentration (ppb)	78.3		9.6		10.3	142.0	15.2		15.2	142.7

Note: ALRRF made a process change in which condensate is no longer sent to the water treatment plant.

			Compound	Concentration Limit (ppb)	First Quarter 2020 Average (ppbw)	Annual Average Results (ppbw)
Annual Average TOC Conc. (ppm)		0.0077	Benzene	80	1.30	1.10
First Quarter 2020 TOC Conc. (ppm)		0.0019	Chloroform	470	ND	ND
Maximum Daily TOC Concentration = 52 ppm			1,4 Dichlorobenzene	1,020	4.30	4.00
Quarterly Average TOC Concentration Limit = 52 ppm			Methylene Chloride	2,530	ND	ND
			Naphthalene	3,590	1.40	1.60
			Perchloroethylene/	430	ND	ND
			Tricholoroethylene/ Trichloroethene	1,290	ND	ND
			Vinyl Chloride	30	ND	ND

Limits set by Permit Condition No. 20922, Part 1 through 5

Altamont Landfill and Resource Recovery Facility, Livermore, CA
S-140 and S-141 Analytical Results

	Quarter 3, 2019	Quarter 3, 2019	Quarter 4, 2019	Quarter 4, 2019	Quarter 1, 2020	Quarter 1, 2020	Quarter 2, 2020	Quarter 2, 2020	Second Quarter 2020	Annual 2019-2020
	8/28/2019	8/28/2019	11/21/2019	11/21/2019	2/24/2020	2/24/2020	5/19/2020	5/19/2020	Quarter Average	Average
	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	Sample Location LCRS	Sample Location S-140	(ppb)	(ppb)
Compound	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**	**Concentration (ppbw)**
Acetone				85.0			200.0		200.0	142.5
1,1,1,2-Tetrachloroethane										
1,1,1-Trichloroethane										
1,1,2,2-Tetrachloroethane										
1,1,2-Trichloroethane										
1,1-Dichloroethane										
1,1-Dichloroethene										
1,1-Dichloropropene										
1,2,3-Trichlorobenzene										
1,2,4-Trichlorobenzene										
1,2,4-Trimethylbenzene					0.6					0.6
1,2-Dibromo-3-chloropropane										
1,2-Dibromoethane										
1,2-Dichlorobenzene										
1,2-Dibromoethane										
1,2-Dichloroethane										
1,2-Dichloropropane										
1,3,5-Trimethylbenzene										
1,3-Dichlorobenzene										
1,3-Dichloropropane										
1,4-Dichlorobenzene	2.8		3.0		4.3					3.4
2,2-Dichloropropane										
2-Butanone(MEK)				57.0			100.0		100.0	78.5
2-Chloroethylvinyl ether										
2-Chlorotoluene										
2-Hexanone										
4-Chlorotoluene										
4-Methyl-2-pentanone (MIBK										
Benzene	0.7		0.9		1.3					1.0
Bromobenzene										
Bromochloromethane										
Bromodichloromethane										
Bromoform										
Bromomethane										
Carbon disulfide							13.0		13.0	13.0
Carbon tetrachloride										
Chlorobenzene										
Chloroethane										
Chloroform										
Chloromethane										
cis-1,2-Dichloroethene										
cis-1,3-Dichloropropene										
Dibromochloromethane										
Dibromomethane										
Dichlorodifluoromethane										
Ethylbenzene	1.4		1.6		2.2					1.7
Hexachlorobutadiene										
Isopropylbenzene										
Methylene chloride										
MTBE	0.6		0.7		0.9					0.7
Naphthalene	1.3		1.1		1.4					1.3
n-Butylbenzene										
n-Propylbenzene										
p-Isopropyltoluene										
4-Isopropyltoluene										
sec-Butylbenzene										
Styrene										
tert-Butylbenzene										
Tetrachloroethene										
Toluene	1.1		1.3		1.8					1.4
Total xylenes	1.7		1.7		2.7					2.0
trans-1,2-Dichloroethene										
trans-1,3-Dichloropropene										
Trichloroethene										
Trichlorofluoromethane										
Trichlorotrifluoroethane										
Vinyl acetate										
Vinyl chloride										
Total TOC Concentration (ppb)	9.6		10.3	142.0	15.2		313.0		313.0	246.1

Note: ALRRF made a process change in which condensate is no longer sent to the water treatment plant.

			Compound	Concentration Limit (ppb)	Second Quarter 2020 Average (ppbw)	Annual Average Results (ppbw)
Annual Average TOC Conc. (ppm)		0.0182	Benzene	80	ND	1.0
Second Quarter 2020 TOC Conc. (ppm)		0.1043	Chloroform	470	ND	ND
Maximum Daily TOC Concentration = 52 ppm			1,4 Dichlorobenzene	1,020	ND	3.37
Quarterly Average TOC Concentration Limit = 52 ppm			Methylene Chloride	2,530	ND	ND
			Naphthalene	3,590	ND	1.27
			Perchloroethylene/ Tetrachloroethene	430	ND	ND
			Tricholoroethylene/ Trichloroethene	1,290	ND	ND
			Vinyl Chloride	30	ND	ND

Limits set by Permit Condition No. 20922, Part 1 through 5

WASTE MANAGEMENT of ALAMEDA COUNTY
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
BAAQMD PLANT NO. 2066

LANDFILL GAS CONDENSATE TREATMENT SYSTEM
PERMIT RECORD

Record Month/Year	Monthly Gallons S-12	Condensate Gallons Injection A-15	Condensate Gallons Injection A-16	Monthly Gallons S-19	Rolling 12 Month Gallons S-19
Jun-19	229,460	0	126,631	0	0
Jul-19	258,699	0	131,164	0	0
Aug-19	238,260	0	130,119	0	0
Sep-19	303,613	0	121,812	0	0
Oct-19	210,256	0	114,146	0	0
Nov-19	220,938	0	126,384	0	0
Dec-19	262,835	0	124,340	0	0
Jan-20	298,832	0	122,038	0	0
Feb-20	230,116	0	120,360	0	0
Mar-20	240,860	0	121,154	0	0
Apr-20	284,151	0	95,038	0	0
May-20	258,003	0	124,841	0	0

Note: The landfill gas condensate injection rate to the A-15 and A-16 Flares pursuant to Permit Condition No. 19235, Part 3 is 4,320 and 7,200 gallons per day, respectively.

Altamont Landfill and Resource Recovery Facility
Monthly Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month	Combined S-140 and S-141 (gallons)	Consecutive 12-Month Total (gallons)	Rolling 12-Month POC Total (lb)
Jun-19	0	0.00	0.00
Jul-19	0	0.00	0.00
Aug-19	0	0.00	0.00
Sep-19	0	0.00	0.00
Oct-19	0	0.00	0.00
Nov-19	0	0.00	0.00
Dec-19	0	0.00	0.00
Jan-20	0	0.00	0.00
Feb-20	0	0.00	0.00
Mar-20	0	0.00	0.00
Apr-20	0	0.00	0.00
May-20	0	0.00	0.00

Pursuant to Permit Condition No. 20922, Part 2,

1) The total combined wastewater throughput to S-140 and S-141 shall not exceed 6,460,000 gallons during any consecutive 12-month period.

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: December 2019

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
12/1/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/2/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/3/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/4/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/5/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/6/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/7/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/8/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/9/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/10/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/11/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/12/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/13/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/14/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/15/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/16/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/17/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/18/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/19/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/20/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/21/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/22/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/23/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/24/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/25/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/26/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/27/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/28/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/29/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/30/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
12/31/2019		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: January 2020

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
1/1/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/2/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/3/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/4/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/5/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/6/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/7/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/8/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/9/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/10/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/11/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/12/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/13/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/14/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/15/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/16/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/17/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/18/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/19/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/20/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/21/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/22/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/23/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/24/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/25/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/26/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/27/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/28/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/29/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/30/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
1/31/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: February 2020

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
2/1/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/2/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/3/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/4/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/5/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/6/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/7/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/8/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/9/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/10/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/11/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/12/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/13/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/14/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/15/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/16/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/17/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/18/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/19/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/20/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/21/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/22/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/23/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/24/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/25/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/26/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/27/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/28/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
2/29/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: March 2020

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
3/1/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/2/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/3/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/4/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/5/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/6/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/7/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/8/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/9/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/10/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/11/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/12/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/13/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/14/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/15/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/16/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/17/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/18/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/19/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/20/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/21/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/22/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/23/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/24/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/25/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/26/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/27/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/28/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/29/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/30/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
3/31/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: April 2020

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
4/1/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/2/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/3/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/4/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/5/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/6/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/7/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/8/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/9/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/10/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/11/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/12/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/13/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/14/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/15/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/16/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/17/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/18/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/19/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/20/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/21/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/22/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/23/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/24/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/25/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/26/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/27/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/28/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/29/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
4/30/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

Altamont Landfill and Resource Recovery Facility
Daily Throughput to S-140 and S-141

Report Prepared by: Rajan Phadnis

Month: May 2020

Day	Time	Duration (min)	Totalizer Reading (gals)	S-140 (gals)	S-141 (gals)	Comments
5/1/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/2/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/3/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/4/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/5/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/6/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/7/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/8/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/9/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/10/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/11/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/12/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/13/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/14/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/15/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/16/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/17/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/18/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/19/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/20/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/21/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/22/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/23/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/24/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/25/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/26/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/27/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/28/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/29/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/30/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
5/31/2020		0		0	0	The WWTP did not operate, so a daily reading was not obtained.
		Combined Volume Total (gals) =		0		POC (lb/day)
			Max Daily	0	0	0

Notes:
Per WM starting March 2010,
1) When operating, liquid is manually sent to the reactors. The difference between two daily readings can be attributed to throughput for the first day. Personnel either sent liquid to S-140 alone or to S-140 and S-141 together. Tank level records determine whether liquids were sent to S-140 alone or to both S-140 and S-141. When liquids were sent to both reactors at once, the throughput was split evenly between the two reactors.
Pursuant to Permit Condition No. 20922, Part 1,
2) The waste water throughput to each reactor (S-140 and S-141) shall not exceed 52,400 gallons during any one day and the total volatile organic compound concentration in the wastewater shall not exceed 54 ppm by weight.
3) The 52 ppm volatile organic compound limit = 10 lbs precursor organic compounds (POC)/day
4) Please refer to Condition 20922 Part 1 (b) if daily throughput limit is breached
N/A - Not Available

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

Laboratory Job ID: 720-97512-1
Client Project/Site: Altamont Landfill

For:
Waste Management
10840 Altamont Pass Road
Livermore, California 94550

Attn: Ms. Tianna Nourot

Authorized for release by:
3/2/2020 1:24:36 PM

Laura Turpen, Project Manager I
(916)374-4414
laura.turpen@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Job ID: 720-97512-1

Laboratory: Eurofins TestAmerica, Pleasanton

Narrative

Job Narrative
720-97512-1

Comments
No additional comments.

Receipt
The samples were received on 2/24/2020 2:07 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3º C.

GC/MS VOA
Method 8260B: The following samples were collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The samples were analyzed within the 7-day holding time specified for unpreserved samples: LCRS (720-97512-1) and S-140 (720-97512-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Client Sample ID: LCRS — Lab Sample ID: 720-97512-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.92		0.50		ug/L	1		8260B	Total/NA
Benzene	1.3		0.50		ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	4.3		0.50		ug/L	1		8260B	Total/NA
Ethylbenzene	2.2		0.50		ug/L	1		8260B	Total/NA
Naphthalene	1.4		1.0		ug/L	1		8260B	Total/NA
Toluene	1.8		0.50		ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.62		0.50		ug/L	1		8260B	Total/NA
Xylenes, Total	2.7		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: S-140 — Lab Sample ID: 720-97512-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: LCRS
Date Collected: 02/24/20 11:30
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**0.92**		0.50		ug/L			02/28/20 23:16	1
Acetone	ND		50		ug/L			02/28/20 23:16	1
Benzene	**1.3**		0.50		ug/L			02/28/20 23:16	1
Dichlorobromomethane	ND		0.50		ug/L			02/28/20 23:16	1
Bromobenzene	ND		1.0		ug/L			02/28/20 23:16	1
Chlorobromomethane	ND		1.0		ug/L			02/28/20 23:16	1
Bromoform	ND		1.0		ug/L			02/28/20 23:16	1
Bromomethane	ND		1.0		ug/L			02/28/20 23:16	1
2-Butanone (MEK)	ND		50		ug/L			02/28/20 23:16	1
n-Butylbenzene	ND		1.0		ug/L			02/28/20 23:16	1
sec-Butylbenzene	ND		1.0		ug/L			02/28/20 23:16	1
tert-Butylbenzene	ND		1.0		ug/L			02/28/20 23:16	1
Carbon disulfide	ND		5.0		ug/L			02/28/20 23:16	1
Carbon tetrachloride	ND		0.50		ug/L			02/28/20 23:16	1
Chlorobenzene	ND		0.50		ug/L			02/28/20 23:16	1
Chloroethane	ND		1.0		ug/L			02/28/20 23:16	1
Chloroform	ND		1.0		ug/L			02/28/20 23:16	1
Chloromethane	ND		1.0		ug/L			02/28/20 23:16	1
2-Chlorotoluene	ND		0.50		ug/L			02/28/20 23:16	1
4-Chlorotoluene	ND		0.50		ug/L			02/28/20 23:16	1
Chlorodibromomethane	ND		0.50		ug/L			02/28/20 23:16	1
1,2-Dichlorobenzene	ND		0.50		ug/L			02/28/20 23:16	1
1,3-Dichlorobenzene	ND		0.50		ug/L			02/28/20 23:16	1
1,4-Dichlorobenzene	**4.3**		0.50		ug/L			02/28/20 23:16	1
1,3-Dichloropropane	ND		1.0		ug/L			02/28/20 23:16	1
1,1-Dichloropropene	ND		0.50		ug/L			02/28/20 23:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			02/28/20 23:16	1
Ethylene Dibromide	ND		0.50		ug/L			02/28/20 23:16	1
Dibromomethane	ND		0.50		ug/L			02/28/20 23:16	1
Dichlorodifluoromethane	ND		0.50		ug/L			02/28/20 23:16	1
1,1-Dichloroethane	ND		0.50		ug/L			02/28/20 23:16	1
1,2-Dichloroethane	ND		0.50		ug/L			02/28/20 23:16	1
1,1-Dichloroethene	ND		0.50		ug/L			02/28/20 23:16	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 23:16	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 23:16	1
1,2-Dichloropropane	ND		0.50		ug/L			02/28/20 23:16	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 23:16	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 23:16	1
Ethylbenzene	**2.2**		0.50		ug/L			02/28/20 23:16	1
Hexachlorobutadiene	ND		1.0		ug/L			02/28/20 23:16	1
2-Hexanone	ND		50		ug/L			02/28/20 23:16	1
Isopropylbenzene	ND		0.50		ug/L			02/28/20 23:16	1
4-Isopropyltoluene	ND		1.0		ug/L			02/28/20 23:16	1
Methylene Chloride	ND		5.0		ug/L			02/28/20 23:16	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			02/28/20 23:16	1
Naphthalene	**1.4**		1.0		ug/L			02/28/20 23:16	1
N-Propylbenzene	ND		1.0		ug/L			02/28/20 23:16	1
Styrene	ND		0.50		ug/L			02/28/20 23:16	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 23:16	1

Client Sample ID: LCRS
Date Collected: 02/24/20 11:30
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 23:16	1
Tetrachloroethene	ND		0.50		ug/L			02/28/20 23:16	1
Toluene	**1.8**		0.50		ug/L			02/28/20 23:16	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/28/20 23:16	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/28/20 23:16	1
1,1,1-Trichloroethane	ND		0.50		ug/L			02/28/20 23:16	1
1,1,2-Trichloroethane	ND		0.50		ug/L			02/28/20 23:16	1
Trichloroethene	ND		0.50		ug/L			02/28/20 23:16	1
Trichlorofluoromethane	ND		1.0		ug/L			02/28/20 23:16	1
1,2,3-Trichloropropane	ND		1.0		ug/L			02/28/20 23:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			02/28/20 23:16	1
1,2,4-Trimethylbenzene	**0.62**		0.50		ug/L			02/28/20 23:16	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			02/28/20 23:16	1
Vinyl acetate	ND		10		ug/L			02/28/20 23:16	1
Vinyl chloride	ND		0.50		ug/L			02/28/20 23:16	1
Xylenes, Total	**2.7**		0.50		ug/L			02/28/20 23:16	1
2,2-Dichloropropane	ND		0.50		ug/L			02/28/20 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*02/28/20 23:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*		*02/28/20 23:16*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*02/28/20 23:16*	*1*

Client Sample ID: S-140
Date Collected: 02/24/20 11:00
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			02/28/20 23:42	1
Acetone	ND		50		ug/L			02/28/20 23:42	1
Benzene	ND		0.50		ug/L			02/28/20 23:42	1
Dichlorobromomethane	ND		0.50		ug/L			02/28/20 23:42	1
Bromobenzene	ND		1.0		ug/L			02/28/20 23:42	1
Chlorobromomethane	ND		1.0		ug/L			02/28/20 23:42	1
Bromoform	ND		1.0		ug/L			02/28/20 23:42	1
Bromomethane	ND		1.0		ug/L			02/28/20 23:42	1
2-Butanone (MEK)	ND		50		ug/L			02/28/20 23:42	1
n-Butylbenzene	ND		1.0		ug/L			02/28/20 23:42	1
sec-Butylbenzene	ND		1.0		ug/L			02/28/20 23:42	1
tert-Butylbenzene	ND		1.0		ug/L			02/28/20 23:42	1
Carbon disulfide	ND		5.0		ug/L			02/28/20 23:42	1
Carbon tetrachloride	ND		0.50		ug/L			02/28/20 23:42	1
Chlorobenzene	ND		0.50		ug/L			02/28/20 23:42	1
Chloroethane	ND		1.0		ug/L			02/28/20 23:42	1
Chloroform	ND		1.0		ug/L			02/28/20 23:42	1
Chloromethane	ND		1.0		ug/L			02/28/20 23:42	1
2-Chlorotoluene	ND		0.50		ug/L			02/28/20 23:42	1
4-Chlorotoluene	ND		0.50		ug/L			02/28/20 23:42	1
Chlorodibromomethane	ND		0.50		ug/L			02/28/20 23:42	1
1,2-Dichlorobenzene	ND		0.50		ug/L			02/28/20 23:42	1
1,3-Dichlorobenzene	ND		0.50		ug/L			02/28/20 23:42	1
1,4-Dichlorobenzene	ND		0.50		ug/L			02/28/20 23:42	1
1,3-Dichloropropane	ND		1.0		ug/L			02/28/20 23:42	1
1,1-Dichloropropene	ND		0.50		ug/L			02/28/20 23:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			02/28/20 23:42	1
Ethylene Dibromide	ND		0.50		ug/L			02/28/20 23:42	1
Dibromomethane	ND		0.50		ug/L			02/28/20 23:42	1
Dichlorodifluoromethane	ND		0.50		ug/L			02/28/20 23:42	1
1,1-Dichloroethane	ND		0.50		ug/L			02/28/20 23:42	1
1,2-Dichloroethane	ND		0.50		ug/L			02/28/20 23:42	1
1,1-Dichloroethene	ND		0.50		ug/L			02/28/20 23:42	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 23:42	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 23:42	1
1,2-Dichloropropane	ND		0.50		ug/L			02/28/20 23:42	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 23:42	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 23:42	1
Ethylbenzene	ND		0.50		ug/L			02/28/20 23:42	1
Hexachlorobutadiene	ND		1.0		ug/L			02/28/20 23:42	1
2-Hexanone	ND		50		ug/L			02/28/20 23:42	1
Isopropylbenzene	ND		0.50		ug/L			02/28/20 23:42	1
4-Isopropyltoluene	ND		1.0		ug/L			02/28/20 23:42	1
Methylene Chloride	ND		5.0		ug/L			02/28/20 23:42	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			02/28/20 23:42	1
Naphthalene	ND		1.0		ug/L			02/28/20 23:42	1
N-Propylbenzene	ND		1.0		ug/L			02/28/20 23:42	1
Styrene	ND		0.50		ug/L			02/28/20 23:42	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 23:42	1

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Client Sample ID: S-140
Date Collected: 02/24/20 11:00
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 23:42	1
Tetrachloroethene	ND		0.50		ug/L			02/28/20 23:42	1
Toluene	ND		0.50		ug/L			02/28/20 23:42	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/28/20 23:42	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/28/20 23:42	1
1,1,1-Trichloroethane	ND		0.50		ug/L			02/28/20 23:42	1
1,1,2-Trichloroethane	ND		0.50		ug/L			02/28/20 23:42	1
Trichloroethene	ND		0.50		ug/L			02/28/20 23:42	1
Trichlorofluoromethane	ND		1.0		ug/L			02/28/20 23:42	1
1,2,3-Trichloropropane	ND		1.0		ug/L			02/28/20 23:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			02/28/20 23:42	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			02/28/20 23:42	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			02/28/20 23:42	1
Vinyl acetate	ND		10		ug/L			02/28/20 23:42	1
Vinyl chloride	ND		0.50		ug/L			02/28/20 23:42	1
Xylenes, Total	ND		0.50		ug/L			02/28/20 23:42	1
2,2-Dichloropropane	ND		0.50		ug/L			02/28/20 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*67 - 130*		*02/28/20 23:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*72 - 130*		*02/28/20 23:42*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*02/28/20 23:42*	*1*

Surrogate Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DCA	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-97512-1	LCRS	100	102	95
720-97512-2	S-140	97	119	93
LCS 720-279831/6	Lab Control Sample	96	97	94
LCSD 720-279831/7	Lab Control Sample Dup	97	95	95
MB 720-279831/5	Method Blank	95	92	92

Surrogate Legend

BFB = 4-Bromofluorobenzene
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-279831/5
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			02/28/20 16:34	1
Acetone	ND		50		ug/L			02/28/20 16:34	1
Benzene	ND		0.50		ug/L			02/28/20 16:34	1
Dichlorobromomethane	ND		0.50		ug/L			02/28/20 16:34	1
Bromobenzene	ND		1.0		ug/L			02/28/20 16:34	1
Chlorobromomethane	ND		1.0		ug/L			02/28/20 16:34	1
Bromoform	ND		1.0		ug/L			02/28/20 16:34	1
Bromomethane	ND		1.0		ug/L			02/28/20 16:34	1
2-Butanone (MEK)	ND		50		ug/L			02/28/20 16:34	1
n-Butylbenzene	ND		1.0		ug/L			02/28/20 16:34	1
sec-Butylbenzene	ND		1.0		ug/L			02/28/20 16:34	1
tert-Butylbenzene	ND		1.0		ug/L			02/28/20 16:34	1
Carbon disulfide	ND		5.0		ug/L			02/28/20 16:34	1
Carbon tetrachloride	ND		0.50		ug/L			02/28/20 16:34	1
Chlorobenzene	ND		0.50		ug/L			02/28/20 16:34	1
Chloroethane	ND		1.0		ug/L			02/28/20 16:34	1
Chloroform	ND		1.0		ug/L			02/28/20 16:34	1
Chloromethane	ND		1.0		ug/L			02/28/20 16:34	1
2-Chlorotoluene	ND		0.50		ug/L			02/28/20 16:34	1
4-Chlorotoluene	ND		0.50		ug/L			02/28/20 16:34	1
Chlorodibromomethane	ND		0.50		ug/L			02/28/20 16:34	1
1,2-Dichlorobenzene	ND		0.50		ug/L			02/28/20 16:34	1
1,3-Dichlorobenzene	ND		0.50		ug/L			02/28/20 16:34	1
1,4-Dichlorobenzene	ND		0.50		ug/L			02/28/20 16:34	1
1,3-Dichloropropane	ND		1.0		ug/L			02/28/20 16:34	1
1,1-Dichloropropene	ND		0.50		ug/L			02/28/20 16:34	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			02/28/20 16:34	1
Ethylene Dibromide	ND		0.50		ug/L			02/28/20 16:34	1
Dibromomethane	ND		0.50		ug/L			02/28/20 16:34	1
Dichlorodifluoromethane	ND		0.50		ug/L			02/28/20 16:34	1
1,1-Dichloroethane	ND		0.50		ug/L			02/28/20 16:34	1
1,2-Dichloroethane	ND		0.50		ug/L			02/28/20 16:34	1
1,1-Dichloroethene	ND		0.50		ug/L			02/28/20 16:34	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 16:34	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			02/28/20 16:34	1
1,2-Dichloropropane	ND		0.50		ug/L			02/28/20 16:34	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 16:34	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			02/28/20 16:34	1
Ethylbenzene	ND		0.50		ug/L			02/28/20 16:34	1
Hexachlorobutadiene	ND		1.0		ug/L			02/28/20 16:34	1
2-Hexanone	ND		50		ug/L			02/28/20 16:34	1
Isopropylbenzene	ND		0.50		ug/L			02/28/20 16:34	1
4-Isopropyltoluene	ND		1.0		ug/L			02/28/20 16:34	1
Methylene Chloride	ND		5.0		ug/L			02/28/20 16:34	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			02/28/20 16:34	1
Naphthalene	ND		1.0		ug/L			02/28/20 16:34	1
N-Propylbenzene	ND		1.0		ug/L			02/28/20 16:34	1
Styrene	ND		0.50		ug/L			02/28/20 16:34	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-279831/5
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 16:34	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			02/28/20 16:34	1
Tetrachloroethene	ND		0.50		ug/L			02/28/20 16:34	1
Toluene	ND		0.50		ug/L			02/28/20 16:34	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/28/20 16:34	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/28/20 16:34	1
1,1,1-Trichloroethane	ND		0.50		ug/L			02/28/20 16:34	1
1,1,2-Trichloroethane	ND		0.50		ug/L			02/28/20 16:34	1
Trichloroethene	ND		0.50		ug/L			02/28/20 16:34	1
Trichlorofluoromethane	ND		1.0		ug/L			02/28/20 16:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			02/28/20 16:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			02/28/20 16:34	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			02/28/20 16:34	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			02/28/20 16:34	1
Vinyl acetate	ND		10		ug/L			02/28/20 16:34	1
Vinyl chloride	ND		0.50		ug/L			02/28/20 16:34	1
Xylenes, Total	ND		0.50		ug/L			02/28/20 16:34	1
2,2-Dichloropropane	ND		0.50		ug/L			02/28/20 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*02/28/20 16:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*02/28/20 16:34*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*02/28/20 16:34*	*1*

Lab Sample ID: LCS 720-279831/6
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	25.7		ug/L		103	70 - 130
Acetone	125	127		ug/L		101	61 - 147
Benzene	25.0	24.8		ug/L		99	79 - 119
Dichlorobromomethane	25.0	26.5		ug/L		106	81 - 130
Bromobenzene	25.0	26.2		ug/L		105	77 - 117
Chlorobromomethane	25.0	24.8		ug/L		99	81 - 122
Bromoform	25.0	30.0		ug/L		120	75 - 127
Bromomethane	25.0	22.9		ug/L		92	70 - 132
2-Butanone (MEK)	125	120		ug/L		96	66 - 133
n-Butylbenzene	25.0	21.9		ug/L		88	78 - 119
sec-Butylbenzene	25.0	23.5		ug/L		94	78 - 118
tert-Butylbenzene	25.0	23.9		ug/L		96	78 - 118
Carbon disulfide	25.0	23.8		ug/L		95	64 - 127
Carbon tetrachloride	25.0	23.4		ug/L		94	72 - 142
Chlorobenzene	25.0	23.9		ug/L		96	76 - 116
Chloroethane	25.0	25.3		ug/L		101	70 - 131
Chloroform	25.0	24.1		ug/L		96	82 - 119
Chloromethane	25.0	25.6		ug/L		102	49 - 134
2-Chlorotoluene	25.0	24.1		ug/L		96	75 - 115

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-279831/6
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorotoluene	25.0	24.0		ug/L		96	73 - 119
Chlorodibromomethane	25.0	27.5		ug/L		110	77 - 133
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	77 - 117
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	76 - 116
1,4-Dichlorobenzene	25.0	24.5		ug/L		98	76 - 116
1,3-Dichloropropane	25.0	25.9		ug/L		104	77 - 117
1,1-Dichloropropene	25.0	23.6		ug/L		94	83 - 130
1,2-Dibromo-3-Chloropropane	25.0	27.5		ug/L		110	74 - 126
Ethylene Dibromide	25.0	25.1		ug/L		100	80 - 121
Dibromomethane	25.0	24.5		ug/L		98	79 - 117
Dichlorodifluoromethane	25.0	19.2		ug/L		77	21 - 150
1,1-Dichloroethane	25.0	25.9		ug/L		103	77 - 119
1,2-Dichloroethane	25.0	24.8		ug/L		99	73 - 122
1,1-Dichloroethene	25.0	21.5		ug/L		86	69 - 119
cis-1,2-Dichloroethene	25.0	26.0		ug/L		104	77 - 117
trans-1,2-Dichloroethene	25.0	21.5		ug/L		86	79 - 117
1,2-Dichloropropane	25.0	27.4		ug/L		110	79 - 119
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	82 - 119
trans-1,3-Dichloropropene	25.0	26.7		ug/L		107	76 - 122
Ethylbenzene	25.0	23.1		ug/L		93	77 - 117
Hexachlorobutadiene	25.0	23.4		ug/L		94	78 - 140
2-Hexanone	125	137		ug/L		110	63 - 140
Isopropylbenzene	25.0	23.2		ug/L		93	77 - 130
4-Isopropyltoluene	25.0	22.7		ug/L		91	80 - 120
Methylene Chloride	25.0	25.4		ug/L		102	75 - 117
4-Methyl-2-pentanone (MIBK)	125	141		ug/L		113	66 - 140
Naphthalene	25.0	25.3		ug/L		101	81 - 121
N-Propylbenzene	25.0	23.5		ug/L		94	77 - 117
Styrene	25.0	23.8		ug/L		95	76 - 116
1,1,1,2-Tetrachloroethane	25.0	27.1		ug/L		108	81 - 121
1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L		106	70 - 115
Tetrachloroethene	25.0	23.4		ug/L		94	81 - 130
Toluene	25.0	23.8		ug/L		95	75 - 120
1,2,3-Trichlorobenzene	25.0	25.3		ug/L		101	87 - 123
1,2,4-Trichlorobenzene	25.0	24.0		ug/L		96	78 - 120
1,1,1-Trichloroethane	25.0	22.8		ug/L		91	74 - 130
1,1,2-Trichloroethane	25.0	26.0		ug/L		104	80 - 117
Trichloroethene	25.0	24.3		ug/L		97	80 - 123
Trichlorofluoromethane	25.0	20.4		ug/L		82	75 - 141
1,2,3-Trichloropropane	25.0	25.4		ug/L		102	77 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.9		ug/L		92	70 - 133
1,2,4-Trimethylbenzene	25.0	23.7		ug/L		95	75 - 115
1,3,5-Trimethylbenzene	25.0	23.6		ug/L		94	77 - 117
Vinyl acetate	25.0	27.0		ug/L		108	50 - 126
Vinyl chloride	25.0	23.4		ug/L		94	58 - 138
Xylenes, Total	50.0	46.6		ug/L		93	77 - 118
2,2-Dichloropropane	25.0	22.6		ug/L		90	74 - 156

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-279831/6
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	*96*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 720-279831/7
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			25.0	24.5		ug/L		98	70 - 130	5	20
Acetone			125	118		ug/L		94	61 - 147	7	30
Benzene			25.0	24.6		ug/L		99	79 - 119	0	20
Dichlorobromomethane			25.0	25.8		ug/L		103	81 - 130	3	20
Bromobenzene			25.0	25.3		ug/L		101	77 - 117	4	20
Chlorobromomethane			25.0	23.9		ug/L		96	81 - 122	4	20
Bromoform			25.0	28.7		ug/L		115	75 - 127	4	20
Bromomethane			25.0	22.8		ug/L		91	70 - 132	1	20
2-Butanone (MEK)			125	117		ug/L		93	66 - 133	3	22
n-Butylbenzene			25.0	22.4		ug/L		89	78 - 119	2	20
sec-Butylbenzene			25.0	23.2		ug/L		93	78 - 118	1	20
tert-Butylbenzene			25.0	23.5		ug/L		94	78 - 118	2	20
Carbon disulfide			25.0	23.8		ug/L		95	64 - 127	0	20
Carbon tetrachloride			25.0	23.5		ug/L		94	72 - 142	0	20
Chlorobenzene			25.0	23.8		ug/L		95	76 - 116	0	20
Chloroethane			25.0	25.0		ug/L		100	70 - 131	1	20
Chloroform			25.0	23.7		ug/L		95	82 - 119	2	20
Chloromethane			25.0	25.7		ug/L		103	49 - 134	0	20
2-Chlorotoluene			25.0	23.6		ug/L		94	75 - 115	2	20
4-Chlorotoluene			25.0	23.6		ug/L		94	73 - 119	2	20
Chlorodibromomethane			25.0	26.7		ug/L		107	77 - 133	3	20
1,2-Dichlorobenzene			25.0	25.4		ug/L		102	77 - 117	2	20
1,3-Dichlorobenzene			25.0	24.1		ug/L		96	76 - 116	1	20
1,4-Dichlorobenzene			25.0	24.2		ug/L		97	76 - 116	1	20
1,3-Dichloropropane			25.0	25.1		ug/L		100	77 - 117	3	20
1,1-Dichloropropene			25.0	23.5		ug/L		94	83 - 130	0	20
1,2-Dibromo-3-Chloropropane			25.0	24.8		ug/L		99	74 - 126	10	20
Ethylene Dibromide			25.0	23.9		ug/L		96	80 - 121	5	20
Dibromomethane			25.0	23.9		ug/L		96	79 - 117	2	20
Dichlorodifluoromethane			25.0	19.1		ug/L		77	21 - 150	0	20
1,1-Dichloroethane			25.0	25.7		ug/L		103	77 - 119	1	20
1,2-Dichloroethane			25.0	24.1		ug/L		97	73 - 122	3	20
1,1-Dichloroethene			25.0	21.2		ug/L		85	69 - 119	1	20
cis-1,2-Dichloroethene			25.0	25.9		ug/L		104	77 - 117	0	20
trans-1,2-Dichloroethene			25.0	21.4		ug/L		86	79 - 117	0	20
1,2-Dichloropropane			25.0	27.2		ug/L		109	79 - 119	1	20
cis-1,3-Dichloropropene			25.0	26.2		ug/L		105	82 - 119	2	20
trans-1,3-Dichloropropene			25.0	26.2		ug/L		105	76 - 122	2	20
Ethylbenzene			25.0	23.4		ug/L		94	77 - 117	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-279831/7
Matrix: Water
Analysis Batch: 279831

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobutadiene			25.0	23.2		ug/L		93	78 - 140	1	20
2-Hexanone			125	128		ug/L		102	63 - 140	7	24
Isopropylbenzene			25.0	23.2		ug/L		93	77 - 130	0	20
4-Isopropyltoluene			25.0	22.7		ug/L		91	80 - 120	0	20
Methylene Chloride			25.0	24.9		ug/L		100	75 - 117	2	20
4-Methyl-2-pentanone (MIBK)			125	130		ug/L		104	66 - 140	8	21
Naphthalene			25.0	24.3		ug/L		97	81 - 121	4	20
N-Propylbenzene			25.0	23.3		ug/L		93	77 - 117	1	20
Styrene			25.0	23.9		ug/L		96	76 - 116	0	20
1,1,1,2-Tetrachloroethane			25.0	26.9		ug/L		107	81 - 121	1	20
1,1,2,2-Tetrachloroethane			25.0	24.8		ug/L		99	70 - 115	7	20
Tetrachloroethene			25.0	23.4		ug/L		94	81 - 130	0	20
Toluene			25.0	23.8		ug/L		95	75 - 120	0	20
1,2,3-Trichlorobenzene			25.0	25.2		ug/L		101	87 - 123	0	20
1,2,4-Trichlorobenzene			25.0	24.4		ug/L		98	78 - 120	2	20
1,1,1-Trichloroethane			25.0	22.7		ug/L		91	74 - 130	0	20
1,1,2-Trichloroethane			25.0	24.9		ug/L		100	80 - 117	4	20
Trichloroethene			25.0	24.3		ug/L		97	80 - 123	0	20
Trichlorofluoromethane			25.0	20.4		ug/L		82	75 - 141	0	20
1,2,3-Trichloropropane			25.0	23.8		ug/L		95	77 - 120	7	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	22.8		ug/L		91	70 - 133	1	20
1,2,4-Trimethylbenzene			25.0	23.5		ug/L		94	75 - 115	1	20
1,3,5-Trimethylbenzene			25.0	23.3		ug/L		93	77 - 117	1	20
Vinyl acetate			25.0	25.5		ug/L		102	50 - 126	6	20
Vinyl chloride			25.0	23.6		ug/L		94	58 - 138	1	20
Xylenes, Total			50.0	46.9		ug/L		94	77 - 118	1	20
2,2-Dichloropropane			25.0	22.2		ug/L		89	74 - 156	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

QC Association Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

GC/MS VOA

Analysis Batch: 279831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-97512-1	LCRS	Total/NA	Water	8260B	
720-97512-2	S-140	Total/NA	Water	8260B	
MB 720-279831/5	Method Blank	Total/NA	Water	8260B	
LCS 720-279831/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-279831/7	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Client Sample ID: LCRS
Date Collected: 02/24/20 11:30
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	279831	02/28/20 23:16	A1C	TAL PLS

Client Sample ID: S-140
Date Collected: 02/24/20 11:00
Date Received: 02/24/20 14:07

Lab Sample ID: 720-97512-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	279831	02/28/20 23:42	A1C	TAL PLS

Laboratory References:

TAL PLS = Eurofins TestAmerica, Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Accreditation/Certification Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Laboratory: Eurofins TestAmerica, Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-20 *

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,1,1-Trichloroethane
8260B		Water	1,1,2,2-Tetrachloroethane
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	1,1,2-Trichloroethane
8260B		Water	1,1-Dichloroethane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,3-Trichloropropane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	1,2-Dichlorobenzene
8260B		Water	1,2-Dichloroethane
8260B		Water	1,2-Dichloropropane
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichlorobenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Butanone (MEK)
8260B		Water	2-Chlorotoluene
8260B		Water	2-Hexanone
8260B		Water	4-Chlorotoluene
8260B		Water	4-Isopropyltoluene
8260B		Water	4-Methyl-2-pentanone (MIBK)
8260B		Water	Acetone
8260B		Water	Benzene
8260B		Water	Bromobenzene
8260B		Water	Bromoform
8260B		Water	Bromomethane
8260B		Water	Carbon disulfide
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chlorobromomethane
8260B		Water	Chlorodibromomethane
8260B		Water	Chloroethane
8260B		Water	Chloroform
8260B		Water	Chloromethane
8260B		Water	cis-1,2-Dichloroethene
8260B		Water	cis-1,3-Dichloropropene
8260B		Water	Dibromomethane
8260B		Water	Dichlorobromomethane
8260B		Water	Dichlorodifluoromethane

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Laboratory: Eurofins TestAmerica, Pleasanton (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-20 *
8260B	Water	Ethylbenzene	
8260B	Water	Ethylene Dibromide	
8260B	Water	Hexachlorobutadiene	
8260B	Water	Isopropylbenzene	
8260B	Water	Methyl tert-butyl ether	
8260B	Water	Methylene Chloride	
8260B	Water	Naphthalene	
8260B	Water	n-Butylbenzene	
8260B	Water	N-Propylbenzene	
8260B	Water	sec-Butylbenzene	
8260B	Water	Styrene	
8260B	Water	tert-Butylbenzene	
8260B	Water	Tetrachloroethene	
8260B	Water	Toluene	
8260B	Water	trans-1,2-Dichloroethene	
8260B	Water	trans-1,3-Dichloropropene	
8260B	Water	Trichloroethene	
8260B	Water	Trichlorofluoromethane	
8260B	Water	Vinyl acetate	
8260B	Water	Vinyl chloride	
8260B	Water	Xylenes, Total	

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS
5030B	Purge and Trap	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = Eurofins TestAmerica, Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Waste Management
Project/Site: Altamont Landfill

Job ID: 720-97512-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
720-97512-1	LCRS	Water	02/24/20 11:30	02/24/20 14:07	
720-97512-2	S-140	Water	02/24/20 11:00	02/24/20 14:07	

194832

TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

	Nashville, TN		Dayton, OH		Indianapolis, IN
	Orlando, FL		Watertown, WI		
XX	Pleasanton, CA		Pontiac, MI		

720-97512

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? Yes / No

Enforcement Action? Yes / No

Client Name/Account #: WM - Altamont Resource Recovery

Address: 10840 Altamont Pass Road

City/State/Zip: Livermore, CA

Report To: Tianna Nourot - tnourot@wm.com

Project Manager: Tianna Nourot

Invoice To: same

Telephone Number: 1-925-455-7325 **Fax No.:**

TA Quote #:

Sampler Name: (Print) Natasha Marrahes

Project ID: Altamont LF

Sampler Signature:

Project #: 72000102

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: Full 8260B VOCs	Hold	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
LCRS	2/24	11:30	3	✓	W																✓			X		
S-140	2/24	11:00	3	✓	W																✓			X		

720-97512 Chain of Custody

Special Instructions:
1. **Standard WM QC level**
2. **cc results to tschmiesing@scseng.com**
3. **Prepare WM Standard EDD.**

Laboratory Comments:
Temperature Upon Receipt:
VOCs Free of Headspace? Y N

2.3°C

Relinquished by	Date	Time	Received by:	Date	Time
Natasha Marrahes	2/24/20	14:07		2-24-2020	1407
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

3/2/2020

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 720-97512-1

Login Number: 97512
List Number: 1
Creator: Garcia, Hilario A

List Source: Eurofins TestAmerica, Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

Laboratory Job ID: 720-98557-1
Client Project/Site: BAAQMD - Altamont Landfill

For:
Waste Management
10840 Altamont Pass Road
Livermore, California 94550

Attn: Ms. Tianna Nourot

Authorized for release by:
6/3/2020 4:34:41 PM

Laura Turpen, Project Manager I
(916)374-4414
laura.turpen@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Job ID: 720-98557-1

Laboratory: Eurofins TestAmerica, Pleasanton

Narrative

Job Narrative
720-98557-1

Comments
No additional comments.

Receipt
The sample was received on 5/19/2020 12:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1º C.

GC/MS VOA
Method 8260B: Internal standard (ISTD) response for Dioxane-d8 for the following sample was outside acceptance criteria: (LCS 320-382517/3). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD associated with analytical batch 320-382517. An LCS/LCSD pair was analyzed.

Method 8260B: The following sample was diluted to bring the concentration of target analytes (Acetone) within the calibration range: LCRS (720-98557-1). Elevated reporting limits (RLs) are provided.

Method 8260B: The following sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: LCRS (720-98557-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Client Sample ID: LCRS

Lab Sample ID: 720-98557-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	200		40		ug/L	4		8260B	Total/NA
2-Butanone (MEK)	100		8.0		ug/L	4		8260B	Total/NA
Carbon disulfide	13		8.0		ug/L	4		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Client Sample ID: LCRS
Date Collected: 05/19/20 09:55
Date Received: 05/19/20 12:40

Lab Sample ID: 720-98557-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		8.0		ug/L			06/02/20 19:58	4
Acetone	**200**		40		ug/L			06/02/20 19:58	4
Benzene	ND		4.0		ug/L			06/02/20 19:58	4
Dichlorobromomethane	ND		4.0		ug/L			06/02/20 19:58	4
Bromobenzene	ND		4.0		ug/L			06/02/20 19:58	4
Chlorobromomethane	ND		4.0		ug/L			06/02/20 19:58	4
Bromoform	ND		4.0		ug/L			06/02/20 19:58	4
Bromomethane	ND		4.0		ug/L			06/02/20 19:58	4
2-Butanone (MEK)	**100**		8.0		ug/L			06/02/20 19:58	4
n-Butylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
sec-Butylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
tert-Butylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
Carbon disulfide	**13**		8.0		ug/L			06/02/20 19:58	4
Carbon tetrachloride	ND		4.0		ug/L			06/02/20 19:58	4
Chlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
Chloroethane	ND		4.0		ug/L			06/02/20 19:58	4
Chloroform	ND		4.0		ug/L			06/02/20 19:58	4
Chloromethane	ND		4.0		ug/L			06/02/20 19:58	4
2-Chlorotoluene	ND		4.0		ug/L			06/02/20 19:58	4
4-Chlorotoluene	ND		4.0		ug/L			06/02/20 19:58	4
Chlorodibromomethane	ND		4.0		ug/L			06/02/20 19:58	4
1,2-Dichlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,3-Dichlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,4-Dichlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,3-Dichloropropane	ND		4.0		ug/L			06/02/20 19:58	4
1,1-Dichloropropene	ND		4.0		ug/L			06/02/20 19:58	4
1,2-Dibromo-3-Chloropropane	ND		8.0		ug/L			06/02/20 19:58	4
Ethylene Dibromide	ND		8.0		ug/L			06/02/20 19:58	4
Dibromomethane	ND		4.0		ug/L			06/02/20 19:58	4
Dichlorodifluoromethane	ND		4.0		ug/L			06/02/20 19:58	4
1,1-Dichloroethane	ND		4.0		ug/L			06/02/20 19:58	4
1,2-Dichloroethane	ND		4.0		ug/L			06/02/20 19:58	4
1,1-Dichloroethene	ND		4.0		ug/L			06/02/20 19:58	4
cis-1,2-Dichloroethene	ND		4.0		ug/L			06/02/20 19:58	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			06/02/20 19:58	4
1,2-Dichloropropane	ND		4.0		ug/L			06/02/20 19:58	4
cis-1,3-Dichloropropene	ND		4.0		ug/L			06/02/20 19:58	4
trans-1,3-Dichloropropene	ND		4.0		ug/L			06/02/20 19:58	4
Ethylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
Hexachlorobutadiene	ND		4.0		ug/L			06/02/20 19:58	4
2-Hexanone	ND		8.0		ug/L			06/02/20 19:58	4
Isopropylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
4-Isopropyltoluene	ND		4.0		ug/L			06/02/20 19:58	4
Methylene Chloride	ND		4.0		ug/L			06/02/20 19:58	4
4-Methyl-2-pentanone (MIBK)	ND		8.0		ug/L			06/02/20 19:58	4
Naphthalene	ND		4.0		ug/L			06/02/20 19:58	4
N-Propylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
Styrene	ND		4.0		ug/L			06/02/20 19:58	4
1,1,1,2-Tetrachloroethane	ND		4.0		ug/L			06/02/20 19:58	4

Client Sample ID: LCRS
Date Collected: 05/19/20 09:55
Date Received: 05/19/20 12:40

Lab Sample ID: 720-98557-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.0		ug/L			06/02/20 19:58	4
Tetrachloroethene	ND		4.0		ug/L			06/02/20 19:58	4
Toluene	ND		4.0		ug/L			06/02/20 19:58	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,1,1-Trichloroethane	ND		4.0		ug/L			06/02/20 19:58	4
1,1,2-Trichloroethane	ND		4.0		ug/L			06/02/20 19:58	4
Trichloroethene	ND		4.0		ug/L			06/02/20 19:58	4
Trichlorofluoromethane	ND		4.0		ug/L			06/02/20 19:58	4
1,2,3-Trichloropropane	ND		4.0		ug/L			06/02/20 19:58	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.0		ug/L			06/02/20 19:58	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			06/02/20 19:58	4
Vinyl acetate	ND		8.0		ug/L			06/02/20 19:58	4
Vinyl chloride	ND		4.0		ug/L			06/02/20 19:58	4
Xylenes, Total	ND		4.0		ug/L			06/02/20 19:58	4
2,2-Dichloropropane	ND		4.0		ug/L			06/02/20 19:58	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*74 - 120*		*06/02/20 19:58*	*4*
Dibromofluoromethane (Surr)	*90*		*80 - 123*		*06/02/20 19:58*	*4*
1,2-Dichloroethane-d4 (Surr)	*114*		*72 - 123*		*06/02/20 19:58*	*4*
Toluene-d8 (Surr)	*93*		*78 - 120*		*06/02/20 19:58*	*4*

Surrogate Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(74-120)	(80-123)	(72-123)	(78-120)
720-98557-1	LCRS	101	90	114	93
LCS 320-382517/3	Lab Control Sample	101	101	107	96
LCSD 320-382517/4	Lab Control Sample Dup	102	104	107	97
MB 320-382517/8	Method Blank	102	96	106	92

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-382517/8
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			06/02/20 11:52	1
Acetone	ND		10		ug/L			06/02/20 11:52	1
Benzene	ND		1.0		ug/L			06/02/20 11:52	1
Dichlorobromomethane	ND		1.0		ug/L			06/02/20 11:52	1
Bromobenzene	ND		1.0		ug/L			06/02/20 11:52	1
Chlorobromomethane	ND		1.0		ug/L			06/02/20 11:52	1
Bromoform	ND		1.0		ug/L			06/02/20 11:52	1
Bromomethane	ND		1.0		ug/L			06/02/20 11:52	1
2-Butanone (MEK)	ND		2.0		ug/L			06/02/20 11:52	1
n-Butylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
sec-Butylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
tert-Butylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
Carbon disulfide	ND		2.0		ug/L			06/02/20 11:52	1
Carbon tetrachloride	ND		1.0		ug/L			06/02/20 11:52	1
Chlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
Chloroethane	ND		1.0		ug/L			06/02/20 11:52	1
Chloroform	ND		1.0		ug/L			06/02/20 11:52	1
Chloromethane	ND		1.0		ug/L			06/02/20 11:52	1
2-Chlorotoluene	ND		1.0		ug/L			06/02/20 11:52	1
4-Chlorotoluene	ND		1.0		ug/L			06/02/20 11:52	1
Chlorodibromomethane	ND		1.0		ug/L			06/02/20 11:52	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,3-Dichloropropane	ND		1.0		ug/L			06/02/20 11:52	1
1,1-Dichloropropene	ND		1.0		ug/L			06/02/20 11:52	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/02/20 11:52	1
Ethylene Dibromide	ND		2.0		ug/L			06/02/20 11:52	1
Dibromomethane	ND		1.0		ug/L			06/02/20 11:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/02/20 11:52	1
1,1-Dichloroethane	ND		1.0		ug/L			06/02/20 11:52	1
1,2-Dichloroethane	ND		1.0		ug/L			06/02/20 11:52	1
1,1-Dichloroethene	ND		1.0		ug/L			06/02/20 11:52	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/02/20 11:52	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/02/20 11:52	1
1,2-Dichloropropane	ND		1.0		ug/L			06/02/20 11:52	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/02/20 11:52	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/02/20 11:52	1
Ethylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/20 11:52	1
2-Hexanone	ND		2.0		ug/L			06/02/20 11:52	1
Isopropylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
4-Isopropyltoluene	ND		1.0		ug/L			06/02/20 11:52	1
Methylene Chloride	ND		1.0		ug/L			06/02/20 11:52	1
4-Methyl-2-pentanone (MIBK)	ND		2.0		ug/L			06/02/20 11:52	1
Naphthalene	ND		1.0		ug/L			06/02/20 11:52	1
N-Propylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
Styrene	ND		1.0		ug/L			06/02/20 11:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 320-382517/8
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/02/20 11:52	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/02/20 11:52	1
Tetrachloroethene	ND		1.0		ug/L			06/02/20 11:52	1
Toluene	ND		1.0		ug/L			06/02/20 11:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/02/20 11:52	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/02/20 11:52	1
Trichloroethene	ND		1.0		ug/L			06/02/20 11:52	1
Trichlorofluoromethane	ND		1.0		ug/L			06/02/20 11:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/02/20 11:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0		ug/L			06/02/20 11:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/02/20 11:52	1
Vinyl acetate	ND		2.0		ug/L			06/02/20 11:52	1
Vinyl chloride	ND		1.0		ug/L			06/02/20 11:52	1
Xylenes, Total	ND		1.0		ug/L			06/02/20 11:52	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/20 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*74 - 120*		*06/02/20 11:52*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 123*		*06/02/20 11:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 123*		*06/02/20 11:52*	*1*
Toluene-d8 (Surr)	*92*		*78 - 120*		*06/02/20 11:52*	*1*

Lab Sample ID: LCS 320-382517/3
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	20.0	20.0		ug/L		100	71 - 125
Acetone	20.0	21.6		ug/L		108	55 - 145
Benzene	20.0	19.5		ug/L		97	79 - 120
Dichlorobromomethane	20.0	19.7		ug/L		99	80 - 124
Bromobenzene	20.0	18.2		ug/L		91	80 - 120
Chlorobromomethane	20.0	20.0		ug/L		100	80 - 120
Bromoform	20.0	18.1		ug/L		90	80 - 120
Bromomethane	20.0	18.3		ug/L		92	65 - 132
2-Butanone (MEK)	20.0	20.6		ug/L		103	66 - 129
n-Butylbenzene	20.0	20.5		ug/L		103	72 - 120
sec-Butylbenzene	20.0	19.9		ug/L		99	77 - 120
tert-Butylbenzene	20.0	20.6		ug/L		103	78 - 120
Carbon disulfide	20.0	19.2		ug/L		96	65 - 121
Carbon tetrachloride	20.0	19.9		ug/L		99	78 - 124
Chlorobenzene	20.0	19.0		ug/L		95	78 - 120
Chloroethane	20.0	18.6		ug/L		93	65 - 123
Chloroform	20.0	19.6		ug/L		98	80 - 120
Chloromethane	20.0	19.0		ug/L		95	62 - 129

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-382517/3
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	20.0	19.4		ug/L		97	79 - 120
4-Chlorotoluene	20.0	19.3		ug/L		97	80 - 121
Chlorodibromomethane	20.0	19.0		ug/L		95	80 - 122
1,2-Dichlorobenzene	20.0	19.2		ug/L		96	77 - 120
1,3-Dichlorobenzene	20.0	19.0		ug/L		95	78 - 120
1,4-Dichlorobenzene	20.0	18.7		ug/L		93	74 - 120
1,3-Dichloropropane	20.0	18.9		ug/L		95	79 - 120
1,1-Dichloropropene	20.0	19.1		ug/L		95	77 - 120
1,2-Dibromo-3-Chloropropane	20.0	18.7		ug/L		94	66 - 121
Ethylene Dibromide	20.0	19.7		ug/L		98	78 - 120
Dibromomethane	20.0	19.6		ug/L		98	80 - 121
Dichlorodifluoromethane	20.0	14.7		ug/L		73	39 - 161
1,1-Dichloroethane	20.0	19.4		ug/L		97	79 - 120
1,2-Dichloroethane	20.0	20.5		ug/L		103	77 - 128
1,1-Dichloroethene	20.0	19.0		ug/L		95	74 - 120
cis-1,2-Dichloroethene	20.0	19.3		ug/L		96	78 - 120
trans-1,2-Dichloroethene	20.0	19.0		ug/L		95	76 - 120
1,2-Dichloropropane	20.0	19.6		ug/L		98	75 - 125
cis-1,3-Dichloropropene	20.0	19.5		ug/L		97	80 - 131
trans-1,3-Dichloropropene	20.0	18.5		ug/L		92	75 - 133
Ethylbenzene	20.0	20.1		ug/L		101	80 - 120
Hexachlorobutadiene	20.0	18.8		ug/L		94	69 - 120
2-Hexanone	20.0	17.0		ug/L		85	54 - 128
Isopropylbenzene	20.0	20.1		ug/L		100	80 - 121
4-Isopropyltoluene	20.0	19.3		ug/L		97	76 - 120
Methylene Chloride	20.0	19.5		ug/L		98	77 - 120
4-Methyl-2-pentanone (MIBK)	20.0	18.2		ug/L		91	64 - 128
Naphthalene	20.0	20.2		ug/L		101	56 - 143
N-Propylbenzene	20.0	20.0		ug/L		100	76 - 120
Styrene	20.0	19.9		ug/L		99	80 - 120
1,1,1,2-Tetrachloroethane	20.0	20.9		ug/L		104	79 - 120
1,1,2,2-Tetrachloroethane	20.0	20.0		ug/L		100	74 - 137
Tetrachloroethene	20.0	17.7		ug/L		89	74 - 120
Toluene	20.0	19.5		ug/L		97	79 - 126
1,2,3-Trichlorobenzene	20.0	19.6		ug/L		98	47 - 162
1,2,4-Trichlorobenzene	20.0	20.0		ug/L		100	61 - 130
1,1,1-Trichloroethane	20.0	19.9		ug/L		100	79 - 121
1,1,2-Trichloroethane	20.0	20.0		ug/L		100	79 - 127
Trichloroethene	20.0	18.3		ug/L		92	74 - 120
Trichlorofluoromethane	20.0	17.9		ug/L		89	60 - 135
1,2,3-Trichloropropane	20.0	18.2		ug/L		91	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.6		ug/L		83	64 - 125
1,2,4-Trimethylbenzene	20.0	20.6		ug/L		103	76 - 120
1,3,5-Trimethylbenzene	20.0	20.1		ug/L		100	79 - 120
Vinyl acetate	20.0	21.2		ug/L		106	64 - 136
Vinyl chloride	20.0	18.2		ug/L		91	68 - 121
Xylenes, Total	40.0	40.5		ug/L		101	80 - 123
2,2-Dichloropropane	20.0	19.2		ug/L		96	75 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*101*		*74 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 123*
Toluene-d8 (Surr)	*96*		*78 - 120*

Lab Sample ID: LCSD 320-382517/4
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			20.0	21.1		ug/L		106	71 - 125	5	24
Acetone			20.0	23.3		ug/L		117	55 - 145	8	49
Benzene			20.0	20.0		ug/L		100	79 - 120	3	21
Dichlorobromomethane			20.0	20.5		ug/L		102	80 - 124	4	20
Bromobenzene			20.0	18.1		ug/L		91	80 - 120	0	17
Chlorobromomethane			20.0	20.5		ug/L		102	80 - 120	2	19
Bromoform			20.0	18.6		ug/L		93	80 - 120	3	16
Bromomethane			20.0	19.4		ug/L		97	65 - 132	5	40
2-Butanone (MEK)			20.0	21.5		ug/L		108	66 - 129	4	34
n-Butylbenzene			20.0	20.7		ug/L		104	72 - 120	1	25
sec-Butylbenzene			20.0	19.8		ug/L		99	77 - 120	0	19
tert-Butylbenzene			20.0	20.3		ug/L		101	78 - 120	1	19
Carbon disulfide			20.0	19.4		ug/L		97	65 - 121	1	26
Carbon tetrachloride			20.0	20.3		ug/L		102	78 - 124	2	25
Chlorobenzene			20.0	18.8		ug/L		94	78 - 120	1	15
Chloroethane			20.0	19.1		ug/L		96	65 - 123	3	40
Chloroform			20.0	19.6		ug/L		98	80 - 120	0	22
Chloromethane			20.0	19.4		ug/L		97	62 - 129	2	25
2-Chlorotoluene			20.0	19.6		ug/L		98	79 - 120	1	19
4-Chlorotoluene			20.0	19.2		ug/L		96	80 - 121	1	19
Chlorodibromomethane			20.0	18.8		ug/L		94	80 - 122	1	17
1,2-Dichlorobenzene			20.0	19.4		ug/L		97	77 - 120	1	19
1,3-Dichlorobenzene			20.0	19.4		ug/L		97	78 - 120	2	17
1,4-Dichlorobenzene			20.0	19.0		ug/L		95	74 - 120	2	15
1,3-Dichloropropane			20.0	18.3		ug/L		92	79 - 120	3	15
1,1-Dichloropropene			20.0	18.9		ug/L		94	77 - 120	1	20
1,2-Dibromo-3-Chloropropane			20.0	18.8		ug/L		94	66 - 121	0	33
Ethylene Dibromide			20.0	19.2		ug/L		96	78 - 120	2	15
Dibromomethane			20.0	20.6		ug/L		103	80 - 121	5	17
Dichlorodifluoromethane			20.0	15.3		ug/L		77	39 - 161	4	51
1,1-Dichloroethane			20.0	19.3		ug/L		96	79 - 120	1	21
1,2-Dichloroethane			20.0	20.8		ug/L		104	77 - 128	1	25
1,1-Dichloroethene			20.0	19.8		ug/L		99	74 - 120	4	22
cis-1,2-Dichloroethene			20.0	19.6		ug/L		98	78 - 120	2	18
trans-1,2-Dichloroethene			20.0	19.6		ug/L		98	76 - 120	3	20
1,2-Dichloropropane			20.0	20.3		ug/L		102	75 - 125	4	27
cis-1,3-Dichloropropene			20.0	19.1		ug/L		96	80 - 131	2	24
trans-1,3-Dichloropropene			20.0	19.0		ug/L		95	75 - 133	3	29
Ethylbenzene			20.0	20.0		ug/L		100	80 - 120	1	15
Hexachlorobutadiene			20.0	19.4		ug/L		97	69 - 120	3	30
2-Hexanone			20.0	18.1		ug/L		91	54 - 128	7	31

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-382517/4
Matrix: Water
Analysis Batch: 382517

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene	20.0	19.9		ug/L		99	80 - 121	1	17
4-Isopropyltoluene	20.0	19.5		ug/L		98	76 - 120	1	18
Methylene Chloride	20.0	20.4		ug/L		102	77 - 120	4	20
4-Methyl-2-pentanone (MIBK)	20.0	19.0		ug/L		95	64 - 128	4	33
Naphthalene	20.0	20.4		ug/L		102	56 - 143	1	48
N-Propylbenzene	20.0	20.0		ug/L		100	76 - 120	0	26
Styrene	20.0	19.9		ug/L		100	80 - 120	0	15
1,1,1,2-Tetrachloroethane	20.0	20.5		ug/L		103	79 - 120	2	23
1,1,2,2-Tetrachloroethane	20.0	20.4		ug/L		102	74 - 137	2	27
Tetrachloroethene	20.0	18.4		ug/L		92	74 - 120	4	18
Toluene	20.0	19.6		ug/L		98	79 - 126	0	20
1,2,3-Trichlorobenzene	20.0	19.8		ug/L		99	47 - 162	1	45
1,2,4-Trichlorobenzene	20.0	20.4		ug/L		102	61 - 130	2	40
1,1,1-Trichloroethane	20.0	19.2		ug/L		96	79 - 121	4	25
1,1,2-Trichloroethane	20.0	19.6		ug/L		98	79 - 127	2	30
Trichloroethene	20.0	18.5		ug/L		93	74 - 120	1	20
Trichlorofluoromethane	20.0	18.4		ug/L		92	60 - 135	3	41
1,2,3-Trichloropropane	20.0	18.6		ug/L		93	73 - 120	2	22
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.9		ug/L		89	64 - 125	7	40
1,2,4-Trimethylbenzene	20.0	20.6		ug/L		103	76 - 120	0	17
1,3,5-Trimethylbenzene	20.0	20.0		ug/L		100	79 - 120	1	20
Vinyl acetate	20.0	21.1		ug/L		105	64 - 136	0	30
Vinyl chloride	20.0	19.1		ug/L		95	68 - 121	4	33
Xylenes, Total	40.0	40.2		ug/L		101	80 - 123	1	16
2,2-Dichloropropane	20.0	20.3		ug/L		101	75 - 127	5	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*74 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 123*
Toluene-d8 (Surr)	*97*		*78 - 120*

QC Association Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

GC/MS VOA

Analysis Batch: 382517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98557-1	LCRS	Total/NA	Water	8260B	
MB 320-382517/8	Method Blank	Total/NA	Water	8260B	
LCS 320-382517/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 320-382517/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Client Sample ID: LCRS

Date Collected: 05/19/20 09:55
Date Received: 05/19/20 12:40

Lab Sample ID: 720-98557-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	382517	06/02/20 19:58	AP1	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Laboratory: Eurofins TestAmerica, Pleasanton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-22

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	07-01-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-22
Michigan	State	9947	01-31-22
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	06-01-21
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20 *
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAC
5030B	Purge and Trap	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Waste Management
Project/Site: BAAQMD - Altamont Landfill

Job ID: 720-98557-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
720-98557-1	LCRS	Water	05/19/20 09:55	05/19/20 12:40	

1195908

TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

[ ] Nashville, TN [ ] Dayton, OH [ ] Indianapolis, IN
[ ] Orlando, FL [ ] Watertown, WI
[XX] Pleasanton, CA [ ] Pontiac, MI

720-98557

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? [Yes] No
Enforcement Action? Yes [No]

Client Name/Account #: WM - Altamont Resource Recovery
Address: 10840 Altamont Pass Road
City/State/Zip: Livermore, CA
Project Manager: Tianna Nourot
Telephone Number: 1-925-455-7325 **Fax No.:**
Sampler Name: (Print) Natasha Maranhas
Sampler Signature:

Report To: Tianna Nourot - tnourot@wm.com
Invoice To: same
TA Quote #:
Project ID: Altamont LF
Project #: 7200012

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	Preservative: HNO_3 (Red Label)	Preservative: HCl (Blue Label)	Preservative: NaOH (Orange Label)	Preservative: H_2SO_4 Plastic (Yellow Label)	Preservative: H_2SO_4 Glass(Yellow Label)	Preservative: None (Black Label)	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Wastewater	Matrix: Drinking Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify):	Analyze For: Full 8260B VOCs	Analyze For: Hold	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
LCRS	5/19/20	9:55	3	X	W		X														X			X		
S-140 — Dry			3		W																			X		

720-98557 Chain of Custody

Special Instructions:
1. **Standard WM QC level**
2. **cc results to tschmiesing@scseng.com**
3. **Prepare WM Standard EDD.**

Laboratory Comments:
Temperature Upon Receipt:
VOCs Free of Headspace? Y N

3.1 C

Relinquished by:	Date	Time	Received by:	Date	Time
N. Maranhas	5/19	1240		5/19/20	1240
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

Eurofins TestAmerica, Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 Fax: 925-600-3002

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Turpen, Laura	Carrier Tracking No(s):	COC No: 720-47270.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: laura.turpen@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 720-98557-1
Address: 880 Riverside Parkway,	Due Date Requested: 6/1/2020			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: BAAQMD - Altamont Landfill	Project #: 72000102			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B/5030B (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LCRS (720-98557-1)	5/19/20	09:55 Pacific		Water			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	5/20/20 1510	ETA PLS	Received by:	05/20/20 3:17	DCS
Relinquished by:	05/20/20 5:06pm	DCS	Received by:	5/20/20 1706	ETA - SAC
Relinquished by:			Received by:		

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.0

Ver: 01/16/2019

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

720-98557 Field Sheet

Job: _____

Tracking # : MA

SO / PO / FO / SAT / 2-Day / Ground / UPS / (CDO) / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: IR Gun Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: —

Cooler ID: —

Temp Observed: 3.0 °C Corrected: 3.0 °C

From: Temp Blank ☒ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Samples received within holding time?	☒	☐	☐

Initials: PK Date: 5/20/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: DH Date: 5/20/20

Notes: _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☒	☐	☐

Initials: DH Date: 5/20/20

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 720-98557-1

Login Number: 98557
List Number: 1
Creator: Arauz, Dennis

List Source: Eurofins TestAmerica, Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 720-98557-1

Login Number: 98557
List Number: 2
Creator: Her, David A

List Source: Eurofins TestAmerica, Sacramento
List Creation: 05/20/20 07:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX Y
SOURCE TEST SUMMARY RESULTS

Waste Management, of Alameda County, Inc.:
Altamont Landfill & Resource Recovery Facility

BAAQMD Facility # A2066

Annual Compliance Emissions Test Report #20008
Landfill Gas Turbines- Source S-6 and S-7

Located at:

10840 Altamont Pass Road
Livermore, CA 94551

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:

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

Testing Performed On:
January 8th, 2020

Final Report Submitted On:
March 2nd, 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 (925) 338-4875.

Chuck Arrivas, QSTI
Project Manager

TABLE of CONTENTS

SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc. was contracted to perform the emissions testing on the S-6 and S-7 Landfill Gas Turbines at Waste Management of Alameda County, Inc. (WMAC), Altamont Landfill & Resource Recovery Facility (ALRRF), 10840 Altamont Pass Road, Livermore, California. This report presents the results of the test program. Table 1 summarizes the source test information.

Tables 1-1 through 1-2 summarize the results compared to the emission limits at normal operating conditions.

Individual test runs are presented in Tables 2-1 and 2-2 located in Appendix A. The Turbines met all compliance emission criteria.

Table 1. Source Test Information

Test Location:	Altamont Landfill & Resource Recovery Facility, 10840 Altamont Pass Road, Livermore, California
Source Contact:	Marcus Nettz (925) 455-4323
Source Tested:	Solar Gas Turbines (S-6) and (S-7)
Source Test Date:	January 8th, 2020
Test Objective:	Determine Compliance with Permit to Operate for Plant #A2066, Condition 18773
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Ave., Albany, CA 94706 Chuck Arrivas (925) 338-4875
Test Parameters:	**Landfill Gas Fuel Analysis** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur & Volumetric Flow Rate **Turbine Emissions** THC, CH_4, NMOC, NO_X, CO, O_2, SO_2 & Volumetric Flow Rate.

Table 1-1
ALRRF Turbine S-6
Normal Operating Condition

Emission Parameter	Average Test Result	Permit Limit (Regulation Limit)	Status
NO_X, lbs/MMBtu	0.1048	0.1567	In Compliance
NO_X, ppm @ 15% O_2 ISO conditions	26.3	42	In Compliance
NO_X, lbs/MW-hr	1.58	<2.34	In Compliance
CO, lbs/MMBtu	0.117	0.2229	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<3.9	120	In Compliance
CH_4 Destruction Efficiency	>99.98	>99	In Compliance
TRS in Landfill Gas, ppmvd	59.2	150	In Compliance
SO_2, ppmvd	2.9	300	In Compliance

Table 1-2
ALRRF Turbine S-7
Normal Operating Condition

Emission Parameter	Average Test Result	Permit Limit (Regulation Limit)	Status
NO_X, lbs/MMBtu	0.1084	0.1567	In Compliance
NO_X, ppm @ 15% O_2 ISO conditions	27.2	42	In Compliance
NO_X, lbs/MW-hr	1.62	<2.34	In Compliance
CO, lbs/MMBtu	0.076	0.2229	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<4.5	120	In Compliance
CH_4 Destruction Efficiency	>99.99	>99	In Compliance
TRS in Landfill Gas, ppmvd	54.9	150	In Compliance
SO_2, ppmvd	2.3	300	In Compliance

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This annual source test was performed within 9 and 12 months of the previous test, which was conducted on January 10th, 2019. It was conducted to demonstrate that the S-6 and S-7 landfill gas (LFG) Turbines are operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Permit to Operate (PTO) for Plant # A2066, Condition 18773.

2.2. Pollutants Tested

The following EPA and ASTM sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O_2 and CO_2, Stack Gas Molecular Weight
EPA Method 10	CO
EPA Method 7E	NO_X and NO_2 Converter Check
EPA Method 4 part 4.16	Moisture Calculation
BAAQMD ST-19A (calculated from TRS)	SO_2 calculated from TRS
EPA 19	Flow Rate Calculation, DSCFM
EPA 25C	LFG Gas analysis for NMOC by GC
EPA Method 25A	VOC Emissions
EPA Method 18	THC and CH_4
ASTM 1945/3588	LFG Gas analysis for BTU and F-Factor
ASTM D-5504	Sulfur Species, H_2S and TRS

2.3. Test Date(s)

Testing was conducted on January 8th, 2020.

2.4. Sampling and Observing Personnel

Chuck Arrivas representing Blue Sky Environmental, Inc, performed testing.

Dave Bearden of SCS Engineers, Rajan Phadnis of Waste Management and Larry LaCerra of WMRE (Plant Manager) were present to operate and oversee the Turbine operation and assist in coordinating testing and the collection of process data to verify accuracy of digitally recorded data during testing.

The BAAQMD was notified of the test in a plan submitted by SCS Engineering on behalf of Waste Management dated December 10th, 2019. A Source Test Protocol acknowledgement (NST #5748) was received on December 11th, 2019, but no agency observers were present to witness the testing. A copy of the source test protocol and email correspondence can be found in Appendix I.

2.5. Source/Process Description

The two identical Solar landfill gas Turbines are rated for 3,300 Kilowatts. The emissions vent through mufflers on the outside of the building and through 47-inch diameter stacks, approximately 25 feet above grade. Each Turbine is a Solar Centaur T-4500 Model gas fired Turbine. The Turbines were previously equipped with fogging systems, which have not been used during Turbine operation in recent history.

2.6. Source Operating Conditions

The operating kilowatt, exhaust temperature, and flow records are contained in Appendix-F.

The Turbines normal operating range is approximately 80 – 100% load. During the test period the Turbines were operated at ~87% of rated kilowatt output.

The average exhaust temperature at the normal operating condition was 1,129.2 degrees Fahrenheit (°F) for Turbine S-6 and 1,169.2 degrees Fahrenheit (°F) for Turbine S-7.

Landfill gas samples collected at the header of Turbine S-6 showed that the Methane quality averaged 46.7% and the Oxygen content was between 1.6 and 1.9%. Samples collected at the header of Turbine S-7 showed that the Methane quality averaged 46.7 % and the Oxygen content was between 1.6 and 2.0%.

The fuel volumetric flow rate was continuously measured and recorded by the LFG flow meter at least every 15 minutes in accordance with 40 CFR 60.756(b)(2), BAAQMD Regulation 8-34-508, and permit condition 18773 Part 11.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The S-6 and S-7 sampling was conducted in the 47-inch diameter ID stack, via ports approximately 25' above grade, accessed by a 40' boom-lift. Two 2-inch ports are available ~3 stack diameters downstream from the muffler and ~0.75 stack diameters upstream from the exit.

3.2. Point description/Labeling – ports/stack

Blue Sky Environmental conducted 8 point traverses and found less than 10% O_2 stratification. Subsequent CEM sampling was conducted at a representative average point in the stack.

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

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.

Stack Gas Moisture by EPA Method 4-16.4 is an acceptable alternative to EPA Method 4 for the determination of moisture using F-factors. In this case the mole fraction of the moisture in the ambient air is calculated using equations in EPA Method 4-16.4 from 1) the measured ambient relative humidity, ambient temperature and barometric pressure, 2) the mole fraction from free water in the fuel, calculated from the moisture % in the fuel which is determined by the analytical lab to be the balance after all the major gaseous components have been summed, and 3) the mole fraction from the hydrogen in the fuel. To determine the moisture in the fuel, the raw fuel analysis before normalization to 100% is referenced.

EPA Method 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.

EPA Method 25A/ALT 078: Sampling for Total Hydrocarbons, Methane and Non-Methane Hydrocarbons. EPA Method 25A/18 (FID/GC Method) employs a heated TECO 55C FID with GC column, heated Teflon sample gas transfer lines to provide a continuous sample to the heated FID/GC Hydrocarbon Analyzer. Heated lines were used if necessary, to avoid moisture or hydrocarbon condensation. Methane is determined by the calibrated GC method in the TECO 55C NMHC/CH4/THC Analyzer. Calibration gases are selected to fall within 25-35%, 45-55% and 80-90% of Range for Methane, Total Hydrocarbon and Non-Methane Hydrocarbons.

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 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 stack gas pressure to allow sample flow without using a pump to avoid contamination. Negative pressure is adjusted to maintain an integrated sample flow for 32 minutes. The bag samples are taken to a laboratory and analyzed within 72 hours.

Concurrent with the exhaust sampling, Blue Sky collected a total of twelve integrated samples. Six exhaust samples (three from each unit) were collected in 3-liter Tedlar Bags for analysis. The samples were collected using Teflon tubing connections, and the tubing and the Tedlar bag were filled and purged prior to sampling. The gas sample was controlled with a rotameter to collect a 32-minute integrated sample. These samples were analized for EPA Method 18 (C1-C6 + CH_4) and NMOC. Six samples of LFG (three from each unit) were collected in Silco SUMMA canisters and analyzed for HHV, F-Factor, Fixed Gases, Sulfur Species (incl. H_2S and TRS) and NMOC.

EPA Method 25C, ASTM 1945/3588/5504 were used to determine VOC (Volatile Organic Compounds) and sulfurs in the fuel analyzed by gas chromatograph/mass spectroscopy (GC/MS) and GC/SCD (Sulfur Chemiluminescence Detector). Fuel samples were metered to a 6L SILCO SUMMA canisters, and samples were taken to a laboratory and analyzed within 1-7 days (sulfurs) or 30 days (Fixed gases, VOC & NMOC).

EPA Method 19 (gas) was used to determine stack gas volumetric flow rates using oxygen based F-factors. F-factors are ratios of combustion gas volumes generated from heat input. The heating value of the fuel in Btu per cubic foot is determined from analysis of the fuel gas samples using ASTM D1946/3588 gas chromatography analytical procedures. Total fuel consumption was measured by CARB Method 1, 2, 3 and 4. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates were used to determine emission rates.

System Performance Criteria

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

Concurrent with the exhaust sampling, Blue Sky collected a total of six 6L SILCO SUMMA canisters of the LFG for analysis. The gas sample was controlled with a orifice to collect a 30-minute integrated sample. All the samples were analyzed for NMOC, HHV, F-Factor, Fixed Gases and Sulfur Species (including H_2S and TRS).

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42C	NO_X	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfisch RS-55	THC	FID
Fuji ZRH	CO_2	IR
Servomex 1440	O_2	Paramagnetic

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

The instrument response was recorded on strip charts and DAS. The averages were corrected for drift using BAAQMD & EPA Method 7E equations.

3.6. Comments: Limitations and Data Qualifications

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

Blue Sky Environmental has reviewed this report for accuracy, and concluded that the test procedures were followed and accurately described and documented. The review included the following items:

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

The services described in this report were performed in a manner consistent with the generally accepted professional testing principles and practices. No other warranty, expressed or implied, is made. These services were performed in a manner consistent with our agreement with our client. The report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions contained in this report pertain to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and operating parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations, subsequent to this, and do not warranty the accuracy of information supplied by others.

SECTION 4. APPENDICES

A.	**Tabulated Results**
B.	**Calculations**
C.	**Laboratory Reports**
D.	**Field Data Sheets**
E.	**Strip Chart Records**
F.	**Process Information**
G.	**Calibration Certifications and Quality Assurance Records**
H.	**Sample Train Configuration and Stack Diagrams**
I.	**Related Correspondence (Source Test Plan & subsequent BAAQMD correspondence)**
J.	**BAAQMD PTO**

A
Tabulated Results

TABLE #1

Altamont Landfill
Turbine S-6
Normal Operating Condition

RUN	1	2	3	AVERAGE	LIMITS
Test Date	1/8/20	1/8/20	1/8/20	--	
Test Time	1202-1235	1254-1324	1339-1409	--	
Standard Temp., °F	70	70	70	70	
Rated kW	3,300	3,300	3,300	3,300	
Turbine kW	2,837	2,851	2,826	2,838	
Turbine, % Rated Power	86	86	86	86	
Avg. Combustion Temp., °F	1,128.3	1,129.9	1,129.4	1,129.2	
Fuel Flow Rate, DSCFM	1,488	1,488	1,493	1,490	
Fuel BTU/CF @ 68°F	471	474	467	471	
Fuel F-Factor, DSCF/10^6 BTU @ 0% O_2	9,466	9,446	9,457	9,456	
Fuel MMBTU/Day	**1,009**	**1,017**	**1,003**	**1,010**	**1378**
Exhaust Flow Rate, DSCFM (Method 19)	32,279	30,562	30,050	30,964	
Water Vapor, H_2O, %	3.1	3.3	3.3	3.2	
Oxygen, O_2, %	16.5	16.3	16.2	16.3	
Carbon Dioxide, CO_2, %	3.5	3.7	3.7	3.6	
Carbon Dioxide, lbs/hr	7,752	7,670	7,507	7,643	
NO_2, ppm	4.6	5.5	5.4	5.2	
NO, ppm	15.0	15.3	15.2	15.2	
NO/NO_2 Ratio	3.2	2.8	2.8	2.9	
NOx, ppm	19.6	20.8	20.6	20.3	
NOx, ppm @ 15% O_2	**26.2**	**26.4**	**26.2**	**26.3**	**42**
NOx, lbs/MMBtu	**0.1048**	**0.1054**	**0.1044**	**0.1048**	**0.1567**
NOx, lbs/hr	4.53	4.53	4.42	4.49	
NOx, lbs/MW hr	**1.60**	**1.59**	**1.57**	**1.58**	**<2.34**
CO, ppm	35.8	37.9	37.8	37.2	
CO, ppm @ 15% O_2	47.8	48.3	47.9	48.0	
CO, lbs/MMBtu	**0.116**	**0.117**	**0.116**	**0.117**	**0.2229**
CO, lbs/hr	5.02	5.03	4.93	5.00	
Total Reduced Sulfur, ppm in Fuel	**56.7**	**58.1**	**62.7**	**59.2**	**150**
SO_2, ppm (calculated)	**2.6**	**2.8**	**3.1**	**2.9**	**300**
SO_2, ppm @ 15% O_2	3.5	3.6	3.9	3.7	
SO_2, lbs/hr	0.84	0.86	0.93	0.88	
THC, ppm (wet) 25A	4.4	4.4	4.4	4.4	
THC, ppm (dry)	4.5	4.5	4.5	4.5	
THC, lbs/hr as CH_4	0.35	0.33	0.32	0.33	
CH_4, ppm (dry) M18	5.0	4.3	4.3	4.5	
CH_4, ppm @ 15% O_2	**6.7**	**5.5**	**5.5**	**5.9**	
CH_4, lbs/hr	0.40	0.33	0.32	0.35	
TNMHC, ppm as CH_4	<1.0	<1.0	<1.0	<1.0	
TNMHC, ppm @ 3% O_2	**<4.1**	**<3.9**	**<3.8**	**<3.9**	**120**
TNMHC, ppm @ 15% O_2	<1.3	<1.3	<1.3	<1.3	
TNMHC, lbs/hr as CH_4	<0.08	<0.08	<0.07	<0.08	
INLET TNMHC ppm as CH_4 (25C)	10,071	8,808	10,692	9,857	
INLET TNMHC lbs/hr as CH_4	807.0	668.2	798	757.6	
TNMHC Removal Efficiency	**>99.99%**	**>99.99%**	**>99.99%**	**>99.99%**	**98**
INLET CH_4, ppm	468,000	471,000	463,000	467,333	
INLET CH_4, lbs/hr	1,729	1,740	1,716	1,728	
CH_4 Removal Efficiency	**>99.98%**	**>99.98%**	**>99.98%**	**>99.98%**	**99**
INLET THC (TOC) ppm as CH_4	478,071	479,808	473,692	477,190	
INLET THC (TOC) lbs/hr as CH_4	1,766	1,772	1,756	1,765	
THC (TOC) Removal Efficiency	**>99.98%**	**>99.98%**	**>99.98%**	**>99.98%**	**98**

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)
THC = Total Hydrocarbons as Methane (MW = 16)
TNMHC = Total Non-Methane Hydrocarbons as Methane (MW = 16)
SO_2 - Sulfur Dioxide (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/MMBtu = Fd @ 68°F * MW * ppm * 2.59E-9 * 20.9/(20.9 - %O_2)
SO_2, ppm = TRS *$DSCFM_{fuel}/DSCFM_{exhaust}$
MMBTU/Day = BTU/CF* $DSCFM_{fuel}$*60*24/1,000,000
Lbs/MW-hr = lb/hr / Megawatt Output

TABLE #2

Altamont Landfill
Turbine S-7
Normal Operating Condition

RUN	1	2	3	AVERAGE	LIMITS
Test Date	1/8/20	1/8/20	1/8/20	--	
Test Time	0922-0955	1017-1047	1102-1132	--	
Standard Temp., °F	70	70	70	70	
Rated kW	3,300	3,300	3,300	3,300	
Turbine kW	2,916	2,906	2,901	2,908	
Turbine, % Rated Power	88	88	88	88	
Avg. Combustion Temp., °F	1,168.8	1,169.9	1,169.0	1,169.2	
Fuel Flow Rate, DSCFM	1,528	1,526	1,526	1,527	
Fuel BTU/CF @ 68°F	470	467	472	469	
Fuel F-Factor, DSCF/10^6 BTU @ 0% O_2	9,460	9,440	9,466	9,455	
Fuel MMBTU/Day	**1,034**	**1,026**	**1,037**	**1,032**	**1378**
Exhaust Flow Rate, DSCFM (Method 19)	36,610	34,947	36,131	35,896	
Water Vapor, H_2O, %	2.8	2.9	2.9	2.9	
Oxygen, O_2, %	16.9	16.9	16.9	16.9	
Carbon Dioxide, CO_2, %	3.1	3.1	3.1	3.1	
Carbon Dioxide, lbs/hr	7,857	7,503	7,686	7,682	
NO_2, ppm	1.5	2.6	3.3	2.4	
NO, ppm	16.9	15.9	15.0	15.9	
NO/NO_2 Ratio	11.5	6.2	4.5	7.4	
NOx, ppm	18.3	18.5	18.3	18.4	
NOx, ppm @ 15% O_2	**27.2**	**27.3**	**26.9**	**27.2**	**42**
NOx, lbs/MMBtu	**0.1087**	**0.1088**	**0.1076**	**0.1084**	**0.1567**
NOx, lbs/hr	4.79	4.62	4.72	4.71	
NOx, lbs/MW hr	**1.64**	**1.59**	**1.63**	**1.62**	**<2.34**
CO, ppm	20.6	21.4	21.4	21.1	
CO, ppm @ 15% O_2	30.5	31.6	31.6	31.2	
CO, lbs/MMBtu	**0.074**	**0.077**	**0.077**	**0.076**	**0.2229**
CO, lbs/hr	3.27	3.25	3.37	3.30	
Total Reduced Sulfur, ppm in Fuel	**56.8**	**47.4**	**60.4**	**54.9**	**150**
SO_2, ppm (calculated)	**2.4**	**2.1**	**2.6**	**2.3**	**300**
SO_2, ppm @ 15% O_2	3.5	3.1	3.8	3.4	
SO_2, lbs/hr	0.86	0.72	0.92	0.83	
THC, ppm (25A)	<2.0	<2.0	<2.0	<2.0	
THC, ppm (dry)	<2.1	<2.1	<2.1	<2.1	
THC, lbs/hr as CH_4	<0.2	<0.2	<0.2	<0.2	
CH4, ppm (M18)	1.8	1.8	1.6	1.7	
CH_4, ppm @ 15% O_2	**2.7**	**2.7**	**2.4**	**2.6**	
CH_4, lbs/hr	0.2	0.2	0.1	0.2	
TNMHC, ppm as CH_4 (wet)	<1.0	<1.0	<1.0	<1.0	
TNMHC, ppm as CH_4 (dry)	<1.0	<1.0	<1.0	<1.0	
TNMHC, ppm @ 3% O_2	**<4.5**	**<4.5**	**<4.5**	**<4.5**	**120**
TNMHC, ppm @ 15% O_2	<1.5	<1.5	<1.5	<1.5	
TNMHC, lbs/hr as CH_4	<0.09	<0.09	<0.09	<0.09	
INLET TNMHC ppm as CH_4 (25C)	6,495	8,064	7,346	7,302	
INLET TNMHC lbs/hr as CH_4	590.3	699.6	659	649.6	
TNMHC Removal Efficiency	**>99.98%**	**>99.99%**	**>99.99%**	**>99.99%**	**98**
INLET CH_4, ppm	467,000	465,000	468,000	466,667	
INLET CH_4, lbs/hr	1,771	1,761	1,773	1,769	
CH_4 Removal Efficiency	**>99.99%**	**>99.99%**	**>99.99%**	**>99.99%**	**99**
INLET THC (TOC) ppm as CH_4	473,495	473,064	475,346	473,968	
INLET THC (TOC) lbs/hr as CH_4	1,796	1,792	1,801	1,796	
THC (TOC) Removal Efficiency	**>99.99%**	**>99.99%**	**>99.99%**	**>99.99%**	**98**

< 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)
THC = Total Hydrocarbons as Methane (MW = 16)
TNMHC = Total Non-Methane Hydrocarbons as Methane (MW = 16)
SO_2 - Sulfur Dioxide (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/MMBtu = Fd @ 68°F * MW * ppm * 2.59E-9 * 20.9/(20.9 - %O_2)
SO_2, ppm = TRS *$DSCFM_{fuel}$/$DSCFM_{exhaust}$
MMBTU/Day = BTU/CF* $DSCFM_{fuel}$*60*24/1,000,000
Lbs/MW-hr = lb/hr / Megawatt Output

Waste Management: Altamont Landfill

BAAQMD Facility #A2066

Annual Compliance Emissions Test Report # 20084
Landfill Gas Flare- Source A-15

Located at:
10840 Altamont Pass Road
Livermore, CA 94551

Prepared For:
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REVIEW AND CERTIFICATION

Team Leader:

The work performed herein was conducted under my supervision, and I certify that: a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program; b) that the sampling and analytical procedures and data presented in the report are authentic and accurate: c) that all testing details and conclusions are accurate and valid, and: d) that the production rate and/or heat input rate during the source test are reported accurately.

If this report is submitted for Compliance purposes it should only be reproduced in its entirety. If there are any questions concerning this report, please contact me at (810) 923 3181.

Jeramie Richardson

Project Manager

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SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc was contracted to perform the emissions testing on the A-15 Landfill Gas Flare at Waste Management of Alameda County (WMAC), Altamont Landfill, 10840 Altamont Pass Road, Livermore, California. This report presents the results of the test program. Table 1 summarizes the source test information. Table 2 summarizes the results compared to the emission limits. The flare met all compliance emission criteria.

Table 1. Source Test Information

Test Location:	Altamont Landfill, 10840 Altamont Pass Road, Livermore, California
Source Contact:	Marcus Nettz (925) 455-7323
Source Tested:	Enclosed Landfill Gas Flare (A-15)
Source Test Date:	March 12th, 2020
Test Objective:	Determine compliance with Regulation 8, Rule 34 and Site A2066, PTO Permit Condition 19235
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Ave., Albany, CA 94706 Wesley Alder (510) 910-5795 bluesky@blueskyenvironmental.com
Test Parameters:	**Landfill Gas** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur & VOC Species, Volumetric Flow Rate **Flare Emissions** THC, CH_4, NMOC, NO_X, CO, O_2, SO_2, Volumetric Flow Rate.

Emission Parameter	Measured	Limit	Compliance Status
NO_X, lbs/MMBTU	**0.018**	**0.06**	**In Compliance**
NO_X ppm @ 3% O_2	**19.2**	**45**	**In Compliance**
CO, lbs/MMBTU	**0.002**	**0.30**	**In Compliance**
CO ppm @ 3% O_2	**5.3**	**369**	**In Compliance**
NMOC, (ppmvd @ 3% O_2 as CH_4)	**<2.2**	**30**	**In Compliance**
CH_4 Destruction Efficiency	**>99.999**	**99**	**In Compliance**
TRS as H_2S, ppm in Fuel	**48.3**	**200**	**In Compliance**

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

The annual source test was conducted to demonstrate that the A-15 landfill gas (LFG) flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Permit To Operate (PTO) for Plant # A2066, Condition 19235.

2.2. Pollutants Tested

The following EPA and ASTM sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O_2 and CO_2, Stack Gas Molecular Weight
EPA Method 4 part 16.4	Moisture
EPA 7E	NO_X Emissions & NO_2 Converter Efficiency
EPA 10	CO Emissions
EPA Method 19	Calculation of Stack Gas Flow Rate
EPA 25A/18	THC, CH_4 and NMOC Emissions
EPA 25C	LFG Gas analysis for NMOC by GC
EPA TO-15	AP-42 Table 2.4-1 VOC Species
ASTM D-1945/3588	LFG Gas analysis for BTU and F-Factor
ASTM D-5504	SO_2, Sulfur Species, H_2S and TRS

2.3. Test Date(s)

Testing was conducted on March 12th, 2020.

2.4. Sampling and Observing Personnel

Jeramie Richardson and Wesley Alder representing Blue Sky Environmental, Inc, performed testing. Dave Bearden of SCS Engineers was present to operate and oversee the Flare operation and assist in coordinating testing and the collection of process data during testing.

The BAAQMD was notified of the test in a plan submitted by SCS Engineers on behalf of Waste Management on February 18th, 2020. A Source Test Protocol acknowledgement was requested and received by Blue Sky Environmental (NST #5856), but no District observers were present to witness the testing. A copy of the source test protocol and BAAQMD NST acknowledgement can be found in Appendix I.

2.5. Source/Process Description

The enclosed landfill gas flare consists of a 71 million British Thermal Units per hour (MMBtu/hr) multiple nozzle burner manufactured by LFG Specialties, Inc. The flare shell is approximately 45 feet high and approximately 102 inches inside diameter.

2.6. Source Operating Conditions

The flare operating temperature and the LFG flow rate records are contained in Appendix-F. The flare was operated at an average of 1565°F. The average landfill gas flow rate was 1,268 standard cubic feet per minute (SCFM). The landfill gas methane content ranged between 43.6-47.7%. Condensate flow was off during the testing.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The A-15 Flare sampling was conducted in the 8.5 feet diameter ID stack, via ports approximately 40' above grade, accessed by a 45' 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 pt traverses of the stack during each test run.

3.3. Sample train description

Sampling system diagrams are included in Appendix H. Additional descriptive information is included in the following section.

3.4. Sampling procedure description

Three, 30-minute test runs were performed on the Flare.

3.5. Instrumentation and Analytical Procedures

Sampling & Traverse Points Selection by EPA Method 1. This method is used to determine the duct or stack area and appropriate traverse points that represent equal areas of the duct for sampling and velocity measurements.

Stack Gas Molecular Weight by EPA Method 3/3A. This method is used to determine the molecular weight of the stack gas. Measurements of gas constituents $\%O_2$ and $\%CO_2$ were obtained from the CEMS system.

Stack Gas Moisture by EPA Method 4-16.4 is an acceptable alternative to EPA Method 4 for the determination of moisture using F-factors. In this case the mole fraction of the moisture in the ambient air is calculated using equations in EPA Method 4-16.4 from 1) the measured ambient relative humidity, ambient temperature and barometric pressure, 2) the mole fraction from free water in the fuel, calculated from the moisture % in the fuel which is determined by the analytical lab to be the balance after all the major gaseous components have been summed, and 3) the mole fraction from the hydrogen in the fuel. To determine the moisture in the fuel, the raw fuel analysis before normalization to 100% is referenced.

EPA Method 19 (gas) was used to determine stack gas volumetric flow rates using oxygen based F-factors. F-factors are ratios of combustion gas volumes generated from heat input. The heating value of the fuel in Btu per cubic foot is determined from analysis of the fuel gas samples using ASTM D1945/3588 gas chromatography analytical procedures. Total fuel consumption was measured by CARB Method 1, and 3/3A. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates were used to determine emission rates.

EPA Method 3A (O_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 7E 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).

Sampling for Total Hydrocarbons by EPA Method 25A. The system was tested by simultaneously monitoring the inlet and the exhaust, for total hydrocarbons (THC) using EPA Method 25A (FID Method) employing separate sampling pumps and heated (if necessary) sample gas transfer lines to provide a continuous sample to the heated FID Hydrocarbon Analyzers. Heated lines were used if necessary to avoid moisture or hydrocarbon condensation. Methane was < 1ppm.

THC calibrations are performed through the probe and entire sample system. The system linearity check was performed prior to testing and calibration drift checks were performed after every run. All data was corrected according to EPA Method 25A and 6C. Calibration gases are selected to fall within 25-35%, 45-55% and 80-90% of Range

EPA Method 25C for NMOC in gaseous fuels. The Method is written for evacuated canister (SUMMA/SILCO) sampling. The sampling equipment comprises a Teflon, stainless steel or glass lined probe with a short stainless-steel or Teflon transfer line into a pre-evacuated SUMMA Canister. An orifice or regulator is placed immediately before the canister and to regulate the flow into the canister over a prescribed time period. The equipment used for analysis is exactly the same as used in EPA 25. The sample is injected into a GC column where the methane, CO and CO_2 are flushed through and removed. Then the NMOC (ROC) fraction is oxidized to form CO_2 then reduced to methane and measured by the flame ionization detector (FID).

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 3 days) for reactive sulfur compounds. The flow controller, valve and canister are designed so that no sample contacts stainless steel components that can remove hydrogen sulfide. The flow controllers consisted of capillary orifice tubing designed to sample for pre-set durations such as 1-hr, 2-hrs and 4-hrs. The samples were analyzed for 20 sulfur compounds by ASTM Method D-5504 GC/SCD (gas chromatography/sulfur chemiluminescent detector).

TO-15/AP42.2 is the analytical strategy for Compendium Method TO-15 involves using a high resolution gas chromatograph (GC) coupled to a mass spectrometer. Mass spectra for individual peaks in the total ion chromatogram are examined with respect to the fragmentation pattern of ions corresponding to various VOCs including the intensity of primary and secondary ions. The fragmentation pattern is compared with stored spectra taken under similar conditions, in order to identify the compound. For any given compound, the intensity of the primary fragment is compared with the system response to the primary fragment for known amounts of the compound. This establishes the compound concentration that exists in the sample.

System Performance Criteria

Instrument Linearity	≤2% Full Scale
Instrument Bias	≤5% Full Scale
System Response Time	≤ 2 minutes
NOx Converter Efficiency (EPA 7E)	≥ 90%
Instrument Zero Drift	≤ 3% Full Scale
Instrument Span Drift	≤ 3% Full Scale

Concurrent with the exhaust sampling, Blue Sky collected a total of three intergrated samples in SILCO SUMMA canisters of the LFG for analysis. The samples were collected and analyzed for EPA AP-42 Table 2.4-1 Compounds, using TO-15, ASTM 1945 and 25C. The samples were also analyzed for ASTM 5504 Sulfur Species (incl. H_2S and TRS).

The inlet volumetric flow rate was continuously measured and recorded by the LFG Flowmeter.

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42C	NO_X	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfisch RS-66	THC	FID
Servomex 1440	CO_2	IR
Servomex 1440	O_2	Paramagnetic

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DPR3000 strip chart recorder, which can be supported by a Data Acquisition System (DAS).

The data logger produces time stamped data in an excel format that is then used to report the averages and calibration values. .

3.6. Comments: Limitations and Data Qualifications

The measured emissions meet the Permit required limits. Methane determination was not made at the exhaust because THC was below the detection limit.

Blue Sky Environmental has reviewed this report for accuracy, and concluded that the test procedures were followed and accurately described and documented. The review included the following items:

Review of the general text

Review of calculations

Review of CEMS data

Review of supporting documentation

The services described in this report were performed in a manner consistent with the generally accepted professional testing principles and practices. No other warranty, expressed or implied, is made. These services were performed in a manner consistent with our agreement with our client. The report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions contained in this report pertain to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and operating parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations, subsequent to this, and do not warranty the accuracy of information supplied by others.

SECTION 4. APPENDICES

A.	**Tabulated Results**
B.	**Calculations**
C.	**Laboratory Reports**
D.	**Field Data Sheets**
E.	**Strip Charts**
F.	**Process Information**
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K.	**Flare Flow Meter Calibration Document**

A
Tabulated Results

TABLE #1

ALRRF
Flare A-15
1,565°F

RUN	1	2	3	AVERAGE	LIMITS
Test Date	3/12/20	3/12/20	3/12/20		
Test Time	1036-1112	1134-1210	1234-1311		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,566	1,565	1,565	1,565	
Fuel Flow Rate, SCFM	1,266	1,270	1,269	1,268	
Fuel Heat Input, MMBTU/Hr	33.3	36.2	36.7	35.4	
Exhaust Flow Rate, DSCFM (Method 19)	6,434	6,463	6,482	6,460	
Oxygen, O_2, %	12.08	12.03	12.54	12.22	
Carbon Dioxide, CO_2, %	7.56	7.59	7.16	7.44	
Water Vapor, H_2O, % M4.16	5.2	5.0	4.9	5.0	
NOx, ppm	13.7	13.9	13.5	13.7	
NOx, ppm @ 3% O_2	**18.5**	**18.6**	**20.3**	**19.2**	**45**
NOx, lbs/hr	0.63	0.64	0.62	0.63	
NOx, lbs/MMBTU	**0.019**	**0.018**	**0.017**	**0.018**	**0.06**
CO, ppm	3.5	2.6	1.6	2.6	
CO, ppm @ 3% O_2	**7.1**	**5.3**	**3.4**	**5.3**	**369**
CO, lbs/hr	0.10	0.07	0.04	0.07	
CO, lbs/MMBTU	**0.003**	**0.002**	**0.001**	**0.002**	**0.30**
TRS as H_2S, ppm in Fuel	**39.6**	**51.8**	**53.6**	**48.3**	**200**
SO_2, ppm Exhaust (calculated)	7.8	10.2	10.5	9.5	
THC, ppm (25A) wet	<1.0	<1.0	<1.0	<1.0	
THC, ppm dry	<1.1	<1.1	<1.1	<1.1	
THC, lbs/hr as CH_4	<0.017	<0.017	<0.017	<0.017	
CH_4, ppm	<1.1	<1.1	<1.1	<1.1	
CH_4, lbs/hr	<0.017	<0.017	<0.017	<0.017	
TNMHC, ppm as CH_4	<1.1	<1.1	<1.1	<1.1	
TNMHC, lbs/hr as CH_4	<0.017	<0.017	<0.017	<0.017	
TNMHC, ppm @ 3% O_2 as CH_4	**<2.1**	**<2.1**	**<2.3**	**<2.2**	**30**
INLET TNMOC (Method 25C)	7,224	11,521	9,383	9,376	**or**
INLET NMOC, lbs/hr as CH_4	22.7	36.3	29.6	29.5	
NMOC Removal Efficiency	**99.93%**	**99.95%**	**99.94%**	**99.94%**	**98**
INLET CH_4, ppm	436,000	472,000	477,000	461,667	
INLET CH_4, lbs/hr	1,370.2	1,488.1	1,502.6	1,454	
CH_4 Removal Efficiency	**>99.999%**	**>99.999%**	**>99.999%**	**>99.999%**	**99**
INLET THC (TOC), ppm as CH_4	443,224	483,521	486,383	471,043	
INLET THC (TOC), lbs/hr as CH_4	1,393	1,524	1,532	1,483	
THC (TOC) Removal Efficiency	**99.999%**	**99.999%**	**99.999%**	**99.999%**	**98**

< 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 @ 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

TABLE #2

ALRRF
Flare A-15
1,565°F

Full List

Constituent	Method	Units	Detection Limit MRL/SRL	Landfill Gas Samples 3/12/20 **1**	3/12/20 **2**	3/12/20 **3**	**Avg**	**LIMITS**
1,1,1-Trichloroethane	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
1,1,2,2-Tetrachloroethane	EPA TO-15	ppb	0.5/100	23.6	16.0	26.7	22.1	400
1,1-Dichloroethane (Ethylidene Dichloride)	EPA TO-15	ppb	0.5/100	<134.0	<157.0	48.3	<113.1	1,000
1,1-Dichloroethene (1,1-Dichloroethylene)	EPA TO-15	ppb	0.5/100	<134.0	<157.0	<160.0	<150.3	
1,2-Dichloroethane (Ethylene Dichloride)	EPA TO-15	ppb	0.5/100	519	531	485	512	1,500
1,2-Dichloropropane	EPA TO-15	ppb	0.5/100	71.5	62.4	67.4	67.1	
2-Propanol (Isopropyl Alcohol)	EPA TO-15	ppb	2.0/100000	55,400	56,900	58,600	56,967	500,000
Acrylonitrile	EPA TO-15	ppb	1.0/100	70.2	<315	<312	<232	300
Bromodichloromethane	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
Butane (C4)	EPA 18/ASTM 1945	ppm	0.3	33.8	34.9	40.4	36.4	
Carbon Disulfide	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
Carbon Monoxide	EPA 3C/ASTM 1945	%	0.1	<0.1	<0.2	<0.2	<0.1	
Carbon Tetrachloride	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	100
Chlorobenzene	EPA TO-15	ppb	0.5/100	148	167	146	154	
Chlorodifluoromethane	EPA TO-15	ppb	0.5/100	202	201	194	199	
Chloroethane	EPA TO-15	ppb	0.5/100	80.9	103	89.6	91.2	
Chloroform	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	100
Chloromethane	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
1,3-Dichlorobenzene	EPA TO-15	ppb	0.5/100	<134	876	<160	<390	
1,4-Dichlorobenzene	EPA TO-15	ppb	0.5/100	724	853	797	791	7,500
Dichlorodifluoromethane	EPA TO-15	ppb	0.5/100	236	239	234	236	
Dichlorofluoromethane	EPA TO-15	ppb	0.5/100	110	118	114	114	
Dichloromethane (Methylene Chloride)	EPA TO-15	ppb	1.0/200	235	263	234	244	1,500
Dimethyl sulfide	ASTM D-5504	ppm	0.1	7.64	8.15	8.41	8.07	
Ethane (C2)	EPA 18/ASTM 1945	ppm	0.1	4.0	5.9	<4.0	5.0	
Ethanol	EPA TO-15	ppb	2.0/100000	285,000	398,000	410,000	364,333	
Ethyl Mercaptan	ASTM D-5504	ppm	0.250	<0.067	0.131	0.087	0.095	
Ethyl Benzene	EPA TO-15	ppb	0.5/1250	4,640	5,240	4,820	4,900	23,000
1,2 Dibromoethane (Ethylene Dibromide)	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
Trichlorofluoromethane	EPA TO-15	ppb	0.5/100	16.7	11.5	6.0	11.4	
Hexane	EPA TO-15	ppb	0.5/100	703	729	644	692	
Hydrogen sulfide	ASTM D-5504	ppm	0.1	27.5	36.7	39.3	34.5	
TRS as Hydrogen sulfide	ASTM D-5504	ppm	0.1	39.6	51.8	53.6	48.3	200
Mercury	NIOSH 6009	ug/m3	NA	NA	NA	NA	NA	
2-Butanone (MEK)	EPA TO-15	ppb	1.0/2500	37,400	36,700	35,200	36,433	350,000
Methyl isoButyl Ketone (MiBK)	EPA TO-15	ppb	0.5/100	2,610	2,700	2,560	2,623	
Pentane (C5)	EPA 18/ASTM 1945	ppm	0.3	208	222	256	229	
Tetrachloroethylene (Perchloroethylene)	EPA TO-15	ppb	0.5/100	300	313	319	311	1,500
Propane (C3)	EPA 18/ASTM 1945	ppm	0.3	32.2	33.9	36.0	34.0	
trans-1,2-Dichloroethene (t-1,2-Dichloroethylene)	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	
Trichloroethylene (Trichloroethene)	EPA TO-15	ppb	0.5/100	204	218	200	207	1,500
Vinyl Chloride	EPA TO-15	ppb	0.5/100	36.3	38.2	39.2	37.9	1,000
Xylenes	EPA TO-15	ppb	1.0/2500	12,330	13,740	13,170	13,080	90,000
m,p-Xylene	EPA TO-15	ppb	1.0/2500	9,140	10,200	9,730	9,690	
o-Xylene	EPA TO-15	ppb	0.5/1250	3,190	3,540	3,440	3,390	
Benzene	EPA TO-15	ppb	0.5/100	1590	1660	1590	1613	7,900
Benzyl Chloride	EPA TO-15	ppb	0.5/100	<134	<157	<160	<150	500
Methanol (Methyl Alcohol)	EPA TO-15	ppb	5/12500	129,000	130,000	126,000	128,333	600,000
Toluene	EPA TO-15	ppb	0.5/1250	11,700	12,700	12,200	12,200	80,000

ND = not detected
MRL = Method detection Limit
SRL = Sample Reporting Limit

Waste Management of Alameda County, Inc
Altamont Landfill & Resource Recovery Facility

BAAQMD Facility # A2066

Annual Compliance Emissions Test Report #20095
Landfill Gas Flare-Source A-16

Located at:

10840 Altamont Pass Road
Alameda County, CA

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
(916) 361-1297
dbearden@scsengineers.com

For Submittal To:

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San Francisco, CA 94105
gespena@baaqmd.gov & mhernandez@baaqmd.gov
sourcetest@baaqmd.gov

Testing Performed On:
March 25th & 26th, 2020

Final Report Submitted On:
May 18th, 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 are authentic and accurate: c) that all testing details and conclusions are accurate and valid, and: d) that the production rate and/or heat input rate during the source test are reported accurately.

If this report is submitted for Compliance purposes it should only be reproduced in its entirety. If there are any questions concerning this report, please contact me at (925) 338-4875.

Chuck Arrivas, QSTI

Project Manager

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SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc was contracted to perform the emissions testing on the A-16 Landfill Gas Flare at Waste Management of Alameda County, Inc. (WMAC), Altamont Landfill Resource and Recovery Facility (ALRRF), 10840 Altamont Pass Road, Alameda County, California. This report presents the results of the test program. Table 1 summarizes the source test information. Table 2 summarizes the results compared to the emission limits. The flare met all compliance emission criteria.

Table 1. Source Test Information

Test Location:	Altamont Landfill, 10840 Altamont Pass Road, Alameda County, California
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Source Test Date:	March 25th & 26th, 2020
Test Objective:	Determine compliance with Regulation 8, Rule 34 and Title V Permit Condition 19235 for Site A2066
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Ave., Albany, CA 94706 Chuck Arrivas (925) 338-4875 carrivas@blueskyenvironmental.com
Test Parameters:	**Inlet Landfill Gas** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur & VOC Species, Volumetric Flow Rate **Flare Emissions** THC, CH_4, NMOC, NO_x, CO, O_2, SO_2, Volumetric Flow Rate.

Table 2. Compliance Summary

A Condensate On	Average Test Result	Permit Limit	Status
NO_x ppm @ 3% O_2	43.0	45	In Compliance
NO_x, lbs/MMBTU	0.057	0.06	In Compliance
CO ppm @ 3% O_2	4.9	246	In Compliance
CO, lbs/MMBTU	0.004	0.20	In Compliance
SO_2, ppmvd	9.8	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<1.9	30	In Compliance
CH_4 Removal Efficiency	>99.998	99	In Compliance
Total Sulfur as H_2S	89.7	200	In Compliance

B Condensate Off	Average Test Result	Permit Limit	Status
NO_x ppm @ 3% O_2	33.6	45	In Compliance
NO_x, lbs/MMBTU	0.04	0.06	In Compliance
CO ppm @ 3% O_2	6.3	246	In Compliance
CO, lbs/MMBTU	0.005	0.20	In Compliance
SO_2, ppmvd	10.0	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<1.9	30	In Compliance
CH_4 Removal Efficiency	>99.998	99	In Compliance
Total Sulfur as H_2S	98.6	200	In Compliance

C (LNG) LFG+BPG+CON	Average Test Result	Permit Limit	Status
NO_x ppm @ 3% O_2	41.3	45	In Compliance
NO_x, lbs/MMBTU	0.057	0.06	In Compliance
CO ppm @ 3% O_2	6.40	246	In Compliance
CO, lbs/MMBTU	0.005	0.20	In Compliance
SO_2, ppmvd	5.6	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<1.8	30	In Compliance
CH_4 Removal Efficiency	>99.998	99	In Compliance
Total Sulfur as H_2S	41.6	200	In Compliance

Fuel Analysis for total sulfur and VOC's were in Compliance Permit Condition 19235.

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This annual source test was performed to demonstrate that the A-16 landfill gas (LFG) flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Title V Permit A2066 and Regulation 8 Rule 34.

2.2. Pollutants Tested

The following United States Environmental Protection Agency (USEPA) and American Society for Testing and Methods (ASTM) sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA 3A	O_2, CO_2
EPA 10	CO
EPA 25A	THC and NMOC
EPA 7E	NO_X
EPA 18	CH_4
EPA 19	Flow Rate Calculation, DSCFM
EPA 25C	LFG Gas analysis for NMOC by GC
EPA 4 part 4.16	Moisture Calculated
EPA TO-15	Condition 19235, Part 14, VOC Species
ASTM 1945/3588	Gas analysis for BTU and F-Factor
ASTM D-5504	Sulfur Species, H_2S and TRS

2.3. Test Date(s)

Testing was conducted on March 25th & 26th, 2020.

2.4. Sampling and Observing Personnel

Chuck Arrivas and Wesley Alder representing Blue Sky Environmental, Inc performed testing.

Dave Bearden of SCS Engineers was present to operate and oversee the Flare operation and assist in coordinating testing and the collection of process data during testing.

The BAAQMD was notified of the test in a plan submitted by SCS Engineers on behalf of WMAC on February 28th, 2020. A Source Test Protocol acknowledgement was requested and received by Blue Sky Environmental (NST #5870). No agency observers were present to witness the testing. A copy of the source test protocol and BAAQMD confirmation email can be found in Appendix I.

2.5. Source/Process Description

The enclosed LFG flare was manufactured and installed by Shaw/LFG Specialties, Inc. The flare shell is approximately 50 feet high and approximately 144 inches inside diameter (ID).

During the test period the flare was operated between 2,057 – 2,440 standard cubic feet per minute (scfm). The flare set-point was established at 1,600 degrees Fahrenheit (°F). Methane quality is typically about 50 percent (%) and the Oxygen content typically less than 1%. LFG condensate is collected and periodically injected into the flare via two vertical nozzles positioned near the burner.

The Liquefied Natural Gas (LNG) Plant was operated during a set of three test runs, during which bypass/byproduct gases (BPG) were introduced into the Flare along with Landfill Gas (LFG) and Condensate.

2.6. Source Operating Conditions

The flare operating temperature, Condensate and the LFG flow rate records are contained in Appendix-F. The condensate injection rate was approximately between 1.00 – 2.01 gallons per minute (gpm).

The flare was operated at approximately 1,591°F average. The average LFG flow rate ranged between 2,057 - 2440 scfm.

The LFG Methane content of the gas fuel sent to the flare content during the tests, ranged between 46.2 – 48.1% and between 38.0% - 38.7% when BPG was added.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The A-16 Flare sampling was conducted in the 144" inside diameter (ID) stack, via ports approximately 45 feet above grade, accessed by a 65' boom-lift. Two of the four, 8-inch flange ports are available ~4 stack diameters downstream from the burners and ~1 stack diameter upstream from the exit.

3.2. Point description/Labeling – ports/stack

Blue Sky Environmental conducted two perpendicular 8-pt traverses and found O_2 stratification of more than 10%. Subsequent CEM sampling was conducted traversing 8-points per axis (16-points) during every run.

The traverse points for the 144 inch diameter exhaust stack with 8 inch ports were 4.6, 15.1, 27.0, 46.5, 97.5, 116.1, 128.9 and 139.4 inches.

3.3. Sample train description

Sampling system diagrams are included in the Appendix H. Additional descriptive information is included in the following section.

3.4. Sampling procedure description

Three, 30-minute minimum test runs were performed on each of the three conditions Condensate On, Condensate Off and LNG and Condensate On.

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.

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 D1945/3588 gas chromatography analytical procedures. Total fuel consumption for each source is monitored by a dedicated fuel gas meter. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates were used to determine emission rates.

Fuel Analysis per ASTM D-1945/3588 and ASTM D-5504 are used for fuel sampling and analysis for F-Factor and BTU determination, fixed gas analysis O2, CO2, CO, N2, H2, CH4, C2-C6+, and sulfur compounds, including H2S. Samples may be collected in tedlar bags and analyzed within 24 hours or Silco SUMMA canisters and analyzed within 72 hours. Hydrogen Sulfide, Carbonyl Sulfide, Sulfur Dioxide, Methyl Mercaptan, Ethyl Mercaptan, Dimethyl Sulfide, Carbon Disulfide, Isopropyl Mercaptan, tert-Butyl Mercaptan, n-Propyl Mercaptan, Methylethylsulfide, sec-Butyl Mercaptan, Thiophene, iso-Butyl Mercaptan, Diethyl Sulfide, n-Butyl Mercaptan, Dimethyl Disulfide, 2-Methylthiophene, 3-Methylthiophene, Tetrahydrothiophene, Bromothiophene, Thiophenol, Diethyl Disulfide, Total Unidentified Sulfurs, Total Reduced Sulfurs as H2S.

EPA Method 4-16.4 is an acceptable alternative to EPA Method 4 for the determination of moisture using F-factors. In this case the mole fraction of the moisture in the ambient air is calculated using equations in EPA Method 4-16.4 from 1) the measured ambient relative humidity, ambient temperature and barometric pressure, 2) the mole fraction from free water in the fuel, calculated from the moisture % in the fuel which is determined by the analytical lab to be the balance after all the major gaseous components have been summed, and 3) the mole fraction from the hydrogen in the fuel. To determine the moisture in the fuel the raw fuel analysis before normalization to 100% is referenced.

EPA Method 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.

TO-15 Volatile Organics and Sulfur Compounds by SILCO SUMMA® Canister. Sampling consists of collecting gases in pre-evacuated 6-Liter SUMMA canisters with pre-set flow controllers set to integrate over the desired test duration. The SUMMA® passivated canisters allow holding times up to 14 days for the TO-15 Method list of volatile organics. The SILCO canisters have a silanized (glass) lining that permits longer holding times (up to 72 hours) for reactive sulfur compounds. The sample gas is drawn by the canister vacuum through a micro-filter, pre-set orifice flow controller and on/off valve into the canister. The canister vacuum is monitored with a vacuum gauge to verify sample collection. In this case, the flow controller consisted of capillary orifice tubing designed to sample for a pre-set duration of 1.0 hrs.

The samples are analyzed for volatile organics by EPA Method TO-15 using GC/MS (gas chromatography/mass spectroscopy and for tentatively identified compounds, not included in the TO-15 list. The samples were also analyzed for 20 sulfur compounds by ASTM Method D-5504 GC/SCD (gas chromatography/sulfur chemiluminescent detector).

Sampling for Total Hydrocarbons by EPA Method 25A. The system was tested by simultaneously monitoring the inlet and the exhaust, for total hydrocarbons (THC) using EPA Method 25A (FID Method) employing separate sampling pumps and heated (if necessary) sample gas transfer lines to provide a continuous sample to the heated FID Hydrocarbon Analyzers. Heated lines were used if necessary to avoid moisture or hydrocarbon condensation. Methane was < 1ppm.

THC calibrations are performed through the probe and entire sample system. The system linearity check was performed prior to testing and calibration drift checks were performed after every run. All data was corrected according to EPA Method 25A and 6C. Calibration gases are selected to fall within 25-35%, 45-55% and 80-90% of Range

EPA Method 25C for NMOC (ROC). The Method is written for evacuated canister (SUMMA) sampling but is adaptable to Tedlar bag sampling procedures as in EPA Method 18, CARB 410 and CARB 422. The sampling equipment comprises a stainless steel or glass lined probe with a short stainless-steel or Teflon transfer line into a pre-evacuated SUMMA Canister. An orifice or regulator is placed immediately before the canister and to regulate the flow into the canister over a prescribed time period. The equipment used for analysis is exactly the same as used in EPA 25 and 25C. The sample is injected into a GC column where the methane, CO and CO_2 are flushed through and removed. Then the NMOC (ROC) fraction is oxidized to form CO_2 then reduced to methane and measured by the flame ionization detector (FID).

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 7E 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).

Landfill (LFG) and LNG bypass gas (BPG) samples were collected in SUMMA canisters integrated over each test period.

System Performance Criteria

Instrument Linearity	≤2% Full Scale (checked)
Instrument Linearity (25A)	≤5% Span Gas
Instrument Bias	≤5% Full Scale (checked)
System Response Time	≤± 2 mins (checked)
NO_x Converter Efficiency (EPA 7E)	≥ 90% (checked)
Instrument Zero Drift	≤± 3% Full Scale (complied)
Instrument Span Drift	≤± 3% Full Scale (complied)

Concurrent with the exhaust sampling, Blue Sky collected a total of six fuel samples for analysis, six LFG samples, three LFG+BPG samples and two BPG only sample. The samples were collected in Tedlar bags and immediately transferred to SILCO canisters. The gas sample rates were set with a rotameter to collect 30-minute integrated samples. All the samples were analyzed for NMOC, HHV, F-Factor and Fixed Gases. The flare samples were analyzed for VOC Compounds and Sulfur Species (including H_2S and TRS).

The inlet LFG and BPG gas volumetric flow rates are continuously measured and recorded by individual flowmeters.

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42C	NO_x	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfisch RS-55	THC	FID
Fuji ZRH	CO_2	IR
Servomex 1440	O_2	Paramagnetic

3.6. Comments: Limitations and Data Qualifications

The measured emissions meet the Permit required limits. Run #1 for the CON has a bad gas sample and was not used in the results. Please see the notes in Tables 1 & 4.

Blue Sky Environmental has reviewed this report for accuracy, and concluded that the test procedures were followed and accurately described and documented. The review included the following items:

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

The services described in this report were performed in a manner consistent with the generally accepted professional testing principles and practices. No other warranty, expressed or implied, is made. These services were performed in a manner consistent with our agreement with our client. The report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions contained in this report pertain to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and operating parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations, subsequent to this, and do not warranty the accuracy of information supplied by others.

SECTION 4. APPENDICES

A.	Tabulated Results
B.	Calculations
C.	Laboratory Reports
D.	Field Data Sheets
E.	Strip Charts
F.	Process Information
G.	Calibration Certifications and Quality Assurance Records
H.	Sample Train Configuration and Stack Diagrams
I.	Related Correspondence (Source Test Plan and Email)
J.	Permit to Operate and March 2020 Modification for Toxic Concentrations
K.	Flare Flow Meter Calibration Document

A
Tabulated Results

TABLE #1

Altamont Landfill
Flare A-16
LFG - Condensate On

RUN	1	2	3	AVERAGE	LIMITS
Test Date	3/26/20	3/26/20	3/26/20		
Test Time	0943-1021	1040-1132	1209-1245		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,590	1,590	1,591	1,590	
Condensate Injection, gpm	1.46	1.40	1.00	1.29	
Fuel Flow Rate, SCFM	2,057	2,064	2,093	2,071	
Fuel Heat Input, MMBTU/Hr	57.8	59.0	57.8	58.2	
Exhaust Flow Rate, DSCFM (Method 19)	18,415	19,324	19,360	19,033	
Oxygen, O_2, %	10.4	10.7	10.9	10.7	
Carbon Dioxide, CO_2, %	9.3	9.0	8.9	9.1	
Water Vapor, H_2O, % M4.16	5.4*	5.4	5.4	5.4	
NO, ppm	25.3	26.2	22.4	24.6	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.04	<0.04	<0.04	<0.04	
NOx, ppm	25.2	26.1	22.3	24.5	
NOx, ppm @ 3% O_2	**43.1**	**45.9**	**39.9**	**43.0**	**45**
NOx, lbs/hr	3.32	3.60	3.08	3.33	
NOx, lbs/MMBTU	**0.057**	**0.061**	**0.053**	**0.057**	**0.06**
CO, ppm	1.5	3.1	3.8	2.8	
CO, ppm @ 3% O_2	**2.6**	**5.4**	**6.8**	**4.9**	**246**
CO, lbs/hr	0.12	0.26	0.32	0.23	
CO, lbs/MMBTU	**0.002**	**0.004**	**0.006**	**0.004**	**0.20**
Total Sulfurs as H_2S in fuel, ppm	**89.7***	**68.3**	**111**	**89.7**	**200**
SO_2 calculated emission, ppm	**10.0**	**7.3**	**12.0**	**9.8**	**300**
THC, ppm (25A) wet	<1.0	<1.0	<1.0	<1.0	
THC, ppm dry	<1.1	<1.1	<1.1	<1.1	
THC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
CH_4, ppm	<1.1	<1.1	<1.1	<1.1	
CH_4, lbs/hr	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm as CH_4	<1.1	<1.1	<1.1	<1.1	
NMOC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm @ 3% O_2 as CH_4	**<1.8**	**<1.9**	**<1.9**	**<1.9**	**30**
INLET TNMOC (Method 25C)	2,514*	2,483	2,544	2,514	
INLET NMOC lbs/hr as CH_4	12.8	12.7	13.2	12.9	
NMOC Removal Efficiency	**99.62%**	**99.60%**	**99.62%**	**99.61%**	**98**
INLET CH_4, ppm	470,500*	479,000	462,000	470,500	
INLET CH_4 lbs/hr	2,403.0	2,454.0	2,399.9	2,419	
CH_4 Removal Efficiency	**>99.998%**	**>99.998%**	**>99.998%**	**>99.998%**	**99**
INLET THC (TOC) ppm as CH_4	473,014	481,483	464,544	473,014	
INLET THC (TOC) lbs/hr as CH_4	2,416	2,467	2,413	2,432	
THC (TOC) Removal Efficiency	**99.998%**	**99.998%**	**99.998%**	**99.998%**	

< Value = 2% of Analyzer Range

**Due to sample air leakage this is an average of Runs #2 & #3*

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

TABLE #2

Altamont Landfill
Flare A-16
LFG - Condensate Off

RUN	1	2	3	AVERAGE	LIMITS
Test Date	3/25/20	3/25/20	3/25/20		
Test Time	1150-1226	1242-1320	1335-1411		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,587	1,591	1,592	1,590	
Condensate Injection, gpm	0.1	0.1	0.1	0.1	
Fuel Flow Rate, SCFM	2,084	2,092	2,103	2,093	
Fuel Heat Input, MMBTU/Hr	60.0	60.2	59.3	59.8	
Exhaust Flow Rate, DSCFM (Method 19)	20,868	20,922	20,063	20,618	
Oxygen, O_2, %	11.3	11.3	11.0	11.2	
Carbon Dioxide, CO_2, %	8.5	8.6	8.8	8.6	
Water Vapor, H_2O, % M4.16	5.2	5.1	5.4	5.2	
NO, ppm	17.9	18.0	19.2	18.4	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.06	<0.06	<0.05	<0.05	
NOx, ppm	17.9	18.0	19.0	18.3	
NOx, ppm @ 3% O_2	**33.2**	**33.5**	**34.2**	**33.6**	**45**
NOx, lbs/hr	2.66	2.69	2.72	2.69	
NOx, lbs/MMBTU	**0.044**	**0.04**	**0.05**	**0.04**	**0.06**
CO, ppm	4.3	3.0	2.9	3.4	
CO, ppm @ 3% O_2	**8.1**	**5.6**	**5.2**	**6.3**	**246**
CO, lbs/hr	0.39	0.27	0.25	0.30	
CO, lbs/MMBTU	**0.007**	**0.005**	**0.004**	**0.005**	**0.20**
Total Sulfurs as H_2S in fuel, ppm	**78.9**	**105.0**	**112**	**98.6**	**200**
SO_2 calculated emission, ppm	**7.9**	**10.5**	**11.7**	**10.0**	**300**
THC, ppm (25A) wet	<1.0	<1.0	<1.0	<1.0	
THC, ppm dry	<1.1	<1.1	<1.1	<1.1	
THC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
CH_4, ppm	<1.1	<1.1	<1.1	<1.1	
CH_4, lbs/hr	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm as CH_4	<1.1	<1.1	<1.1	<1.1	
NMOC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm @ 3% O_2 as CH_4	**<2.0**	**<2.0**	**<1.9**	**<1.9**	**30**
INLET TNMOC (Method 25C)	2,570	2,652	2,780	2,667	
INLET NMOC lbs/hr as CH_4	13.3	13.8	14.5	13.9	
NMOC Removal Efficiency	**>99.59%**	**>99.60%**	**>99.64%**	**>99.61%**	**98**
INLET CH_4, ppm	482,000	481,000	472,000	478,333	
INLET CH_4 lbs/hr	2,494.1	2,498.0	2,464.4	2485.5	
CH_4 Removal Efficiency	**>99.998%**	**>99.998%**	**>99.998%**	**>99.998%**	**99**
INLET THC (TOC) ppm as CH_4	484,570	483,652	474,780	481,001	
INLET THC (TOC) lbs/hr as CH_4	2,507	2,512	2,479	2,499	
THC (TOC) Removal Efficiency	**99.998%**	**99.998%**	**99.998%**	**99.998%**	

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 Carbons 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

TABLE #3

Altamont Landfill
Flare A-16
BPG+LFG

RUN	1	2	3	AVERAGE	LIMITS
Test Date	3/25/20	3/25/20	3/25/20		
Test Time	0851-0927	0950-1027	1041-1118		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,591	1,592	1,592	1,592	
Condensate Injection, gpm	2.01	2.01	2.01	2.01	
Fuel Flow Rate, SCFM (LFG+BPG)	2,438	2,417	2,440	2,431	
Fuel Heat Input, MMBTU/Hr	55.4	55.9	56.5	55.9	
Exhaust Flow Rate, SCFM (Method 19)	18,096	18,070	18,249	18,138	
Oxygen, O_2, %	10.2	10.1	10.1	10.1	
Carbon Dioxide, CO_2, %	10.2	10.3	10.1	10.2	
Water Vapor, H_2O, % M4.16	5.7	5.8	5.8	5.8	
NO, ppm	23.4	23.8	26.3	24.5	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.04	<0.04	<0.04	<0.04	
NOx, ppm	23.8	24.1	26.6	24.8	
NOx, ppm @ 3% O_2	**39.7**	**39.9**	**44.2**	**41.3**	**45**
NOx, lbs/hr	3.07	3.11	3.47	3.22	
NOx, lbs/MMBTU	**0.055**	**0.056**	**0.061**	**0.057**	**0.06**
CO, ppm	4.11	3.94	3.49	3.85	
CO, ppm @ 3% O_2	**6.87**	**6.53**	**5.79**	**6.40**	**246**
CO, lbs/hr	0.32	0.31	0.28	0.30	
CO, lbs/MMBTU	**0.006**	**0.006**	**0.005**	**0.005**	**0.20**
Total Sulfurs as H_2S in fuel, ppm	**27.0**	**51.1**	**46.6**	**41.6**	**200**
SO_2 calculated emission, ppm	**3.6**	**6.8**	**6.2**	**5.6**	**300**
THC, ppm (25A) wet	<1.0	<1.0	<1.0	<1.0	
THC, ppm dry	<1.1	<1.1	<1.1	<1.1	
THC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
CH_4, ppm	<1.1	<1.1	<1.1	<1.1	
CH_4, lbs/hr	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm as CH_4	<1.1	<1.1	<1.1	<1.1	
NMOC, lbs/hr as CH_4	<0.05	<0.05	<0.05	<0.05	
NMOC, ppm @ 3% O_2 as CH_4	**<1.8**	**<1.8**	**<1.8**	**<1.8**	**30**
BPG+LFG					
INLET TNMOC ppm as CH_4, (Method 25C)	1,437	1,678	2,043	1,719	
INLET NMOC lbs/hr as CH_4	8.7	10.1	12.4	10.4	
NMOC Removal Efficiency	**>99.45%**	**>99.53%**	**>99.61%**	**>99.53%**	**98**
BPG+LFG					
INLET CH_4, ppm	380,000	387,000	387,000	384,667	
INLET CH_4 lbs/hr	2,299.4	2,322.1	2,343.7	2321.7	
CH_4 Removal Efficiency	**>99.998%**	**>99.998%**	**>99.998%**	**>99.998%**	**99**
INLET THC (TOC) ppm as CH_4	381,437	388,678	389,043	386,386	
INLET THC (TOC) lbs/hr as CH_4	2,308	2,332	2,356	2,332	
THC (TOC) Removal Efficiency	**99.9979%**	**99.998%**	**99.998%**	**99.998%**	

< 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 Carbons 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

TABLE # 4

Altamont Landfill
Flare A-16
AP42 2.4-1
Condensate On

Constituent	Method	Units	Detection Limit MRL (MDL)	Landfill Gas Samples 3/26/20 0943-1021 R1-LFG-CON-A16	3/26/20 1040-1132 R2-LFG-CON-A16	3/26/20 1209-1245 R3-LFG-CON-A16	Average Results	Permit Limit
1,1,1-Trichloroethane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
1,1,2,2-Tetrachloroethane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	400
1,1-Dichloroethane (Ethylidene Dichloride)	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	1,000
1,1-Dichloroethene (1,1-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
1,2-Dichloroethane (Ethylene Dichloride)	EPA TO-15	ppb	100/0.5	239	567	538	553	1,500
1,2-Dichloropropane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
2-Propanol (Isopropyl Alcohol, IPA)	EPA TO-15	ppb	10000/2.0	16,200	39,900	36,100	38,000	500,000
Acrylonitrile	EPA TO-15	ppb	100/1.0	<165	<157	<166	<162	300
Bromodichloromethane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Butane (C4)	EPA 18/ASTM 1945	ppm		22.0	22.4	21.6	22.0	
Carbon Disulfide	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Carbon Monoxide	ASTM 1945	%	NA	NA	NA	NA	NA	
Carbon Tetrachloride	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	100
Carbonyl sulfide	ASTM D-5504	ppm		0.163	0.300	0.212	0.256	
Chlorobenzene	EPA TO-15	ppb	100/0.5	<82	1,090	<83	<587	
Chlorodifluoromethane	EPA TO-15	ppb	100/0.5	135	189	177	183	
Chloroethane	EPA TO-15	ppb	100/0.5	116	195	202	199	
Chloroform	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	100
Chloromethane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<80.5	
1,3-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
1,4-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	7,500
1,2-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Dichlorodifluoromethane	EPA TO-15	ppb	100/0.5	123	192	192	192	
Dichlorofluoromethane	EPA TO-15	ppb	100/0.5	91	132	136	134	
Dichloromethane (Methylene Chloride)	EPA TO-15	ppb	100/1.0	<165	175	170	173	1,500
Dimethyl sulfide	ASTM D-5504	ppm		1.79	2.64	2.29	2.47	
Ethane (C2)	EPA 18/ASTM 1945	ppm		4.00	<3.9	<4.1	<3.9	
Ethanol	EPA TO-15	ppb	10000/2.0	81,100	203,000	190,000	196,500	
Ethyl Mercaptan	ASTM D-5504	ppm		<0.082	<0.078	<0.083	<0.081	
Ethyl Benzene	EPA TO-15	ppb	100/0.5	95	820	927	874	23,000
1,2 Dibromoethane (Ethylene Dibromide)	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Trichlorofluoromethane	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Hexane	EPA TO-15	ppb	100/0.5	302	448	489	469	
Hydrogen sulfide	ASTM D-5504	ppm		42.0	62.0	105.0	83.5	
2-Butanone (MEK)	EPA TO-15	ppb	10000/1.0	13,600	28,400	27,500	27,950	350,000
Methyl isoButyl Ketone (MiBK) (4-Methyl-2-Pentanone)	EPA TO-15	ppb	100/0.5	360	1,330	1,330	1,330	
Pentane (C5)	EPA 18/ASTM 1945	ppm		75.9	77.2	74.6	75.9	
Tetrachloroethylene (Perchloroethylene)	EPA TO-15	ppb	100/0.5	<82	102	120	111	1,500
Propane (C3)	EPA 18/ASTM 1945	ppm		34.3	34.4	34.2	34.3	
trans-1,2-Dichloroethene (t-1,2-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	
Trichloroethylene (Trichloroethene)	EPA TO-15	ppb	100/0.5	<82	110	108	109	1,500
Vinyl Chloride	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	1,000
m,p-Xylene	EPA TO-15	ppb	100/1.0	<165	1,230	1,410	1,320	
o-Xylene	EPA TO-15	ppb	100/0.5	<82	383	483	433	
total Xylenes	EPA TO-15	ppb	2500/1.0	<247	1,613	1,893	1,753	90,000
Methyl Alcohol (Methanol MeOH)	EPA 18/ASTM 1945	ppb	10000/5.0	29,400	69,300	65,000	67,150	600,000
Benzene	EPA TO-15	ppb	100/0.5	541	708	704	706	7,900
Benzyl Chloride (a-Chloroltoluene)	EPA TO-15	ppb	100/0.5	<82	<78	<83	<81	500
Toluene	EPA TO-15	ppb	2000/0.5	1,200	6,040	6,260	6,150	80,000

*Due to sample air leakage this is an average of Runs #2 & #3
ND = not detected
MRL = method reporting limit
MDL = method detection limit

TABLE # 5

Altamont Landfill
Flare A-16
AP42 2.4-1
Condensate Off

Constituent	Method	Units	Detection Limit MRL (MDL)	Landfill Gas Samples 3/25/20 1150-1226 R1-LFG-COFF-A16	3/25/20 1242-1320 R2-LFG-COFF-A16	3/25/20 1335-1411 R3-LFG-COFF-A16	Average Results	Permit Limit
1,1,1-Trichloroethane	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
1,1,2,2-Tetrachloroethane	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	400
1,1-Dichloroethane (Ethylidene Dichloride)	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	1,000
1,1-Dichloroethene (1,1-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
1,2-Dichloroethane (Ethylene Dichloride)	EPA TO-15	ppb	100/0.5	600	594	613	452	1,500
1,2-Dichloropropane	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
2-Propanol (Isopropyl Alcohol, IPA)	EPA TO-15	ppb	10000/2.0	36,500	38,900	38,400	37,933	500,000
Acrylonitrile	EPA TO-15	ppb	100/1.0	<160	<163	<168	<164	300
Bromodichloromethane	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Butane (C4)	EPA 18/ASTM 1945	ppm		24.2	23.2	21.8	23.07	
Carbon Disulfide	EPA TO-15	ppb	100/0.5	<80	<81	<84	82	
Carbon Monoxide	EPA 3C/ASTM 1945	%	NA	NA	NA	NA	NA	
Carbon Tetrachloride	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	100
Carbonyl sulfide	ASTM D-5504	ppm		0.244	0.307	0.235	0.262	
Chlorobenzene	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Chlorodifluoromethane	EPA TO-15	ppb	100/0.5	196	170	192	186	
Chloroethane	EPA TO-15	ppb	100/0.5	183	204	199	195	
Chloroform	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	100
Chloromethane	EPA TO-15	ppb	100/0.5	82	<81	89	84	
1,3-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
1,4-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	7,500
1,2-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Dichlorodifluoromethane	EPA TO-15	ppb	100/0.5	207	200	197	201	
Dichlorofluoromethane	EPA TO-15	ppb	100/0.5	149	146	145	147	
Dichloromethane (Methylene Chloride)	EPA TO-15	ppb	100/1.0	193	190	179	187	1,500
Dimethyl sulfide	ASTM D-5504	ppm		3.09	3.05	2.68	2.94	
Ethane (C2)	EPA 18/ASTM 1945	ppm		<4.0	<4.1	<4.2	<4.2	
Ethanol	EPA TO-15	ppb	10000/2.0	178,000	190,000	192,000	186,667	
Ethyl Mercaptan	ASTM D-5504	ppm		<0.080	<0.081	0.092	<0.084	
Ethyl Benzene	EPA TO-15	ppb	100/0.5	1,090	1,190	1,240	1,173	23,000
1,2 Dibromoethane (Ethylene Dibromide)	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Trichlorofluoromethane	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Hexane	EPA TO-15	ppb	100/0.5	486	478	472	479	
Hydrogen sulfide	ASTM D-5504	ppm		71.8	97.5	104.0	91.1	
2-Butanone (MEK)	EPA TO-15	ppb	10000/1.0	29,700	28,900	28,000	28,867	350,000
Methyl isoButyl Ketone (MiBK)	EPA TO-15	ppb	100/0.5	1,540	1,580	1,550	1,557	
Pentane (C5)	EPA 18/ASTM 1945	ppm		76.1	76.4	72.7	75.1	
Tetrachloroethylene (Perchloroethylene)	EPA TO-15	ppb	100/0.5	112	130	135	126	1,500
Propane (C3)	EPA 18/ASTM 1945	ppm		38.7	38.0	35.9	37.5	
trans-1,2-Dichloroethene (t-1,2-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	
Trichloroethylene (Trichloroethene)	EPA TO-15	ppb	100/0.5	117	119	116	117	1,500
Vinyl Chloride	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	1,000
m,p-Xylene	EPA TO-15	ppb	100/1.0	1,620	1,800	1,910	1,777	
o-Xylene	EPA TO-15	ppb	100/0.5	552	651	670	624	
total Xylenes	EPA TO-15	ppb	2500/1.0	2,172	2,451	2,580	2,401	90,000
Methyl Alcohol (Methanol MeOH)	EPA 18/ASTM 1945	ppb	10000/5.0	70,900	63,900	72,100	68,967	600,000
Benzene	EPA 18/ASTM 1945	ppb	100/0.5	819	815	780	805	7,900
Benzyl Chloride (a-Chloroltoluene)	EPA TO-15	ppb	100/0.5	<80	<81	<84	<82	500
Toluene	EPA TO-15	ppb	2000/0.5	6,360	6,810	6,780	6,650	80,000

MRL = method reporting limit
MDL = method detection limit

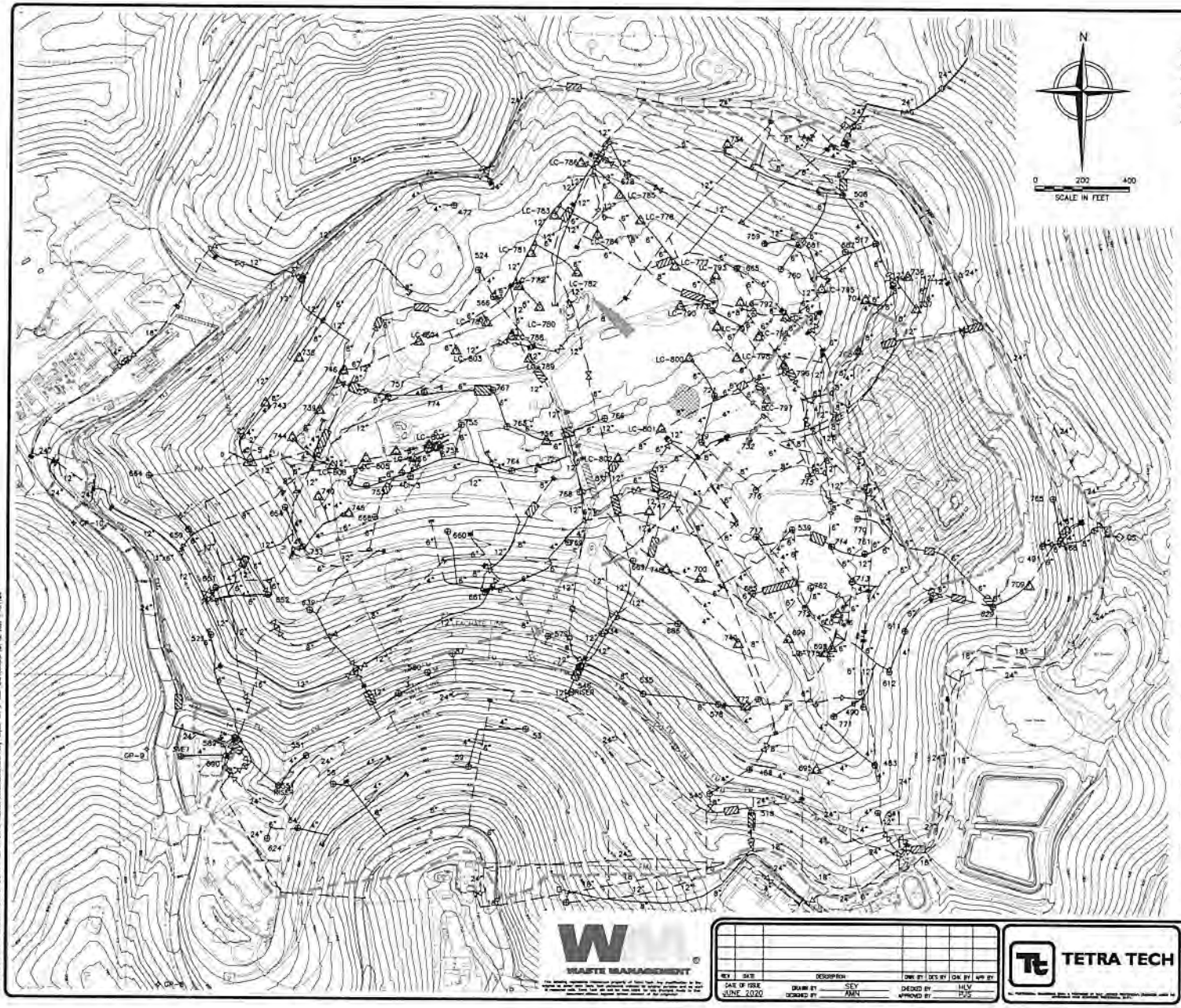
TABLE # 6

Altamont Landfill
Flare A-16
AP42 2.4-1
LNG (BPG+LFG)

Constituent	Method	Units	Detection Limit MRL Analysis DF/MRL	Landfill Gas Samples 3/25/20 **0851-0927** **R1-BPG+LFG-A16**	3/25/20 **0950-1027** **R2-BPG+LFG-A16**	3/25/20 **1041-1118** **R3-BPG+LFG-A16**	Average Results	Permit Limit
1,1,1-Trichloroethane	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
1,1,2,2-Tetrachloroethane	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	400
1,1-Dichloroethane (Ethylidene Dichloride)	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	1,000
1,1-Dichloroethene (1,1-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
1,2-Dichloroethane (Ethylene Dichloride)	EPA TO-15	ppb	100/0.5	341	385	443	390	1,500
1,2-Dichloropropane	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
2-Propanol (Isopropyl Alcohol, IPA)	EPA TO-15	ppb	10000/2.0	14,100	19,800	23,400	19,100	500,000
Acrylonitrile	EPA TO-15	ppb	100/1.0	<190	<184	<167	<180	300
Bromodichloromethane	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Butane (C4)	EPA 18/ASTM 1945	ppm		21.6	20.8	24.1	22.2	
Carbon Disulfide	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Carbon Monoxide	EPA 3C/ASTM 1945	%	NA	NA	NA	NA	NA	
Carbon Tetrachloride	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	100
Carbonyl sulfide	ASTM D-5504	ppm		0.258	0.178	0.210	0.215	
Chlorobenzene	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Chlorodifluoromethane	EPA TO-15	ppb	100/0.5	211	202	189	201	
Chloroethane	EPA TO-15	ppb	100/0.5	133	131	176	<147	
Chloroform	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	100
Chloromethane	EPA TO-15	ppb	100/0.5	99	<92	89	93	
1,3-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
1,4-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	7,500
1,2-Dichlorobenzene	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Dichlorodifluoromethane	EPA TO-15	ppb	100/0.5	221	240	232	231.0	
Dichlorofluoromethane	EPA TO-15	ppb	100/0.5	125	95	142	120.7	
Dichloromethane (Methylene Chloride)	EPA TO-15	ppb	100/1.0	<190	<184	<167	<180	1,500
Dimethyl sulfide	ASTM D-5504	ppm		2.84	2.50	2.73	2.69	
Ethane (C2)	EPA 18/ASTM 1945	ppm		<4.7	<4.6	<4.2	<4.2	
Ethanol	EPA TO-15	ppb	10000/2.0	67,300	92,700	109,000	89,667	
Ethyl Mercaptan	ASTM D-5504	ppm		<0.095	<0.092	<0.084	<0.090	
Ethyl Benzene	EPA TO-15	ppb	100/0.5	224	529	848	534	23,000
1,2 Dibromoethane (Ethylene Dibromide)	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Trichlorofluoromethane	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90.3	
Hexane	EPA TO-15	ppb	100/0.5	578	523	553	551	
Hydrogen sulfide	ASTM D-5504	ppm		22.5	46.7	41.5	36.9	
2-Butanone (MEK)	EPA TO-15	ppb	10000/1.0	17,400	22,100	23,100	20,867	350,000
Methyl isoButyl Ketone (MiBK)	EPA TO-15	ppb	100/0.5	606	1,010	1,230	949	
Pentane (C5)	EPA 18/ASTM 1945	ppm		43.6	45.5	57.4	48.8	
Tetrachloroethylene (Perchloroethylene)	EPA TO-15	ppb	100/0.5	<95	<92	91	<93	1,500
Propane (C3)	EPA 18/ASTM 1945	ppm		38.1	37.8	40.4	38.8	
trans-1,2-Dichloroethene (t-1,2-Dichloroethylene)	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	
Trichloroethylene (Trichloroethene)	EPA TO-15	ppb	100/0.5	<95	<92	92	<93	1,500
Vinyl Chloride	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	1,000
m,p-Xylene	EPA TO-15	ppb	100/1.0	304	747	1,270	774	
o-Xylene	EPA TO-15	ppb	100/0.5	<95	<92	388	<192	
total Xylenes	EPA TO-15	ppb	2500/1.0	399	839	1,658	965	90,000
Methyl Alcohol (Methanol MeOH)	EPA TO-15	ppb	10000/5.0	51,600	45,700	43,400	46,900	600,000
Benzene	EPA TO-15	ppb	100/0.5	907	766	766	813	7,900
Benzyl Chloride (a-Chloroltoluene)	EPA TO-15	ppb	100/0.5	<95	<92	<84	<90	500
Toluene	EPA TO-15	ppb	2000/0.5	2,260	4,880	5,580	4,240	80,000

ND = not detected
MRL = method reporting limit
MDL = method detection limit

APPENDIX Z
GCCS MAP



NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING INC. DATE OF PHOTOGRAPHY: JUNE 11, 2019. DATUM: HORIZONTAL – ZONE 3, NAD27, VERTICAL – NGVD29.
2. SUPPLEMENTAL 2014 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA PROVIDED BY EMAIL FROM F3 & ASSOCIATES. DATE OF SURVEY: FEBRUARY 17, 2015.
3. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEYS: DECEMBER 18, 2015 AND FEBRUARY 25, 2016. ADDITIONAL FIELD MARKUPS PROVIDED BY WM DATED MAY 17, 2016.
4. THE 2016 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: DECEMBER 22, 2016.
5. THE 2017 GCCS IMPROVEMENTS AS-BUILT WELL LOCATIONS PER FIELD SURVEYS PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE SURVEYS RECEIVED: APRIL 17, 2018.
6. THE 2018 GCCS IMPROVEMENTS AS-BUILT PER SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: JUNE 26 AND JULY 30, 2018.
7. ASBESTOS AREA BOUNDARY LOCATION PER FIELD SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEY: APRIL 7, 2018.
8. THE 2019 GCCS IMPROVEMENTS AS-BUILT PER SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEYS: JANUARY 31 AND FEBRUARY 12, 2020.
9. THE 2020 GCCS IMPROVEMENTS AS-BUILT PER SURVEY PERFORMED BY F3 & ASSOCIATES, INC. OF BENICIA, CA. DATE OF SURVEYS: JANUARY 30, FEBRUARY 12, MARCH 13, AND APRIL 22 AND 30, 2020.
10. FORCE MAIN PIPING LOCATIONS PER MARKUPS PROVIDED BY WM. DATE OF MARKUPS: APRIL 7, APRIL 9, AND MAY 7, 2020.

AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE JUNE 2020	DRAWN BY: SEY; DESIGNED BY: AMN		DESIGNED BY:	CHK BY: HLV; APP BY: DVC	

TETRA TECH

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

2020 GCCS IMPROVEMENTS
CONSTRUCTION SITE LAYOUT

SHEET NO. 3

PROJECT NO. 200025

APPENDIX AA
QUARTERLY GAS MIGRATION MONITORING DATA

WASTE MANAGEMENT
910 Coyote Creek Golf Drive,
San Jose, CA 95037

March 31, 2020

Benjamin Wade
EP Specialist
Altamont Landfill and Resource Recovery Facility
10840 Altamont Pass Rd.
Livermore, California 94551

Re: First Quarter 2020 Perimeter Gas and Methane in Structure Monitoring Report Altamont Landfill and Resource Recovery Facility

Dear Mr Wade,

This report for the Altamont Landfill and Resource Recovery Facility (ALRRF) contains the results of the First Quarter 2020 Perimeter Gas and Methane in Structure Monitoring conducted at the ALRRF. All monitoring was conducted by ALRRF personnel.

REGULATORY REQUIREMENTS

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A).

During the First Quarter 2020 Probes GP8C and GP20C had higher methane values during the month of February and March 2020. The methane values Probes GP8C and GP20C have been previously shown to be naturally occurring and not related to landfill operations. No exceedances of Subtitle D (40 CFR 258.23) and California Code of Regulations (CCR) Title 27, Division 2, Section 20919.5 were detected during the monitoring events.

Results for probes are summarized in Table 1. All other Field data sheets during the First Quarter of 2020 are presented in Attachment B.

Table 1

Altamont Landfill and Resource Recovery Facility
Perimeter Gas Probe Monitoring Results

Analyst: Dan San Jose **DATE :** 01.07.20
Instrument: Gem 2000 **Serial** #: 12104

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALT-GP1A	1/6/2020 12:35	0	0	0.08	Ok	Ok	
ALT-GP1B	1/6/2020 12:37	0	0	0.00	Ok	Ok	
ALT-GP1C	1/6/2020 12:39	0	0.1	0.12	Ok	Ok	
ALT-GP2A	1/7/2020 11:19	0	0.2	0.01	Ok	Ok	
ALT-GP2B	1/7/2020 11:21	0	0.4	0.03	Ok	Ok	
ALT-GP3A	1/6/2020 12:19	0	0.1	0.07	Ok	Ok	
ALT-GP3B	1/6/2020 12:21	0	0	0.08	Ok	Ok	
ALT-GP4A	1/6/2020 11:48	0	0.1	0.06	Ok	Ok	
ALT-GP5A	1/6/2020 12:03	0	0.5	0.07	Ok	Ok	
ALT-GP6A	1/7/2020 11:29	0	0.1	0.02	Ok	Ok	
ALT-GP6B	1/7/2020 11:31	0	0	0.03	Ok	Ok	
ALT-GP6C	1/7/2020 11:34	0	0.1	0.02	Ok	Ok	
ALT-GP7A	1/7/2020 11:40	0	0.2	0.03	Ok	Ok	
ALT-GP7B	1/7/2020 11:42	0	1	0.03	Ok	Ok	
ALT-GP7C	1/7/2020 11:44	0	0.6	0.03	Ok	Ok	
ALT-GP8A	1/6/2020 10:23	0	0.4	0.00	Ok	Ok	
ALT-GP8B	1/6/2020 10:25	0	0.2	0.00	Ok	Ok	
ALT-GP8C	1/6/2020 10:28	0	0	-3.16	Ok	Ok	
ALT-GP9A	1/6/2020 10:08	4.2	10.2	0.02	Ok	Ok	
ALT-GP9B	1/6/2020 10:12	0.3	3.6	0.02	Ok	Ok	
ALT-GP9C	1/6/2020 10:14	0	9.5	0.05	Ok	Ok	
ALTGP10A	1/7/2020 8:57	0	0.5	0.02	Ok	Ok	
ALTGP10B	1/7/2020 8:59	0	0.5	0.04	Ok	Ok	
ALTGP11A	1/7/2020 9:07	0	4.2	0.03	Ok	Ok	
ALTGP11B	1/7/2020 9:09	0	3.8	0.06	Ok	Ok	
ALTGP11C	1/7/2020 9:11	0	0.1	0.05	Ok	Ok	
ALTGP12A	1/7/2020 9:22	0	0.2	0.05	Ok	Ok	
ALTGP13A	1/7/2020 9:28	0	0.3	0.12	Ok	Ok	
ALTGP14A	1/7/2020 9:33	0	0.1	0.07	Ok	Ok	
ALTGP15A	1/7/2020 9:39	0	0.7	0.06	Ok	Ok	
ALTGP16A	1/7/2020 9:44	0	0.6	0.07	Ok	Ok	
ALTGP17A	1/7/2020 9:51	0	0.4	0.07	Ok	Ok	
ALTGP18A	1/7/2020 10:14	0	0.3	0.03	Ok	Ok	
ALTGP18B	1/7/2020 10:16	0	0.4	0.03	Ok	Ok	
ALTGP19A	1/7/2020 10:26	0	0.2	0.05	Ok	Ok	
ALTGP19B	1/7/2020 10:28	0	0	0.05	Ok	Ok	
ALTGP20A	1/7/2020 10:39	0	0.1	0.06	Ok	Ok	
ALTGP20B	1/7/2020 10:41	0	0.1	0.07	Ok	Ok	
ALTGP20C	1/7/2020 10:43	0	0	0.09	Ok	Ok	

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALTGP21A	1/6/2020 10:49	0	0.6	-0.03	Ok	Ok	
ALTGP21B	1/6/2020 10:51	0	0	-0.03	Ok	Ok	
ALTGP21C	1/6/2020 10:53	0	0.3	-0.01	Ok	Ok	
ALTGP22A	1/6/2020 10:59	0	0.5	0.00	Ok	Ok	
ALTGP23A	1/6/2020 11:05	0	0	0.02	Ok	Ok	
ALTGP23B	1/6/2020 11:07	0	1.4	0.01	Ok	Ok	
ALTGP23C	1/6/2020 11:09	0	0.5	0.02	Ok	Ok	
ALTGP24A	1/6/2020 11:16	0	0.2	0.02	Ok	Ok	
ALTGP25A	1/6/2020 11:22	0	0.1	0.00	Ok	Ok	
ALTGP25B	1/6/2020 11:24	0	0.3	0.05	Ok	Ok	
ALTGP26A	1/6/2020 11:34	0	0.1	0.02	Ok	Ok	

Immediately notify compliance personnel of any readings in excess of 5 percent methane.

ND = Not Detected

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

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

Perimeter Gas Monitoring

The facility conducted the required monitoring using a CES - Landtec GEM-2000 gas analyzer (GEM).

The facility conducted the required monitoring using a CES - Landtec GEM-2000 gas analyzer (GEM). The monitoring was conducted by Dan San Jose during January 6 and 7, 2020. The static pressure of each probe was measured using the GEM's internal pressure transducers.

Facility Structures

Dan San Jose (ALRRF) used a Photovac Micro FID to monitor buildings and structures to check for the presence of methane on March 11, 2020. The instrument was calibrated on March 11, 2020, using 500 ppm methane standard.

Combustible Methane Gas Monitor Calibration

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. The most recent calibration was conducted by Dan San Jose and Juan Baracio on March 11, 20, and 24, 2020.

GENERAL WEATHER CONDITIONS [TITLE 27 §20934(a)(3)]

General weather conditions at the time of monitoring are presented in Table 2.

Table 2
General Weather Conditions

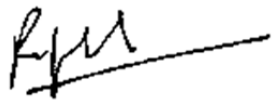
Description	General Conditions	Wind Speed mph	Wind Direction	Barometric Pressure, Inches of Hg	Average Ambient Temperature, Deg F
January 6, 2020	Fair	0.0	Calm	30.52	49
January 7, 2020	Cloudy	0.0	WNW	30.23	50

* Refer to www.weatherunderground.com for details on wind speed and direction

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 875-9338.

Thank you,

Waste Management,

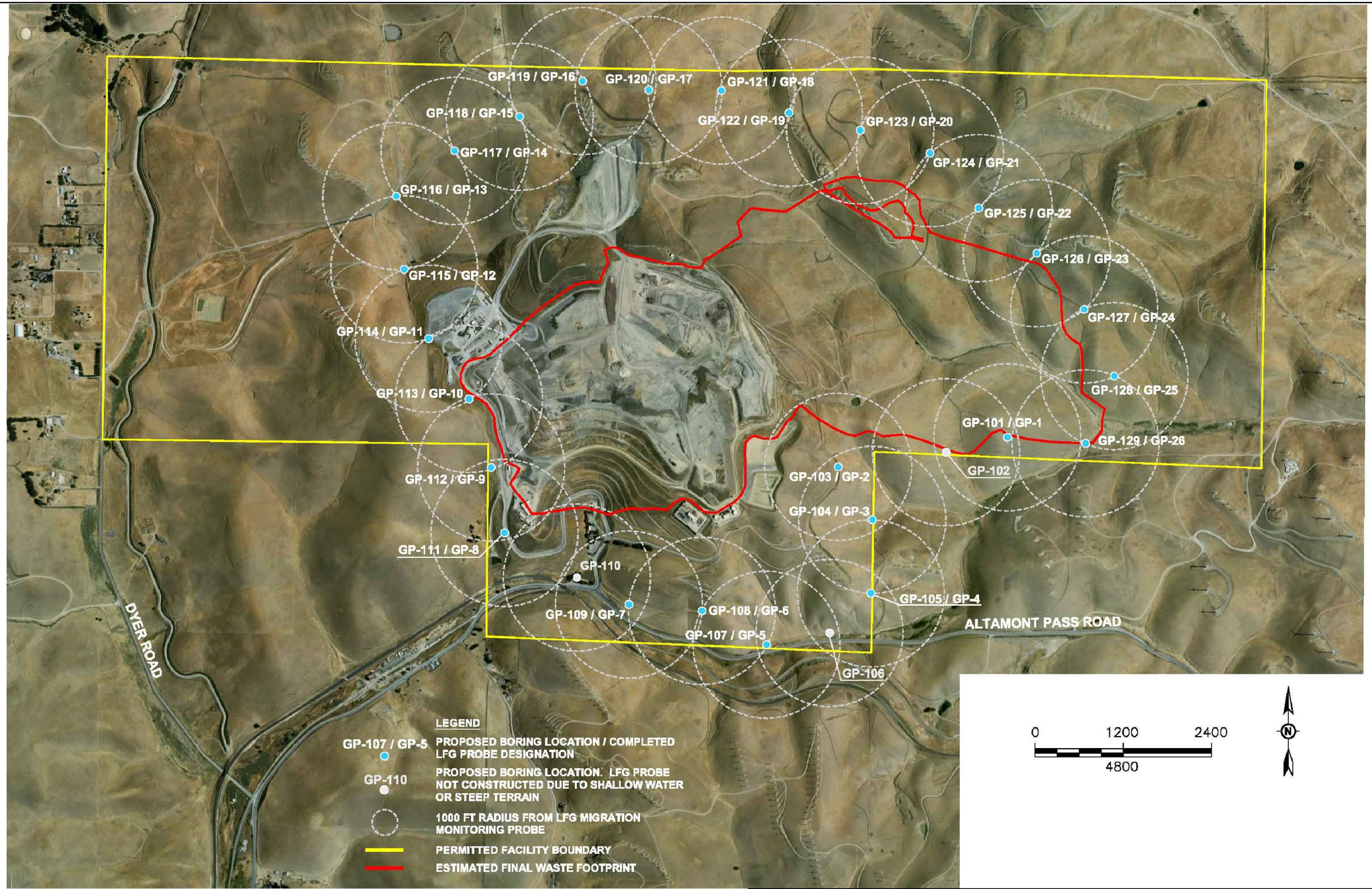


Rajan Phadnis
EP Air Specialist

Attachments: Perimeter Gas Probe Location Map
ALRRF First Quarter 2020 Field Data

ATTACHMENT A

PROBE LOCATION MAP



SOURCE: FIGURE 1 "PERIMETER GAS PROBE LOCATIONS" FROM LANDFILL GAS MIGRATION MONITORING PLAN, GEOTRANS, INC., A TETRA TECH COMPANY, 9-22-09.

Geosyntec consultants

GAS MONITORING PROBE LOCATIONS – FILL AREA 1 AND FILL AREA 2
ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

FIGURE NO.	32
PROJECT NO.	WG2018
DATE:	JULY 2015

P:\CADD\CIVIL 3D\WM\ALTAMONT\WG2018\JTD\Fig32.dwg 7-10-15 09:46:19 PM Skholomeyzer

ATTACHMENT B

FIELD DATA

Altamont Landfill and Resource Recovery Facility
Perimeter Gas Probe Monitoring Results

Analyst: Dan San Jose **Date: 01.07.20**

Instrument: Gem 2000 **Serial #: 12104**

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALT-GP1A	1/6/2020 12:35	0	0	0.08	Ok	Ok	
ALT-GP1B	1/6/2020 12:37	0	0	0	Ok	Ok	
ALT-GP1C	1/6/2020 12:39	0	0.1	0.12	Ok	Ok	
ALT-GP2A	1/7/2020 11:19	0	0.2	0.01	Ok	Ok	
ALT-GP2B	1/7/2020 11:21	0	0.4	0.03	Ok	Ok	
ALT-GP3A	1/6/2020 12:19	0	0.1	0.07	Ok	Ok	
ALT-GP3B	1/6/2020 12:21	0	0	0.08	Ok	Ok	
ALT-GP4A	1/6/2020 11:48	0	0.1	0.06	Ok	Ok	
ALT-GP5A	1/6/2020 12:03	0	0.5	0.07	Ok	Ok	
ALT-GP6A	1/7/2020 11:29	0	0.1	0.02	Ok	Ok	
ALT-GP6B	1/7/2020 11:31	0	0	0.03	Ok	Ok	
ALT-GP6C	1/7/2020 11:34	0	0.1	0.02	Ok	Ok	
ALT-GP7A	1/7/2020 11:40	0	0.2	0.03	Ok	Ok	
ALT-GP7B	1/7/2020 11:42	0	1	0.03	Ok	Ok	
ALT-GP7C	1/7/2020 11:44	0	0.6	0.03	Ok	Ok	
ALT-GP8A	1/6/2020 10:23	0	0.4	0	Ok	Ok	
ALT-GP8B	1/6/2020 10:25	0	0.2	0	Ok	Ok	
ALT-GP8C	1/6/2020 10:28	0	0	-3.16	Ok	Ok	
ALT-GP9A	1/6/2020 10:08	4.2	10.2	0.02	Ok	Ok	
ALT-GP9B	1/6/2020 10:12	0.3	3.6	0.02	Ok	Ok	
ALT-GP9C	1/6/2020 10:14	0	9.5	0.05	Ok	Ok	
ALTGP10A	1/7/2020 8:57	0	0.5	0.02	Ok	Ok	
ALTGP10B	1/7/2020 8:59	0	0.5	0.04	Ok	Ok	
ALTGP11A	1/7/2020 9:07	0	4.2	0.03	Ok	Ok	
ALTGP11B	1/7/2020 9:09	0	3.8	0.06	Ok	Ok	
ALTGP11C	1/7/2020 9:11	0	0.1	0.05	Ok	Ok	
ALTGP12A	1/7/2020 9:22	0	0.2	0.05	Ok	Ok	
ALTGP13A	1/7/2020 9:28	0	0.3	0.12	Ok	Ok	
ALTGP14A	1/7/2020 9:33	0	0.1	0.07	Ok	Ok	
ALTGP15A	1/7/2020 9:39	0	0.7	0.06	Ok	Ok	
ALTGP16A	1/7/2020 9:44	0	0.6	0.07	Ok	Ok	
ALTGP17A	1/7/2020 9:51	0	0.4	0.07	Ok	Ok	
ALTGP18A	1/7/2020 10:14	0	0.3	0.03	Ok	Ok	
ALTGP18B	1/7/2020 10:16	0	0.4	0.03	Ok	Ok	
ALTGP19A	1/7/2020 10:26	0	0.2	0.05	Ok	Ok	
ALTGP19B	1/7/2020 10:28	0	0	0.05	Ok	Ok	
ALTGP20A	1/7/2020 10:39	0	0.1	0.06	Ok	Ok	
ALTGP20B	1/7/2020 10:41	0	0.1	0.07	Ok	Ok	
ALTGP20C	1/7/2020 10:43	0	0	0.09	Ok	Ok	
ALTGP21A	1/6/2020 10:49	0	0.6	-0.03	Ok	Ok	
ALTGP21B	1/6/2020 10:51	0	0	-0.03	Ok	Ok	

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALTGP21C	1/6/2020 10:53	0	0.3	-0.01	Ok	Ok	
ALTGP22A	1/6/2020 10:59	0	0.5	0	Ok	Ok	
ALTGP23A	1/6/2020 11:05	0	0	0.02	Ok	Ok	
ALTGP23B	1/6/2020 11:07	0	1.4	0.01	Ok	Ok	
ALTGP23C	1/6/2020 11:09	0	0.5	0.02	Ok	Ok	
ALTGP24A	1/6/2020 11:16	0	0.2	0.02	Ok	Ok	
ALTGP25A	1/6/2020 11:22	0	0.1	0	Ok	Ok	
ALTGP25B	1/6/2020 11:24	0	0.3	0.05	Ok	Ok	
ALTGP26A	1/6/2020 11:34	0	0.1	0.02	Ok	Ok	

Immediately notify compliance personnel of any readings in excess of 5 percent methane.
ND = Not Detected

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Additional Data- Monthly Monitoring

Device Name	Date Time	CH4 (Methane)(%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen)(%)	Balance Gas(%)	Relative Pressure('' H2O)
ALT-GP1B	1/6/2020 12:37	0	0	21.2	78.8	0
ALT-GP1B	2/21/2020 10:22	0	0	19.9	80.1	-0.1
ALT-GP1B	3/4/2020 8:16	0	0.1	20.2	79.7	0.01
ALT-GP8C	1/6/2020 10:28	0	0	21.7	78.3	-3.16
ALT-GP8C	2/27/2020 9:30	0	0	21.6	78.4	-1.23
ALT-GP8C	3/4/2020 10:02	23.3	1.1	10.1	65.5	0
ALTGP20C	1/7/2020 10:43	0	0	21.3	78.7	0.09
ALTGP20C	2/21/2020 10:48	26.4	3.3	3.1	67.2	0.14
ALTGP20C	3/4/2020 7:51	30.4	3.9	0.5	65.2	-0.01

Methane-In-Structure Monitoring Data

Analyst: DAN SAN JOSE **Date:** 03.11.20 / 03.20.20

Instrument: MICRO FID **Serial Number:** CZPD312

Monitored Location	Date and Time		Methane (ppm)	Methane (%)	Comments
Guardhouse	03.20.20	7:29	0		
Leachate Pump Station	03.11.20	10:41	28		
Administration Building	03.11.20	10:52	1		
Sales Building	03.11.20	10:49	0		
Engineering Trailer	03.11.20	10:43	0		
Garage Office	03.11.20	11:00	0		
Maintenance Building	03.11.20	11:02	0		
Maintenance Office West Trailer	03.11.20	1104	0		
Office Trailer Fill Area 2	03.20.20	8:33	0		
Employee break trailer fill area 2	03.20.20	8:29 ~~8:8~~	0		
Scale House South	03.20.20	8:49	0		
Scale House North	03.20.20	8:51	0		
Employee Break Trailer	03.11.20	11:10	3		
Gas Team Office Trailer	03.11.20	11:52	0		
LNG Building 1	3-24-20	8:55am	2		
LNG Building 2 (Trailer)	3-24-20	9am	0		
Tire Office Trailer	03.20.20	9:11	0		
Davis Street Trailer	03.20.20	9:01	0		
Waste Water Plant	03.20.20	7:40	76		
Gas Plant	03.11.20	10:32	0		
Litter Pickers' Trailer (Mobile)	03.11.20	11:16	0		

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

Permanent Structure Monitor Calibration

Calibrated to 5,000 ppm CH_4

Analyst: Dan San Jose **Date:** 03.11.20 / 03.20.20

Instrument: Model 26 Calibration system **Serial Number: 0824904075MTS**

METHANE SENSOR CALIBRATION					
Monitored Location	Date	Time	Monitor Condition		Comments
			Arrival	Departure	
Guardhouse	03.20.20	7:31 AM	OK	OK	
Administrative Building	03.11.20	10:53	Ok	Ok	
Sales Building	03.11.20	10:51	OK	OK	
Engineering Trailer	03.11.20	10:44	Ok	Ok	
Garage Office	03.11.20	11:01	Ok	OK	
Shop Break room	03.11.20	11:03	Ok	OK	
Maintenance Building – Supervisor's Office	03.11.20	11:05	OK	OK	
Office Trailer Fill area 2 middle	03.20.20	8:34	OK	OK	
Employee break trailer fill area 2	03.20.20	8:31	Ok	OK	
Office trailer in Fill Area 2 South	03.20.20	8:36	Ok	OK	
Scale House –(South)	03.20.20	8:50	OK	OK	
Scale House –(North)	03.20.20	8:52	Ok	OK	
Employee Break Trailer	03.11.20	11:11	OK	OK	
Litter picker Trailer	03.11.20	11:15	Ok	OK	No Power
Davis Street Trailer	03.20.20	9:05	OK	OK	
Gas Team's Trailer	03.11.20	11:51	OK	OK	
WWTP (Manager's Office)	03.20.20	7:44	OK	OK	
WWTP (Lab)	03.20.20	7:46	OK	OK	
Gas Plant	03.20.20	9:30	Unplugged (1)	OK	(1) Replaced malfunctioned sierra monitor. Replacement checked.

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03.11.20

Time: 8:56 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Calibration Procedure

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

   Stable Reading = 499 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 03.20.20

Time: 7:13 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZP0312

Calibration Procedure

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

   Stable Reading = 502 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: DAN SAN JOSE

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 3-24-20

Time: 8:49 AM _____ PM

Instrument Make: Photovac Model: Micro FID S/N: C2P312

Calibration Procedure

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

   Stable Reading = 506 ppm
3. Adjust meter to read 500 ppm.

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: Juan Barocio

RESPONSE TIME TEST RECORD

Date: 03.05.20

Expiration Date (3 months): 06.05.20

Time: 9:25 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: CZPD312

Measurement #1:

Stabilized Reading Using Calibration Gas: 498 ppm
90% of the Stabilized Reading: 448 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 3 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 498 ppm
90% of the Stabilized Reading: 448 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 499 ppm
90% of the Stabilized Reading: 449 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 3 seconds (c)

Calculate Response Time:

$$\frac{(a)+(b)+(c)}{3} = 2.7 \text{ seconds (must be less than 30 seconds)}$$

Performed By: D. San Jose

CALIBRATION PRECISION TEST RECORD

Date: 03.05.20

Expiration Date (3 months): 06.05.20

Time: 9:25 AM _____ PM

Instrument Make: PHOTOVAC Model: MICRO FID S/N: C2PD312

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 498 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 498 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 499 ppm (f)

Calculate Precision:

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

_____ % (must be < than 10%)

Performed By: D. San Jose

WASTE MANAGEMENT
910 Coyote Creek Golf Drive,
San Jose, CA 95037

January 2, 2020

Luis Rocha
EP Specialist I
Altamont Landfill and Resource Recovery Facility
10840 Altamont Pass Rd.
Livermore, California 94551

Re: Fourth Quarter 2019 Perimeter Gas and Methane in Structure Monitoring Report Altamont Landfill and Resource Recovery Facility

Dear Mr Rocha,

This report for the Altamont Landfill and Resource Recovery Facility (ALRRF) contains the results of the Fourth Quarter 2019 Perimeter Gas and Methane in Structure Monitoring conducted at the ALRRF. All monitoring was conducted by ALRRF personnel.

REGULATORY REQUIREMENTS

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A).

During the Fourth Quarter 2019 Probe GP 20C had higher methane values. The methane values GP 20C have been previously shown to be naturally occurring and not related to landfill operations. No exceedances of Subtitle D (40 CFR 258.23) and California Code of Regulations (CCR) Title 27, Division 2, Section 20919.5 were detected during the monitoring events.

Results for probes are summarized in Table 1. All other Field data sheets during the Fourth Quarter of 2019 are presented in Attachment B.

Table 1

Altamont Landfill and Resource Recovery Facility
Perimeter Gas Probe Monitoring Results

Analyst: Ben Tarver **DATE :** 10-02-19
Instrument: Gem 2000 **Serial** #: 12104

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALT-GP1A	10/1/2019 10:33	0	0.1	0.14	Ok	Ok	
ALT-GP1B	10/1/2019 10:36	0	0	-0.74	Ok	Ok	
ALT-GP1C	10/1/2019 10:38	0	0.1	0.17	Ok	Ok	
ALT-GP2A	10/2/2019 7:48	0	0.4	-0.01	Ok	Ok	
ALT-GP2B	10/2/2019 7:50	0	0.4	-0.01	Ok	Ok	
ALT-GP3A	10/1/2019 11:03	0	0.1	0.14	Ok	Ok	
ALT-GP3B	10/1/2019 11:05	0	0.1	0.18	Ok	Ok	
ALT-GP4A	10/1/2019 11:16	0	0.1	0.18	Ok	Ok	
ALT-GP5A	10/1/2019 11:30	0	0.5	0.22	Ok	Ok	
ALT-GP6A	10/2/2019 7:58	0	0.2	0.01	Ok	Ok	
ALT-GP6B	10/2/2019 8:00	0	0.1	0.03	Ok	Ok	
ALT-GP6C	10/2/2019 8:01	0	0.1	0.04	Ok	Ok	
ALT-GP7A	10/2/2019 8:06	0	0.3	0.01	Ok	Ok	
ALT-GP7B	10/2/2019 8:08	0	0.9	0.02	Ok	Ok	
ALT-GP7C	10/2/2019 8:09	0	0.6	-0.05	Ok	Ok	
ALT-GP8A	10/1/2019 7:59	0	0.7	-0.15	Ok	Ok	
ALT-GP8B	10/1/2019 8:01	2.7	0.7	-0.12	Ok	Ok	
ALT-GP8C	10/1/2019 8:03	0	0.3	0.25	Ok	Ok	
ALT-GP9A	10/1/2019 8:11	0	1.1	0.3	Ok	Ok	
ALT-GP9B	10/1/2019 8:13	0	2.3	0.38	Ok	Ok	
ALT-GP9C	10/1/2019 8:15	0	10.4	0.59	Ok	Ok	
ALTGP10A	10/1/2019 8:25	0	1	0.76	Ok	Ok	
ALTGP10B	10/1/2019 8:28	0	0.9	-0.09	Ok	Ok	
ALTGP11A	10/1/2019 8:36	0	5.9	0.81	Ok	Ok	
ALTGP11B	10/1/2019 8:38	0	3.3	0.52	Ok	Ok	
ALTGP11C	10/1/2019 8:42	0	0.2	-25.14	Ok	Ok	
ALTGP12A	10/2/2019 7:13	0	0.4	-0.02	Ok	Ok	
ALTGP13A	10/2/2019 7:18	0	0.4	0.01	Ok	Ok	
ALTGP14A	10/2/2019 7:22	0	0.2	0	Ok	Ok	
ALTGP15A	10/2/2019 7:27	0	1.1	0	Ok	Ok	
ALTGP16A	10/2/2019 7:31	0	0.7	-0.01	Ok	Ok	
ALTGP17A	10/2/2019 6:49	0	0.6	-0.04	Ok	Ok	
ALTGP18A	10/1/2019 9:02	0	0.4	0.61	Ok	Ok	
ALTGP18B	10/1/2019 9:04	0	0.7	0.68	Ok	Ok	
ALTGP19A	10/1/2019 9:14	0	0.4	1.13	Ok	Ok	
ALTGP19B	10/1/2019 9:16	0	0.2	0.38	Ok	Ok	
ALTGP20A	10/1/2019 9:28	0	0.2	1.57	Ok	Ok	
ALTGP20B	10/1/2019 9:30	0	0.2	1.56	Ok	Ok	
ALTGP20C	10/1/2019 9:32	5.8	0.4	1.11	Ok	Ok	
ALTGP21A	10/1/2019 9:47	0	0.7	0.97	Ok	Ok	

Probe ID	Date Time	CH_4 (%)	CO_2 (%)	Probe Pressure (in-H_2O)	Probe Condition (clean, capped, locked)		Comments
ALTGP21B	10/1/2019 9:49	0	0.1	1.02	Ok	Ok	
ALTGP21C	10/1/2019 9:51	0	0.4	0.84	Ok	Ok	
ALTGP22A	10/2/2019 6:57	0	0.4	-0.03	Ok	Ok	
ALTGP23A	10/1/2019 10:01	0	0.1	0.93	Ok	Ok	
ALTGP23B	10/1/2019 10:03	0	3.1	0.04	Ok	Ok	
ALTGP23C	10/1/2019 10:05	0	1.9	0.04	Ok	Ok	
ALTGP24A	10/1/2019 10:10	0	0.4	0.07	Ok	Ok	
ALTGP25A	10/1/2019 10:19	0	0.1	0.08	Ok	Ok	
ALTGP25B	10/1/2019 10:21	0	0.4	0.08	Ok	Ok	
ALTGP26A	10/1/2019 10:51	0	0.2	0.16	Ok	Ok	

Immediately notify compliance personnel of any readings in excess of 5 percent methane.

ND = Not Detected

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

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

Perimeter Gas Monitoring

The facility conducted the required monitoring using a CES - Landtec GEM-2000 gas analyzer (GEM).

The facility conducted the required monitoring using a CES - Landtec GEM-2000 gas analyzer (GEM). The monitoring was conducted by Dan San Jose during October 1 and 2, 2019. The static pressure of each probe was measured using the GEM's internal pressure transducers.

Facility Structures

Dan San Jose (ALRRF) used a Photovac Micro FID to monitor buildings and structures to check for the presence of methane on December 13, 2019. The instrument was calibrated on December 13, 2019, using 500 ppm methane standard.

Combustible Methane Gas Monitor Calibration

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. The most recent calibration was conducted by Dan San Jose and Juan Baracio on December 13, 2019.

GENERAL WEATHER CONDITIONS [TITLE 27 §20934(a)(3)]

General weather conditions at the time of monitoring are presented in Table 2.

Table 2
General Weather Conditions

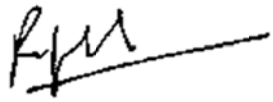
Description	General Conditions	Wind Speed mph	Wind Direction	Barometric Pressure, Inches of Hg	Average Ambient Temperature, Deg F
October 1, 2019	Fair	0.0	Calm	29.57	56
October 2 , 2019	Fair	0.0	Calm	29.63	59

* Refer to www.weatherunderground.com for details on wind speed and direction

If you have any questions regarding this notification, please do not hesitate to contact me at (510) 875-9338.

Thank you,

Waste Management,

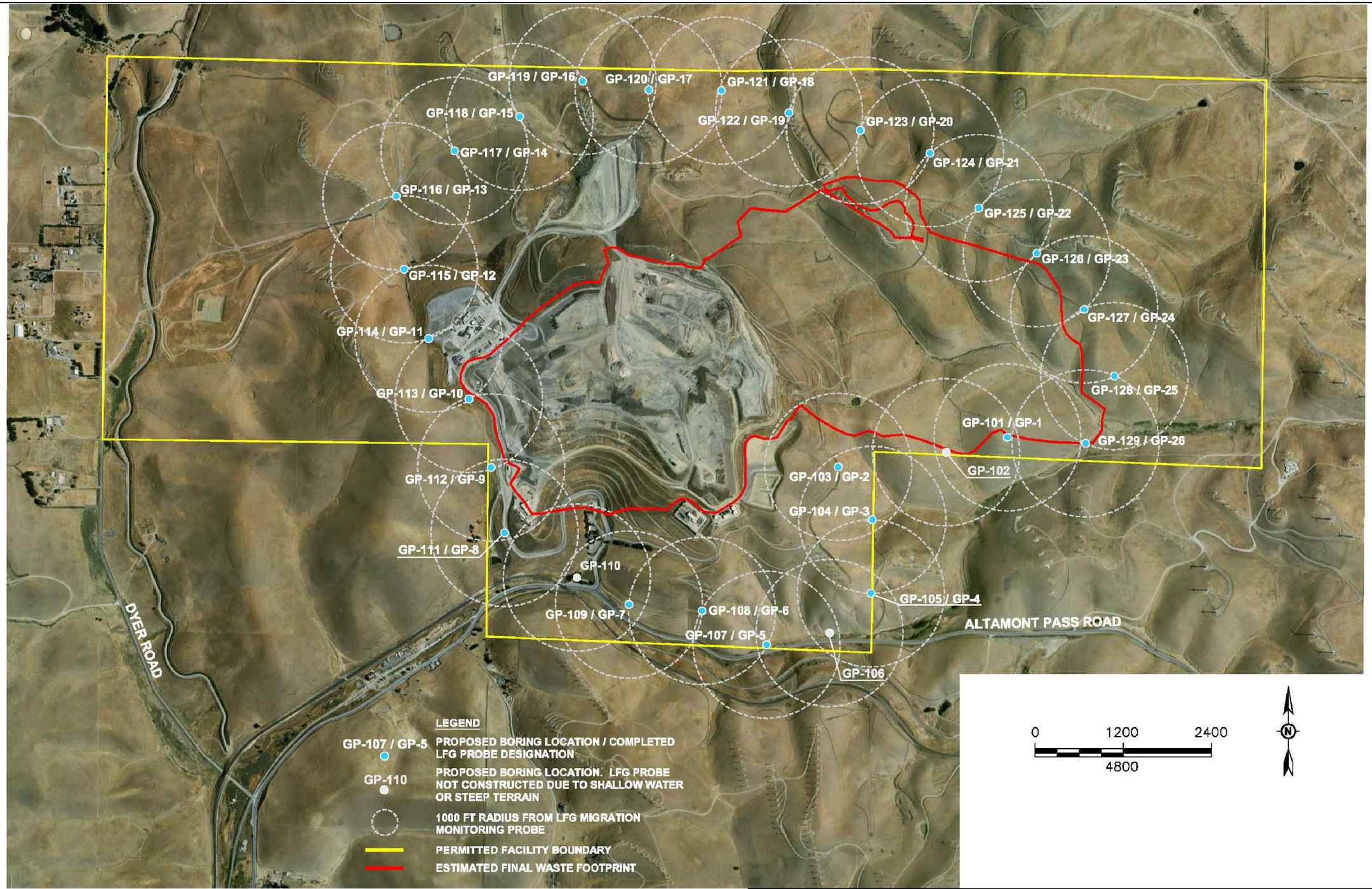


Rajan Phadnis
EP Air Specialist

Attachments: Perimeter Gas Probe Location Map
ALRRF Fourth Quarter 2019 Field Data

ATTACHMENT A

PROBE LOCATION MAP



SOURCE: FIGURE 1 "PERIMETER GAS PROBE LOCATIONS" FROM LANDFILL GAS MIGRATION MONITORING PLAN, GEOTRANS, INC., A TETRA TECH COMPANY, 9-22-09.

Geosyntec consultants

GAS MONITORING PROBE LOCATIONS – FILL AREA 1 AND FILL AREA 2
ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

FIGURE NO.	32
PROJECT NO.	WG2018
DATE:	JULY 2015

P:\CADD\CIVIL 3D\WM\ALTAMONT\WG2018\JTD\Fig32.dwg 7-10-15 09:46:19 PM Skholomeyzer

ATTACHMENT B

FIELD DATA

Permanent Structure Monitor Calibration

Calibrated to 5,000 ppm CH_4

Analyst: Jbarocio/Dsanjose **Date: 12-13-19**

Instrument: Model 26 Calibration system **Serial Number: 0824904075MTS**

METHANE SENSOR CALIBRATION					
Monitored Location	**Date**	**Time**	**Monitor Condition**		**Comments**
			Arrival	**Departure**	
Guardhouse	12.13.19	11:30am	✓	✓	
Administrative Building	12.13.19	11:19am	✓	✓	
Sales Building	12.13.19	11:21am	✓	✓	
Engineering Trailer	12.13.19	11:14am	✓	✓	
Garage Office	12.13.19	11:53am	✓	✓	
Shop Break room	12:13.19	11:57am	✓	✓	
Maintenance Building – Supervisor's Office	12.13.19	11:50am	✓	✓	
Office Trailer Fill area 2 middle	12:13.19	12:15pm	✓	✓	
Employee break trailer fill area 2	12.13.19	12:20 pm	✓	✓	
Office trailer in Fill Area 2 South	12.13.19	12:17pm	✓	✓	
Scale House –(South)	12.13.19	12:00 nn	✓	✓	
Scale House –(North)	12.13.19	12:03 pm	✓	✓	
Employee Break Trailer	12.13.19	12:06 pm	✓	✓	
Litter picker Trailer	12.13.19	12:08 pm	✓	✓	NO POWER
Davis Street Trailer	12.13.19	11:05 am	✓	✓	
Gas Team's Trailer	12.13.19	11:00 am	✓	✓	
WWTP (Manager's Office)	12.13.19	11:40am	✓	✓	
WWTP (Lab)	12.13.19	11:42am	✓	✓	
Gas Plant	12.13.19	11:34am	✓	✓	

Methane-In-Structure Monitoring Data
4th Quarter *2019*

Analyst: Jbarocio/Dsanjose **Date: 12-13-19**

Instrument: MicroFid **Serial Number:CZPD312**

Monitored Location	Date and Time	Methane (ppm)	Methane (%)	Comments
Guardhouse	12-13-19 11:30 am	0		
Leachate Pump Station	12-13-19 11:26 am	5		
Administration Building	12-13-19 11:19 am	0		
Sales Building	12-13-19 11:21 am	0		
Engineering Trailer	12-13-19 11:14 am	0		
Garage Office	12-13-19 11:53 am	0		
Maintenance Building	12-13-19 11:50 am	0		
Fill area 2 Trailer Middle	12-13-19 12:15 pm	0		
Office Trailer Fill Area 2 South	12-13-19 12:17 pm	3		
Employee break trailer fill area 2	12-13-19 12:20	3		
Scale House South	12-13-19 12 pm	0		
Scale House North	12-13-19 12:03 pm	0		
Employee Break Trailer	12-13-19 12:06 pm	0		
Gas Team Office Trailer	12-13-19 11 am	0		
LNG Building 1	12-13-19 1:40 pm	0		
LNG Building 2 (Trailer)	12-13-19 1:35 pm	0		
Tire Office Trailer	12-13-19 12:28	0		
Davis Street Trailer	12-13-19 11:05 am	0		
Waste Water Plant	12-13-19 11:40 am	60		
Gas Plant	12-13-19 11:34 am	0		
Litter Pickers' Trailer (Mobile)	12-13-19 12:08 pm	50		

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

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Altamont Landfill Date: 12/13-14

Time: 10:40 AM _____ PM

Instrument Make: Photovac Model: MicroFid S/N: C2PD3LZ

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed By: Jon Bond

CALIBRATION PRECISION TEST RECORD

Date: 10-18-19

Expiration Date (3 months): 1-18-2020

Time: 8:30 AM _____ PM

Instrument Make: Photovac Model: MicroFID S/N: CZPD312

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 500 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 500 ppm (f)

Calculate Precision:

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

_____ % (must be < than 10%)

Performed By: Jun Baduua

RESPONSE TIME TEST RECORD

Date: 10-18-19

Expiration Date (3 months): 1-18-2020

Time: 8:36 AM _____ PM

Instrument Make: Photovac Model: MicroFid S/N: C2PD312

Measurement #1:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 1 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 1 seconds (b)

Measurement #3:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 2 seconds (c)

Calculate Response Time:

$\frac{(a) + (b) + (c)}{3}$ = 2 seconds (must be less than 30 seconds)

Performed By: Juan Bucio

APPENDIX AB

GREEN WASTE ACCEPTANCE RECORD AND S-31 FUEL USAGE AND HOURS OF OPERATION

S-29 - Green Waste Stockpiles

Log of Throughput, Fuel Usage, and Hours of Operation per Title V (BAAQMD) - Permit Condition

Limit: 68,040 tons of green waste received from off-site locations for grinding per 12-month period

Limit: 76,205 gallons of fuel for grinder during any 12-month period

Water Applications: Refer to Dust Suppression Logs

Green Waste Recei		Grinder		12 Month Rolling Totals	
Month	(tons)	Diesel Usage (gallons)	Hours of Operation	Received (tons)	Fuel (gallons)
Jun-19	0.0	0.0	0.0	0	0.0
Jul-19	0.0	0.0	0.0	0	0.0
Aug-19	0.0	0.0	0.0	0	0.0
Sep-19	0.0	0.0	0.0	0	0.0
Oct-19	0.0	0.0	0.0	0	0.0
Nov-19	0.0	0.0	0.0	0	0.0
Dec-19	0.0	0.0	0.0	0	0.0
Jan-20	0.0	0.0	0.0	0	0.0
Feb-20	0.0	0.0	0.0	0	0.0
Mar-20	0.0	0.0	0.0	0	0.0
Apr-20	0.0	0.0	0.0	0	0.0
May-20	0.0	0.0	0.0	0	0.0

This data includes both greenwaste and C&D material that third accept and grind.

ALRRF only accepts green waste for transferring offsite for processing.

*June diesel usage was estimated based on previous average diesel usage per ton of greenwaste ground

APPENDIX AC
NON-METHANE ORGANIC COMPOUNDS PERMIT RECORD

Pursuant to PTO Condition Number 19235 Part 17(a), upon commencement of waste disposal in Fill Area 2, the rolling 3-year average NMOC concentration in LFG will be limited to 600 ppmv NMOC, expressed as C6 and corrected to 50 percent CH_4. Filling commenced in Fill Area 2 in March 2019. Appendix P includes the initial POC assessment report submitted to the BAAQMD June 19, 2020.

APPENDIX AD
PARAMETRIC MONITOR INOPERATION SUMMARY

WASTE MANAGEMENT of ALAMEDA COUNTY
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
BAAQMD PLANT NO. 2066

Parametric Monitor Inoperation Summary
December 1, 2019 through May 31, 2020

Source	Data Monitoring Month	Start Date Time	End Date Time	Total Missing Data (Hours)	Comments
A-15 Flare	December 1, 2019 through May 31, 2020	No data gaps greater than 15 minutes in duration when standby flare was operational.			
A-16 Flare	December 1, 2019 through May 31, 2020	4/15/2020 12:22	4/15/2020 13:34	1.2	Condensate injection flowmeter recorded anamolous data on PLC for a short duration. Technician immediately conducted troubleshooting and shutdown the system. New flowmeter was installed on 4/23/2020 and system was back online.
S-6 Gas Turbine	December 1, 2019 through May 31, 2020	2/4/2020 7:48	2/4/2020 7:52	0.07	Missing data stamp. Subsitute data was used.
S-6 Gas Turbine	December 1, 2019 through May 31, 2020	2/11/2020 8:04	2/11/2020 8:08	0.07	Missing data stamp. Subsitute data was used.
S-7 Gas Turbine	December 1, 2019 through May 31, 2020	2/4/2020 7:48	2/4/2020 7:52	0.07	Missing data stamp. Subsitute data was used.
S-7 Gas Turbine	December 1, 2019 through May 31, 2020	2/11/2020 8:04	2/11/2020 8:08	0.07	Missing data stamp. Subsitute data was used.
S-210 LNG Plant	December 1, 2019 through May 31, 2020	No data gaps greater than 15 minutes in duration during operation of the device.			

Notes: 1) The Data Gap Summary is maintained pursuant to BAAQMD Regulation 1-523.
2) Periods of parametric monitor inoperation did not exceed 24 hours or 15 consecutive days for each source. Also, periods of parametric monitor inoperation did not exceed 30 days over a consecutive 12-month period for each source.