WASTE MANAGEMENT

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1. ☐ RECEIVED IN ENFORCEMENT: 10/28/2021

October 27, 2021

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
Attn: Air-3

SUBJECT: Combined Title V Semi-Annual and Partial 8-34 Annual Report 40 CFR 63
Subpart AAAA Semi-Annual Report
Guadalupe Recycling & Disposal Facility
15999 Guadalupe Mines Road, San Jose, CA 95120
Facility Number A3294

Dear Sir or Madam:

The Guadalupe Rubbish Disposal Co., Inc. (GRDC) is pleased to submit the attached Combined Title V Semi-Annual and Partial 8-34 Annual Report for the period of April 1, 2021 through September 30, 2021 to the Bay Area Air Quality Management District (BAAQMD) and the United States Environmental Protection Agency (USEPA), Region IX. As required by 40 Code of Federal Regulations (CFR) Part 63 Subpart AAAA, the Semi-Annual Startup, Shutdown and Malfunction (SSM) Report is also enclosed. The Combined Title V Semi-Annual and Partial 8-34 Annual Report satisfies the requirements of the Title V Permit listed in Title V Permit Condition Number 6188 Part 22 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,
Guadalupe Rubbish Disposal Co., Inc.

Paul Enrique Perez

Enrique Perez
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 Guadalupe Rubbish Disposal Co., Inc.
15999 Guadalupe Mines Road
San Jose, California 95120
Facility Number A3294

April 1, 2021 through September 30, 2021

Submitted on:
October 28, 2021

Prepared for
Guadalupe Recycling & Disposal Facility
15999 Guadalupe Mines Road
San Jose, California 95120

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

And

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

Prepared by

WM
WASTE MANAGEMENT

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1 INTRODUCTION

1.1 Purpose

This document is a Combined Semi-Annual Title V and Partial 8-34 Annual Report for the Guadalupe Recycling & Disposal Facility (GRDF) pursuant to Title V Permit Standard Condition 1.F and Condition Number 6188 Part 22. This report satisfies the requirements of Bay Area Air Quality Management District's (BAAQMD) Regulation 8, Rule 34, Section 411 and Title 40 Code of Federal Regulations (CFR) Part 60 Subpart WWW, New Source Performance Standards (NSPS) for municipal solid waste (MSW) landfills. This Combined Report meets the requirements of Title V Standard Condition 1.F, BAAQMD Rule 8-34-411 and 40 CFR §60.757(f) and covers compliance activities conducted from April 1, 2021 through September 30, 2021. During the timeframe included in this report from April 1, 2021 through September 30, 2021, the site began compliance activities with specific condition of Subpart OOO related to wellhead temperature standards. During the timeframe included in this report from April 1, 2021 through September 30, 2021, the site began compliance activities with specific conditions of 40 CFR part 62, Subpart F and specific sections of Subpart OOO (effective June 21, 2021) for wellhead temperature standards. During the timeframe included in this report from April 1, 2021 through September 30, 2021, the site also began compliance activities with specific conditions of 40 CFR part 63, Subpart AAAA (effective September 27, 2021) for wellhead temperature and pressure standards. This Combined Report also includes the Semi-Annual Report of Start-up, Shutdown, and Malfunction (SSM) Plan activities pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AAAA for Landfills.

Section 2 of this Combined Report contains the elements required to satisfy both BAAQMD 8-34-411 and 40 CFR §60.757(f). A Performance Test Report for the A-9 Flare that meets the requirements of both BAAQMD Rule 8-34-413 and 40 CFR §60.758(g) was submitted to the BAAQMD on June 24, 2020, and results of the test are included in Appendix N of this Combined Report. Section 3 of this Combined Report includes a discussion of the data from the most recent Performance Test on A-9 Flare, which was conducted on April 29, 2020, in compliance with BAAQMD Rule 8-34-412 and Title V Permit Condition Number 6188, Part 14. Initial Performance Test Report for the Flare A-17 (previously designated as A-14) that meets the requirements of both BAAQMD Rule 8-34-413 and 40 CFR §60.758(g) was submitted to the BAAQMD on April 9, 2021, and summary of test results are included in Appendix N of this Combined Report. Section 3 of this Combined Report includes a discussion of the data from the most recent Performance Test on A-17 Flare, which was conducted on February 18, 2021, in compliance with BAAQMD Rule 8-34-412 and Title V Permit Condition Number 6188, Part 14. Section 4 of this Combined Report includes the Semi-Annual Report of the SSM Plan activities pursuant to the NESHAP, 40 CFR Part 63, Subpart AAAA for Landfills.

1.2 Record Keeping and Reporting

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

2 COMBINED MONITORING REPORT

In accordance with Title V Permit Standard Condition 1.F, BAAQMD Rule 8-34-411 and §60.757(f) in the NSPS, this report is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report that is required to be submitted by the GRDF. 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 April 1, 2021 through September 30, 2021. The following table lists the rules and regulations that are required to be included in this Combined Report.

Table 2-1 Combined Report Requirements

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-501.1 §60.757(f)(4)	All collection system downtime, including individual well shutdown times and the reason for the shutdown.	Section 2.1, Appendices B, D, & E
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2, Appendices B & E
8-34-501.3, 8-34-507, §60.757(f)(1)	Continuous temperature for all operating flares and any enclosed combustor subject to Section 8-34-507.	Section 2.3, Appendix F
8-34-501.4, 8-34-505, 8-34-510	Testing performed to satisfy any of the requirements of this rule.	Section 2.4 & 2.10 Appendices G & J
8-34-501.5	Monthly landfill gas flow (LFG) rates and well concentration readings for facilities subject to 8-34-404.	Section 2.5, 2.11 Appendix L
8-34-501.6, 8-34-503, 8-34-506, §60.757(f)(5)	For operations subject to Section 8-34-503 and 8-34-506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in parts per million by volume (ppmv), date of discovery, the action taken to repair the leak, date of the repair, date of any required re-monitoring, and the re-monitored concentration in ppmv.	Section 2.6 & 2.7, Appendix H
8-34-501.7	Annual waste acceptance rate and current amount of waste in-place.	Section 2.8 Appendix I
8-34-501.8	Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the GCCS Design Plan.	Section 2.9

RULE	REQUIREMENT	LOCATION IN REPORT
8-34-501.9, 8-34-505, §60.757(f)(1)	For operations subject to Section 8-34-505, records of all monitoring dates and any excesses of the limits stated in Section 8-34-305 that are discovered by the operator, including well identification number, the measured excess, the action taken to repair the excess, and the date of repair.	Section 2.10, 2.10.1, Appendices J & K
8-34-501.10, 8-34-508, §60.757(f)(1)	Continuous gas flow rate records for any site subject to Section 8-34-508.	Section 2.11, Appendices F and L
8-34-501.11, 8-34-509	For operations subject to Section 8-34-509, records or key emission control system operating parameters.	Section 2.2.2
8-34-501.12	The records required above shall be made available and retained for a period of five years.	Section 1.2
§60.757(f)(2)	Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.	Section 2.2.1
§60.757(f)(6)	The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), (c)(4) of §60.755.	Section 2.12
§60.10 (d)(5)(i)	Startup, Shutdown, Malfunction Events	Section 4.0, Appendices D & E
§63	Subpart AAAA	Section 2.10

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

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

2.1.1 Collection System Downtime

During the period covered in this report, the GCCS was not shut down for more than five days on any one occasion. Downtime for 2021 partial calendar year from January 1, 2021 through September 30, 2021, was 13.9 hours, out of an allowable 240 hours per year. The total downtime for the reporting period of April 1, 2021 through September 30, 2021 was 4.8 hours.

Appendix B contains the GCCS Downtime Report which lists dates, times, and lengths of shutdowns for the reporting period and year-to-date.

2.1.2 Well Start-Up & Disconnection Log

There were twenty-eight (28) wellfield SSM events during the reporting period. See Appendix D, Wellfield SSM Log for details of well disconnection and reconnection events.

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

During this reporting period, the GRDF flare (A-9), which began operation in August 2003 was operated in conjunction with flare (A-14), which began operation in November 2016. The stack on flare A-14 was replaced with a new stack in October 2020. Based on the correspondence with the BAAQMD, flare A-14 is now designated as flare A-17. The control system was not bypassed at any time during the reporting period by operating combination of flare A-9 or flare A-17. Raw LFG was not emitted during the reporting period. The SSM logs for the flare A-9 and flare A-17 are located in Appendix E. As indicated in Section 2.1.1, the total downtime for 2021 partial calendar year from January 1, 2021 through September 30, 2021, was 13.9 hours, out of an allowable 240 hours per year. The total downtime for the reporting period of April 1, 2021 through September 30, 2021 was 4.8 hours. The GCCS Downtime Log for the reporting period is included in Appendix B.

During the reporting period, BAAQMD issued GRDF Notice of Violation (“NOV”) Number A-59779 dated September 1, 2021. The NOV alleges a violation of BAAQMD Reg. 2, Rule 1, Section 301 and Reg. 2, Rule 1, Section 302 and states “Flare modified without Authority to Construct (ATC) and Permit to Operate (PTO)”. GRDF submitted the 10-day NOV response and Title V 10 and 30-day letters via email on September 10, 2021. Copies of submitted letters are included in Appendix C.

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

Title 40 CFR §60.757(f)(2*)* is not applicable at the GRDF because a by-pass line has not been installed. LFG cannot be diverted from the control equipment.

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

BAAQMD Regulation 8-34-501.11 and 8-34-509 are not applicable to the A-9 and A-17 Flares because the A-9 and A-17 Flares are subject to continuous temperature monitoring as required in BAAQMD Regulation 8-34-507 and §60.757(f)(1).

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

The combustion zone temperature of the flare is monitored with Thermo-Electric Thermocouples. The temperature is displayed and recorded every two minutes with a Yokogawa FX1000 digital recorder on flare A-9 and Yokogawa DX1000 digital recorder on flare A-17. There were no temperature deviations during the reporting period that were below the permit limit of 1,593 and 1,449 Degree F for flare A-9 and flare A-17. Appendix F contains the Flare Temperature Deviation/ Inoperative Monitor/Missing Data Report for April 1, 2021 through September 30, 2021.

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

The cover integrity monitoring was performed on the following dates:

- April 26, 2021
- May 26, 2021
- June 25, 2021
- July 30, 2021
- August 24, 2021
- September 28, 2021

No areas of concern were found during the monitoring event. The Monthly Cover Integrity Monitoring reports are included in Appendix G.

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

The GRDF does not operate under BAAQMD Regulation 8-34-404 (Less Than Continuous Operation) and, therefore, is not required to submit monthly LFG flow rates.

2.6 Surface Emissions Monitoring (BAAQMD 8-34-501.6, 8-34-506, & §60.757(f)(5))

Quarterly Surface Emissions Monitoring (SEM), pursuant to BAAQMD Regulation 8-34-506 occurred during the reporting period on the following dates:

- Second Quarter 2021 - May 18, 2021
- Third Quarter 2021 - July 26, 2021

A Photovac Micro Flame Ionization Detector (FID) was used to monitor the path along the landfill surface according to the Landfill Surface Emissions Monitoring Plan map. Any areas suspected of having emissions problems based on visible observations were also monitored. Prior to both monitoring events, the FID instrument was zeroed and calibrated using zero air and 500 parts per million by volume (ppmv) methane calibration gas.

The Initial monitoring event for the Second Quarter 2021 SEM was conducted by Roberts Environmental Services (RES) on May 18, 2021, identifying 10 exceedance locations. GRDF personnel performed the ten-day re-monitoring on May 28, 2021. GRDF personnel performed the thirty-day follow-up monitoring event on June 17, 2021. No exceedances were observed during the 30-day re-monitoring events. Detailed monitoring results are available in the Second Quarter 2021 SEM Report, included in Appendix H.

The Initial monitoring event for the Third Quarter 2021 SEM was conducted by Roberts Environmental Services (RES) on July 26, 2021, identifying 5 exceedance locations. GRDF personnel performed the first ten-day re-monitoring on August 4, 2021 with no exceedance identified. GRDF personnel performed the thirty-day follow-up monitoring event on August 24, 2021. No exceedances were observed during the 30-day re-monitoring events. Detailed monitoring results are available in the Third Quarter 2021 SEM Report, included in Appendix H.

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

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

- Second Quarter 2021 - May 18, 2021
- Third Quarter 2021 - July 26, 2021

A TVA was used to perform the leak testing. No exceedances were identified during the reporting period. Appendix H contains the Quarterly LFG Component Leak Monitoring Reports.

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

The Annual Waste Acceptance Rate was compiled for the timeframe of April 1, 2021 through September 30, 2021. The Current Waste-In-Place figure includes waste placed through the end of this reporting period. Below is a summary of the waste acceptance records for the reporting period. A table of monthly totals for the reporting period is provided in Appendix I.

Table 2-2 Waste Acceptance

Description	Total Waste Landfilled (Decomposable)
Total Waste Acceptance April 1, 2021 through September 30, 2021	56,881
Current Waste In Place as September 30, 2021	Approximately 9.875 Million tons

2.9 Non-degradable waste acceptance records (BAAQMD 8-34-501.8)

The GCCS Design Plan for the GRDF does not indicate non-degradable waste areas that are excluded from the collection system. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable.

2.10 Wellhead Monitoring Data (BAAQMD 8-34-501.4 & 8-34-505)

Wellhead monitoring was performed on a monthly basis pursuant to 8-34-505. Effective June 21, 2021, the site began compliance activities with specific conditions of 40 CFR part 62, Subpart F and specific sections of Subpart OOO for wellhead temperature standards. Effective September 27, 2021, the site began compliance activities with specific conditions of 40 CFR part 63, Subpart AAAA for wellhead temperature and pressure standards. No wellhead monitoring was conducted during September 27 through September 30, 2021. The well readings for April 1, 2021 through September 30, 2021 are included in Appendix J. Each well was monitored in accordance with the following requirements:

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

The wellhead monitoring was performed on the following dates:

- April 1, 5, 6, 7, 8, and 9, 2021
- May 7, 8, 12, 13, 14, 17 and 18, 2021
- June 3, 9, 10, 11, 15, 16, 18, and 25, 2021
- July 3, 6, 16, 19,24, 28, and 30, 2021
- August 9, 11, 12, and 13, 2021
- September 3, 10, 11, and 14, 2021

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

There were nine (9) well deviations with readings that exceeded limits per BAAQMD Regulation 8-34-305 during the reporting period. During this reporting period, there was one temperature exceedance associated with specific conditions of 40 CFR part 62, Subpart F and specific sections of Subpart OOO for wellhead temperature standards. The exceedance was corrected within 15 days, notification was submitted to the BAAQMD and well was added to the list of Higher Operating Value (HOV) wells. During this reporting period, there were no additional exceedances associated with specific conditions of 40 CFR part 63, Subpart AAAA for wellhead temperature and pressure standards. All exceedances were corrected within 120-days. See Appendix K, Wellfield Deviation Log, for more detail.

2.10.2 Higher Operating Value (HOV) Wells

As of September 30, 2021, the following list of wells are approved to operate at a temperature HOV of 145°F: Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 209, 213, 215, and 216. Horizontal

Leachate Collectors H11L, H12L are approved for less than continuous operation (LTCO), and may operate at up to 15.0 percent oxygen.

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

The flare LFG flow rate was measured with a dedicated Kurz MFT-B flow meter at both the flares. The General Electric data panel displays the LFG flow and the digital Yokogawa data recorder records LFG flow every two minutes and is downloaded and saved to a compact flash card. The flare flow meters meet the requirements of BAAQMD Regulation 8-34-508 by recording data at least every 15 minutes. The flow meter is maintained and calibrated pursuant to manufacturer's recommendations. The flow data for the flare is available for review at the GRDF. Appendix L contains a summary of the monthly LFG flow rates for the flare. Appendix F contains the Flare Temperature Deviation/ Inoperative Monitor/Missing Data Report for April 1, 2021 through September 30, 2021.

Table 2-3 below is a summary of the total LFG flow for the reporting period of April 1, 2021 through September 30, 2021.

Table 2-3 Total LFG Flow for April 1, 2021 through September 30, 2021

Emission Control Device	Average Flow (scfm)	Average CH_4 (%)*	Total LFG Volume (scf)	Total CH_4 Volume (scf)	Heat Input (MMBTU)
A-9 Flare	0.0	49.9	0.0	0.0	0.0
A-17 Flare	1,977	40.6	520,881,276	211,393,591	214,142

scfm = standard cubic feet per minute
CH_4 = methane
scf = standard cubic feet
*Methane content determined from April 29, 2020 Source Test on Flare A-9.
*Methane content determined from February 18, 2021 Source Test on Flare A-17.
MMBTU = million British thermal units

2.12 Compliance with §60.757(f)(6)

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

The GCCS was modified pursuant to Title V Permit Condition Number 6188 Part 2 as modified by the Permit to Operate (PTO) Condition Number 28011, during the reporting period. One well was decommissioned during the reporting period.

As of September 30, 2021, the GRDF has a total 87 collectors, (85 vertical wells and 2 horizontal Leachate collectors). See Appendix C, for copies of the Notification Letters.

2.13 Compliance with Title V Permit Condition Number 6188, Part 19 and 20

Contaminated soil containing volatile organic compounds (VOCs) greater than 50 ppm_v was not received during the reporting period. A total of 3,652.3 tons of Low-VOC soil (containing less than 50 ppm of VOCs) was received during the reporting period. Condition Number 6188, Part 19 of the Title V Permit requires that GRDF 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. GRDF was in compliance with this requirement during the reporting period. All records required by the permit are available onsite.

2.14 Compliance with Title V Permit Condition Number 25537 for S-24

For Source S-24, Construction & Demolition Debris Stockpile, the total construction and demolition debris accepted at S-24 in any consecutive 12-month period is limited to 200,000 tons and the combined amount processed is 2,500 tons per day. During the reporting period, the site did not exceed the permitted annual and daily limits. Required records are available for review at the GRDF.

2.15 Compliance with Title V Permit Condition Number 7649 for S-5

For Source S-5, Wood Debris Stockpile, during the reporting period, the operation did not operate for over 12 hours within any consecutive 24-hours. Required records are available for review at the GRDF.

2.16 Compliance with Title V Permit Condition Number 7650 for S-6

For Source S-6, Shredded Storage Stockpiles and Loadout, during the reporting period, the operation did not operate for over 12 hours within any consecutive 24-hours. Required records are available for review at the GRDF.

2.17 Compliance with Title V Permit Condition Number 18258 for S-18

For Source S-18, Materials Recovery Operation, the total throughput did not exceed 900 tons per day average, based on a calendar month. Required records are available for review at the GRDF.

3 PERFORMANCE TEST REPORT SUMMARY

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 from subject facilities containing performance and monitoring data for the operation of the GCCS. The operational records listed in Table 3-1 have been reviewed, summarized, and are included in the Performance Test Report section of this report.

Table 3-1 Performance Test Requirements

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

3.1 Flare (A-9) Compliance Demonstration Test Results (BAAQMD 8-34-412)

The Compliance Demonstration Test (Performance Test) was performed on the A-9 Flare by Blue Sky Environmental, Inc. on April 29, 2020, pursuant to BAAQMD Regulation 8-34-412. Two sets of three runs were conducted, one set without condensate injection running and one set with condensate injection running. The final test report was submitted on June 24, 2020.

As required by BAAQMD Regulation 8-34-301.3, the A-9 Flare meets the non-methane organic compound (NMOC) emission concentration of less than 30 ppm_v. Pursuant to Title V Permit Condition Number 6188 Part 9, the A-9 Flare meets the nitrogen oxide (NO_x) emission concentration of less than 16 ppm_v. Also, the A-9 Flare meets the carbon monoxide (CO) emission concentration of less than 134 ppm_v pursuant to the Title V Permit Condition Number 6188, Part 10. The old Flare A9 was shutdown starting November 2020 since Flare A17 is equipped to handle the maximum flow rate expected over the life of the landfill.

The stack on flare A-14 was replaced with a new stack in October 2020. Based on the correspondence with the BAAQMD, flare A-14 is now designated as flare A-17. The Initial Compliance Demonstration Test was performed on the A-17 Flare by Blue Sky Environmental, Inc. on February 18, 2021, pursuant to BAAQMD Regulation 8-34-412. Results indicate that the flare A-17 was in compliance with BAAQMD Regulation 8-34-301.3 and all conditions in the authority to construct. As required by BAAQMD Regulation 8-34-301.3, the A-17 Flare meets the non-methane organic compound (NMOC) emission concentration of less than 30 ppm_v. The A-17 Flare meets the nitrogen oxide (NO_x) emission concentration of less than 15 ppm_v. Also, the A-14 Flare meets the carbon monoxide (CO) emission concentration of less than 81 ppm_v.

Table 3-2 shows the results of the A-9 Flare Performance Test, averaged from each set of three test runs. Table 3-3 shows the results of the A-17 Flare Performance Test, averaged from each set of three test runs. A summary of this Performance Test Results can be found in Appendix N.

Table 3-2 Flare Compliance Demonstration Test Results- Test Data April 29, 2020

Condition	**Flare (A-9) (Condensate Off) Average Results**	**Flare (A-9) (Condensate On) Average Results**	**8-34-301.3 limit**	**Compliance Status**
NMOC (either 98% DRE or 30 ppm @ 3% O_2)	<0.5 ppm	<1.6 ppm	30 ppm	In Compliance
NO_x (ppm @ 15% O_2)	8.4	9.5	16	In Compliance
CO (ppm @ 15% O_2)	<3.3	<3.4	134	In Compliance

Table 3-3 Flare Initial Compliance Demonstration Test Results- Test Data February 18, 2021

Condition	Flare (A-17) (Condensate Off) Average Results	Flare (A-17) (Condensate On) Average Results	8-34-301.3 limit	Compliance Status
NMOC (either 98% DRE or 30 ppm @ 3% O_2)	<2.6 ppm	<5.79 ppm	30 ppm	In Compliance
NO_X (ppm @ 15% O_2)	10.3	13.3	15	In Compliance
CO (ppm @ 15% O_2)	2.5	1.24	81	In Compliance

**Flare A-14 Stack was replaced in October 2020. The new flare designation will be flare A-17.*

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 showing the location of all vertical wells, horizontal collectors, and other LFG extraction devices is included in Appendix A.

3.3 Compliance with §60.757(g)(2).

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

The GRDF GCCS has historically provided LFG wells and collectors spaced in accordance with standard industry practice. The GCCS systems are adequate to move the current LFG flow rate. GRDF will continue to add additional LFG control capacity as necessary with the approval of BAAQMD. The installed collector density appears adequate for controlling surface emissions, based on continuous compliance and operational experience.

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

3.3.1 Demonstrating Compliance with §60.757(g)(2)

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

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

3.4 Compliance With §60.757(g)(3)

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

Segregated areas or accumulations of asbestos material were not documented for the site in the GCCS Design Plan. 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 site does not contain non-productive areas that have been excluded from the coverage of 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 current GCCS has the capacity to handle LFG flow rates for future.

3.7 Compliance with §60.757(g)(6)

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

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

- Second Quarter 2021 – April 22, 2021
- Third Quarter 2021- September 13, 2021

The LFG migration monitoring results for the quarterly events are included in Appendix M.

3.7.1 Demonstrating Compliance with §60.757(g)(6)

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

The Landfill operator will continue surface and perimeter monitoring in accordance with the approved monitoring plans. If the GCCS at the 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.

4 STARTUP, SHUTDOWN, MALFUNCTION (SSM) PLAN

4.1 SSM Log for the GCCS at the GRDF

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

NESHAP 40 CFR part 63, AAAA became effective on January 16, 2004. Those SSM events that occurred during the NSPS semi-annual reporting period are reported in this section (April 1, 2021 through September 30, 2021). The following information is included as required:

- During the reporting period, twenty-eight (28) Wellfield SSM events occurred. Details are included in Appendix D, Well SSM Log.
- During the reporting period, zero (0) A-9 Flare SSM events occurred. The A-9 Flare did not operate during the reporting period due to the reasons noted in Appendix E, Flare SSM Log.
- During the reporting period, seven (7) A-17 Flare (formerly designated as Flare A-14) Flare SSM events occurred. The A-17 Flare was shut down and restarted during the reporting period due to the reasons noted in Appendix E, Flare SSM Log.
- During the reporting period, zero (0) monitoring/recorder equipment SSM events occurred. Details are included in Appendix F, Temperature Deviation/Inoperative Monitor/Missing Data Report.
- There were thirty-five (35) events in total. In all events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan. There were no deviations from the SSM plan.
- Exceedances were not identified during the reporting period in any applicable emission limitation in the landfills NESHAP (§63.10(d)(5)(i)).
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).

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.***

Paul Enrique Perez

Signature of Responsible Official

10/14/21

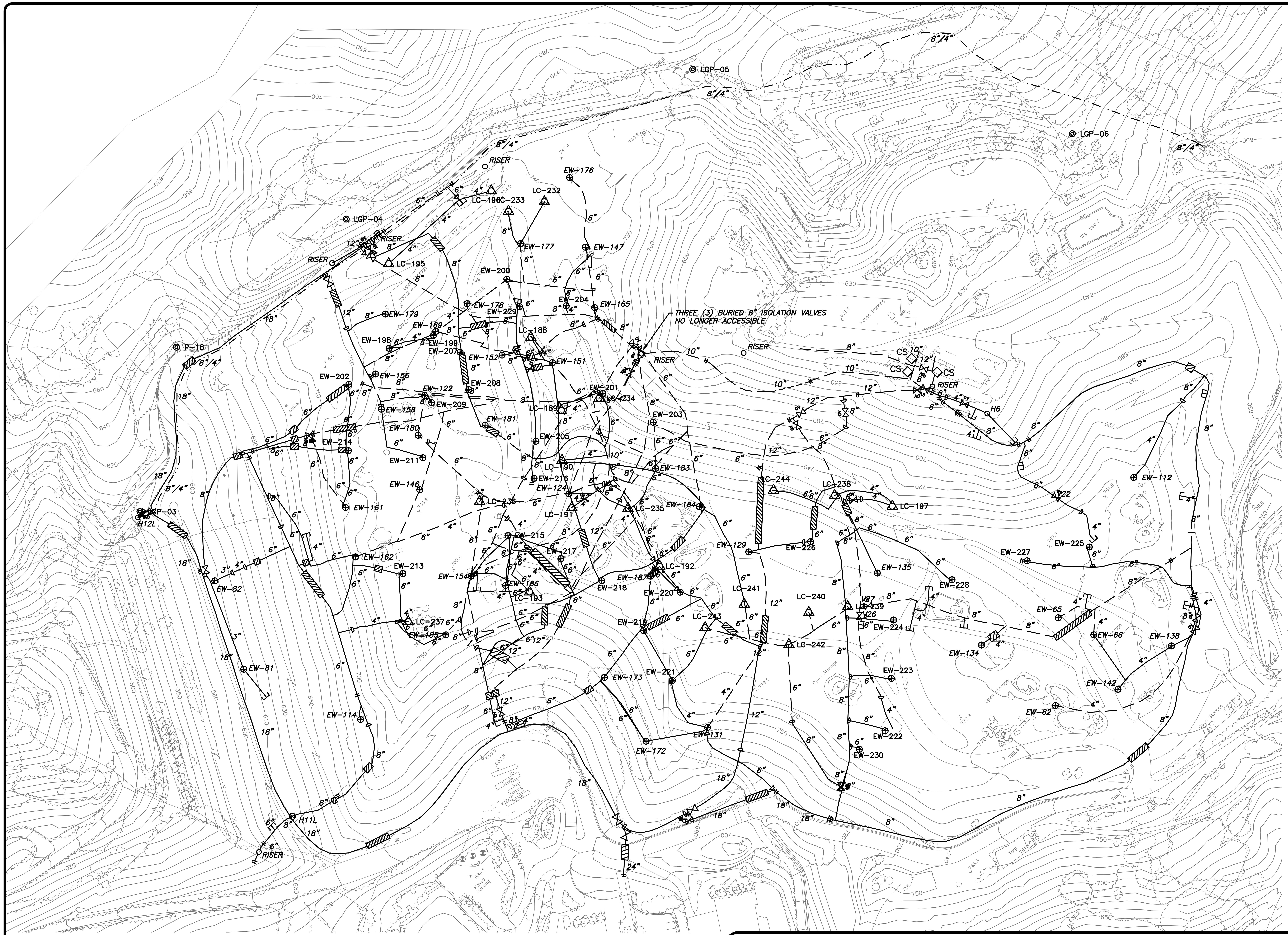
Date

Enrique Perez

Name of Responsible Official

APPENDIX A

SITE MAP



LEGEND

▬ ▪ ▪ ▬	PROPERTY BOUNDARY
1400	EXISTING 10' CONTOUR
12"	EXISTING ABOVEGROUND PIPING
12"	EXISTING BELOWGROUND PIPING
8"/4"	INSTALLED LEACHATE PIPING
— · — · —	EXISTING HORIZONTAL COLLECTOR
⊕ EW-3	EXISTING LFG EXTRACTION WELL
⊗	EXISTING REMOTE WELLHEAD
◎ LGP-04 ◎ P-18	EXISTING PROBE
○H6 ⊕ EW-H15	EXISTING HORIZONTAL COLLECTOR WELLHEAD
△ LC-190	EXISTING LOCAL CONTROL WELL
⋈	EXISTING CONTROL VALVE
⊣‖	EXISTING BLIND FLANGE
⊣⊢	EXISTING FLANGE CONNECTION
⊸	EXISTING REDUCER FITTING
▨	EXISTING ROAD CROSSING
◇ CS-	EXISTING CONDENSATE SUMP
○ RISER	EXISTING RISER
⊐	EXISTING CAP ON EXISTING PIPE

0 125 250
SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: MARCH 26, 2021. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON MAY 29, 2015. WELL LOCATIONS PER ISSUED FOR CONSTRUCTION WELL SCHEDULE DATED APRIL 10, 2015.
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5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.
8. 2021 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: AUGUST 4, 2021 AND AUGUST 21, 2021.

RECORD DRAWINGS

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 10/11/21
DRAWN BY GVP
DESIGNED BY GVP
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2021 GCCS IMPROVEMENTS

AS-BUILT SITE PLAN

SHEET NO.
1

PROJECT NO.
210030

APPENDIX B

GCCS DOWNTIME REPORT

LFG Collection System: April 1, 2021 through September 30, 2021

2021 (Partial) GCCS DOWNTIME LOG

GUADALUPE RECYCLING & DISPOSAL FACILITY, San Jose, CA

SHUTDOWN DATE/ TIME	START-UP DATE/ TIME	TOTAL DOWNTIME (HOURS)	COMMENTS OR REASONS
04/27/21 10:44	04/27/21 12:18	1.6	Flare A17 shutdown during blower inspection and maintenance activities. Flare was inspected and restarted.
05/15/21 14:58	05/15/21 17:12	0.2	Flare A17 shutdown due to flame out alarm. Flare was restarted. Flare was inspected on May 17, 2021.
06/21/21 11:34	06/21/21 11:48	0.2	Flare A17 shutdown due to low temperature alarm. Flare was restarted. Flare was inspected after restart.
06/21/21 13:30	06/21/21 13:34	0.1	Flare A17 was shutdown during construction activities. Flare was inspected and restarted.
06/21/21 14:08	06/21/21 14:10	0.0	Flare A17 was shutdown during construction activities. Flare was inspected and restarted.
06/21/21 14:18	06/21/21 15:04	0.8	Flare A17 shutdown during pipe construction. Flare was inspected and restarted.
09/28/21 17:22	09/28/21 19:18	1.9	Flare A17 was shutdown for required lateral repairs. Flare was inspected and restarted.
TOTAL DOWNTIME January 1 through September 30, 2021 (HOURS)		**13.9**	
TOTAL DOWNTIME April 1, 2021 through September 30, 2021 (HOURS)		**4.8**	
TOTAL PERMITTED DOWNTIME FOR 1 YEAR (HOURS):		**240.0**	

APPENDIX C
BAAQMD Correspondence

WASTE MANAGEMENT

Guadalupe Rubbish Disposal Company, Inc.
15999 Guadalupe Mines Road, San Jose, CA 95120

March 17, 2021

Mr. Raymond Salalila
Air Quality Specialist
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Re: Guadalupe Recycling and Disposal Facility
Facility Number A3294
Request for Limited Exemption (for construction activities) from Regulation 8, Rule 34 (Solid Waste Disposal Sites), Section 303 (Landfill Surface Requirements)

Dear Mr. Salalila:

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 construction, repairs and installation of piping and laterals to be connected to the existing gas collection and control system (GCCS) from April 12, 2021 through July 31, 2021, at the Guadalupe Rubbish Disposal Company, Inc. (GRDC). This notification is submitted pursuant to the BAAQMD Regulation 8, Rule 34, Section 118, "Limited Exemptions for Construction Activities." The work consists of repairs and installation of piping and laterals that will connect to the existing gas collection and control system (GCCS) to maintain compliance with the BAAQMD Regulation 8, Rule 34, and is to be performed during the period of April 12, 2021 through July 31, 2021.

GRDC will conduct repairs and installation of piping and laterals that will connect to the existing GCCS. This letter also transmits the BAAQMD-required construction plan (work plan) for the proposed work. The work plan contains information required pursuant to Regulation 8, Rule 34, Section 118.1 and AB-32 §95470(a)(1)(I) and (J) and includes:

- Description of actions being taken;
- Description of landfill areas affected;
- Description of LFG components affected;
- Map showing the above areas and components;
- Reason requiring the action;
- Construction schedule;
- Description of air quality mitigation measures planned; and
- Recordkeeping requirements.

No significant interruption of the current site LFG extraction and control operations is anticipated due to the work. The construction will begin on or around April 12, 2021. We anticipate construction activities to conclude by July 31, 2021.

Unless notified otherwise, GRDC will proceed in accordance with the attached work plan. We deem submittal of this plan as approval by the BAAQMD to take necessary action to ensure compliance with regulations, which may include taking additional LFG extraction wells offline for an extended period of time pursuant to Regulation 8, Rule 34, Section 118.

In case of any questions, please do not hesitate to contact me at (408) 960-0770.

Sincerely,

Guadalupe Rubbish Disposal Company, Inc.

Michael L.

Michael L. Winter
District Engineer

Cc: Enrique Perez, GRDC
Bill Louis, WM

BAAQMD REGULATION 8, RULE 34 CONSTRUCTION PLAN

GUADALUPE RUBBISH DISPOSAL COMPANY, INC.

CONSTRUCTION FOR INSTALLATION AND REPAIR OF LFG PIPING

April 12, 2021 through July 31, 2021

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. In addition, this plan also includes information required by the AB-32 Sections §95470(a)(1)(I) and (J).

BAAQMD Section 303 requires maintaining the concentration of organic compounds and methane below 500 parts per million by volume (ppm_v) 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 and AB-32 Sections §95470(a)(1)(I) and (J), 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;
- Description of air quality mitigation measures planned; and
- Recordkeeping requirements.

ACTIONS BEING TAKEN

The work consists of excavation, repair of existing pipes and installation of new piping and laterals that will connect to existing LFG extraction wells and to the GCCS.

AFFECTED LANDFILL AREAS

The construction activities will occur in the area shown on the attached figure.

AFFECTED LFG COMPONENTS

GRDC will conduct landfill GCCS construction activities in compliance with to maintain compliance with the Rule 8-34-116 and 8-34-117.

Please see below for list of proposed GCCS repairs and installations:

- Installation, repair and tie-ins of piping at wells 147, 204, 151, 153, 124, 235, 154, 186, 193, 237, and 250;
- Installation, repair and tie-ins of piping from well 215 to 217;
- Installation, repair and tie-ins of piping near wells 176 and 233;
- Installation, repair and tie-ins of piping from well 189 to 218;
- Any additional piping that may be required at existing pipes and wells; and
- Cut and cap below grade few surface penetrations that are not active

Pursuant to Rule 8-34-117, GRDC will take the GCCS wells with ID Numbers 147, 204, 151, 153, 124, 235, 154, 186, 193, 237, 250, 215, 217, 176, 233, 189, 205, 191, and 218 and any other well offline, as necessary. GRDC will ensure that no more than 5 gas wells are shut down at any time, and that no gas collection well may be down for more than 24 hours.

It is anticipated that the construction will have no significant impact on the routine operation of the existing GCCS. Installation of new LFG extraction laterals is independent of the ongoing operations of the GCCS. When connecting LFG extraction wells, isolation valves installed within the existing GCCS piping network will be used to minimize the number of existing LFG extraction wells offline at any given time while the newly installed LFG laterals are connected to the GCCS.

REASONS FOR ACTIONS

The proposed construction work is intended to:

- Increase LFG collection efficiency by repairing and installation of LFG laterals and piping on existing wells;
- Increase LFG collection efficiency to further reduce the potential surface emissions;

CONSTRUCTION SCHEDULE

The anticipated construction period will be between April 12, 2021 through July 31, 2021. 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
Repair and installation of piping and laterals	Up to 12 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 and repair of piping 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. These mitigation measures are presented below and are designed to meet both the requirements of 8-34 Section 118 and §95470(a)(1)(I).

Due to the minimal amount of excavation planned for this work, air quality impacts are also anticipated to be minimal. Air quality mitigation will be provided during the following work tasks:

- Excavation for installation piping;
- Excavation and backfill of pipe trenches; and
- Connection of new piping and laterals to existing piping and GCCS

During construction 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 trench excavations at any one time;
- Relocating excavated refuse to the designated waste disposal area immediately and covering the relocated waste daily by no later than the end of each day; and
- Well borings will not be left open overnight or for periods greater than 8 hours

During connection of wells to the existing LFG piping, and installation of laterals and piping, air emissions will be controlled by implementing the following measures:

- Capping or blind flanging of all pipes and collector openings, which will remain sealed until time of connection to a vacuum source;
- Using isolation valves;
- Minimizing installation time for making each connection; and
- Minimizing the amount of open pipe during each installation, by using flange joints and flexible couplings.

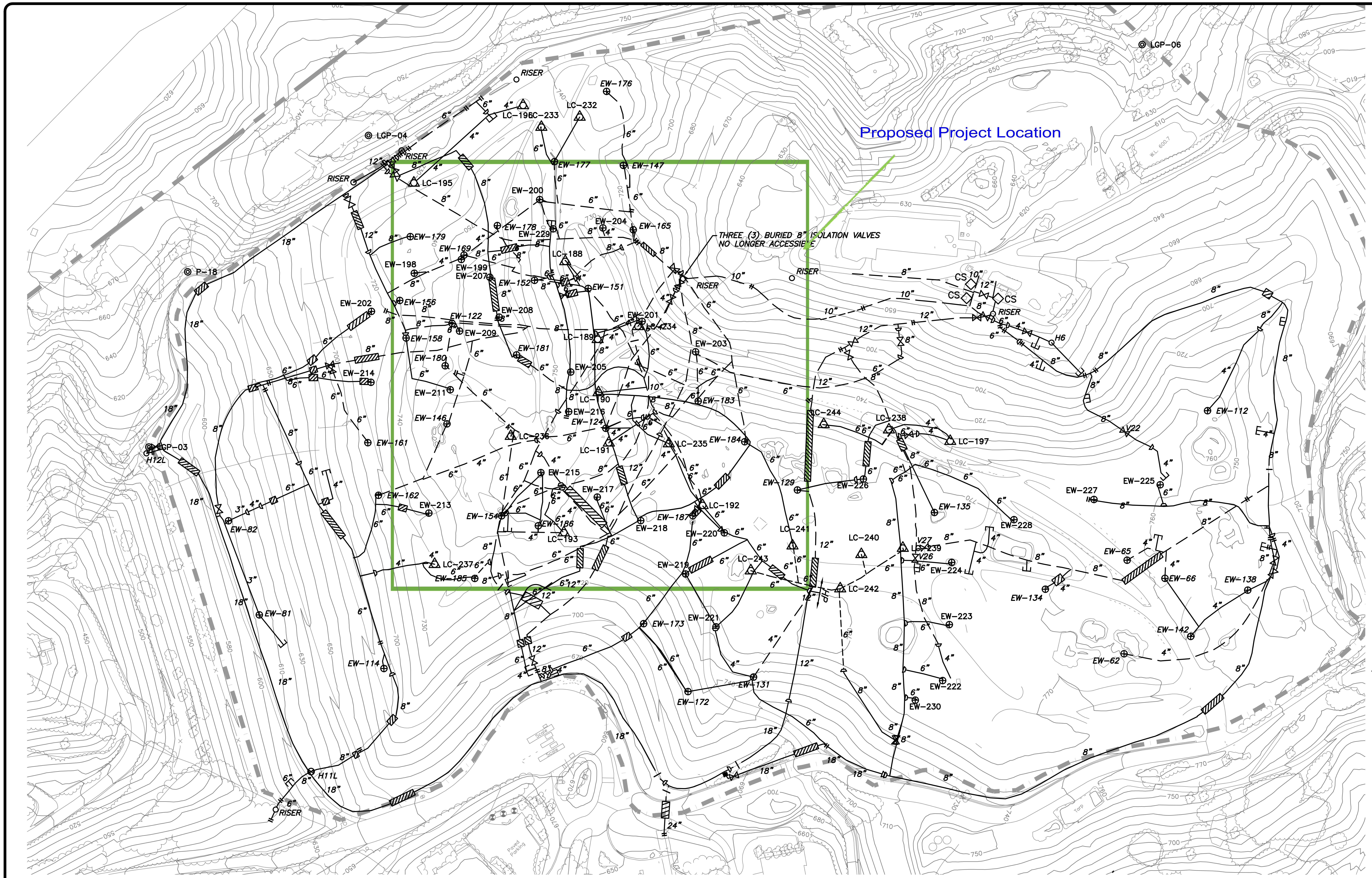
RECORDKEEPING

The following records will be retained during the project:

- Construction start and end dates, projected and actual installation dates, and projected shut down times for individual gas collection system components.

- GCCS downtime and individual well shutdown times will be documented in accordance with the GRDC’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



LEGEND

▬ ▬ ▬	PROPERTY BOUNDARY
—1400—	EXISTING 10' CONTOUR
12"	EXISTING ABOVEGROUND PIPING
– – 12" – –	EXISTING BELOWGROUND PIPING
— · — · —	EXISTING HORIZONTAL COLLECTOR
⊕ EW-3	EXISTING LFG EXTRACTION WELL
⊗	EXISTING REMOTE WELLHEAD
◎ LGP-04 ◎ P-18	EXISTING PROBE
○H6 ⊕ EW-H15	EXISTING HORIZONTAL COLLECTOR WELLHEAD
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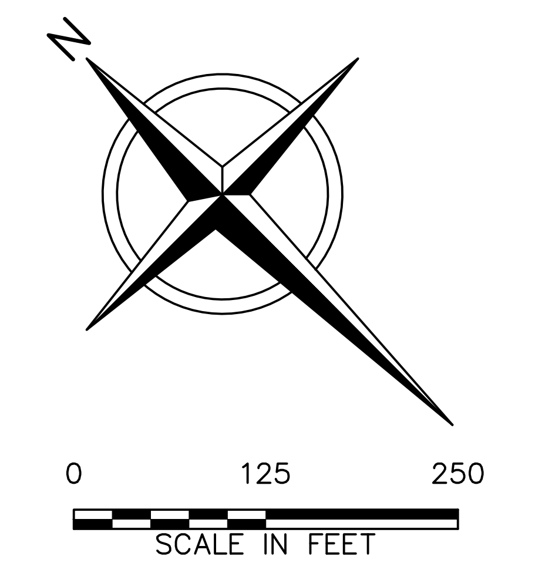
⊣⊢	EXISTING FLANGE CONNECTION
▷	EXISTING REDUCER FITTING
▨	EXISTING ROAD CROSSING
◇ CS-	EXISTING CONDENSATE SUMP
○ RISER	EXISTING RISER
—]	EXISTING CAP ON EXISTING PIPE



NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
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3. 2018 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: DECEMBER 11, 2018.
4. 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY WM DATED: NOVEMBER 11, 2019.
5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

File: X:\PROJECTS\GUADALUPE\200126 - 2020 AS-BUILT UPDATE\Project Drawings\200126-GUADALUPE_2020 AS-BUILT FINAL UPDATE_RevGRD.dwg Layout: S1 User: CHELSEA.EVANS Nov 12, 2020 - 10:22pm

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVP
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

AS-BUILT SITE PLAN

SHEET NO.
1
PROJECT NO.
200126

Guadalupe Rubbish
Disposal Co., Inc.
15999 Guadalupe Mines Road
P.O. Box 20957
San Jose, CA 95160

May 11, 2021

Ms. Tamiko Endow
Bay Area Air Quality Management District
Permit Services Division
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: Decommissioning Notification Letter of Two Vertical Wells
Title V Permit Condition Number 6188 Part 2, Facility A3294
Guadalupe Rubbish Disposal Co., Inc., San Jose, California

Dear Ms. Endow,

This letter is to notify the Bay Area Air Quality Management District (BAAQMD) of the decommissioning of two landfill gas (LFG) vertical wells at the Guadalupe Rubbish Disposal Co., Inc., (GRDC), pursuant to Title V Permit Condition 6188, Part 2, as modified by Application Number (AN) 28011. The affected collectors and respective startup/shutdown dates are listed in the following table:

Well ID	**Well Action Type**	**Applicable Date**
Well 156	Decommission	5/7/2021; 10:30 AM
Well 158	Decommission	5/7/2021; 11:30 AM

As stated in the most recent March 1, 2021, Well Actions Letter, GRDC had 89 total collectors (87 vertical wells and 2 horizontal collectors) connected to the GCCS.

With the completion of these well actions, the GRDC's current GCCS component count and permitted remaining actions per AN 28011 are listed in the following table:

Description	Vertical Decommissioning Actions	Vertical Installation Actions	Horizontal Decommissioning Actions	Horizontal Installation Actions
Actions Permitted Under AN 28011	40	70	10	20
Actions Performed Under AN 28011	14	41	1	0
Actions Remaining Under AN 28011	26	29	9	20
Active Well Count After Actions in this Letter	**87 total collectors (85 vertical LFG wells and 2 horizontal collectors)**			

This notification is pursuant to Title V Permit Requirements; which state that the permit engineer must be notified of changes to the wellfield.

If you have any questions or concerns, please feel free to contact me at (408) 960-0769.

Sincerely,

Guadalupe Rubbish Disposal Co., Inc.

Becky Azevedo

Becky Azevedo
Technical Manager

CC: Enrique Perez, GRDC
Bill Louis, GRDC
Mike Winter, GRDC

Guadalupe Rubbish
Disposal Co., Inc.
15999 Guadalupe Mines Road
P.O. Box 20957
San Jose, CA 95160

May 7, 2021

Ms. Tamiko Endow
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: Facility No. A3294– Guadalupe Recycling and Disposal Facility
Notification of the Addition of Landfill Gas Collection Well 199 to Higher Operating Value List

Dear Ms. Endow:

The Guadalupe Recycling and Disposal Facility (GRDF), owned by Guadalupe Rubbish Disposal Co., Inc., (GRDC) is subject to the Federal New Source Performance Standards/Emission Guidelines (NSPS/EG) for municipal solid waste (MSW) landfills (40 Code of Federal Regulations [CFR], Part 60, Subparts WWW and Cc) and the Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34. In accordance with Title V Permit Condition Number 6188, Part 3b(vi), the GRDF is submitting this letter as notification to the BAAQMD for the addition of landfill gas (LFG) Well 199 to the higher operating value (HOV) list of wells at the GRDF.

The GRDF has installed and operates a landfill gas collection and control system (GCCS) at the facility in accordance with the NSPS/EG and BAAQMD Regulation 8, Rule 34. These regulations require that the LFG wells that make up the GCCS be operated with wellhead temperatures below 131 degrees Fahrenheit (°F) (BAAQMD 8-34-305).

In March 2021, the GRDF investigated the LFG temperatures at Well 199. The intent of the investigation was to determine if the elevated temperature readings were due to excess air infiltration, damage to the well, or if the well simply operates at a higher normal temperature.

The review of monitoring data for Well 199 indicates that the well had elevated operating temperatures, and oxygen data shows negligible oxygen has been detected at the well. Upon first discovering the elevated temperatures, GRDF personnel monitored the well for carbon monoxide (CO), which is an early indicator of subsurface fire. Typically, CO concentrations of greater than 1,000 parts per million by volume (ppmv) will indicate a subsurface fire, with CO concentrations greater than 500 ppmv being of concern. The initial two readings at Well 199 indicated CO readings of 0 ppmv. Subsequent monitoring at Well 199 indicated that CO concentrations remained at 0 ppmv. The wellhead temperature for each CO monitoring event was less than 140°F. Methane concentrations at Well 199 do not appear to be affected by operation at the higher temperatures. See attached table for historical monitoring data and CO monitoring results. Well 199 did not have well exceedances within the last 120 days.

GRDF considers Well 199 added to the HOV list for a temperature of 145°F as of May 7, 2021. Should the temperature measured at Well 199 during routine monitoring exceed 145°F, GRDF will consider it an exceedance and will track the deviation in accordance with the NSPS/EG and BAAQMD requirements.

If you have any questions or need any additional information, please do not hesitate to contact me at rphadnis@wm.com.

Sincerely,

Guadalupe Recycling and Disposal Facility

Rajan Phadnis
EP Specialist

Enclosures: Attachment A- Wellfield Monitoring Data for Well 199
Figure 1. – Gas Collection and Control System Map

cc: Enrique Perez, GRDF
Bill Louis, GRDF
Mike Winter, GRDF

Attachment A

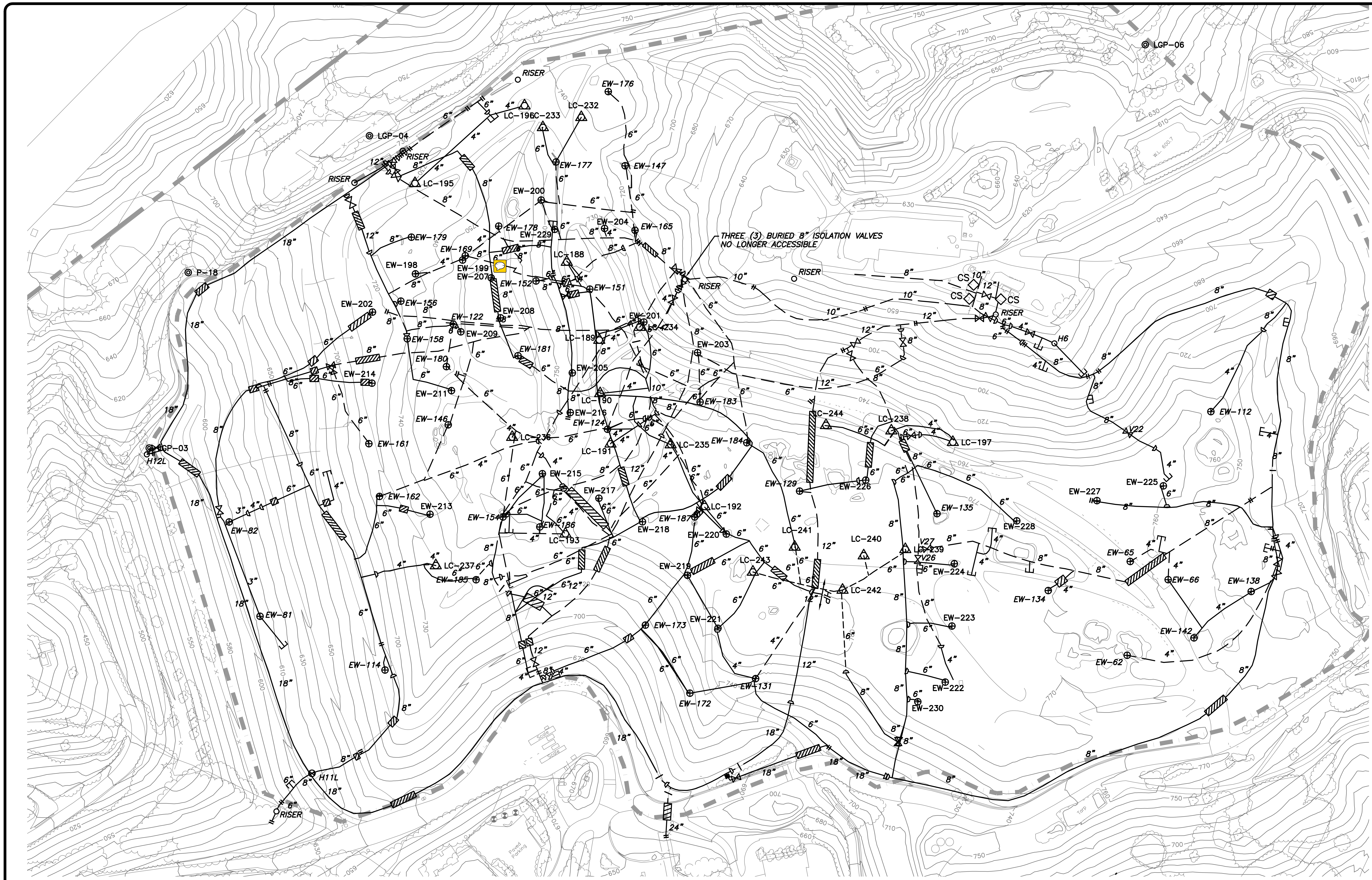
Wellfield Monitoring and CO Data for Well 199

Table 1. Well 199 Wellfield Monitoring and CO Data

Device Name	Date Time	CH4 (Methane)(%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen)(%)	Balance Gas(%)	Initial Temperature(oF)	Adjusted Temperature(oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GUAD0199	10/10/2020 12:59	56.5	39.9	0.0	3.6	128.0	128.0	-6.4	-7
GUAD0199	11/27/2020 15:17	58.2	41.8	0.0	0	129.2	129.2	-3.1	-3.72
GUAD0199	12/16/2020 11:42	57.1	40.6	0.0	2.3	129.1	129.2	-25.1	-25.73
GUAD0199	1/14/2021 15:50	42.6	36.9	0.0	20.5	129.7	129.8	-28.3	-24.07
GUAD0199	2/16/2021 11:04	51	38.3	0.0	10.7	129.7	129.7	-19.6	-19.56
GUAD0199	3/22/2021 15:14	53.5	40	0.0	6.5	131.0	131.0	-19.0	-20.7
GUAD0199	3/23/2021 15:15	CO was 0 ppm							
GUAD0199	3/23/2021 15:23	53.1	40	0.0	6.9	131.0	131.0	-22.5	-23
GUAD0199	4/5/2021 13:25	CO was 0 ppm							
GUAD0199	4/5/2021 13:32	49.3	38.9	0.0	11.8	131.0	131.0	-23.2	-23
GUAD0199	5/4/2021 15:19	56.8	42.9	0.2	0.1	128.0	128.0	-14.4	-14.4
GUAD0199	5/4/2021 17:23	CO was 0 ppm							

Figure 1

Gas Collection and Control System Map



LEGEND

▬ ▪ ▪ ▬	PROPERTY BOUNDARY
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◎ LGP-04 ◎ P-18	EXISTING PROBE
○H6 ⊕ EW-H15	EXISTING HORIZONTAL COLLECTOR WELLHEAD
△ LC-190	EXISTING LOCAL CONTROL WELL
⋈	EXISTING CONTROL VALVE
⊣	EXISTING BLIND FLANGE
⊣⊢	EXISTING FLANGE CONNECTION
⊳	EXISTING REDUCER FITTING
▨	EXISTING ROAD CROSSING
◇ CS-	EXISTING CONDENSATE SUMP
○ RISER	EXISTING RISER
⊐	EXISTING CAP ON EXISTING PIPE

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
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6. SUPPLEMENTAL 2019 GCCS AS–BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS–BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

File: X:\PROJECTS\GUADALUPE\200126 – 2020 AS–BUILT UPDATE\Project Drawings\200126–GUADALUPE_2020 AS–BUILT FINAL UPDATE_RevGRID.dwg Layout: S1 User: CHELSEA.EVANS Nov 12, 2020 – 10:22pm

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVP
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

AS-BUILT SITE PLAN

SHEET NO.
1
PROJECT NO.
200126

Guadalupe Rubbish
Disposal Co., Inc.
15999 Guadalupe Mines Road
P.O. Box 20957
San Jose, CA 95160

September 10, 2021 (via email: compliance@baaqmd.gov)

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

Re: Guadalupe Recycling and Disposal Facility, San Jose, California Facility A3294, 10-Day NOV Response Letter to BAAQMD Notice of Violation A 59779, Dated September 1, 2021

Dear Sir or Madam:

Guadalupe Rubbish Disposal Company, Inc. (GRDC) is submitting this 10-day Notice of Violation response letter to the Bay Area Air Quality Management District (BAAQMD) as required for the Guadalupe Recycling and Disposal Facility (GRDF) in San Jose, CA (Plant No. A3294). On September 1, 2021, Erin Phillips, BAAQMD Air Quality Inspector, issued a Notice of Violation No. A-59779 ("NOV"; copy attached). As required by Title V Permit Condition Section I.F, 10 and 30-day letters were submitted to BAAQMD on September 10, 2021.

The NOV alleges a violation of BAAQMD Reg. 2, Rule 1, Section 301 and Reg. 2, Rule 1, Section 302 and states "*Flare modified without Authority to Construct (ATC) and Permit to Operate (PTO)*".

This NOV does not acknowledge the substantial permitting history related to the flare. It is GRDC's position that the BAAQMD permit division's lack of prosecution and responsiveness led to the extreme delay in issuing the PTO within a reasonable timeframe and, therefore, GRDC requests BAAQMD to rescind the NOV A 59779. GRDC has submitted all required permit documentation and immediately responded to all information requests in a timely manner. The details provided below demonstrate how GRDC continually reached out the BAAQMD with updates on the project and followed the guidance given by BAAQMD's permit division.

GRDC was originally issued an ATC (A/N 21927) for the new flare project (with capacity of 120 MMBTU/HR; Flare A-14). Also, within this timeline, GRDC was simultaneously working with BAAQMD to obtain an additional permit for a landfill gas to energy (LFGTE) engine project. During the course of these permitting projects, GRDC decided to install a novel enhanced turndown narrow stack flare (with capacity of 90 MMBTU/HR) with the understanding that it would provide a symbiotic operational scenario between the flare and the engine plant. GRDC notified the BAAQMD of this change and submitted a change of equipment notification to the BAAQMD in November 2014 and subsequently submitted the application for Change of Permit

Condition to change flare capacity to 90 MMBTU/HR (rather than the one originally proposed in A/N 21927). BAAQMD assigned permit application number A/N 28806.

The novel flare was installed and commissioned but was defective and that compelled the site to replace the narrow flare stack with a standard flare stack (as was detailed in the original ATC) to prevent the high-risk potential for future gas control deficiencies, compliance failures, and safety concerns. GRDC communicated these issues with BAAQMD during the commissioning stage and continued to provide updates about flare operation to maintain compliance with landfill gas requirements.

Since the permit for the narrow stack flare was still being drafted, the GRDC engine plant permit status was unknown, and given that the underlying permitting requirements for the standard flare stack had not changed (120 MMBTU/HR as per ATC A/N 21927) and no additional emissions, GRDC submitted a notification of the change of flare stack to the BAAQMD permit division. This notification was acknowledged by BAAQMD and the application was reactivated as permit application A/N 28806 with the original ATC capacity of 120 MMBTU/HR. GRDC continued to keep the BAAQMD up to date with these changes and it was decided that the permit engineer would make these changes during the PTO issuance period. GRDC has paid all required fees and anticipated that BAAQMD would issue an additional invoice before issuance of the final PTO.

It is GRDC's understanding that it is BAAQMD's policy that if you are issued an NOV for ATC, submittal of a permit application closes out the NOV. As the current flare permit application is and has been already under review, GRDC respectfully requests NOV A 59779 to be rescinded. Furthermore, GRDC has been responsive during the permitting process and submitted requested information in a timely manner to additional data requests during early 2021 as part of the flare permit process. Through its numerous actions stated above, it is clear that GRDC is committed to protect human health and environment by operating its landfill in a safe manner in compliance with applicable regulations and, therefore, GRDC again respectfully requests BAAQMD to rescind NOV A 59779.

Please contact me at (408) 779-2206, if you have any questions or need any additional information.

Sincerely,
Guadalupe Recycling and Disposal Facility

Paul Enrique Perez

Enrique Perez
District Manager

cc: Erin Phillips, BAAQMD Inspector
Nimrat Sandhu, BAAQMD Permit Division

Attachments: 1- Copy of BAAQMD Notice of Violation A 59779

ATTACHMENT 1
NOV #A59779

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105
(415) 749-5000

NOTICE OF VIOLATION

No. A 59779

ISSUED TO: Guadalupe Rubbish Disposal ☐P ☐G ☐N# A3294
ADDRESS: 15999 Guadalupe Mines Rd.
CITY: San Jose STATE: CA ZIP: 95120
PHONE: (408) 268-1670
☐ N# Mailing Address on F61

OCCURRENCE

NAME:
ADDRESS: ☒ Same As Above
CITY: ZIP:
SOURCE: S#_____ NAME:
EMISSION PT: P#_____ NAME:
DATE: October 2020 TIME: — HRS

☒ REG 2 RULE 1 SEC 301
No Authority to Construct

☒ REG 2 RULE 1 SEC 302
No Permit to Operate

☐ REG 1 SEC 301
H & S CODE - 41700
Public Nuisance

☐ REG 2 RULE __ SEC 307
Failure to Meet Permit Condition

☐ REG 5 SEC 301
Prohibited Open Burning

☐ REG 6 RULE 1 SEC 301
Excessive Visible Emissions

☐ REG _____ RULE _____ SECTION _____ CODE ☐
☐ REG _____ RULE _____ SECTION _____ CODE ☐

Details: Flare modified w/o ATC/PTO

RECIPIENT NAME: Enrique Perez
TITLE: District Manager
SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT X

WITHIN 10 DAYS, RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT CONTINUED OR RECURRENT VIOLATION. **THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY.** YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION

ISSUED BY: Erin Phillips INSP # 853
DATE: 9/1/21 TIME: 1413 HRS ☐ MAILED

PLEASE PRESS HARD

INSTRUCTIONS

PERMIT VIOLATIONS - (REG 2, RULE 1, SECTION 301 AND/OR 302)

Within 30 days, a permit application must be submitted to the District's Permit Division. The permit application must reference the Violation Notice Number Shown on the front of this notice. If either the Violation Notice Number is not referenced or no permit application is received, then this matter will be referred to the District's Legal Department for legal action. Your response does not preclude further legal action.

If there are any questions regarding the submission of a Permit Application, call the Permit Services Division at (415) 749-4990.

ALL OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation. This violation is subject to substantial penalty. Your response does not preclude further legal action.

A variance should be sought if it is necessary to continue to operate in violation of District Regulations. For information on eligiblity for, or filing of, a variance, call (415) 749-5073.

WASTE MANAGEMENT

Guadalupe Rubbish
Disposal Co., Inc.
15999 Guadalupe Mines Road
P.O. Box 20957
San Jose, CA 95160

August 25, 2021

Ms. Tamiko Endow
Permit Service Division
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: Facility No. A3294– Guadalupe Recycling and Disposal Facility
Notification of the Addition of Landfill Gas Collection Well 209 to Higher Operating Value List

Dear Ms. Endow:

The Guadalupe Recycling and Disposal Facility (GRDF), owned by Guadalupe Rubbish Disposal Co., Inc., (GRDC) is subject to the Federal New Source Performance Standards/Emission Guidelines (NSPS/EG) for municipal solid waste (MSW) landfills (40 Code of Federal Regulations [CFR], Part 60) and the Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34. In accordance with Title V Permit Condition Number 6188, Part 3b(vi), the GRDF is submitting this letter as notification to the BAAQMD for the addition of landfill gas (LFG) Well 209 to the higher operating value (HOV) list of wells at the GRDF.

The GRDF has installed and operates a landfill gas collection and control system (GCCS) at the facility in accordance with the NSPS/EG and BAAQMD Regulation 8, Rule 34. These regulations require that the LFG wells that make up the GCCS be operated with wellhead temperatures below 131 degrees Fahrenheit (°F) (BAAQMD 8-34-305).

In July 2021, the GRDF investigated the LFG temperatures at Well 209. The intent of the investigation was to determine if the elevated temperature readings were due to excess air infiltration, damage to the well, or if the well simply operates at a higher normal temperature.

The review of monitoring data for Well 209 indicates that the well had elevated operating temperatures, and oxygen data shows negligible oxygen has been detected at the well. Upon first discovering the elevated temperatures, GRDF personnel monitored the well for carbon monoxide (CO), which is an early indicator of subsurface fire. Typically, CO concentrations of greater than 1,000 parts per million by volume (ppmv) will indicate a subsurface fire, with CO concentrations greater than 500 ppmv being of concern. The initial two readings at Well 209 indicated CO readings of 0 ppmv. Subsequent monitoring at Well 209 indicated that CO concentrations remained at 0 ppmv. The wellhead temperature for each CO monitoring event was less than 140°F. Methane concentrations at Well 209 do not appear to be affected by operation at the higher temperatures. See attached table for historical monitoring data and CO monitoring results. Well 209 did not have well exceedances within the last 120 days.

GRDF considers Well 209 added to the HOV list for a temperature of 145°F as of August 25, 2021. Should the temperature measured at Well 209 during routine monitoring exceed 145°F, GRDF will consider it an exceedance and will track the deviation in accordance with the NSPS/EG and BAAQMD requirements.

If you have any questions or need any additional information, please do not hesitate to contact me at rphadnis@wm.com.

Sincerely,

Guadalupe Recycling and Disposal Facility

Rajan Phadnis
EP Specialist

Enclosures: Attachment A- Wellfield Monitoring Data for Well 209
Figure 1. – Gas Collection and Control System Map

cc: Enrique Perez, GRDF
Bill Louis, GRDF
Mike Winter, GRDF

Attachment A

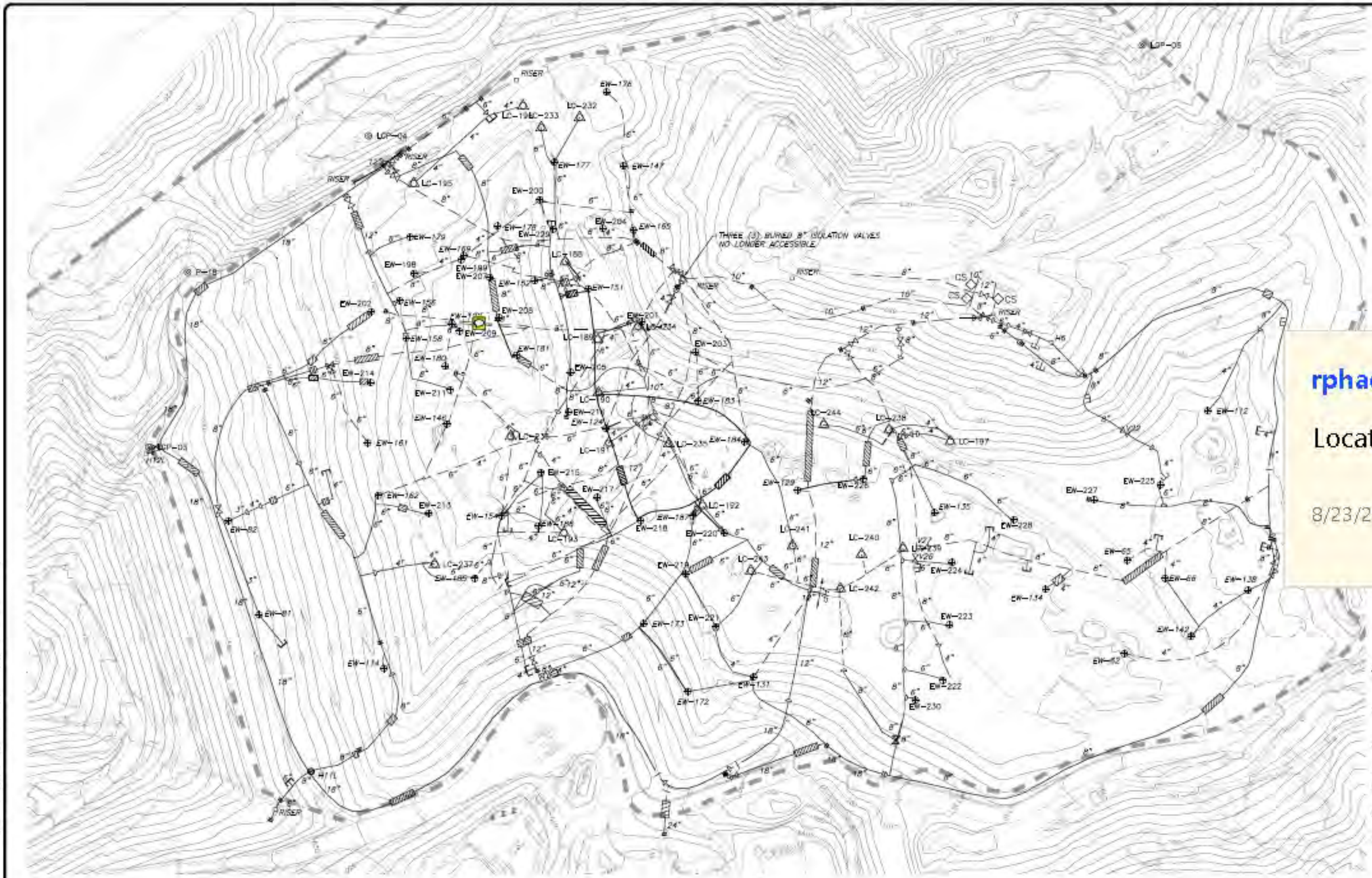
Wellfield Monitoring and CO Data for Well 209

Table 1. GRDF Well 209 Historical Data

Device Name	Date Time	CH4 (Methane)(%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen)(%)	Balance Gas(%)	Initial Temperature(oF)	Adjusted Temperature(oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GUAD0209	3/3/2021 14:15	51.6	48.1	0.1	0.2	78.0	103.0	-0.1	-0.1
GUAD0209	3/3/2021 14:18	49.9	46.3	0.0	3.8	122.0	123.0	-0.1	-0.1
GUAD0209	4/6/2021 11:32	52.6	47.1	0.1	0.2	85.0	86.0	-0.1	-0.1
GUAD0209	5/17/2021 13:42	52.7	47.2	0.0	0.1	92.0	96.0	-0.1	-0.1
GUAD0209	6/16/2021 15:29	40.7	45.7	0.0	13.6	128.0	128.0	-0.2	-0.1
GUAD0209	7/3/2021 10:39	31.5	41.2	0.0	27.3	132.7	131.1	-0.7	-0.1
GUAD0209	7/3/2021 10:40	CO was 0 ppm							
GUAD0209	7/3/2021 10:47	32.8	42.0	0.0	25.2	130.9	131.0	-0.1	0.0
GUAD0209	7/14/2021 13:37	CO was 0 ppm							
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7.0	128.0	128.0	-30.2	-30.4
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7.0	128.0	128.0	-30.2	-30.3
GUAD0209	7/14/2021 16:13	43.7	43.9	0.1	12.3	119.0	97.0	-0.1	-0.1
GUAD0209	8/12/2021 13:15	50.4	47.9	0.0	1.7	129.0	129.0	-0.1	-0.1
GUAD0209	8/12/2021 16:12	CO was 0 ppm							

Figure 1

Gas Collection and Control System Map



rphadnis Reply ✕

Location of well 209

8/23/2021 1:28 PM

LEGEND

▬ ▬ · · ▬ ▬	PROPERTY BOUNDARY
——	EXISTING 10' CONTOUR
—12"—	EXISTING ABOVEGROUND PIPING
- - -12"- - -	EXISTING BELOWGROUND PIPING
— · — · —	EXISTING HORIZONTAL COLLECTOR
⊕ EW-3	EXISTING LFG EXTRACTION WELL
⊗	EXISTING REMOTE WELLHEAD
⊗ LGP-04 ⊗ P-18	EXISTING PROBE
○H6 ⊕ EW-H15	EXISTING HORIZONTAL COLLECTOR WELLHEAD
△ LC-190	EXISTING LOCAL CONTROL WELL
⋈	EXISTING CONTROL VALVE
⊣	EXISTING BLIND FLANGE
⊣⊢	EXISTING FLANGE CONNECTION
⊣⊢	EXISTING REDUCER FITTING
▨	EXISTING ROAD CROSSING
◇ CS-	EXISTING CONDENSATE SUMP
○ RISER	EXISTING RISER
⊐	EXISTING CAP ON EXISTING PIPE

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7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY DVP
DESIGNED BY CHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

AS-BUILT SITE PLAN

SHEET NO.
1

PROJECT NO.
200126

WASTE MANAGEMENT

Guadalupe Rubbish
Disposal Co., Inc.
15999 Guadalupe Mines Road
P.O. Box 20957
San Jose, CA 95160

September 10, 2021 (via email: compliance@baaqmd.gov)

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

Re: Guadalupe Recycling and Disposal Facility, San Jose, California Facility A3294, Title V Section I.F – 10-Day and 30-Day Letter to BAAQMD Notice of Violation A 59779, Dated September 1, 2021

Dear Sir or Madam:

Guadalupe Rubbish Disposal Company, Inc. (GRDC) is submitting this 10-day Notice of Violation response letter to the Bay Area Air Quality Management District (BAAQMD) as required for the Guadalupe Recycling and Disposal Facility (GRDF) in San Jose, CA (Plant No. A3294). On September 1, 2021, Erin Phillips, BAAQMD Air Quality Inspector, issued a Notice of Violation No. A-59779 ("NOV"; copy attached).

The NOV alleges a violation of BAAQMD Reg. 2, Rule 1, Section 301 and Reg. 2, Rule 1, Section 302 and states "*Flare modified without Authority to Construct (ATC) and Permit to Operate (PTO)*".

This NOV does not acknowledge the substantial permitting history related to the flare. It is GRDC's position that the BAAQMD permit division's lack of prosecution and responsiveness led to the extreme delay in issuing the PTO within a reasonable timeframe and, therefore, GRDC requests BAAQMD to rescind the NOV A 59779. GRDC has submitted all required permit documentation and immediately responded to all information requests in a timely manner. The details provided below demonstrate how GRDC continually reached out the BAAQMD with updates on the project and followed the guidance given by BAAQMD's permit division.

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The novel flare was installed and commissioned but was defective and that compelled the site to replace the narrow flare stack with a standard flare stack (as was detailed in the original ATC) to prevent the high-risk potential for future gas control deficiencies, compliance failures, and safety concerns. GRDC communicated these issues with BAAQMD during the commissioning stage and continued to provide updates about flare operation to maintain compliance with landfill gas requirements.

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It is GRDC's understanding that it is BAAQMD's policy that if you are issued an NOV for ATC, submittal of a permit application closes out the NOV. As the current flare permit application is and has been already under review, GRDC respectfully requests NOV A 59779 to be rescinded. Furthermore, GRDC has been responsive during the permitting process and submitted requested information in a timely manner to additional data requests during early 2021 as part of the flare permit process. Through its numerous actions stated above, it is clear that GRDC is committed to protect human health and environment by operating its landfill in a safe manner in compliance with applicable regulations and, therefore, GRDC again respectfully requests BAAQMD to rescind NOV A 59779.

Please contact me at (408) 779-2206, if you have any questions or need any additional information.

Sincerely,
Guadalupe Recycling and Disposal Facility

Paul Enrique Perez

Enrique Perez
District Manager

cc: Erin Phillips, BAAQMD Inspector

Attachments: 1- Copy of BAAQMD Notice of Violation A 59779

ATTACHMENT 1
NOV #A59779

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105
(415) 749-5000

NOTICE OF VIOLATION

No. A 59779

ISSUED TO: Guadalupe Rubbish Disposal ☐P ☐G ☐N# A3294
ADDRESS: 15999 Guadalupe Mines Rd.
CITY: San Jose STATE: CA ZIP: 95120
PHONE: (408) 268-1670
☐ N# Mailing Address on F61

OCCURRENCE

NAME:
ADDRESS: ☒ Same As Above
CITY: ZIP:
SOURCE: S#____ NAME:
EMISSION PT: P#____ NAME:
DATE: October 2020 TIME: — HRS

☒ REG 2 RULE 1 SEC 301
No Authority to Construct

☒ REG 2 RULE 1 SEC 302
No Permit to Operate

☐ REG 1 SEC 301
H & S CODE - 41700
Public Nuisance

☐ REG 2 RULE__ SEC 307
Failure to Meet Permit Condition

☐ REG 5 SEC 301
Prohibited Open Burning

☐ REG 6 RULE 1 SEC 301
Excessive Visible Emissions

☐ REG ____ RULE ____ SECTION ____ CODE
☐ REG ____ RULE ____ SECTION ____ CODE

Details: Flare modified w/o ATC/PTO

RECIPIENT NAME: Enrique Perez
TITLE: District Manager
SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT X

WITHIN 10 DAYS, RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT CONTINUED OR RECURRENT VIOLATION. **THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY.** YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: Erin Phillips INSP # 853
DATE: 9/1/21 TIME: 1413 HRS ☐ MAILED

PLEASE PRESS HARD

INSTRUCTIONS

PERMIT VIOLATIONS - (REG 2, RULE 1, SECTION 301 AND/OR 302)

Within 30 days, a permit application must be submitted to the District's Permit Division. The permit application must reference the Violation Notice Number Shown on the front of this notice. If either the Violation Notice Number is not referenced or no permit application is received, then this matter will be referred to the District's Legal Department for legal action. Your response does not preclude further legal action.

If there are any questions regarding the submission of a Permit Application, call the Permit Services Division at (415) 749-4990.

ALL OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation. This violation is subject to substantial penalty. Your response does not preclude further legal action.

A variance should be sought if it is necessary to continue to operate in violation of District Regulations. For information on eligiblity for, or filing of, a variance, call (415) 749-5073.

APPENDIX D

WELL SSM LOG

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield

Completed By: Marcus Bernard/Rajan Phadnis

Guadalupe Recycling & Disposal Facility, San Jose, CA
SSMP REPORT - April 1, 2021 Through September 30, 2021

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Well ID Number:214 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	3/19/21 11:05	3/19/21 11:07	0.03	485 hours (20 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	3/19/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:214 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	4/8/21 16:28	4/8/21 16:30	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/8/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:161 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	3/19/21 12:05	3/19/21 12:07	0.03	484 hours (20 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	3/19/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:161 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	4/8/21 16:12	4/8/21 16:14	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/8/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:209 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	4/6/21 11:45	4/6/21 11:47	0.03	220 hours (9 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/6/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:209 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	4/15/21 16:09	4/15/21 16:11	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:122 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	4/6/21 12:30	4/6/21 12:32	0.03	219 hours (9 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/6/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:122 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	4/15/21 15:34	4/15/21 15:36	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:199 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	4/16/21 15:49	4/16/21 15:51	0.03	431 hours (18 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/16/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:199 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	5/4/21 15:15	5/4/21 15:17	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/4/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:156 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	5/7/21 10:30	5/7/21 10:32	0.03	NA	Well was decommissioned pursuant to PTO Condition #6188.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/7/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:156 ☐ Startup Event ☐ Shutdown Event ☐ Malfunction Event						☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities		☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:158 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	5/7/21 11:30	5/7/21 11:32	0.03	NA	Well was decommissioned pursuant to PTO Condition #6188.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/7/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:158 ☐ Startup Event ☐ Shutdown Event ☐ Malfunction Event						☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities		☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:186 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/15/21 10:00	6/15/21 10:02	0.03	5 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:186 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/15/21 15:00	6/15/21 15:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:193 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/15/21 10:00	6/15/21 10:02	0.03	5 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:193 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/15/21 15:00	6/15/21 15:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/15/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:213 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/17/21 9:00	6/17/21 9:02	0.03	2 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/17/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:213 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/17/21 11:00	6/17/21 11:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/17/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield

Completed By: Marcus Bernard/Rajan Phadnis

Guadalupe Recycling & Disposal Facility, San Jose, CA
SSMP REPORT - April 1, 2021 Through September 30, 2021

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Well ID Number:185 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/17/21 13:30	6/17/21 13:32	0.03	1 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/17/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:185 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/17/21 14:30	6/17/21 14:32	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/17/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:235 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/18/21 8:30	6/18/21 8:32	0.03	3 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:235 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/18/21 11:00	6/18/21 11:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:192 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/18/21 8:30	6/18/21 8:32	0.03	3 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:192 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/18/21 11:00	6/18/21 11:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:187 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/18/21 8:30	6/18/21 8:32	0.03	3 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:187 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/18/21 11:00	6/18/21 11:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:161 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/21/21 8:00	6/21/21 8:02	0.03	7 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:161 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/21/21 15:00	6/21/21 15:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:214 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/21/21 8:00	6/21/21 8:02	0.03	7 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:214 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/21/21 15:00	6/21/21 15:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:183 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/21/21 9:00	6/21/21 9:02	0.03	1 hours	Well offline during contruction and repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:183 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/21/21 10:00	6/21/21 10:02	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☒ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:180 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	5/18/21 11:00	5/18/21 11:02	0.03	694 hours (29 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/18/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:180 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/16/21 9:00	6/16/21 9:02	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/16/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:237 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	8/26/20 11:30	8/26/20 11:32	0.03	7,272 hours (303 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/26/2020	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:237 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/25/21 11:00	6/25/21 11:02	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/25/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: Wellfield

Completed By: Marcus Bernard/Rajan Phadnis

Guadalupe Recycling & Disposal Facility, San Jose, CA
SSMP REPORT - April 1, 2021 Through September 30, 2021

Identify Well & Check Applicable Event	(1) Start of Event Date and Time	(2) End of Event Date and Time	(3) Duration of Event (Hours)	(4) Duration Shutdown (Hours)	(5) Cause or Reason	(6) Applicable 8-34 Exemption	(7) Date Form Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Well ID Number:188 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/9/21 10:20	6/9/21 10:22	0.03	676 hours (28 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/9/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:188 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	7/7/21 14:12	7/7/21 14:14	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/7/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:152 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/9/21 10:45	6/9/21 10:47	0.03	676 hours (28 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/9/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:152 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	7/7/21 14:33	7/7/21 14:35	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/7/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:151 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	7/30/21 17:05	7/30/21 17:07	0.03	.2 hours	Well offline for repairs.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☐ 118: Construction Activities	7/30/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:151 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	7/30/21 17:20	7/30/21 17:22	0.03			☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☒ 117: Gas Collection ☐ 118: Construction Activities	7/30/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:205 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	7/7/21 11:40	7/7/21 11:42	0.03	557 hours (23 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/7/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:205 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	7/30/21 17:02	7/30/21 17:04	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/30/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:200 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	7/29/21 18:15	7/29/21 18:17	0.03	164 hours (7 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/29/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:200 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	8/5/21 14:30	8/5/21 14:32	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/5/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:188 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	7/28/21 11:00	7/28/21 11:02	0.03	196 hours (8 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/28/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:188 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	8/5/21 15:15	8/5/21 15:17	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/5/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:177 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	7/30/21 10:45	7/30/21 10:47	0.03	147 hours (6 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	7/30/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:177 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	8/5/21 13:25	8/5/21 13:27	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/5/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:179 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	8/11/21 11:40	8/11/21 11:42	0.03	793 hours (33 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/11/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:179 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	9/13/21 12:43	9/13/21 12:45	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	9/13/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:198 ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	8/23/21 10:45	8/23/21 10:47	0.03	506 hours (21 days)	Well Located in Active Filling Area. Well Raised.	☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	8/23/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 3	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Well ID Number:198 ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	9/13/21 12:24	9/13/21 12:26	0.03			☐ 113: Inspection and Maintenance ☒ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	9/13/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	

N/A = Not Applicable

(a) **STANDARD OPERATING PROCEDURES**

Shutdown

Procedure No.	Procedure
1.	Ensure that there is 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 is 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 energized 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 shutdown 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	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".

APPENDIX E

FLARE SSM LOG

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: A-9 Flare

Completed By: Marcus Bernard/Rajan Phadnis

Guadalupe Recycling & Disposal Facility, San Jose, CA
SSMP REPORT - From April 1, 2021 Through September 30, 2021

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 Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: A-9 Flare ☐ Startup Event ☐ Shutdown Event ☐ Malfunction Event				4,392.0	Flare remains shutdown. Flare A9 not required to operate in conjunction with flare A17.	☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	1/0/1900	☐ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☐ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-9 Flare ☐ Startup Event ☐ Shutdown Event ☐ Malfunction Event						☐ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	1/0/1900	☐ 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)	

TOTAL DOWNTIME April 1, 2021 Through September 30, 2021	4392.0
TOTAL RUNTIME April 1, 2021 Through September 30, 2021	0.0
TOTAL HOURS April 1, 2021 Through September 30, 2021 (HOURS):	4392.0

CONTROL DEVICE AND GAS COLLECTION SYSTEM DOWNTIME LOG

AFFECTED EQUIPMENT: A-17 Flare (Based on the correspondence with the BAAQMD, flare A-14 is now designated as flare A-17)

Completed By: Marcus Bernard/Rajan Phadnis

Guadalupe Recycling & Disposal Facility, San Jose, CA
SSMP REPORT - From April 1, 2021 Through September 30, 2021

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 Completed	(8) Type of Event (Startup and Shutdown Events Only)	(9) Procedures Used	(10) Did Steps Taken Vary From Section 9?	(11) Did Event Cause Any Emission Limit Exceedance	(12) Describe Emission Standard(s) Exceeded
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	4/27/21 10:44	4/27/21 10:48	0.07	1.57	Flare shutdown during blower inspection and maintenance activities. Flare was inspected and restarted.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/27/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	4/27/21 12:18	4/27/21 12:22	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	4/27/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 4	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	5/15/21 14:58	5/15/21 15:02	0.07	0.23	Flare A17 shutdown due to flame out alarm. Flare was restarted. Flare was inspected on May 17, 2021.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/15/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	5/15/21 15:12	5/15/21 15:16	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	5/15/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 4	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/21/21 11:34	6/21/21 11:38	0.07	0.23	Flare shutdown due to low temperature alarm. Flare was restarted. Flare was inspected after restart.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/21/2021	☐ Manual (Go to Section 9) ☒ Automatic (Go to Section 11)		☐ Yes (Go to Section 11) ☐ No (Stop)	☐ Yes (Go to Section 12) ☒ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/21/21 11:48	6/21/21 11:52	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/21/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/23/21 13:30	6/23/21 13:34	0.07	0.07	Flare was shutdown during construction. Flare was inspected and restarted.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/23/21 13:34	6/23/21 13:38	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 4	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/23/21 14:08	6/23/21 14:12	0.07	0.03	Flare was shutdown during construction. Flare was inspected and restarted.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/23/21 14:10	6/23/21 14:14	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 4	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	6/23/21 14:18	6/23/21 14:22	0.07	0.77	Flare was shutdown during construction. Flare was inspected and restarted.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 3	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	6/23/21 15:04	6/23/21 15:08	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	6/23/2021	☒ Manual (Go to Section 8) ☐ Automatic (Go to Section 10)	Procedure 1 to 4	☐ Yes (Go to Section 10) ☒ No (Stop)	☐ Yes (Go to Section 11) ☐ No (Stop)	
Component: A-17 Flare ☐ Startup Event ☒ Shutdown Event ☐ Malfunction Event	9/28/21 17:22	9/28/21 17:26	0.07	1.93	Flare A17 was shutdown for required lateral repairs. Flare was inspected and restarted.	☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	9/28/2021	☐ Manual (Go to Section 9) ☒ Automatic (Go to Section 11)		☐ Yes (Go to Section 11) ☐ No (Stop)	☐ Yes (Go to Section 12) ☒ No (Stop)	
Component: A-14 Flare ☒ Startup Event ☐ Shutdown Event ☐ Malfunction Event	9/28/21 19:18	9/28/21 19:22	0.07			☒ 113: Inspection and Maintenance ☐ 116: Well Raising ☐ 117: Gas Collection ☐ 118: Construction Activities	9/28/2021	☒ Manual (Go to Section 9) ☐ Automatic (Go to Section 11)	Procedure No. 1 to 4	☐ Yes (Go to Section 11) ☒ No (Stop)	☐ Yes (Go to Section 12) ☐ No (Stop)	

TOTAL DOWNTIME April 1, 2021 Through September 30, 2021 (HOURS):	4.83
TOTAL RUNTIME April 1, 2021 Through September 30, 2021 (HOURS):	4387.2
TOTAL HOURS April 1, 2021 Through September 30, 2021 (HOURS):	4392.0

(a) **STANDARD OPERATING PROCEDURES**

Shutdown

Procedure No.	Procedure
1.	Ensure that there is 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 is 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 energized 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 shutdown 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	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 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".

APPENDIX F

TEMPERATURE DEVIATION / INOPERATIVE MONITOR / MISSING DATA REPORT

Guadalupe Recycling & Disposal Facility, San Jose, CA
TEMPERATURE DEVIATION/ INOPERATIVE MONITOR/MISSING DATA REPORT - April 1, 2021 Through September 30, 2021
Flare A-9

REPORT PREPARED BY:	Rajan Phadnis	**DATE:**	October 1, 2021
TEMPERATURE SENSING DEVICE:	Thermocouple	**MODEL:**	Thermo-Electric

START DATE & TIME	END DATE & TIME	DURATION (HOURS)	TEMP (°F)/ FLOW (scfm)	CAUSE	EXPLANATION	ACTION TAKEN
No deviations, inoperative monitors, or missing data occurred in April 2021						
No deviations, inoperative monitors, or missing data occurred in May 2021						
No deviations, inoperative monitors, or missing data occurred in June 2021						
No deviations, inoperative monitors, or missing data occurred in July 2021						
No deviations, inoperative monitors, or missing data occurred in August 2021						
No deviations, inoperative monitors, or missing data occurred in September 2021						

NOTES:
°F= degrees Fahrenheit
scfm= standard cubic feet per minute

COMMENTS: The A-9 Flare combustion zone 3-hour average temperature did not drop below the 1,450 degrees Fahrenheit (°F) limit, as required by Title V Permit Condition Number 6188 Part 8, during the reporting period while the flare was in operation.

The A-9 Flare combustion zone 3-hour average temperature did not drop below the 1,593°F limit established in the April 29, 2020 Annual Source Test and , pursuant to Title V Permit A3294 Condition 6188 Part 8, during the reporting period while the flare was in operation.

Guadalupe Recycling & Disposal Facility, San Jose, CA
TEMPERATURE DEVIATION/ INOPERATIVE MONITOR/MISSING DATA REPORT - April 1, 2021 Through September 30, 2021
Flare A-17 (previously designated as A-14)

REPORT PREPARED BY: Rajan Phadnis
DATE: October 1, 2021
TEMPERATURE SENSING DEVICE: Thermocouple
MODEL: Thermo-Electric

START DATE & TIME	END DATE & TIME	DURATION (HOURS)	TEMP (°F)/ FLOW (scfm)	CAUSE	EXPLANATION	ACTION TAKEN
No deviations, inoperative monitors, or missing data occurred in April 2021						
No deviations, inoperative monitors, or missing data occurred in May 2021						
No deviations, inoperative monitors, or missing data occurred in June 2021						
No deviations, inoperative monitors, or missing data occurred in July 2021						
No deviations, inoperative monitors, or missing data occurred in August 2021						
No deviations, inoperative monitors, or missing data occurred in September 2021						

NOTES:
°F= degrees Fahrenheit
scfm= standard cubic feet per minute

COMMENTS: The A-14 Flare combustion zone 3-hour average temperature did not drop below the 1,450°F limit established in the February 18, 2021 Annual Source Test, pursuant to as required by Authority to Construct. The A-17 Flare combustion zone 3-hour average temperature did not drop below the 1,449°F limit established in the February 18, 2021 Annual Source Test

APPENDIX G

COVER INTEGRITY MONITORING REPORTS

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: April 26, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: May 26, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: June 25, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: July 30, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: August 24, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

Monthly Cover Monitoring

LOCATION: Guadalupe Rubbish Disposal Company, Inc.
INSPECTION DATE: September 28, 2021
TECHNICIAN: Markus Bernard

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

REPAIR AREAS:

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

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

APPENDIX H

SURFACE EMISSIONS AND COMPONENT LEAK MONITORING REPORTS

Guadalupe Rubbish
Disposal Co., Inc.
P.O. Box 20957
San Jose, CA 95160

September 16, 2021

Ms. Becky Azevedo
Guadalupe Rubbish Disposal Co., Inc
15999 Guadalupe Mines Road
San Jose, CA 95120

Re: Third Quarter 2021 Surface Emissions and Component Leak Monitoring Report for Guadalupe Recycling & Disposal Facility

Dear Ms. Azevedo:

This monitoring report for **"Guadalupe Rubbish Disposal Co., Inc. (GRDC)"** contains the results of the Third Quarter 2021 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. Initial surface emissions monitoring was performed by Roberts Environmental Services, LLC. (RES). Re-monitoring of surface emissions and component leak monitoring was conducted by RES and/or Waste Management (WM) personnel.

APPLICABLE REQUIREMENTS

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

Surface Emission Monitoring (SEM)

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

Component Leak

- 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 AB32 LMR.

GRDC 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 GRDC disposal area has been divided into one-hundred-and-five (105), approximately 50,000 square foot monitoring grids. Of these grids, eleven (11) currently have no waste in place. 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 GRDC AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

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

Instantaneous Surface Emissions Monitoring

The Instantaneous and Integrated SEM was conducted using flame ionization detectors (FID), 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 FIDs were calibrated prior to use in accordance with the United States Environmental Protection Agency (USEPA) Method 21 requirements. The 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 2 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

WM 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.

THIRD QUARTER 2021 SEM AND COMPONENT LEAK RESULTS

The following is a summary of the SEM and component leak monitoring results completed for the Third Quarter 2021.

Instantaneous Surface Emissions Monitoring Results

The Instantaneous surface monitoring was performed on July 26, 2021 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 5 exceedances of 500 ppm_v as methane detected on July 26, 2021. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (July 27, 2021).

Ten-Day Re-Monitoring Results

The 10-day re-monitoring event was completed on August 4, 2021. All locations were observed at less than 500 ppm_v.

One-Month Re-Monitoring Results

The 1-month re-monitoring event was completed on August 24, 2021. 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 July 27, 2021, 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 monitoring on July 27, 2021.

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 July 26, 2021. No leaks greater than 500 ppm$_v$ were identified during this monitoring period. 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 strip chart data is scanned and included in Attachment D.

Precipitation Requirements

Per the GRDC'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 rphadnis@wm.com.

Thank you,
Waste Management

Rajan Phadnis
Environmental Protection Specialist

Attachment A – Instantaneous Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- Surface Monitoring Weather Data
- SEM Map

Attachment B – Integrated Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- Surface Monitoring Weather Data
- 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

2021 QUARTER: 3

PERFORMED BY: RES

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Flag Number	Grid Number	Date of Monitoring	Concentration of Emission (ppmv)	Comments
O76	42	7/26/2021	512 ppm	Well 185
O77	67	7/26/2021	2000 ppm	Sump 1
O78	67	7/26/2021	1000 ppm	Sump 2
O79	67	7/26/2021	600 ppm	Pipe
O80	67	7/26/2021	750 ppm	Buterfly Valve

Notes: Please refer to field data sheets for details

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM-Markus Bernard

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			
Flag Number	Monitoring Date	Field Reading	Repair Date	Action taken to repair Exceedance	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Comments
O76	7/26/2021	512 ppm	7/27/2021	Soil Added	8/4/2021	5 ppm		8/24/2021	5 ppm		Well 185
O77	7/26/2021	2000 ppm	7/27/2021	Soil Added	8/4/2021	23 ppm		8/24/2021	40 ppm		Sump 1
O78	7/26/2021	1000 ppm	7/27/2021	Soil Added	8/4/2021	11 ppm		8/24/2021	15 ppm		Sump 2
O79	7/26/2021	600 ppm	7/27/2021	Soil Added	8/4/2021	45 ppm		8/24/2021	35 ppm		Pipe
O80	7/26/2021	750 ppm	7/27/2021	Soil Added	8/4/2021	38 ppm		8/24/2021	42 ppm		Buterfly Valve

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM-Markus Bernard

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

Initial Monitoring Event			1st Re-mon Event - 10 Days			2nd Re-mon Event - 10 Days			
Exceedance Grid ID No.	Monitoring Date	Field Reading	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Comments
O76	7/26/2021	512 ppm	8/4/2021	5 ppm					Well 185
O77	7/26/2021	2000 ppm	8/4/2021	23 ppm					Sump 1
O78	7/26/2021	1000 ppm	8/4/2021	11 ppm					Sump 2
O79	7/26/2021	600 ppm	8/4/2021	45 ppm					Pipe
O80	7/26/2021	750 ppm	8/4/2021	38 ppm					Buterfly Valve

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

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

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

2021 QUARTER: 3RD Qtr
INITIAL MONITORING PERFORMED BY: RES Environmental
FOLLOW-UP MONITORING PERFORMED BY: Markus Bernard
LANDFILL NAME: GUADALUPE LANDFILL

Wind Direction: N
Wind Speed: 8 MPH

Wind Direction: NW
Wind Speed: 5 MPH

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	Action taken to repair Exceedance	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	
O76	7/26/2021	512 ppm	7/27/2021	Soil Added	8/4/2021	5 ppm		8/24/2021	5 ppm		Well 185
O77	7/26/2021	2000 ppm	7/27/2021	Soil Added	8/4/2021	23 ppm		8/24/2021	40 ppm		Sump 1
O78	7/26/2021	1000 ppm	7/27/2021	Soil Added	8/4/2021	11 ppm		8/24/2021	15 ppm		Sump 2
O79	7/26/2021	600 ppm	7/27/2021	Soil Added	8/4/2021	45 ppm		8/24/2021	35 ppm		Pipe
O80	7/26/2021	750 ppm	7/27/2021	Soil Added	8/4/2021	38 ppm		8/24/2021	42 ppm		Buterfly Valve

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE; Richard Lemos; OMAR PERALTA; DWIGHT ANDERSON

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

Date: 7-26-21 Instrument Used: TVA 1000 Grid Spacing: 25

Temperature: 81 Precip: 0 Upwind BG: 2.9 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1	LW	1130	1145	21	1	2	7	
2	OP	1130	1145	18	1	2	7	
3	DA	1130	1145	36	1	2	7	
4	RL	1130	1145	17	1	2	7	
5	LW	1145	1200	34	3	5	6	
6	OP	1145	1200	19	3	5	6	
7	DA	1145	1200	31	3	5	6	
8	RL	1145	1200	54	3	5	6	
10	LW	1200	1215	31	3	4	7	
11	OP	1200	1215	11	3	4	7	
12	DA	1200	1215	89	3	4	7	
15	RL	1200	1215	17	3	4	7	
18	LW	1215	1230	31	3	5	7	
19	OP	1215	1230	11	3	5	7	
20	DA	1215	1230	65	3	5	7	
24	RL	1215	1230	19	3	5	7	
25	LW	1230	1245	36	3	4	4	
29	OP	1230	1245	20	3	4	4	
30	DA	1230	1245	19	3	4	4	
31	RL	1230	1245	59	3	4	4	
35	LW	1245	1300	24	3	4	4	
36	OP	1245	1300	18	3	4	4	
37	DA	1245	1300	26	3	4	4	
41	RL	1245	1300	39	3	4	4	
42	LW	1300	1315	512	3	4	4	WELL 185
43	OP	1300	1315	51	3	4	4	
47	DA	1300	1315	25	3	4	4	
48	RL	1300	1315	22	3	4	4	
49	LW	1315	1330	37	3	4	4	
50	OP	1315	1330	60	3	4	4	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE RICHARD LEMOS
OMAR PERALTA
DWIGHT ANDERSON

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

Date: 7-26-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 84 Precip: 0 Upwind BG: 2.4 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
54	DA	1315	1330	37	3	4	4	
55	RL	1315	1330	61	3	4	4	
59	LW	1330	1345	42	3	5	7	
60	OP	1330	1345	34	3	5	7	
61	DA	1330	1345	29	3	5	7	
64	RL	1330	1345	45	3	5	7	
65	LW	1345	1400	25	3	4	6	
66	OP	1345	1400	84	3	4	6	
67	DA	1345	1400	2,000	3	4	6	Sampl
69	RL	1345	1400	34	3	4	6	
70	LW	1400	1415	28	1	2	15	
71	OP	1400	1415	41	1	2	15	
72	DA	1400	1415	39	1	2	15	
73	RL	1400	1415	21	1	2	15	
74	LW	1415	1430	18	1	2	16	
75	OP	1415	1430	64	1	2	16	
76	DA	1415	1430	25	1	2	16	
77	RL	1415	1430	38	1	2	16	
78	LW	1430	1445	51	1	2	16	
79	OP	1430	1445	27	1	2	16	
80	DA	1430	1445	35	1	2	16	
81	RL	1430	1445	35	1	2	16	
82	LW	1445	1500	26	1	2	16	
83	OP	1445	1500	39	1	2	16	
84	DA	1445	1500	17	1	2	16	
85	RL	1445	1500	24	1	2	16	
86	LW	1500	1515	19	1	2	8	
87	OP	1500	1515	21	1	2	8	
88	DA	1500	1515	30	1	2	8	
89	RL	1500	1515	81	1	2	8	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEIsh WADE   Richard Lewis
OMAR PENA[illegible]
Dwight Anderson
Cal. Gas Exp. Date: 9-21-21

Date: 7-26-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 84 Precip: 0 Upwind BG: 2.4 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
90	LW	1515	1530	34	1	2	8	
91	OP	1515	1530	17	1	2	8	
92	DA	1515	1530	21	1	2	8	
93	RL	1515	1530	19	1	2	8	
94	LW	1530	1545	20	3	5	7	
95	OP	1530	1545	11	3	5	7	
96	DA	1530	1545	16	3	5	7	
97	RL	1530	1545	14	3	5	7	
98	LW	1545	1600	36	4	6	7	
99	OP	1545	1600	24	4	6	7	
100	DA	1545	1600	21	4	6	7	
101	RL	1545	1600	16	4	6	7	
102	LW	1600	1615	18	4	6	7	
103	OP	1600	1615	25	4	6	7	
104	DA	1600	1615	14	4	6	7	
105	RL	1600	1615	17	4	6	7	

Attach Calibration Sheet
Attach site map showing grid ID

Page 3 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: LEISHWADE

Cal. Gas Exp. Date: _______

Date: 7-26-21 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	
9								Active tress
13								
16								
21								
26								↓
14								steep slopes
17								
22								
27								
32								
38								
44								
51								
56								↓
23								no waste in place
28								
33								
34								
39								
40								
45								
46								
52								
53								
57								
58								
62								
63								
68								↓

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 1

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site Guadalupe

Quarter / Year: 3RD 2021
Technician: LEIGH WADE
Instrument: TVA 1000
Calibration Standard: 500ppm

Page of Pages

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	
O-76	42	512	7-26-21										Well 185
O-77	67	2000											Sump 1
O-78	67	1000											Sump 2
O-79	67	600											Pipe
O-80	67	750											Butterfly Valve
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													

SITE: Guadalupe

DATE: 3RD Quarter

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
SVE2	1	21		
NONE	2			
SVE1	3	36		
CC188	4	17		
NONE	5			
NONE	6			
CC196	7	21		
Well202	8	54		
Well179	9	Active		
Well198	9	↓		
Well159	9			
Well176	10	31		
Well233	10	17		
Well232	10	24		
NONE	11			

SITE: Guadalupe **DATE:**

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
Well 214	12	24		
Well 158	12	89		
Well 178	13	Active		
Black pipe	13			
Well 199	13			
annorized well	13			
Well 200	13	↓		
Well 208	16	Active		
Well 180	16			
Grey pipe	16			
Black pipe	16			
Well 152	16	↓		
Well 181	21	Active		
Well 236	26	Active		
Well 216	31	27		
Well 190		59		
Well 215	32	Steep slope		
Well 205	32	↓		
Well 185	42	512		

SITE: 6650 9/4/05

DATE:

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
WELL 217	43	52		
WELL 235	43	46		
NONE	47			
NONE	48			
NONE	49	–		
WELL 218	50	29		
WELL 183	50	60		
NONE	54			
WELL 184	55	27		
WELL 187	55	34		
WELL 192	55	61		
WELL 173	59	42		
WELL 129	60	34		
WELL 219	60	16		
WELL 220	60	25		
NONE	61			
SUMP 2	62 OR 67			
NONE	64			

SITE: [illegible]　　　　**DATE:**

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
Well243	65	25		
Well241	65	17		
Well226	66	31		
Well238	66	84		
Blackpipe	67	2,000		
Blackpipe	67	1,000		
Blackpipe	67	600		
Blackpipe	67	700		
Well172	69	34		
NONE	70			
NONE	71			
HO-8	72	39		
NONE	73			
NONE	74			
Well242	75	31		
Well240	75	64		
Well135	76	25		
Well239	76	13		

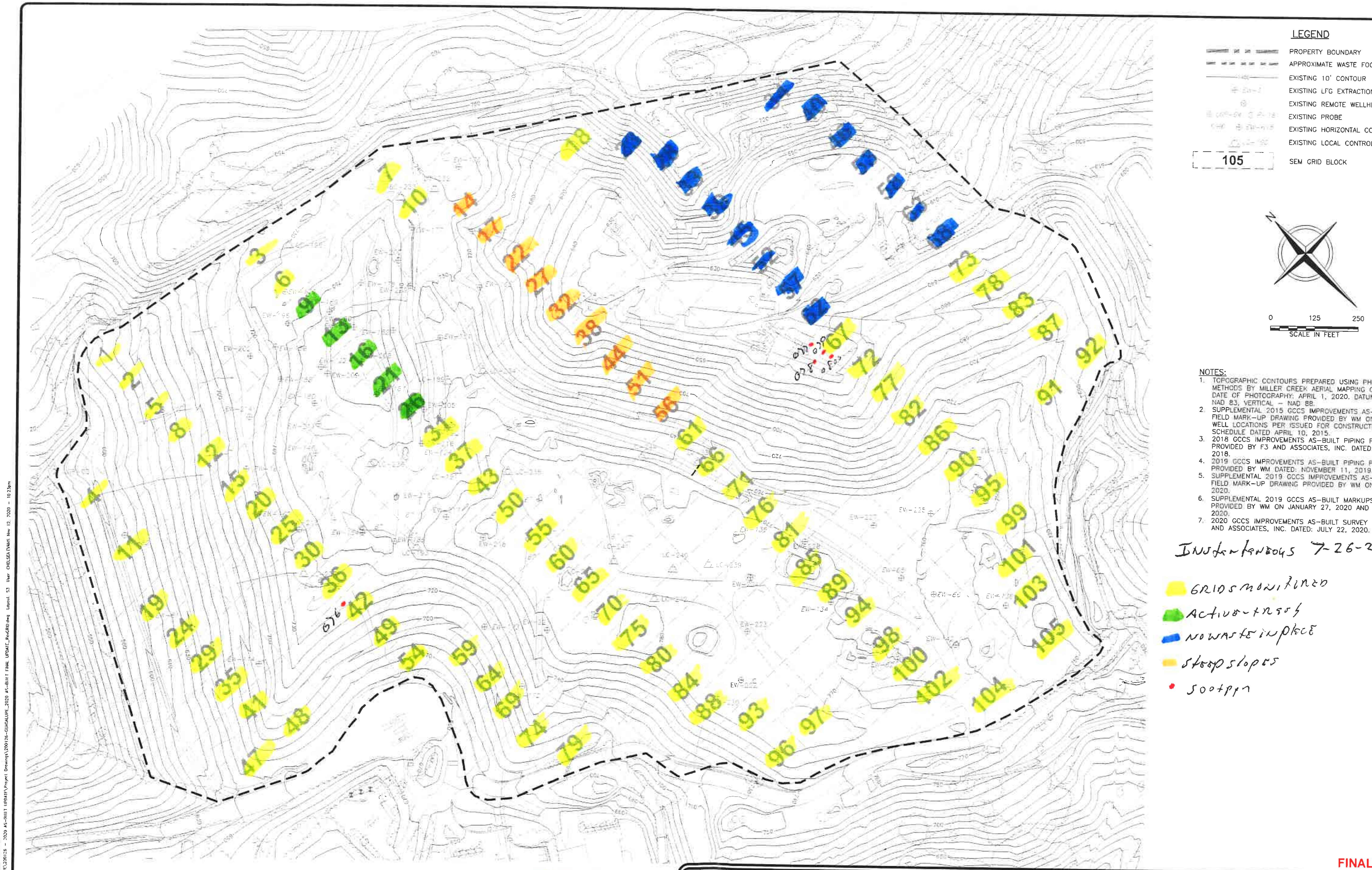
SITE: Guadalupe **DATE:** ______

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
NONE	77			
NONE	78			
NONE	79			
NONE	80			
Well224	81	35		
NONE	82			
NONE	83			
Well220	84	17		
Well228	85	24		
NONE	86			
NONE	87			
Well222	88	50		
Well230	88	16		
Well227	89	35		
Well134	89	81		

SITE: Glendelyn

DATE:

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
WELL225	90	34		
Well 112		21		
NONE	91			
NONE	92			
NONE	93			
WELL65	94	20		
NONE	95			
NONE	96			
NONE	97			
EW 66	98	3.6		
NONE	99			
LFG 62	100	21		
NONE	101			
Well142	102	18		
Well138	103	25		



LEGEND

PROPERTY BOUNDARY
APPROXIMATE WASTE FOOTPRINT
EXISTING 10' CONTOUR
EXISTING LFG EXTRACTION WELL
EXISTING REMOTE WELLHEAD
EXISTING PROBE
EXISTING HORIZONTAL COLLECTOR WELLHEAD
EXISTING LOCAL CONTROL WELL
105 SEM GRID BLOCK

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON MAY 29, 2015. WELL LOCATIONS PER ISSUED FOR CONSTRUCTION WELL SCHEDULE DATED APRIL 10, 2015.
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4. 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY WM DATED: NOVEMBER 11, 2019.
5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

INSTANTANEOUS 7-26-21

🟨 GRIDS MONITORED
🟩 Active trash
🟦 no waste in place
🟧 steep slopes
● 500ppm

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVP
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

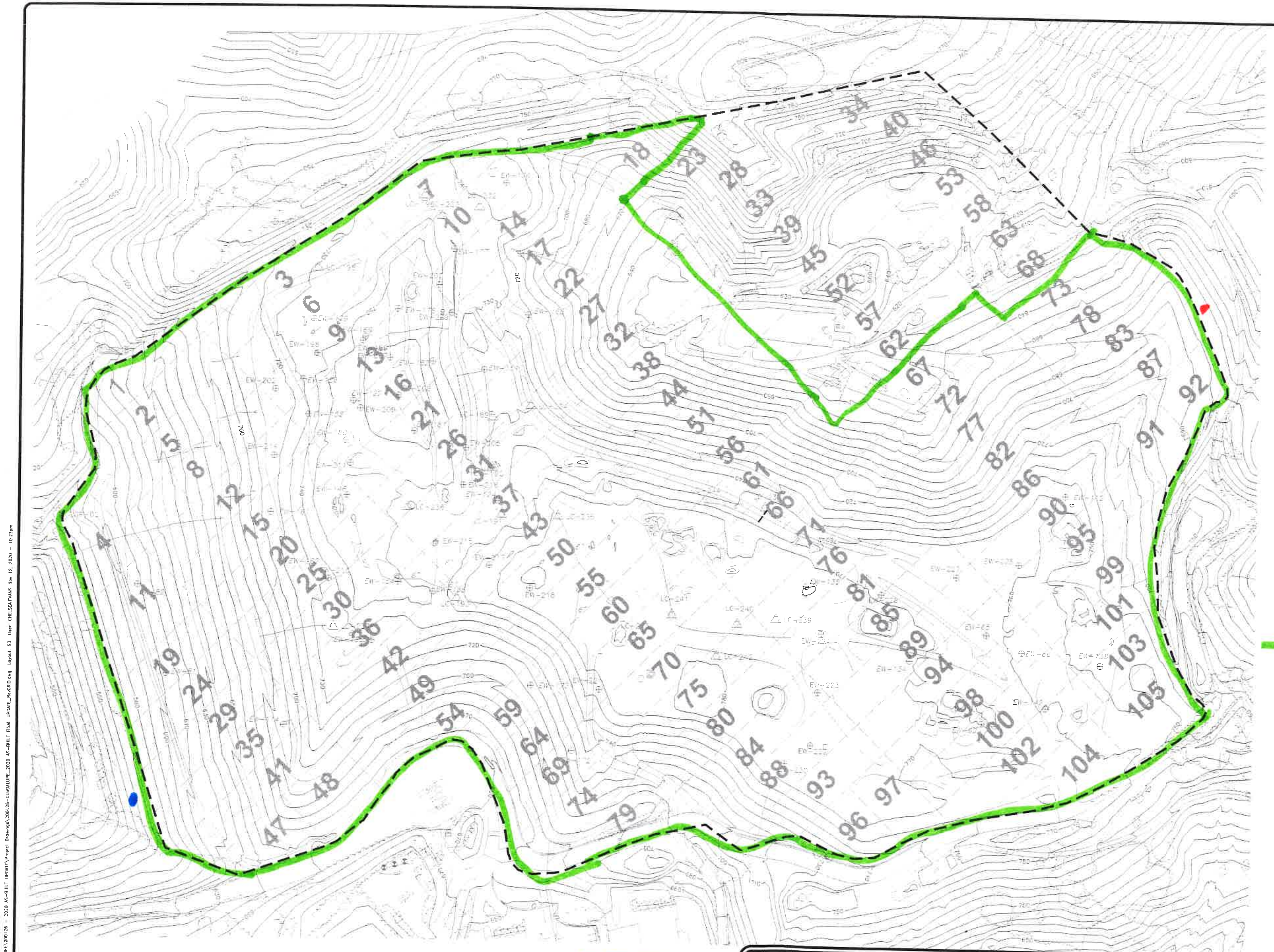
GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3

PROJECT NO.
200126

File: X:\PROJECTS\GUADALUPE\200126 – 2020 AS-BUILT UPDATE\Project Drawings\200126-GUADALUPE_2020 AS-BUILT FINAL UPDATE_RevGRID.dwg Layout: S3 User: CHELSEA.EVANS Nov 12, 2020 – 10:23pm



LEGEND

▬ ▬	PROPERTY BOUNDARY
— — —	APPROXIMATE WASTE FOOTPRINT
—1400—	EXISTING 10' CONTOUR
⊕ EW-1	EXISTING LFG EXTRACTION WELL
⊛	EXISTING REMOTE WELLHEAD
⊕	EXISTING PROBE
⊕	EXISTING HORIZONTAL COLLECTOR WELLHEAD
△ LC-10	EXISTING LOCAL CONTROL WELL
105	SEM GRID BLOCK

N

0 125 250

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
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7. 2020 GCCS IMPROVEMENTS AS–BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

🟩 3RD Quarter 2021 NSPS SWEEP

● Upwind

● Downwind

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020

DRAWN BY GVP

DESIGNED BY DHK

CHECKED BY AMN

APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3

PROJECT NO.
200126

File: Y:\PROJECTS\GUADALUPE\200126 - 2020 AS-BUILT FINAL UPDATE\Project Drawings\200126-GUADALUPE_2020 AS-BUILT FINAL UPDATE_RevGRID.dwg Layout: S3 User: CHELSEA.TWAIS Nov 12, 2020 - 10:23pm

Attachment B

Integrated Surface Emission Monitoring Event Records

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: **Guadalupe Recycling & Disposal 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						

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leigh Wadot / Omar Pencella / Dwight Anderson / Richard Lemos

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

Date: 7-27-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 60 Precip: 0 Upwind BG: 2.4 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1	LW	0530	0555	3.74	2	3	4	
2	OP	0530	0555	4.11	2	3	4	
3	DA	0530	0555	3.98	2	3	4	
4	RL	0530	0555	4.26	2	3	4	
5	LW	0555	0620	3.71	2	3	4	
6	OP	0555	0620	5.54	2	3	4	
7	DA	0555	0620	5.82	2	3	4	
8	RL	0555	0620	6.13	2	3	4	
10	LW	0620	0645	5.91	2	3	4	
11	OP	0620	0645	4.15	2	3	4	
12	DA	0620	0645	5.54	2	3	4	
15	RL	0620	0645	6.61	2	3	4	
18	LW	0645	0710	5.98	2	3	4	
19	OP	0645	0710	4.74	2	3	4	
20	DA	0645	0710	5.38	2	3	4	
24	RL	0645	0710	4.67	2	3	4	
25	LW	0710	0735	5.55	2	3	3	
29	OP	0710	0735	4.84	2	3	3	
30	DA	0710	0735	6.11	2	3	3	
31	RL	0710	0735	6.02	2	3	3	
35	LW	0735	0800	5.54	2	3	16	
36	OP	0735	0800	6.28	2	3	16	
37	DA	0735	0800	5.45	2	3	16	
41	RL	0735	0800	6.08	2	3	16	
42	LW	0800	0825	5.32	2	3	16	
43	OP	0800	0825	6.45	2	3	16	
47	DA	0800	0825	4.92	2	3	16	
48	RL	0800	0825	4.56	2	3	16	
49	LW	0825	0850	6.13	2	3	16	
50	OP	0825	0850	5.74	2	3	16	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 3

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leif Lward   Richard Lomas
Omar Penalza
Dwight Anderson

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

Date: 7-27-21   Instrument Used: TVA 1000   Grid Spacing: 25'

Temperature: 65   Precip: 0   Upwind BG: 2.4   Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
54	DA	0825	0850	6.27	2	3	16	
55	RL	0825	0850	5.41	2	3	16	
59	LW	0850	0915	4.28	2	3	16	
60	OP	0850	0915	5.11	2	3	16	
61	DA	0850	0915	4.77	2	3	16	
64	RL	0850	0915	5.63	2	3	16	
65	LW	0915	0940	5.99	2	3	16	
66	OP	0915	0940	4.38	2	3	16	
67	DA	0915	0940	5.24	2	3	16	
69	RL	0915	0940	5.66	2	3	16	
70	LW	0940	1005	6.27	2	3	16	
71	OP	0940	1005	6.45	2	3	16	
72	DA	0940	1005	7.14	2	3	16	
73	RL	0940	1005	6.89	2	3	16	
74	LW	1005	1030	5.44	2	3	16	
75	OP	1005	1030	5.86	2	3	16	
76	DA	1005	1030	4.21	2	3	16	
77	RL	1005	1030	4.75	2	3	16	
78	LW	1030	1055	5.07	2	3	16	
79	OP	1030	1055	4.80	2	3	16	
80	DA	1030	1055	5.54	2	3	16	
81	RL	1030	1055	5.02	2	3	16	
82	LW	1055	1120	4.65	2	3	16	
83	OP	1055	1120	4.21	2	3	16	
84	DA	1055	1120	5.13	2	3	16	
85	RL	1055	1120	4.65	2	3	16	
86	LW	1150	1215	4.40	2	3	16	
87	OP	1150	1215	5.19	2	3	16	
88	DA	1150	1215	4.71	2	3	16	
89	RL	1150	1215	4.66	2	3	16	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 3

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leigh Wadt   Richard Lamus
Omar Peralta
Dwight Anderson
Cal. Gas Exp. Date: 9-21-21

Date: 7-27-21   Instrument Used: TVA1000   Grid Spacing: 25'

Temperature: 71   Precip: 0   Upwind BG: 2.4   Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
90	LW	1215	1240	4.28	2	3	16	
91	OP	1215	1240	5-30	2	3	16	
92	DA	1215	1240	4-71	2	3	16	
93	RL	1215	1240	5.28	2	3	16	
94	LW	1240	1305	5.16	2	3	16	
95	OP	1240	1305	4.39	2	3	16	
96	DA	1240	1305	5.12	2	3	16	
97	RL	1240	1305	4.75	2	3	16	
98	LW	1305	1330	4-68	2	3	4	
99	OP	1305	1330	5.84	2	3	4	
100	DA	1305	1330	6.17	2	3	4	
101	RL	1305	1330	5.92	2	3	4	
102	LW	1330	1355	5-47	2	3	4	
103	OP	1330	1355	4.30	2	3	4	
104	DA	1330	1355	4.55	2	3	4	
105	RL	1330	1355	5.13	2	3	4	

Attach Calibration Sheet
Attach site map showing grid ID

Page 3 of 3

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leighwood

Cal. Gas Exp. Date:

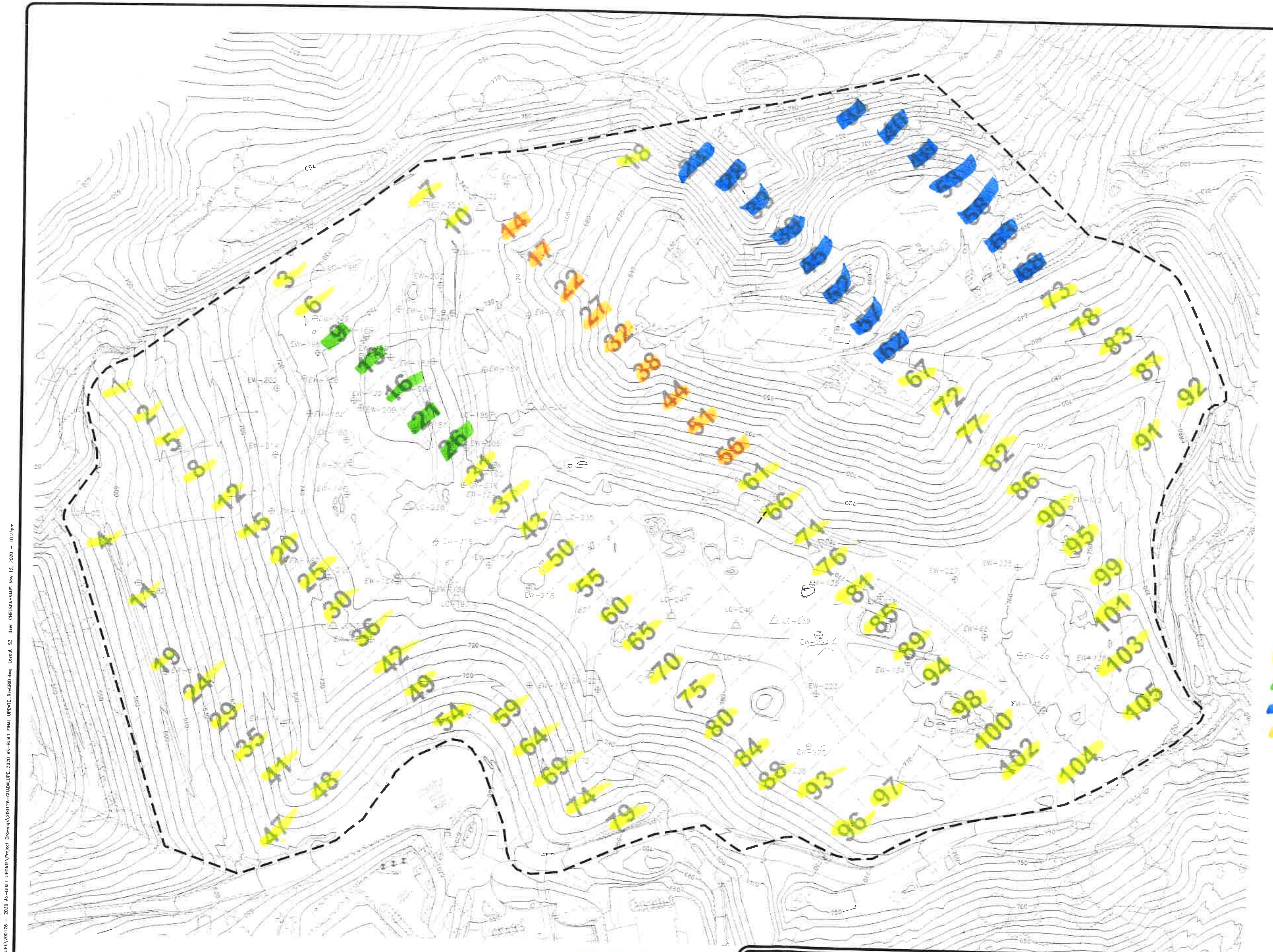
Date: 7-27-21 Instrument Used: Grid Spacing:

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	
9								Active faces
13								
16								
21								
26								
14								Steep slopes
17								
22								
27								
32								
38								
44								
51								
56								
23								No waste in place
28								
33								
34								
39								
40								
45								
46								
52								
53								
57								
58								
62								
63								
68								

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 1



LEGEND

	PROPERTY BOUNDARY
	APPROXIMATE WASTE FOOTPRINT
	EXISTING 10' CONTOUR
	EXISTING LFG EXTRACTION WELL
	EXISTING REMOTE WELLHEAD
	EXISTING PROBE
	EXISTING HORIZONTAL COLLECTOR WELLHEAD
	EXISTING LOCAL CONTROL WELL
105	SEM GRID BLOCK

N

0 125 250

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
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7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

INTEGRATED 7-27-21

🟨 Grids monitored

🟩 Active - trees

🟦 No waste in place

🟧 steep slopes

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020

DRAWN BY GVP

DESIGNED BY DHK

CHECKED BY AMN

APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3

PROJECT NO.
200126

Attachment C

Component Leak Monitoring Event Records

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station A-9	7/26/2021	ND	RES	NA	NA	NA	NA	NA
Flare Station A-14	7/26/2021	ND	RES	NA	NA	NA	NA	NA

ND= Non Exceedances

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

2021 QUARTER: 3

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station A-9	7/26/2021	ND	RES	NA	NA	NA	NA	NA
Flare Station A-14	7/26/2021	ND	RES	NA	NA	NA	NA	NA

ND= Non Exceedances

LANDFILL NAME: [illegible]

QUARTERLY LFG COMPONENT LEAK MONITORING

INSTRUMENT FID
MAKE: Thermo Environr
MODEL: TVA 1000
S/N: 1036346773

DATE OF SAMPLING: 7-26-21
TECHNICIAN: Leigh Vance

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
NO EXCEEDANCES							

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).

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

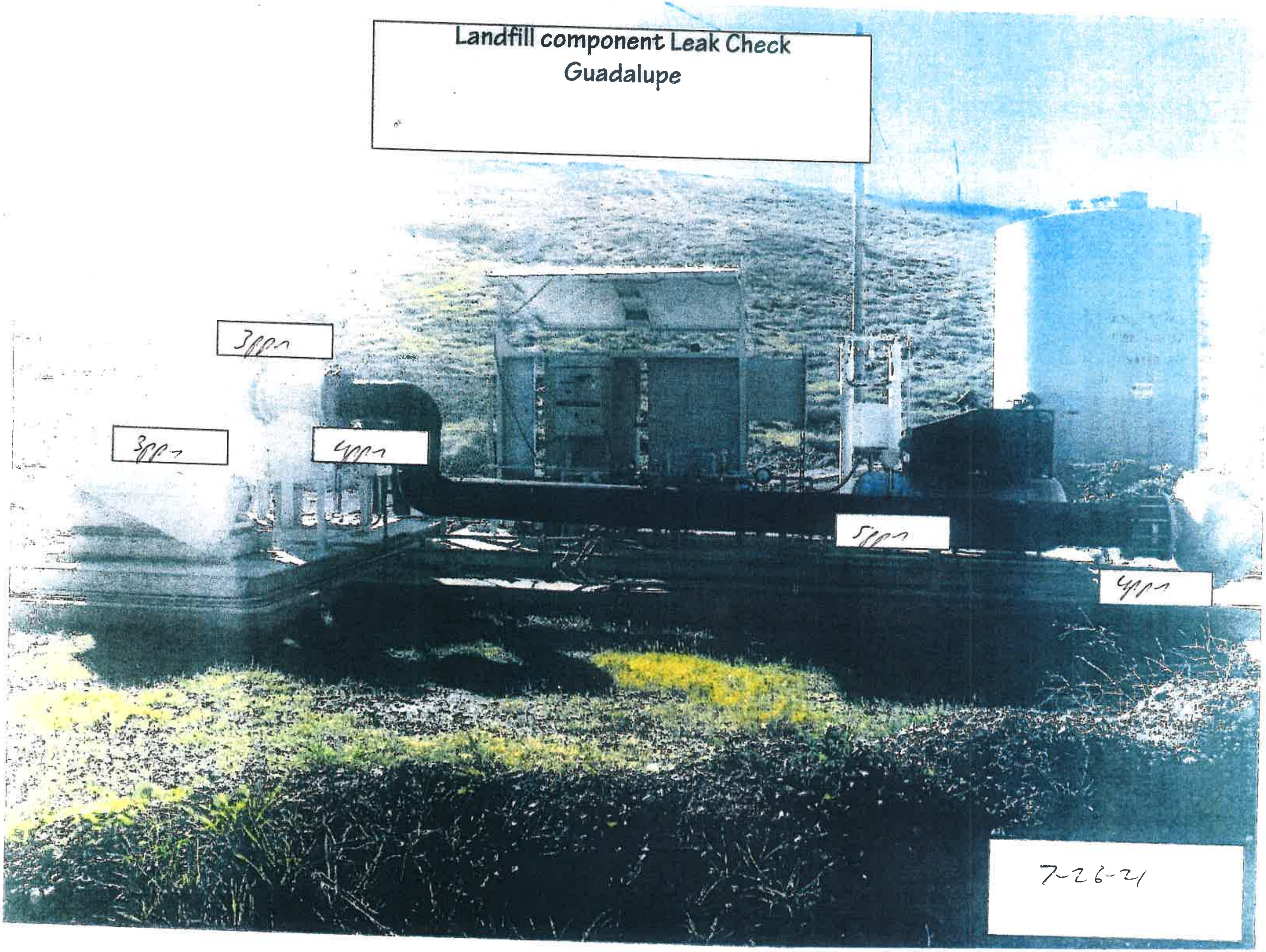
Landfill component Leak Check
Guadalupe

4ppm

3ppm

3ppm

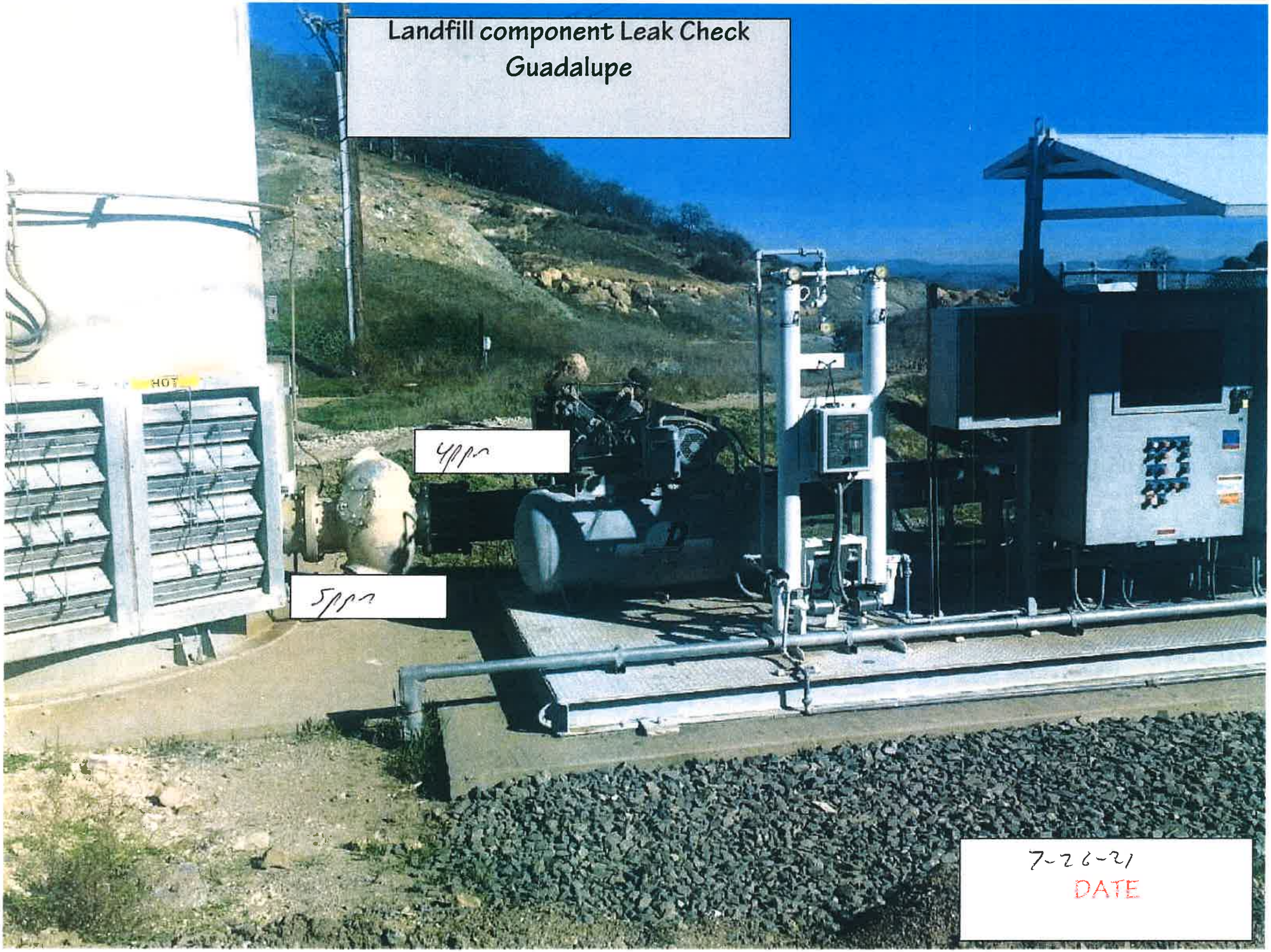
7-26-21
DATE



Landfill component Leak Check
Guadalupe

7-26-21

Landfill component Leak Check Guadalupe

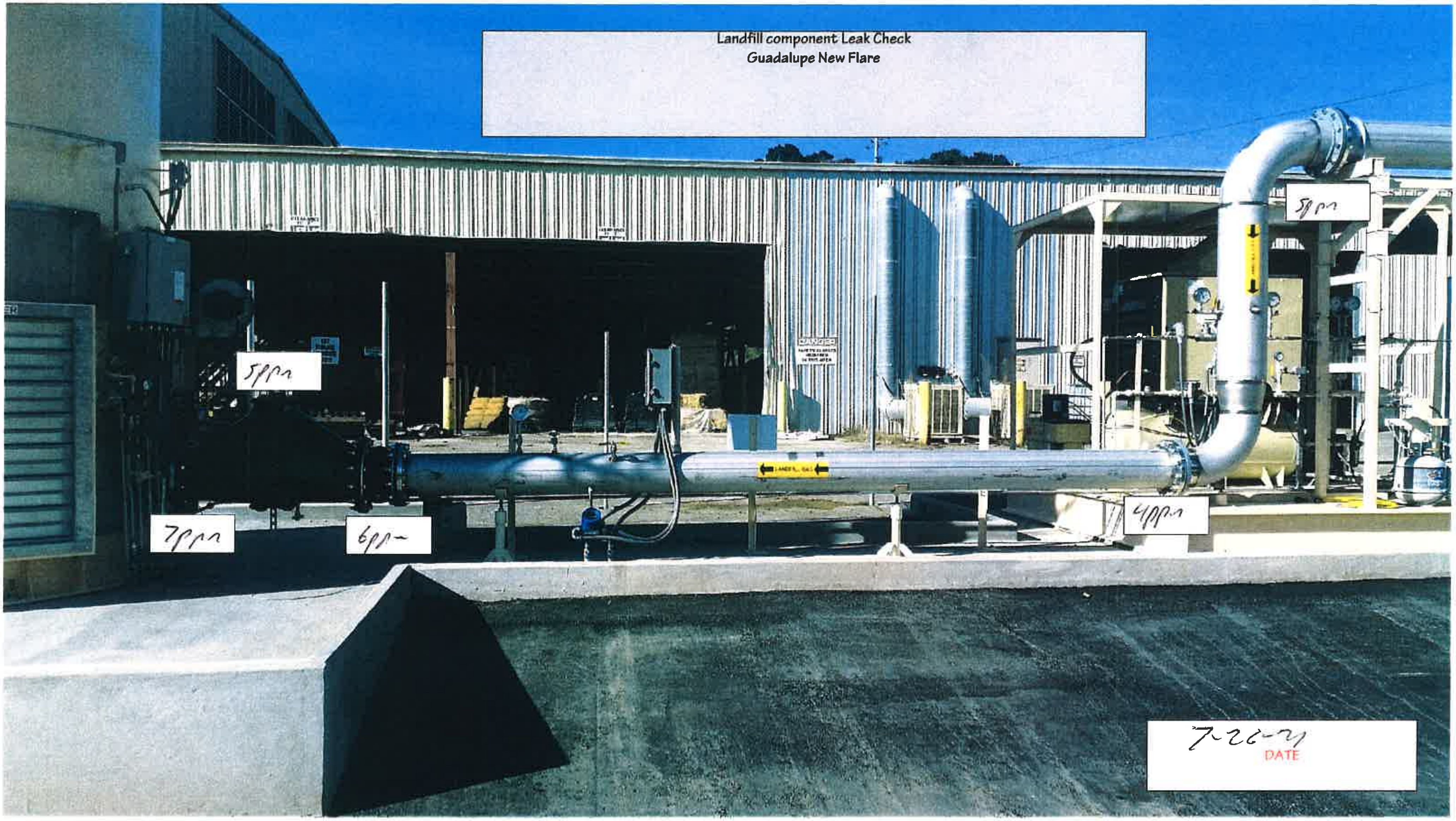


4ppm

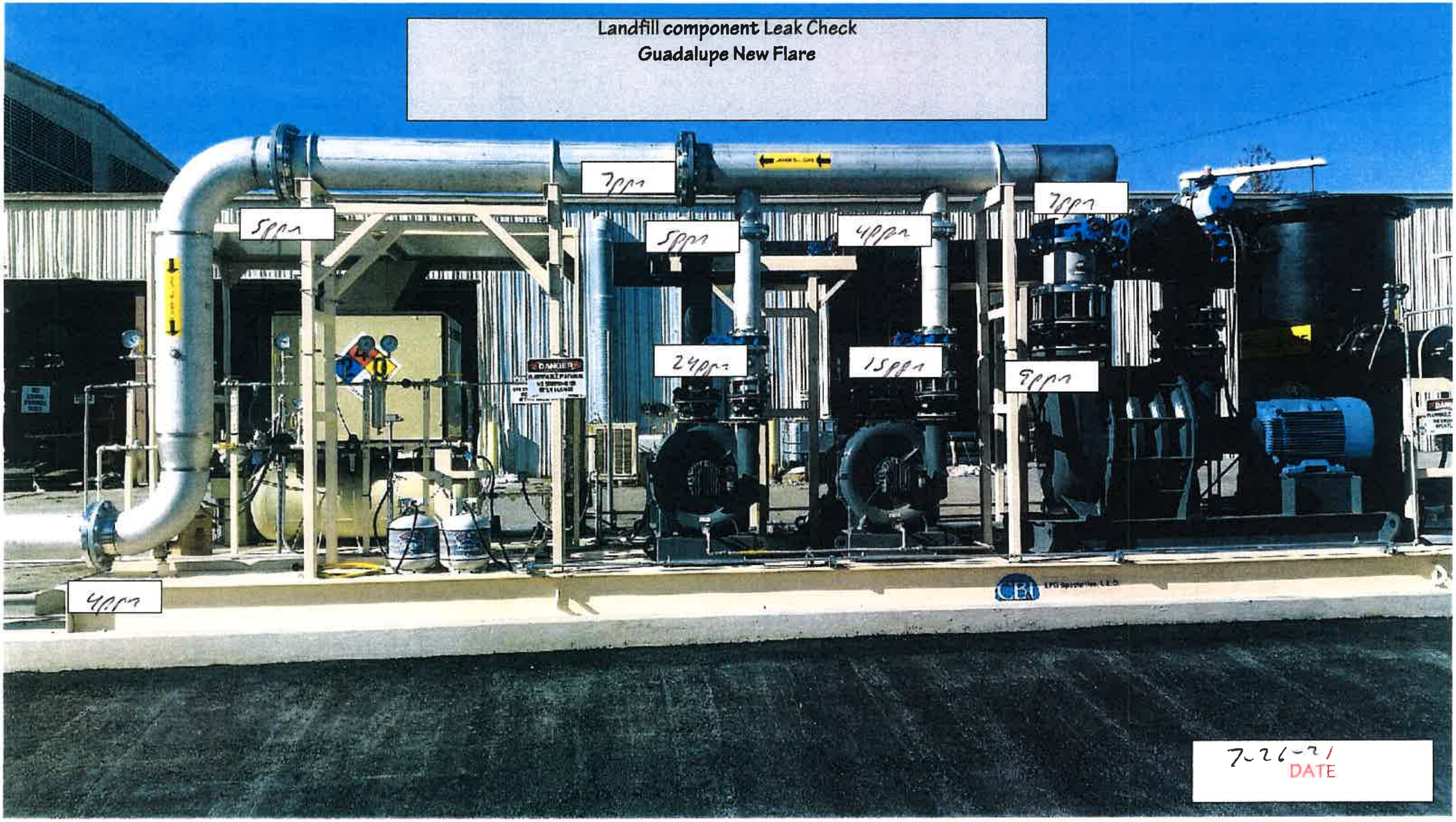
5ppm

7-26-21
DATE

Landfill component Leak Check
Guadalupe New Flare

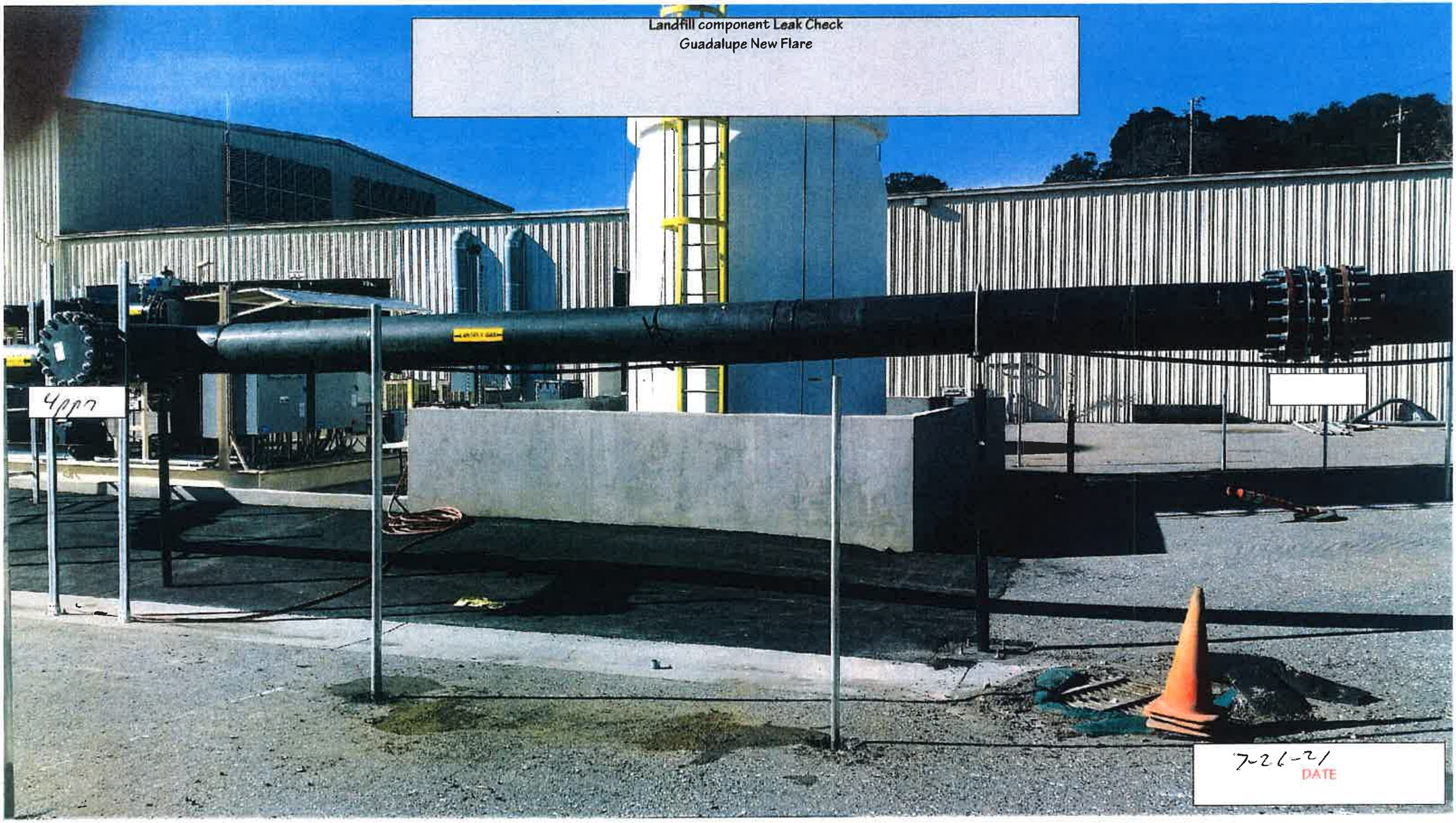


7-26-21
DATE



Landfill component Leak Check
Guadalupe New Flare

7-26-21
DATE



Landfill component Leak Check
Guadalupe New Flare

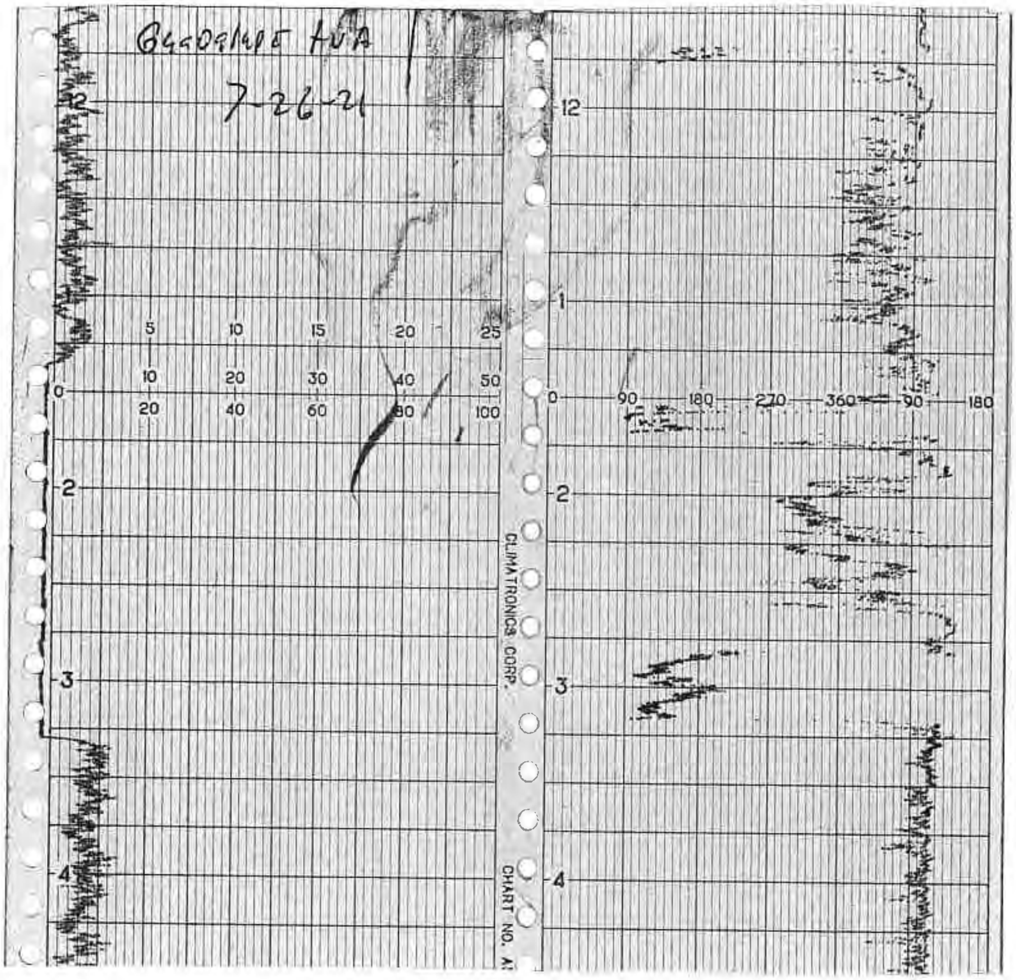
4ppm

7-26-21
DATE

Attachment D

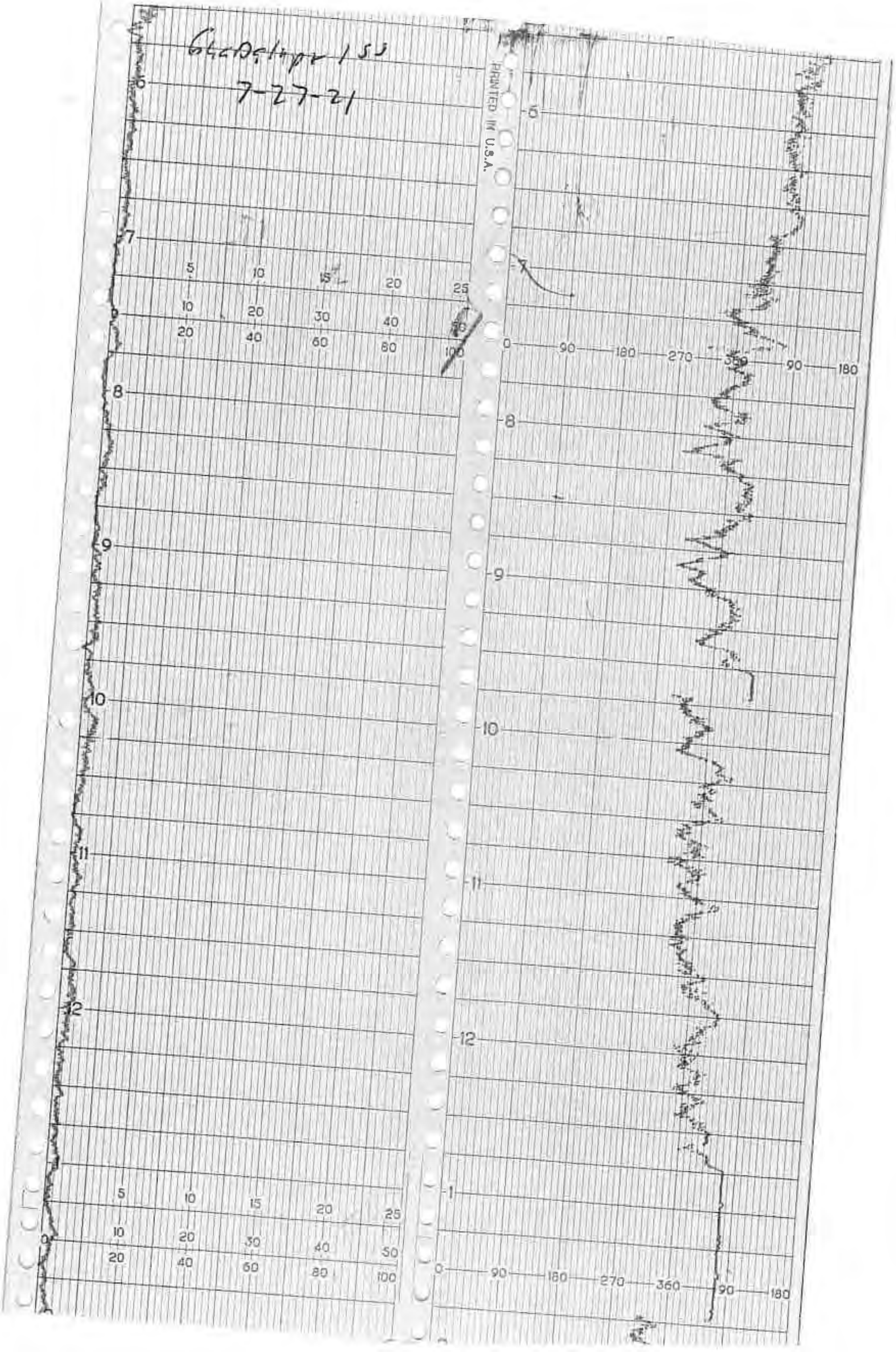
Weather Station Data

WIND SPEED & DIRECTION CHART ROLL



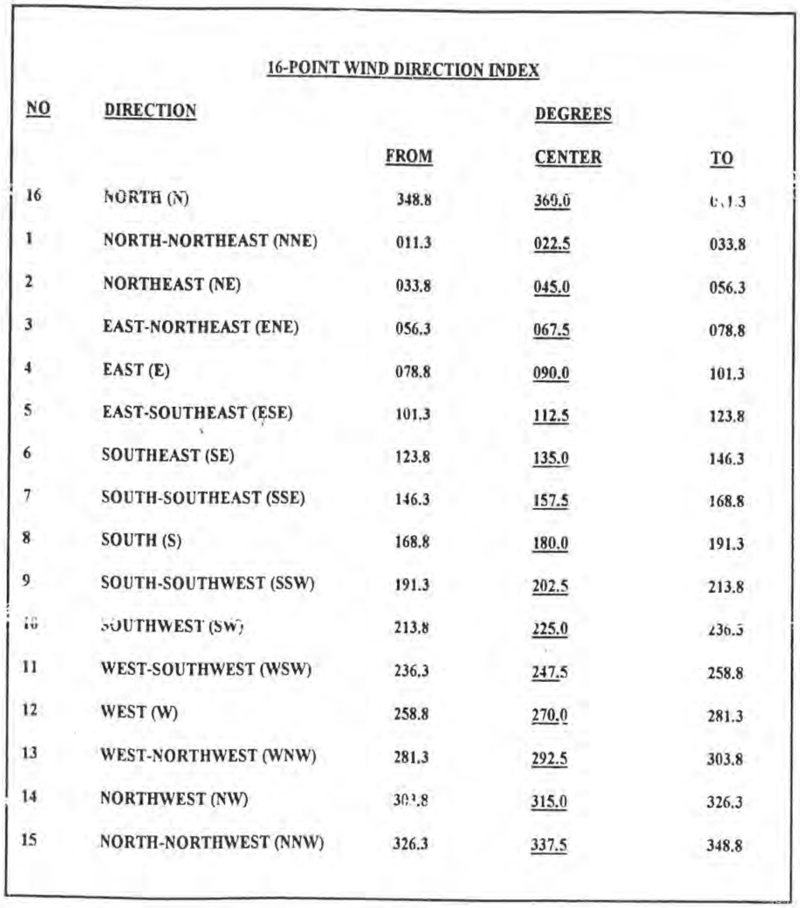
Guadalupe AVA
7-26-21

WIND SPEED & DIRECTION CHART ROLL



Gladstone 150
7-27-21

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

Attachment E

Calibration Records

RES
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CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 13 SERIAL #: 1162746775

MONITORING DATE: 7-26-21 TIME: 1120

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	**Downwind Background Reading:** (Highest in 30 seconds)	**Background Value:** $\frac{\text{(Upwind + Downwind)}}{2}$
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 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	5
#2	500 ppm	450 ppm	5
#3	500 ppm	450 ppm	5
Calculate Response Time $\frac{(1+2+3)}{3}$			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	0.32 ppm	506 ppm	6
#2	0.16 ppm	500 ppm	0
#3	0.10 ppm	500 ppm	0
Calculate Precision	$\frac{\text{[STD-B1] + [STD-B2] + [STD-B3]}}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.40 #DIV/0! Must be less than 10%

Performed By: omar peralta Date/Time: 7-26-21 -1120

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: 64c0slyln INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 10 SERIAL #: 1036346773

MONITORING DATE: 7-26-21 TIME: 1120

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
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 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	505 ppm	455 ppm	7
#2	500 ppm	450 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	0.31 ppm	505 ppm	5
#2	0.18 ppm	500 ppm	0
#3	0.10 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.33 #DIV/0! Must be less than 10%

Performed By: Date/Time 7-26-21 - 1120

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo
MODEL: TVA1000 EQUIPMENT #: 11 SERIAL #: 1636346772
MONITORING DATE: 7-26-21 TIME: 1120

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
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 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	489 ppm	5
#2	502 ppm	452 ppm	5
#3	500 ppm	450 ppm	5
	Calculate Response Time $\frac{(1+2+3)}{3}$		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	0.21 ppm	489 ppm	11
#2	0.14 ppm	502 ppm	2
#3	0.08 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.86 #DIV/0! Must be less than 10%

Performed By Dwight Anderson Date/Time 7-26-21 – 1120

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Glcoslupr INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1636246741

MONITORING DATE: 7-26-21 TIME: 1120

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
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 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	0.27 ppm	490 ppm	10
#2	0.19 ppm	500 ppm	0
#3	0.14 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.66 #DIV/0! Must be less than 10%

Performed By Ricardo Lonos Date/Time 7-26-21 – 1120

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo

MODEL: TVA 1000 EQUIPMENT #: 10 SERIAL #: 1036J46773

MONITORING DATE: 7-27-21 TIME: 0525

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
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 **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 $\frac{(1+2+3)}{3}$			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	0.27 ppm	24 ppm	1
#2	0.21 ppm	25 ppm	0
#3	0.12 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		1.3 #DIV/0! Must be less than 10%

Performed By: Date/Time: 7-7-21 - 05.25

RES Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Greenslope INSTRUMENT MAKE: Thermo

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

MONITORING DATE: 7-27-21 TIME: 0525

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
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 **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	0.35 ppm	24 ppm	1
#2	0.16 ppm	24 ppm	1
#3	0.21 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		2.8 #DIV/0! Must be less than 10%

Performed By Dwight Anderson Date/Time: 7-27-21 0525

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo
MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1036246741
MONITORING DATE: 7-27-21 TIME: 0525

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	**Downwind Background Reading:** (Highest in 30 seconds)	**Background Value:** $\frac{\text{(Upwind + Downwind)}}{2}$
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 **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 $\frac{(1+2+3)}{3}$			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	0.73 ppm	23 ppm	2
#2	0.21 ppm	25 ppm	0
#3	0.14 ppm	25 ppm	0
Calculate Precision $\frac{\text{[STD-B1] + [STD-B2] + [STD-B3]}}{3} \text{ X } \frac{1}{25} \text{ X } \frac{100}{1}$			2.6 #DIV/0! Must be less than 10%

Performed By Richard Ramos Date/Time: 7-27-21 0525

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE: 7-27-21 TIME: 0525

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**
2.4 ppm	2.8 ppm	2.6 ppm

Background Value = 2.6 **ppm**

INSTRUMENT RESPONSE TIME RECORD

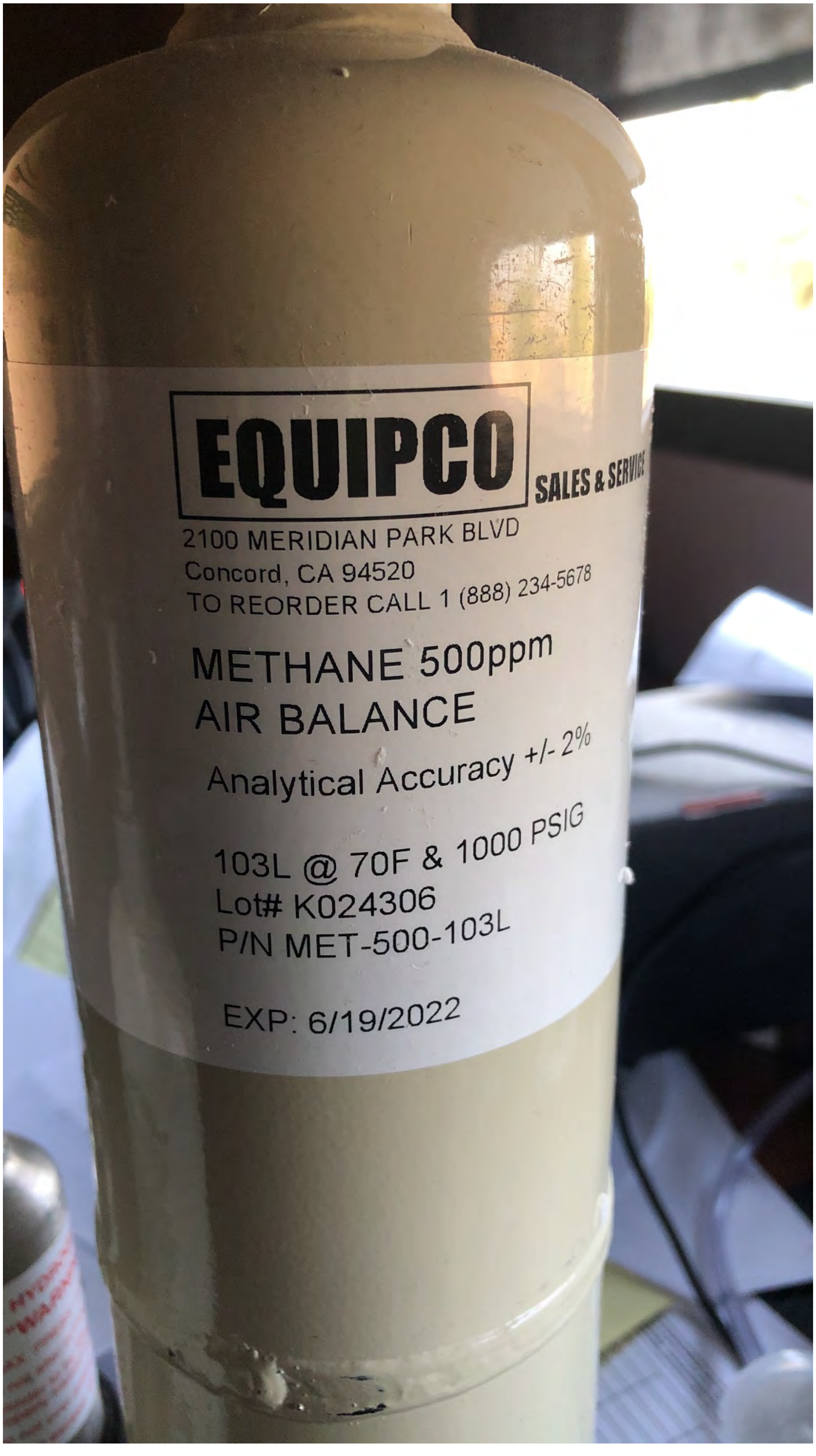
Measurement #	**Stabilized Reading Using Calibration Gas**	**90% of the Stabilized Reading**	**Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas**
#1	24 ppm	21.8 ppm	6
#2	25 ppm	22.5 ppm	6
#3	25 ppm	22.5 ppm	6
Calculate Response Time **(1+2+3)** / **3**			6 #DIV/0! 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	0.21 ppm	24 ppm	1
#2	0.11 ppm	25 ppm	0
#3	0.08 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: Date/Time: 7-27-21 – 0525



EQUIPCO SALES & SERVICE

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

METHANE 500ppm
AIR BALANCE

Analytical Accuracy +/- 2%

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

EXP: 6/19/2022

CALIBRATION PRECISION TEST RECORD

Date: 6/4/2021

Expiration Date (3 months): 9/4/2021

Time: 8:45 AM ______ PM

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

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 496 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: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(496) - (500)| + |(500) - (498)| + |(500) - (496)|\}}{3} \times \frac{1}{500} \times 100$$

1.0 % (must be < than 10%)

Performed by: M. Bernard

RESPONSE TIME TEST RECORD

Date: 6/4/21

Expiration Date (3 months): 9/4/21

Time: 8:50 AM ______ PM

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

Measurement #1:

Stabilized Reading Using Calibration Gas: 496 ppm

90% of the Stabilized Reading: 450 ppm

Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 10 seconds (a)

Measurement #2:

Stabilized Reading Using Calibration Gas: 498 ppm

90% of the Stabilized Reading: 450 ppm

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

Measurement #3:

Stabilized Reading Using Calibration Gas: 496 ppm

90% of the Stabilized Reading: 450 ppm

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

Calculate Response Time:

$\frac{(a) + (b) + (c)}{3}$ = 8 seconds (must be less than 30 seconds)

Performed by: M. Bernard

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 8/4/21

Time: 9:45 AM ________ PM

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

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 0.5 ppm

Performed by: Markus Bernard

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 8/24/21

Time: 11:45 AM ________ PM

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

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 0.5 ppm

Performed by: Markus Bernard

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www.isgases.com

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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

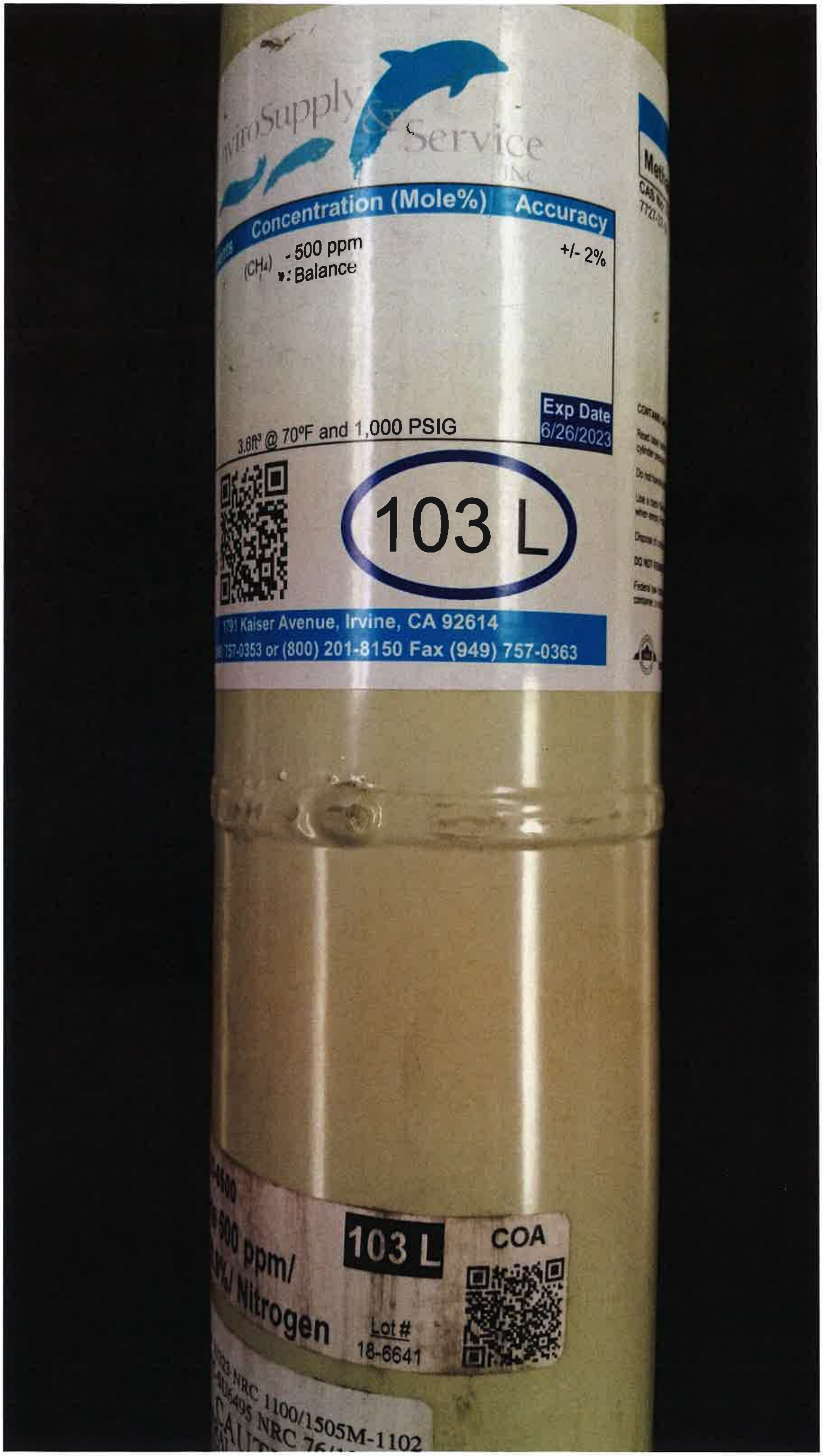
Method of Preparation:

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


viroSupply
Service
Inc
Concentration (Mole%)
Accuracy
(CH4) - 500 ppm
: Balance
+/- 2%
Exp Date
6/26/2023
3.6ft³ @ 70ºF and 1,000 PSIG
103 L
791 Kaiser Avenue, Irvine, CA 92614
757-0353 or (800) 201-8150 Fax (949) 757-0363
500 ppm/
Nitrogen
103 L
COA
Lot #
18-6641
NRC 1100/1505M-1102
NRC 76/

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CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy (+/-)
Methane	500 ppm	2%
Oxygen	20.9 %	2%
Nitrogen	Balance UHP	

Lot #	20-7497
Mfg. Date:	7/10/2020
Expiration Date:	
Transfill Date:	see cylinder
Parent Cylinder ID Number:	TWC001763

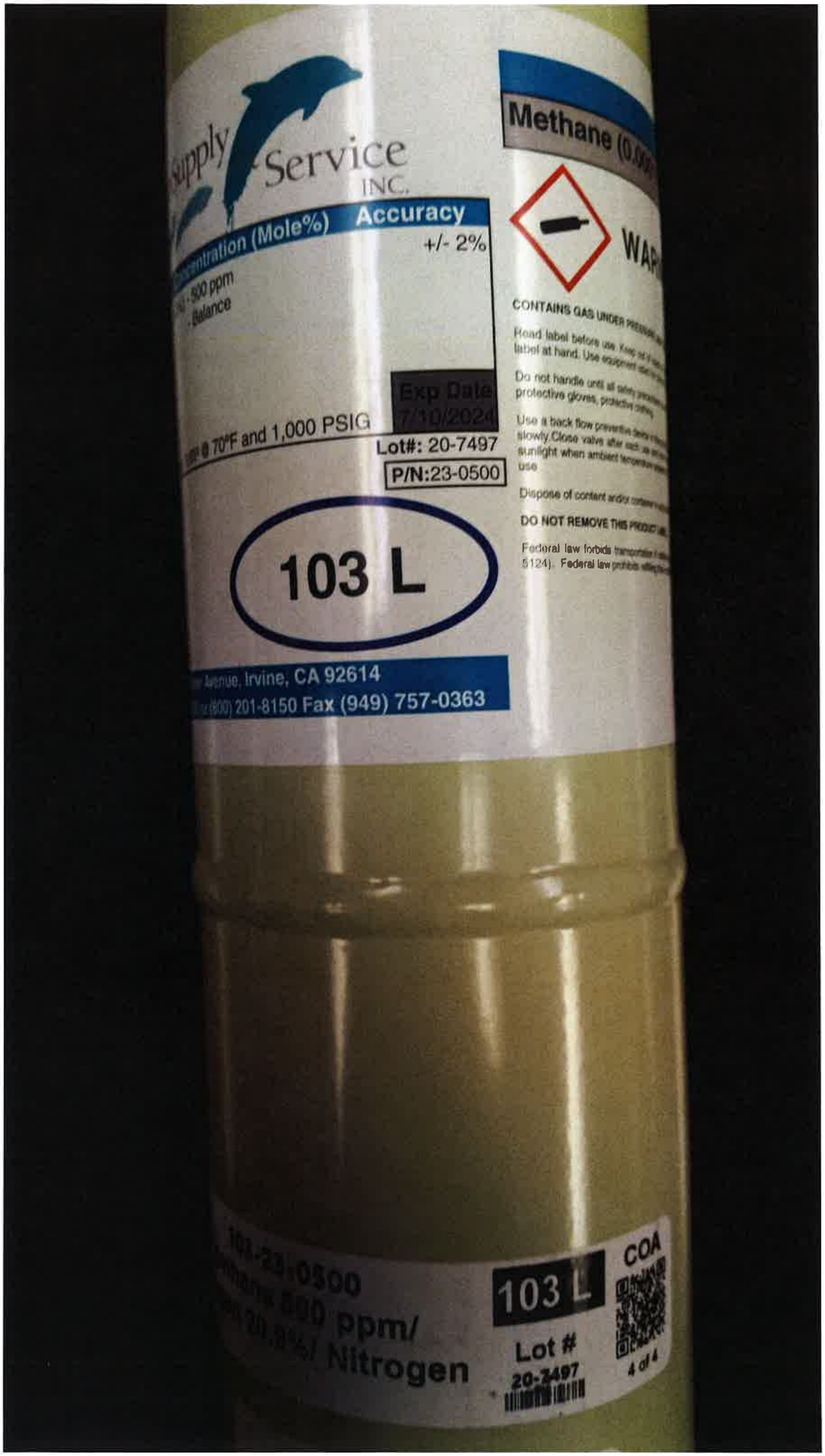
Method of Preparation:

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: 7/10/2020


Supply Service INC.
Concentration (Mole%)
Accuracy
+/- 2%
- 500 ppm
- Balance
Exp Date
7/10/2024
@ 70°F and 1,000 PSIG
Lot#: 20-7497
P/N:23-0500
103 L
Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
Methane (0.0
WAR
CONTAINS GAS UNDER PRESSURE
Read label before use. Keep out of
label at hand. Use equipment
Do not handle until all safety
protective gloves, protective clothing
Use a back flow preventive device
slowly.Close valve after each use
sunlight when ambient temperature
use
Dispose of content and/or container
DO NOT REMOVE THIS PRODUCT LABEL
Federal law forbids transportation
5124). Federal law prohibits
103-23-0500
Methane 500 ppm/
20.9%/ Nitrogen
103 L
Lot #
20-3497
COA
4 of 4

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800-552-5003 ● www.isgases.com

CERTIFICATE OF ANALYSIS

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

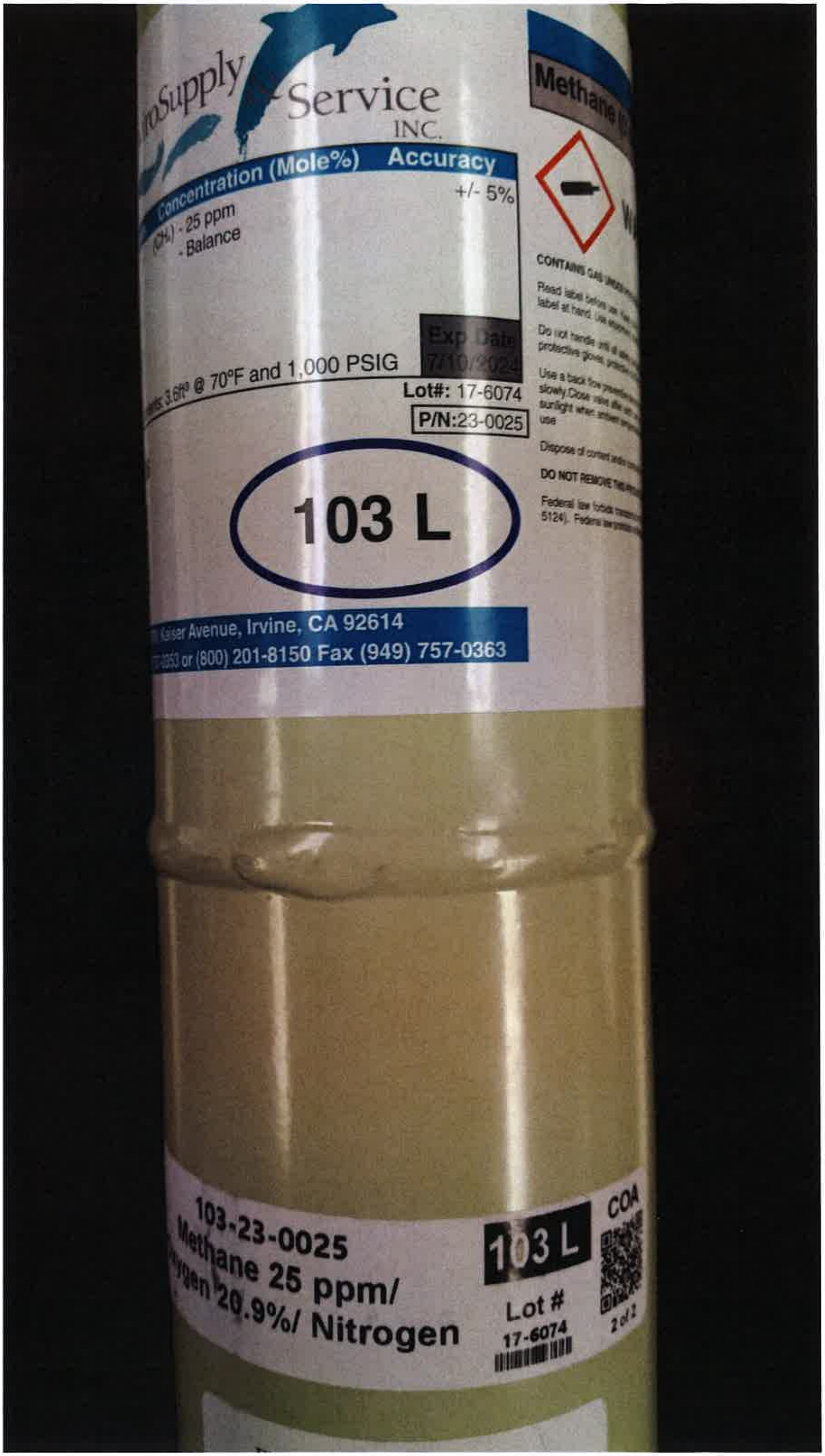
Lot # 17-6074

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



roSupply
Service
INC.
Methane
Concentration (Mole%)
Accuracy
+/- 5%
(CH4) - 25 ppm
- Balance
Exp Date
7/10/2024
nts: 3.6ft³ @ 70°F and 1,000 PSIG
Lot#: 17-6074
P/N:23-0025
103 L
Kaiser Avenue, Irvine, CA 92614
or (800) 201-8150 Fax (949) 757-0363
CONTAINS GAS
Read label before use.
label at hand.
Do not handle until all
protective gloves,
Use a back flow
slowly. Close valve after
sunlight when
use
Dispose of content
DO NOT REMOVE THIS
Federal law forbids
5124). Federal law
103-23-0025
Methane 25 ppm/
gen 20.9%/ Nitrogen
103 L
Lot #
17-6074
COA
2 of 2

INTERMOUNTAIN SPECIALTY GASES

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CERTIFICATE OF ANALYSIS

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

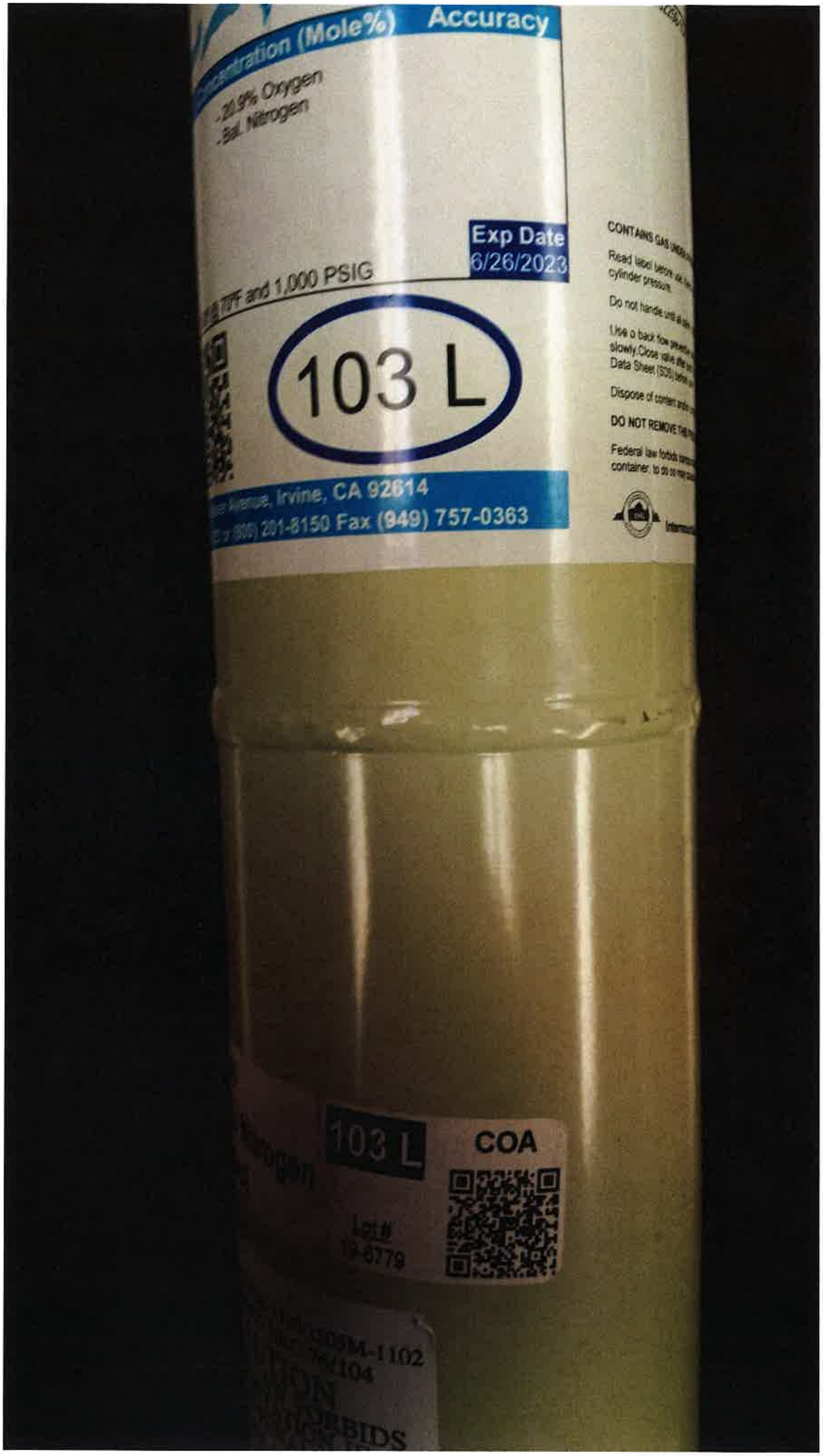
Lot # 19-6779

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


Accuracy
Concentration (Mole%)
-20.9% Oxygen
-Bal. Nitrogen
Exp Date
6/26/2023
at 70°F and 1,000 PSIG
103 L
Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
CONTAINS GAS UNDER
Read label before use
cylinder pressure.
Do not handle until all
Use a back flow preventer
slowly.Close valve after
Data Sheet (SDS) before
Dispose of content and/or
DO NOT REMOVE THIS
Federal law forbids
container, to do so may
103 L
COA
Lot #
19-6779
M-1102
104
BIDS

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 8-7-21 Time: 0830

Model # TVA 1000B

Serial # #10 1036346773

INSTRUMENT INTEGRITY CHECKLIST

Battery test [✓ Pass] / Fail

Reading following ignition 2.3 ppm

Leak test [✓ Pass] / Fail / NA

Clean system check (check valve chatter) [✓ Pass] / Fail / NA

H_2 supply pressure gauge (acceptable range 9.5 - 12) [✓ Pass] / Fail / NA

Date of last factory calibration 7-10-21

Factory calibration record w/instrument within 3 months [✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 5
2. 5
3. 5

Average 5.0

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH4 gas.

Comments:

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 8-7-21 **Time:** 0845

Model # TVA 1000 B

Serial # #11 1036346774

INSTRUMENT INTEGRITY CHECKLIST

Battery test [✓ Pass] / Fail

Reading following ignition 2.1 ppm

Leak test [✓ Pass] / Fail / NA

Clean system check (check valve chatter) [✓ Pass] / Fail / NA

H_2 supply pressure gauge (acceptable range 9.5 - 12) [✓ Pass] / Fail / NA

Date of last factory calibration 7-10-21

Factory calibration record w/instrument within 3 months [✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 5
2. 6
3. 6

Average 5.6

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH4 gas.

Comments:

RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 8-7-21 **Time:** 0900

Model # TVA 1000 B

Serial # #12 1036246741

INSTRUMENT INTEGRITY CHECKLIST

Battery test	[✓ Pass] / Fail
Reading following ignition	2.1 ppm
Leak test	[✓ Pass] / Fail / NA
Clean system check (check valve chatter)	[✓ Pass] / Fail / NA
H_2 supply pressure gauge (acceptable range 9.5 - 12)	[✓ Pass] / Fail / NA
Date of last factory calibration	7-10-21
Factory calibration record w/instrument within 3 months	[✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 6
2. 7
3. 7

Average 6.6

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH4 gas.

Comments:

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT

CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 8-7-21 Time: 0915

Model # TVA 1000B

Serial # #13 1107746775

INSTRUMENT INTEGRITY CHECKLIST

Battery test [✓ Pass] / Fail

Reading following ignition 7.0 ppm

Leak test [✓ Pass] / Fail / NA

Clean system check (check valve chatter) [✓ Pass] / Fail / NA

H_2 supply pressure gauge (acceptable range 9.5 - 12) [✓ Pass] / Fail / NA

Date of last factory calibration 7-10-21

Factory calibration record w/instrument within 3 months [✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 6
2. 7
3. 5

Average 6.0

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH4 gas.

Comments:

RES
Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES UNIT #10

SERIAL NUMBER: 1036346773

TECHNICIAN:

DATE: 7-10-21

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	10,026	+/- 2500
< 1	ZERO GAS	0.57	< 3

PID

ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

RES
Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #11

SERIAL NUMBER: 1036346774

TECHNICIAN: M Roberts DATE: 7-10-21

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	0.64	< 3

PID

ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES UNIT #12

SERIAL NUMBER: 1036246741

TECHNICIAN: R Roberts

DATE: 7-10-21

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	0.64	< 3

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

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

RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #13

SERIAL NUMBER: 1102746775

TECHNICIAN:

DATE: 7-10-21

GAS CALIBRATION CHECK (PERFORMED AT ROOM TEMPERATURE)

FID

METHANE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
100	100	99	+/- 25
500	500	500	+/- 125
10000	10000	10,101	+/- 2500
< 1	ZERO GAS	0.57	< 3

PID

ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

Guadalupe Rubbish
Disposal Co., Inc.
P.O. Box 20957
San Jose, CA 95160

July 26, 2021

Ms. Becky Azevedo
Guadalupe Rubbish Disposal Co., Inc
15999 Guadalupe Mines Road
San Jose, CA 95120

Re: Second Quarter 2021 Surface Emissions and Component Leak Monitoring Report for Guadalupe Recycling & Disposal Facility

Dear Ms. Azevedo:

This monitoring report for **"Guadalupe Rubbish Disposal Co., Inc. (GRDC)"** contains the results of the Second Quarter 2021 Integrated and Instantaneous Surface Emissions Monitoring (SEM) and Component Leak Monitoring. Initial surface emissions monitoring was performed by Roberts Environmental Services, LLC. (RES). Re-monitoring of surface emissions and component leak monitoring was conducted by RES and/or Waste Management (WM) personnel.

APPLICABLE REQUIREMENTS

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

Surface Emission Monitoring (SEM)

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

Component Leak

- 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 AB32 LMR.

GRDC 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 GRDC disposal area has been divided into one-hundred-and-five (105), approximately 50,000 square foot monitoring grids. Of these grids, eleven (11) currently have no waste in place. 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 GRDC AB-32 SEM Plan, which traverses each monitoring grid. Additionally, in accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface was monitored. During the event, special attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and any areas with unusual odors.

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

Instantaneous Surface Emissions Monitoring

The Instantaneous and Integrated SEM was conducted using flame ionization detectors (FID), 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 FIDs were calibrated prior to use in accordance with the United States Environmental Protection Agency (USEPA) Method 21 requirements. The 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 2 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

WM 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.

SECOND QUARTER 2021 SEM AND COMPONENT LEAK RESULTS

The following is a summary of the SEM and component leak monitoring results completed for the Second Quarter 2021.

Instantaneous Surface Emissions Monitoring Results

The Instantaneous surface monitoring was performed on May 18, 2021 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 10 exceedances of 500 ppm_v as methane detected on May 18, 2021. Corrective actions to initiate repairs of the exceedances were completed within five days for all locations (May 21, 2021).

Ten-Day Re-Monitoring Results

The 10-day re-monitoring event was completed on May 28, 2021. All locations were observed at less than 500 ppm_v.

One-Month Re-Monitoring Results

The 1-month re-monitoring event was completed on June 17, 2021. 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 June 6 and 7, 2021, 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 monitoring on June 6 and 7, 2021.

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 May 18, 2021. No leaks greater than 500 ppm$_v$ were identified during this monitoring period. 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 strip chart data is scanned and included in Attachment D.

Precipitation Requirements

Per the GRDC'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 rphadnis@wm.com.

Thank you,
Waste Management

Rajan Phadnis
Environmental Protection Specialist

Attachment A – Instantaneous Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- Surface Monitoring Weather Data
- SEM Map

Attachment B – Integrated Surface Emission Monitoring Event Records

- Monitoring Logs and Exceedances
- Surface Monitoring Weather Data
- 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

2021 QUARTER: 2

PERFORMED BY: RES

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Flag Number	Grid Number	Date of Monitoring	Concentration of Emission (ppmv)	Comments
61	67	5/18/2021	800	Black Pipe
62	67	5/18/2021	800	Black Pipe
21	75	5/18/2021	5000	Well 242
22	70	5/18/2021	543	Well 240
23	88	5/18/2021	1161	Well 230
1	3	5/18/2021	3000	Surface
2	6	5/18/2021	1000	White Cap Pipe
3	43	5/18/2021	700	Well 235
4	50	5/18/2021	600	Well 218
5	89	5/18/2021	5,000	Well 217

Notes: Please refer to field data sheets for details

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

2021 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM-Markus Bernard

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

Initial Monitoring Event			Corrective action within 5 days		1st 10-day Follow-Up			1st 30-day Follow-Up			
Flag Number	Monitoring Date	Field Reading	Repair Date	Action taken to repair Exceedance	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Monitoring Date	No Exced. <500 ppm	Exced. >500 ppm	Comments
61	5/18/2021	800	5/21/2021	Add Water Soil	5/28/2021	40 ppm		6/17/2021	0 ppm		Black Pipe
62	5/18/2021	800	5/21/2021	Add Water Soil	5/28/2021	42 ppm		6/17/2021	0 ppm		Black Pipe
21	5/18/2021	5000	5/21/2021	Adjust Valve	5/28/2021	20 ppm		6/17/2021	30 ppm		Well 242
22	5/18/2021	543	5/21/2021	Adjust Valve	5/28/2021	11 ppm		6/17/2021	21 ppm		Well 240
23	5/18/2021	1161	5/21/2021	Add Water Soil	5/28/2021	7 ppm		6/17/2021	12 ppm		Well 230
1	5/18/2021	3000	5/21/2021	Add Water Soil	5/28/2021	60 ppm		6/17/2021	0 ppm		Surface
2	5/18/2021	1000	5/21/2021	Adjust Valve	5/28/2021	50 ppm		6/17/2021	0 ppm		White Cap Pipe
3	5/18/2021	700	5/21/2021	Adjust Valve	5/28/2021	34 ppm		6/17/2021	5 ppm		Well 235
4	5/18/2021	600	5/21/2021	Adjust Valve	5/28/2021	23 ppm		6/17/2021	8 ppm		Well 218
5	5/18/2021	5,000	5/21/2021	Adjust Valve	5/28/2021	12 ppm		6/17/2021	0 ppm		Well 217

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

2021 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: WM-Markus Bernard

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

Initial Monitoring Event			1st Re-mon Event - 10 Days			2nd Re-mon Event - 10 Days			
Exceedance	Monitoring	Field	Monitoring	No Exced.	Exced.	Monitoring	No Exced.	Exced.	
Grid ID No.	Date	Reading	Date	<500 ppm	>500 ppm	Date	<500 ppm	>500 ppm	Comments
61	5/21/2021	800	5/28/2021	40 ppm					Black Pipe
62	5/21/2021	800	5/28/2021	42 ppm					Black Pipe
21	5/21/2021	5000	5/28/2021	20 ppm					Well 242
22	5/21/2021	543	5/28/2021	11 ppm					Well 240
23	5/21/2021	1161	5/28/2021	7 ppm					Well 230
1	5/21/2021	3000	5/28/2021	60 ppm					Surface
2	5/21/2021	1000	5/28/2021	50 ppm					White Cap Pipe
3	5/21/2021	700	5/28/2021	34 ppm					Well 235
4	5/21/2021	600	5/28/2021	23 ppm					Well 218
5	5/21/2021	5,000	5/28/2021	12 ppm					Well 217

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

2021 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: **Guadalupe Recycling & Disposal Facility**

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

Orange Flag Landfill Surface Emissions Monitoring
Exceedances and Monitoring Log

Site: Guadalupe

Quarter / Year: 2nd 2021
Technician: Leishware
Instrument: TVA1000
Calibration Standard: 500ppm

Page of Pages

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	
O-61	67	800	5-18-21										Black pipe
O-62	67	800											Black pipe
O-21	75	5,000											well 242
O-22	70	543											Well 240
O-23	88	1161											Well 230
O-1	3	3,000											Surface
O-2	6	1,000											White cap pipe
O-3	43	700											Well 235
O-4	50	600											well 218
O-5	89	5,000											well 227
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													
O-													

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Luis Wade
Omar Peralta
Jesse Moreno

Cal. Gas Exp. Date: 9-21-4

Date: 5-18-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 70 Precip: 0 Upwind BG: 2-6 Downwind BG: 2-8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1	LW	0715	0730	28	4	5	7	
2	OP	0715	0730	30	4	5	7	
3	JM	0715	0730	3,000	4	5	7	surface
4	LW	0730	0745	44	4	5	7	
5	OP	0730	0745	61	4	5	7	
6	JM	0730	0745	1,000	4	5	7	whitecappipe
7	LW	0745	0800	17	4	5	7	
8	OP	0745	0800	45	4	5	7	
9	JM	0745	0800	61	4	5	7	
10	LW	0800	0815	57	4	6	7	
11	OP	0800	0815	19	4	6	7	
12	JM	0800	0815	51	4	6	7	
13	LW	0815	0830	106	4	6	7	
16	OP	0815	0830	57	4	6	7	
21	JM	0815	0830	45	4	6	7	
26	LW	0830	0845	51	4	6	7	
37	OP	0830	0845	62	4	6	7	
33	JM	0830	0845	50	4	6	7	
41	LW	0845	0900	26	4	6	7	
42	OP	0845	0900	39	4	6	7	
43	JM	0845	0900	700	4	6	7	well 235
47	LW	0900	0915	38	4	6	7	
48	OP	0900	0915	22	4	6	7	
49	JM	0900	0915	68	4	6	7	
50	LW	0915	0930	600	4	6	7	well 218
54	OP	0915	0930	24	4	6	7	
55	JM	0915	0930	33	4	6	7	
59	LW	0930	0945	44	4	6	7	
60	OP	0930	0945	55	4	6	7	
61	JM	0930	0945	62	4	6	7	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Leif Wade
Omar Peralta
Jesse Menning

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

Date: 5-18-21 Instrument Used: TVA 1000 Grid Spacing: 25'

Temperature: 72 Precip: 0 Upwind BG: 2.6 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
64	LW	0945	1000	29	4	6	7	
65	OP	0945	1000	19	4	6	7	
66	JM	0945	1000	58	4	6	7	
67	LW	1000	1015	800	4	6	6	Blackpipe
69	OP	1000	1015	34	4	6	6	
70	JM	1000	1015	543	4	6	6	Well 240
71	LW	1015	1030	41	4	6	6	
72	OP	1015	1030	80	4	6	6	
73	JM	1015	1030	39	4	6	6	
74	LW	1030	1045	67	4	6	6	
75	OP	1030	1045	5,000	4	6	6	Well 242
76	JM	1030	1045	30	4	6	6	
77	LW	1045	1100	24	4	6	7	
78	OP	1045	1100	58	4	6	7	
79	JM	1045	1100	40	4	6	7	
80	LW	1130	1145	37	4	6	7	
81	OP	1130	1145	40	4	6	7	
82	JM	1130	1145	38	4	6	7	
83	LW	1145	1200	61	4	6	7	
84	OP	1145	1200	35	4	6	7	
85	JM	1145	1200	20	4	6	7	
86	LW	1200	1215	31	4	6	7	
87	OP	1200	1215	59	4	6	7	
88	JM	1200	1215	1161	4	6	7	Well 230
89	LW	1215	1230	5,000	4	6	7	Well 227
90	OP	1215	1230	17	4	6	7	
91	JM	1215	1230	14	4	6	7	
92	LW	1230	1245	21	4	6	7	
93	OP	1230	1245	47	4	6	7	
94	JM	1230	1245	35	4	6	7	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Leigh Wade

Omer Penoloza

Jesse Menning

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

Date: 5-18-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 78 Precip: 0 Upwind BG: 2.6 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
95	LW	1245	1300	32	4	6	7	
96	OP	1245	1300	26	4	6	7	
97	JM	1245	1300	19	4	6	7	
98	LW	1300	1315	24	4	6	7	
99	OP	1300	1315	12	4	6	7	
100	JM	1300	1315	32	4	6	7	
101	LW	1315	1330	14	4	6	6	
102	OP	1315	1330	27	4	6	6	
103	JM	1315	1330	18	4	6	6	
104	LW	1330	1345	21	4	6	6	
105	OP	1330	1345	16	4	6	6	

Attach Calibration Sheet
Attach site map showing grid ID

Page 3 of 3

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Leiszunor

Cal. Gas Exp. Date:

Date: 5-18-21 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	
15								Active-Trench
19								
20								
24								
25								
29								
30								
35								
36								
14								steep slopes
17								
18								
22								
27								
32								
38								
44								
51								
56								
23								No waste in place
28								
33								
34								
39								
40								
45								
46								
52								
53								
57								

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 2

GUADALUPE LANDFILL
INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: [illegible] ______ ______

______ ______ ______

______ ______ Cal. Gas Exp. Date: ______

Date: 5-18-21 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	
58								↓
62								
63								
68								

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 2

SITE: Guadalupe

DATE: 2ND 2021

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
SVE2	1	1.34		
NONE	2			
SVE1	3	3.0		
LC188	4	47		
NONE	5			
NONE	6			
LC196	7	2.20		
Well202	8	43		
Well179	9	61		
Well198	9	24		
Well159	9	55		
Well176	10	57.24		
Well233	10	2.50		
Well232	10	3.20		
NONE	11			

SITE: Guadalupe **DATE:** ____ / ____

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
Well 214	12	31		
Well 158	12	26		
		28		
Well 178	13	37		
Black pipe	13	47		
Well 199	13	48		
abandoned well	13	106		
Well 200	13	3.86		
Well 208	16	4.59		
Well 180	16	12.86		
Green pipe	16	4.0		
Black pipe	16	17.49		
Well 152	16	51.37		
Well 181	21	64		
Well 151	21	2.15		
Well 236	26	17.91		
Well 216	31	26		
Well 190		57		
Well 215	32	41		
Well 205	32	15		

SITE: 6450 S 14 Dr DATE:

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
Well 217	43	39		
Well 235	43	700.		
None	47			
None	48			
None	49	-		
Well 218	50	600.		
Well 183	50	24		
None	54			
Well 184	55	2.06		
Well 180	55	1.85		
Well 192	55	2.10		
Well 173	59	4.47		
Well 229	60	3.67		
Well 219	60	4.10		
Well 220	60	2.47		
None	61			
Sump 2	62	75		
None	64			

SITE: Gallup

DATE:

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
Well243	65	2.70		
Well241	65	2.08		
Well226	66	4.15		
Well238	66	17.92		
Blackpipe	67	800		
Blackpipe	67	800		
Blackpipe	67	110		
Blackpipe	67	25		
Well172	69	4.56		
None	70			
None	71			
HO-8	72			
None	73			
None	74			
Well242	75	5,000		
Well240	75	543		
Well135	76	2.09		
Well239	76	29.60		

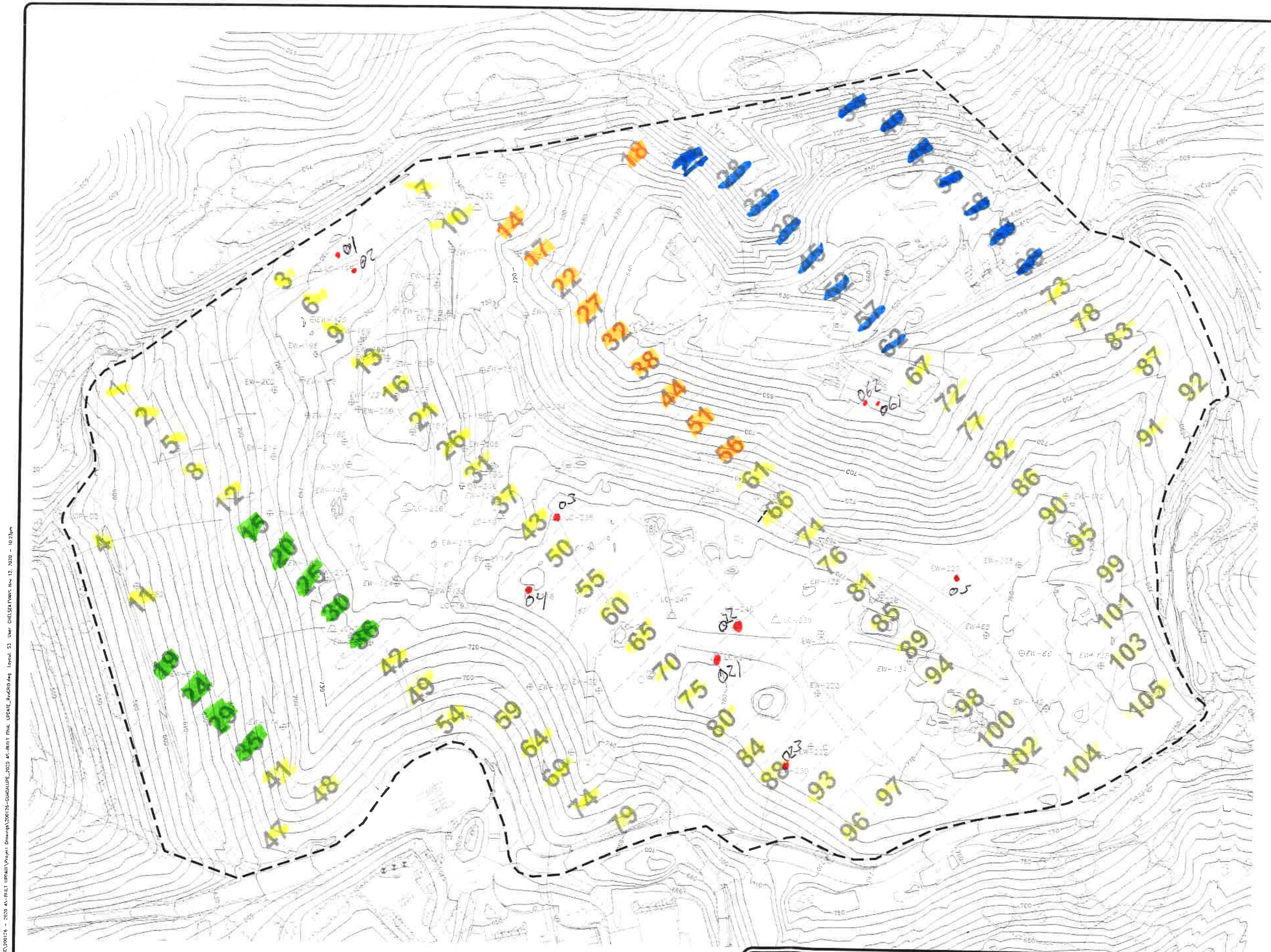
SITE: Guadalupe **DATE:**

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
NONE	77			
NONE	78			
NONE	79			
NONE	80			
WELL224	81	4.55		
NONE	82			
NONE	83			
WELL223	84	5.04		
WELL228	85	3.48		
NONE	86			
NONE	87			
WELL222	88	5.15		
WELL230	88	1161		
WELL227	89	5000.		
WELL134	89	4470		

SITE: Glenolyn

DATE:

PENETRATION ID	GRID NUMBER	INITIAL (PPM)		
WELL225	90	2.80		
WELL112		4.63		
NONE	91			
NONE	92			
NONE	93			
WELL65	94	35.16		
NONE	95			
NONE	96			
NONE	97			
EW 66	98	4.74		
NONE	99			
LFG 62	100	12.60		
NONE	101			
WELL142	102	5.06		
WELL138	103	4.89		



LEGEND

▬ ▬ ▬	PROPERTY BOUNDARY
— — —	APPROXIMATE WASTE FOOTPRINT
——1400——	EXISTING 10' CONTOUR
⊕ EW-2	EXISTING LFG EXTRACTION WELL
⊗	EXISTING REMOTE WELLHEAD
○	EXISTING PROBE
⊕ EW-415	EXISTING HORIZONTAL COLLECTOR WELLHEAD
△ LC-190	EXISTING LOCAL CONTROL WELL
105	SEM GRID BLOCK

N

0 125 250
SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS–BUILT PIPING PER FIELD MARK–UP DRAWING PROVIDED BY WM ON MAY 29, 2015. WELL LOCATIONS PER ISSUED FOR CONSTRUCTION WELL SCHEDULE DATED APRIL 10, 2015.
3. 2018 GCCS IMPROVEMENTS AS–BUILT PIPING PER SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: DECEMBER 11, 2018.
4. 2019 GCCS IMPROVEMENTS AS–BUILT PIPING PER SURVEY PROVIDED BY WM DATED: NOVEMBER 11, 2019.
5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS–BUILT PIPING PER FIELD MARK–UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS–BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS–BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

Instantaneous 5-18-21

- 🟨 GRIDS monitored
- 🟩 Active-trash
- 🟧 steep slopes
- ● No waste in place
- ● 500+ ppm

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVF
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

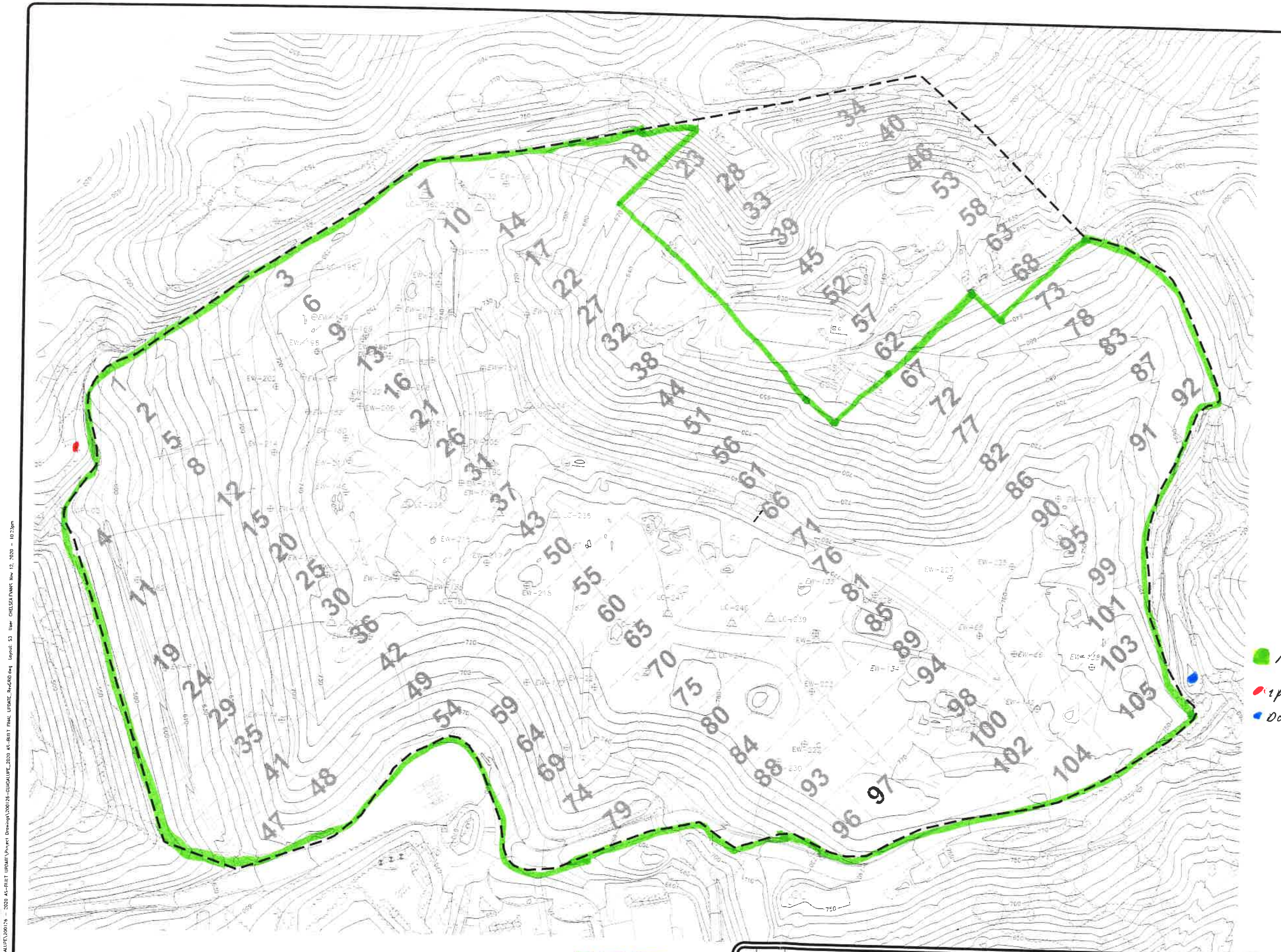
GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3

PROJECT NO.
200126

File: Y:\PROJECTS\GUADALUPE\200126 - 2020 AS-BUILT UPDATE\Project Drawings\200126-GUADALUPE_2020 AS-BUILT FINAL UPDATE_RevGRID.dwg Layout: S3 User: CHELSEA.EVANS Nov 12, 2020 - 10:23pm



LEGEND

- PROPERTY BOUNDARY
- APPROXIMATE WASTE FOOTPRINT
- EXISTING 10' CONTOUR
- EXISTING LFG EXTRACTION WELL
- EXISTING REMOTE WELLHEAD
- EXISTING PROBE
- EXISTING HORIZONTAL COLLECTOR WELLHEAD
- EXISTING LOCAL CONTROL WELL
- 105 SEM GRID BLOCK

0 125 250
SCALE IN FEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON MAY 29, 2015. WELL LOCATIONS PER ISSUED FOR CONSTRUCTION WELL SCHEDULE DATED APRIL 10, 2015.
3. 2018 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: DECEMBER 11, 2018.
4. 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY WM DATED: NOVEMBER 11, 2019.
5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

2ND QUARTER 2021

🟩 NSPS SWEEP

🟥 UPWIND

🟦 DOWNWIND

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVP
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY PJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3

PROJECT NO.
200126

File: X:\PROJECTS\GUADALUPE\200126 - 2020 AS-BUILT UPDATE\Project Drawings\200126-GUADALUPE_2020 AS-BUILT FINAL UPDATE_RevGRID.dwg Layout: S3 User: CHELSEA.EVANS Nov 12, 2020 - 10:23pm

Attachment B

Integrated Surface Emission Monitoring Event Records

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE DWIGHT ANDERSON
OMAR PERALTA
NICK BANKS

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

Date: 6-8-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 57 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
75	LW	0545	0610	7.14	4	5	6	
76	OP	0545	0610	6.92	4	5	6	
77	ND	0545	0610	6.70	4	5	6	
78	DA	0548	0610	7.42	4	5	6	
79	LW	0610	0635	5.41	4	6	6	
80	OP	0610	0635	6.12	4	6	6	
81	ND	0610	0635	5.77	4	6	6	
82	DA	0610	0635	6.39	4	6	6	
83	LW	0635	0700	6.02	4	8	7	
84	OP	0635	0700	5.41	4	8	7	
85	ND	0635	0700	5.78	4	8	7	
86	DA	0635	0700	5.13	4	8	7	
87	LW	0700	0725	5.91	4	8	7	
88	OP	0700	0725	6.77	4	8	7	
89	ND	0700	0725	6.54	4	8	7	
90	DA	0700	0725	5.28	4	8	7	
91	LW	0725	0750	4.77	4	8	7	
92	OP	0725	0750	6.51	4	8	7	
93	ND	0725	0750	8.27	4	8	7	
94	DA	0725	0750	5.31	4	8	7	
95	LW	0750	0815	4.70	4	10	7	
96	OP	0750	0815	4.26	4	10	7	
97	ND	0750	0815	5.91	4	10	7	
98	DA	0750	0815	6.54	4	10	7	
99	LW	0815	0840	5.13	4	8	6	
100	OP	0815	0840	5.71	4	8	6	
101	ND	0815	0840	4.25	4	8	6	
102	DA	0815	0840	4.17	4	8	6	
103	LW	0840	0905	3.94	4	8	6	
104	OP	0840	0905	3.71	4	8	6	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 2

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGHWADE DWIGHT ANDERSON
OMAR PENALER
NICK BANKS

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

Date: 6-8-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 60 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
105	NB	0840	0905	3.25	4	8	6	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 2

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE; DWIGHT ANDERSON
OMAR PERALTA
NICK BENES

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

Date: 6-7-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 64 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
1	LW	1200	1225	3.71	3	5	8	
2	OP	1200	1225	4.12	3	5	8	
3	NB	1200	1225	3.89	3	5	8	
4	DA	1200	1225	5.64	3	5	8	
5	LW	1225	1250	6.13	4	5	7	
6	OP	1225	1250	5.79	4	5	7	
7	NB	1225	1250	6.04	4	5	7	
8	DA	1225	1250	7.21	4	5	7	
9	LW	1250	1315	6.54	4	6	8	
10	OP	1250	1315	7.10	4	6	8	
11	NB	1250	1315	4.58	4	6	8	
12	DA	1250	1315	5.81	4	6	8	
13	LW	1315	1340	5.20	4	8	7	
16	OP	1315	1340	6.27	4	8	7	
21	NB	1315	1340	6.40	4	8	7	
26	DA	1315	1340	5.85	4	8	7	
31	LW	1340	1405	6.13	4	8	7	
37	OP	1340	1405	5.70	4	8	7	
41	NB	1340	1405	6.81	4	8	7	
42	DA	1340	1405	5.94	4	8	7	
43	LW	1405	1430	7.13	3	5	8	
47	OP	1405	1430	6.82	3	5	8	
48	NB	1405	1430	7.34	3	5	8	
49	DA	1405	1430	8.13	3	5	8	
50	LW	1430	1455	7.09	4	6	8	
54	OP	1430	1455	5.30	4	6	8	
55	NB	1430	1455	5.71	4	6	8	
59	DA	1430	1455	6.03	4	6	8	
60	LW	1455	1520	5.24	4	6	8	
61	OP	1455	1520	5.98	4	6	8	

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 2

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIGH WADE ; DWIGHT ANDERSON
OMAR PERALTA
NEIL BANKS

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

Date: 6-7-21 Instrument Used: TVA1000 Grid Spacing: 25'

Temperature: 72 Precip: 0 Upwind BG: 2.2 Downwind BG: 2.8

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	WIND INFORMATION			REMARKS
					AVG SPEED	MAX. SPEED	DIRECTION 16 POINT	
64	NB	1455	1520	7.13	4	6	8	
65	DA	1455	1520	6.49	4	6	8	
66	LW	1520	1545	6.03	4	6	8	
67	OP	1520	1545	5.77	4	6	8	
69	NB	1520	1545	6.34	4	6	8	
70	DA	1520	1545	5.50	4	6	8	
71	LW	1545	1610	5.21	4	6	8	
72	OP	1545	1610	7.13	4	6	8	
73	NB	1545	1610	6.54	4	6	8	
74	DA	1545	1610	6.20	4	6	8	

Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 2

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Leigh wade ______ ______

Cal. Gas Exp. Date: ______

Date: 6-7-21 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	
15								Active tress
19								
20								
24								
25								
29								
30								
35								
36								↓
14								steep slopes
17								
18								
22								
27								
32								
38								
44								
51								
56								↓
23								No waste in place
28								
33								
34								
39								
40								
45								
46								
52								
53								
57								↓

Attach Calibration Sheet
Attach site map showing grid ID

Page 1 of 2

GUADALUPE LANDFILL
INTEGRATED LANDFILL SURFACE MONITORING

Personnel: LEIShNAOZ ______ ______
______ ______ ______
______ ______ Cal. Gas Exp. Date: ______

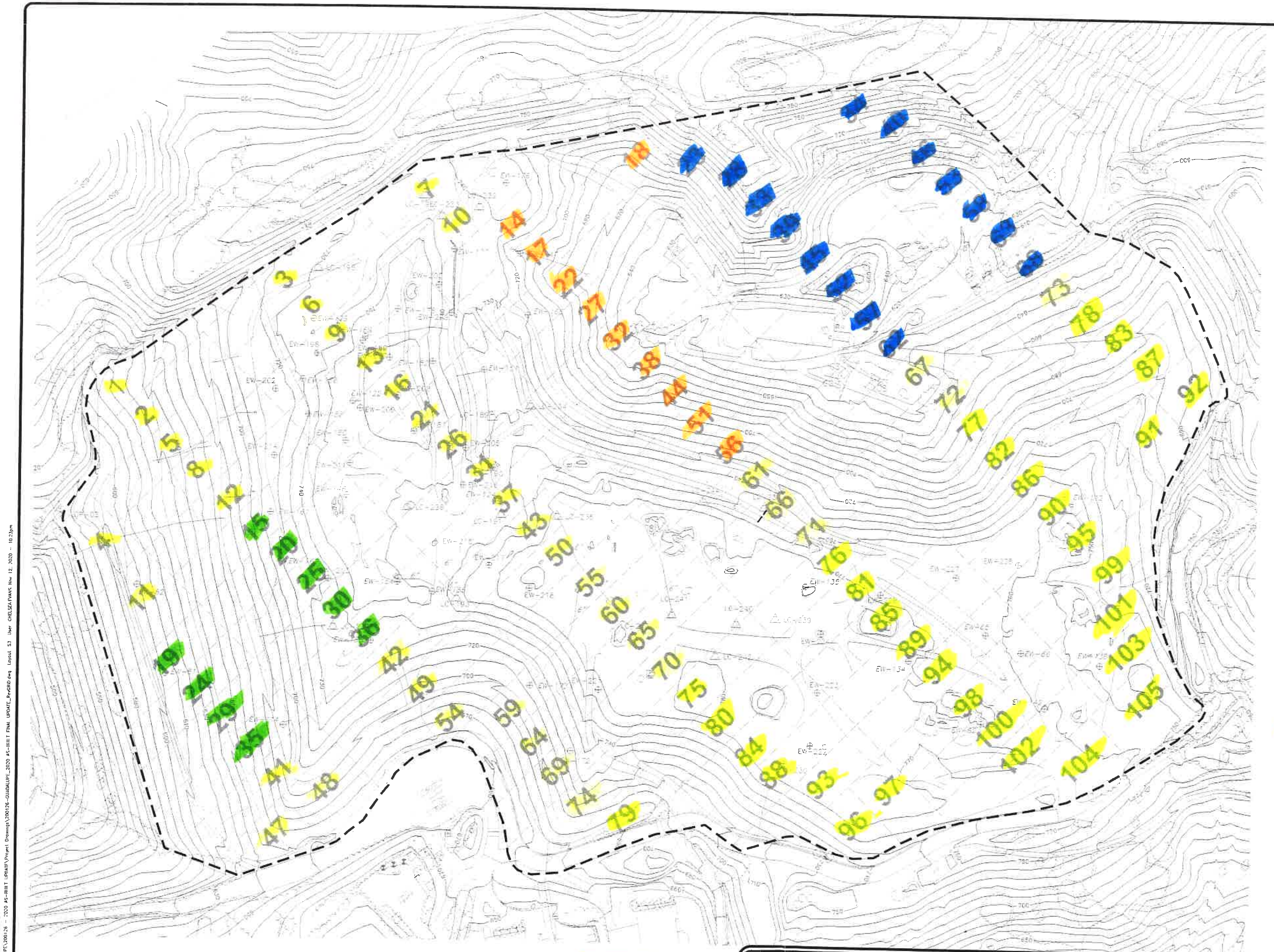
Date: 6-7-21 Instrument Used: ______ Grid Spacing: ______

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	
58								
62								
63								
68								

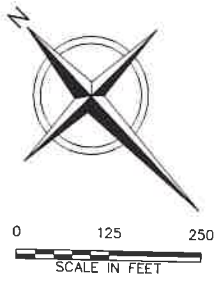
Attach Calibration Sheet
Attach site map showing grid ID

Page 2 of 2



LEGEND

PROPERTY BOUNDARY
APPROXIMATE WASTE FOOTPRINT
EXISTING 10' CONTOUR
EXISTING LFG EXTRACTION WELL
EXISTING REMOTE WELLHEAD
EXISTING PROBE
EXISTING HORIZONTAL COLLECTOR WELLHEAD
EXISTING LOCAL CONTROL WELL
105 SEM GRID BLOCK



NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY MILLER CREEK AERIAL MAPPING OF BURIEN, WA. DATE OF PHOTOGRAPHY: APRIL 1, 2020. DATUM: HORIZONTAL – NAD 83, VERTICAL – NAD 88.
2. SUPPLEMENTAL 2015 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON MAY 29, 2015. WELL LOCATIONS PER ISSUED FOR CONSTRUCTION WELL SCHEDULE DATED APRIL 10, 2015.
3. 2018 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: DECEMBER 11, 2018.
4. 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER SURVEY PROVIDED BY WM DATED: NOVEMBER 11, 2019.
5. SUPPLEMENTAL 2019 GCCS IMPROVEMENTS AS-BUILT PIPING PER FIELD MARK-UP DRAWING PROVIDED BY WM ON JANUARY 6, 2020.
6. SUPPLEMENTAL 2019 GCCS AS-BUILT MARKUPS/COMMENTS PROVIDED BY WM ON JANUARY 27, 2020 AND JANUARY 29, 2020.
7. 2020 GCCS IMPROVEMENTS AS-BUILT SURVEY PROVIDED BY F3 AND ASSOCIATES, INC. DATED: JULY 22, 2020.

INTEGRATED 6-7-21
6-8-21

🟨 GRIDS MONITORED
🟩 ACTIVE FRESH
🟦 NO WASTE INPLACE
🟧 STEEP SLOPES

FINAL AS-BUILT

WASTE MANAGEMENT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 11/12/2020
DRAWN BY GVP
DESIGNED BY DHK
CHECKED BY AMN
APPROVED BY FJS

TETRA TECH

GUADALUPE RECYCLING AND DISPOSAL FACILITY
SAN JOSE, CALIFORNIA
2020 GCCS IMPROVEMENTS

SEM GRID MAP

SHEET NO.
3
PROJECT NO.
200126

Attachment C

Component Leak Monitoring Event Records

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

2021 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES

FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		10-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station A-9	5/18/2021	ND	RES	NA	NA	NA	NA	NA
Flare Station A-14	5/18/2021	ND	RES	NA	NA	NA	NA	NA

ND= Non Exceedances

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

2021 QUARTER: 2

INITIAL MONITORING PERFORMED BY: RES

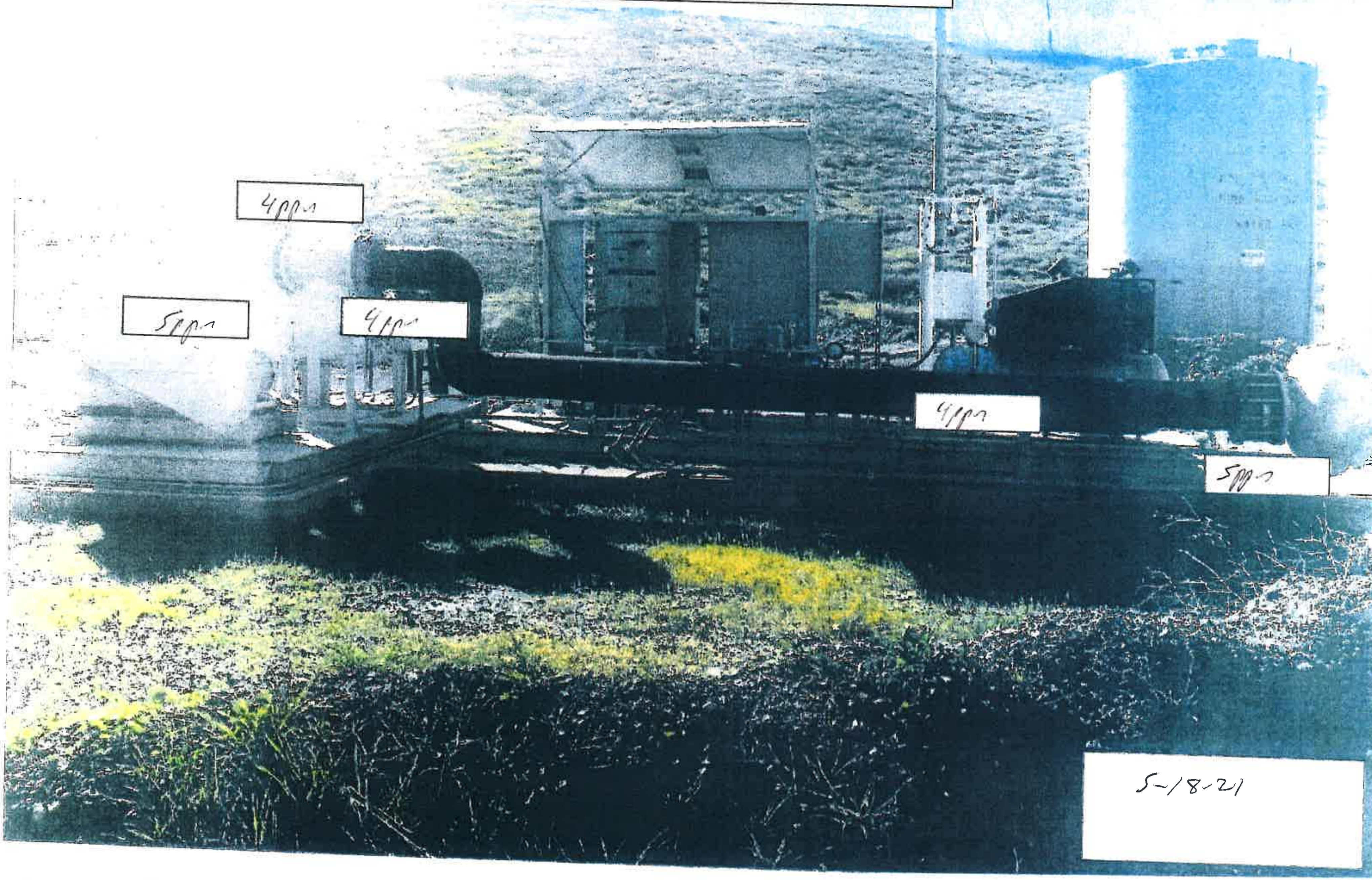
FOLLOW-UP MONITORING PERFORMED BY: NA

LANDFILL NAME: Guadalupe Recycling & Disposal Facility

Location	Initial Monitoring			Corrective Action		7-Day Remonitoring		
	Date	TOC (ppmv)	Tech	Date	Description	Date	TOC (ppmv)	Tech
Flare Station A-9	5/18/2021	ND	RES	NA	NA	NA	NA	NA
Flare Station A-14	5/18/2021	ND	RES	NA	NA	NA	NA	NA

ND= Non Exceedances

Landfill component Leak Check
Guadalupe



5-18-21

Landfill component Leak Check
Guadalupe

4ppm

5ppm

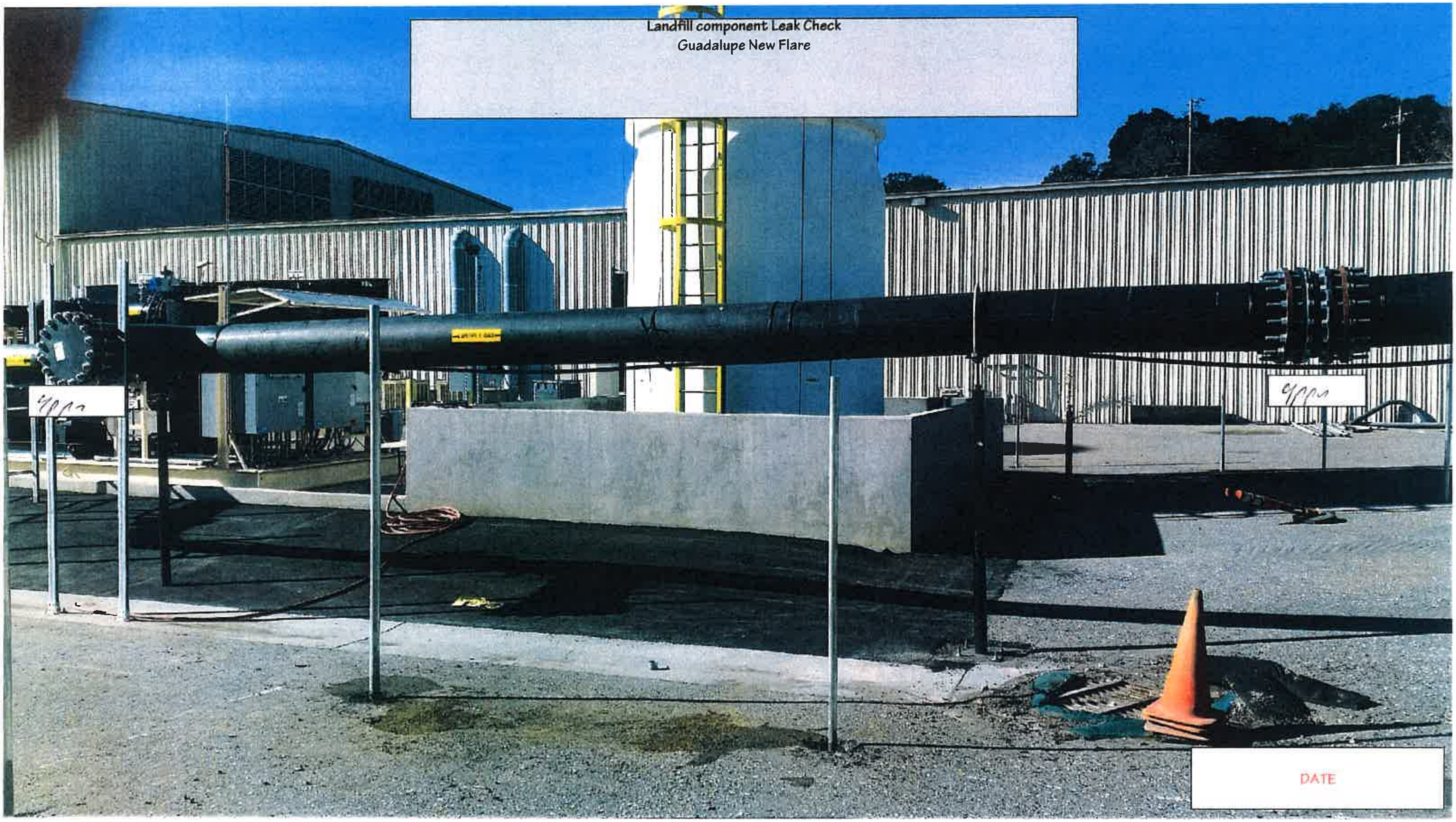
5-18-21
DATE

Landfill component Leak Check
Guadalupe

8-18-21
DATE

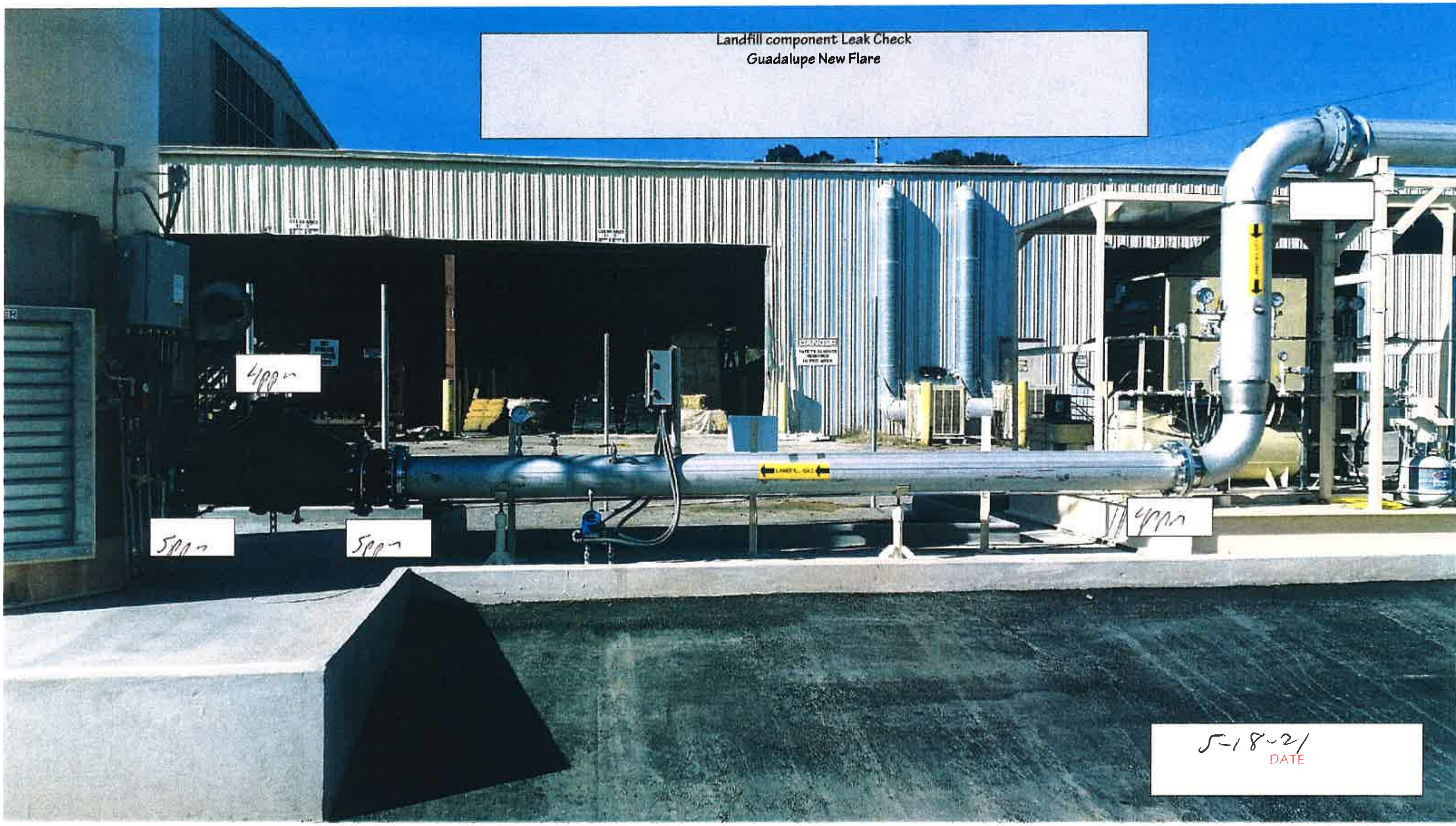
Landfill component Leak Check
Guadalupe New Flare

5-18-21
DATE



Landfill component Leak Check
Guadalupe New Flare

DATE



Landfill component Leak Check
Guadalupe New Flare

5-18-21
DATE

LANDFILL NAME: Guadalupe

QUARTERLY LFG COMPONENT LEAK MONITORING

INSTRUMENT FID
MAKE: Thermo Environr
MODEL: TVA 1000
S/N: 10363 46773

DATE OF SAMPLING: 5-18-21
TECHNICIAN: Luis Junok

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	TECHNICIAN	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
NO EXCEEDANCES							

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.

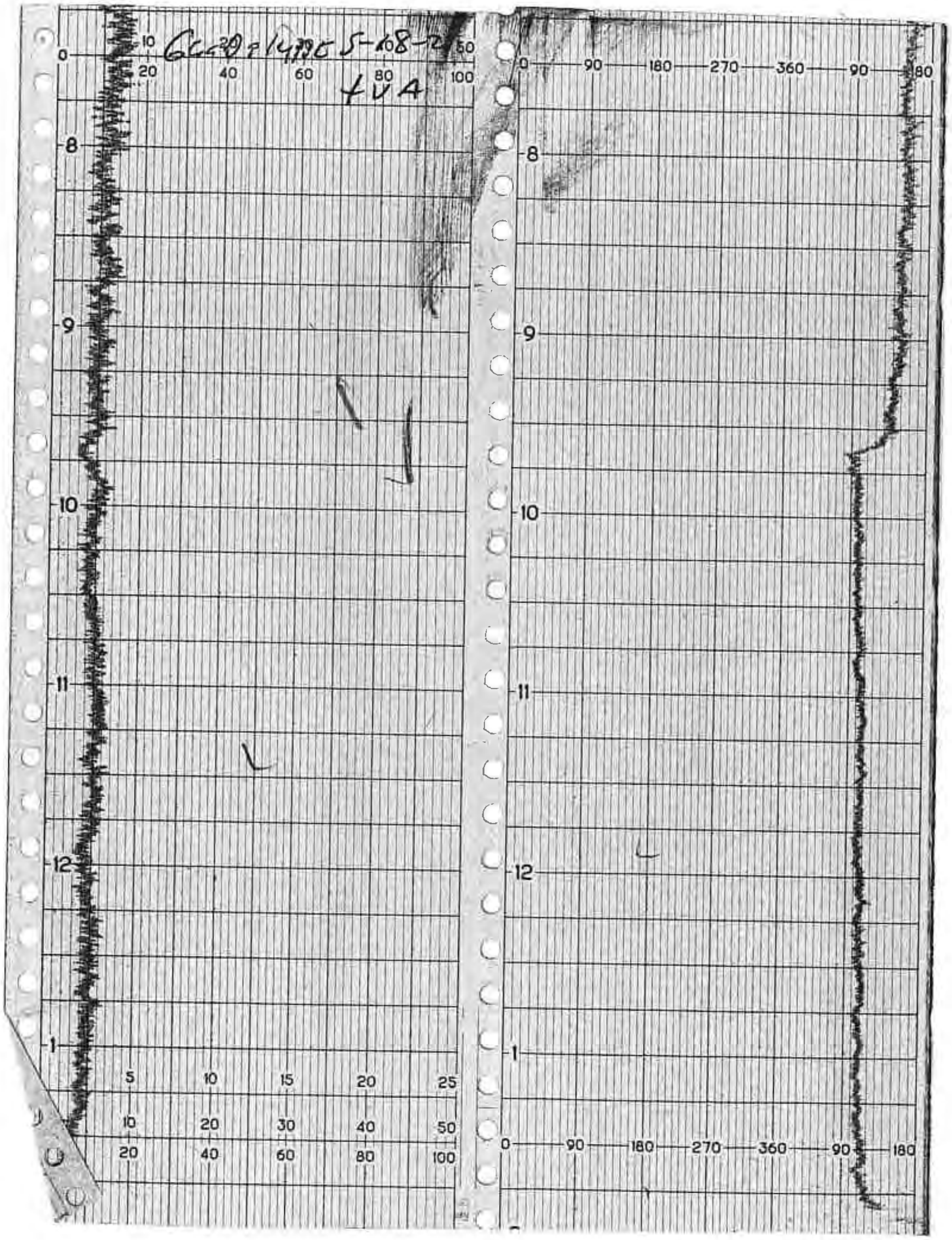
NOTE: Leaks over 500 ppmv methane are exceedances at any component containing landfill gas, pursuant to CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B).

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

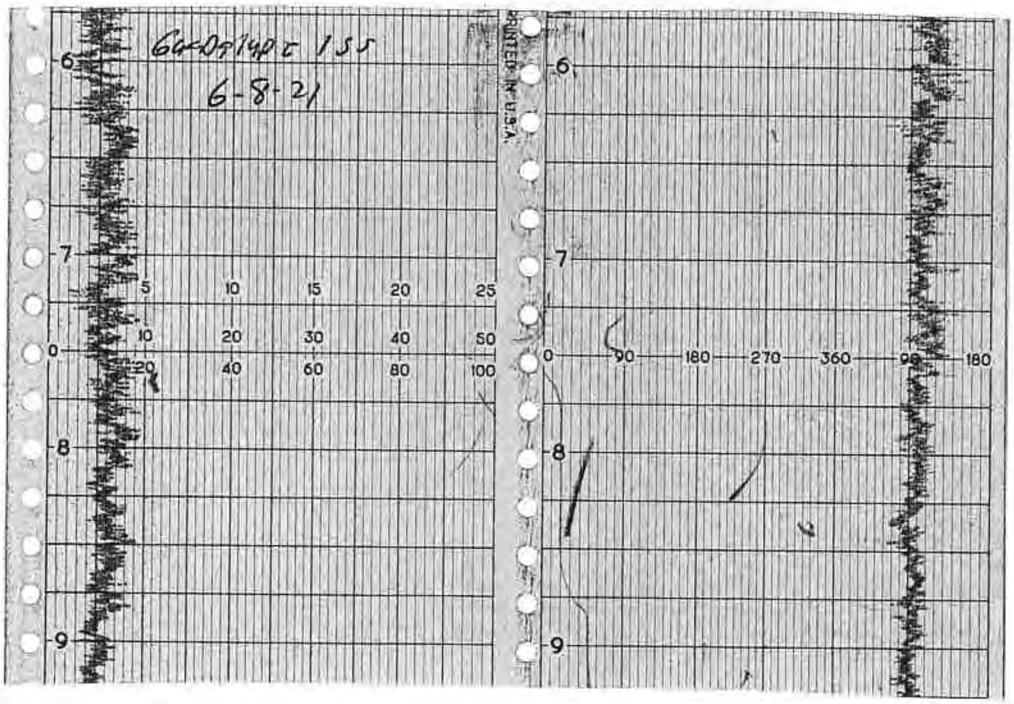
Attachment D

Weather Station Data

WIND SPEED & DIRECTION CHART ROLL

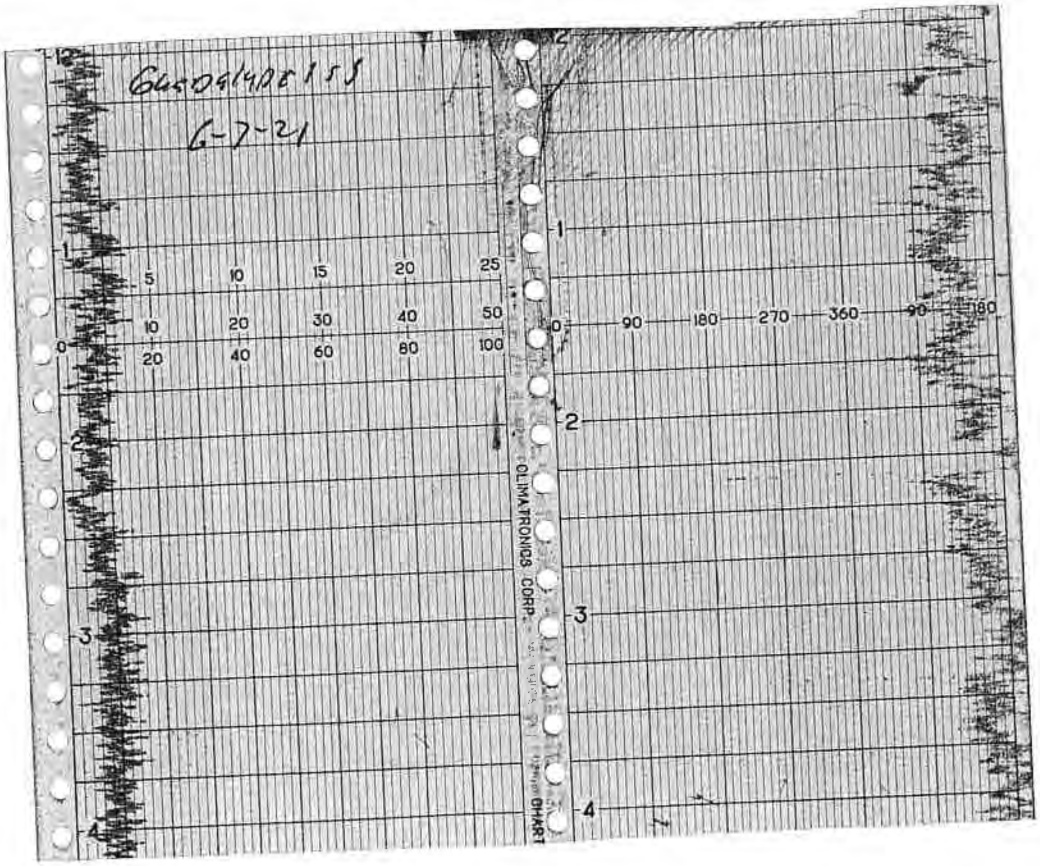


WIND SPEED & DIRECTION CHART ROLL



64-Ds14pc 155
6-8-21

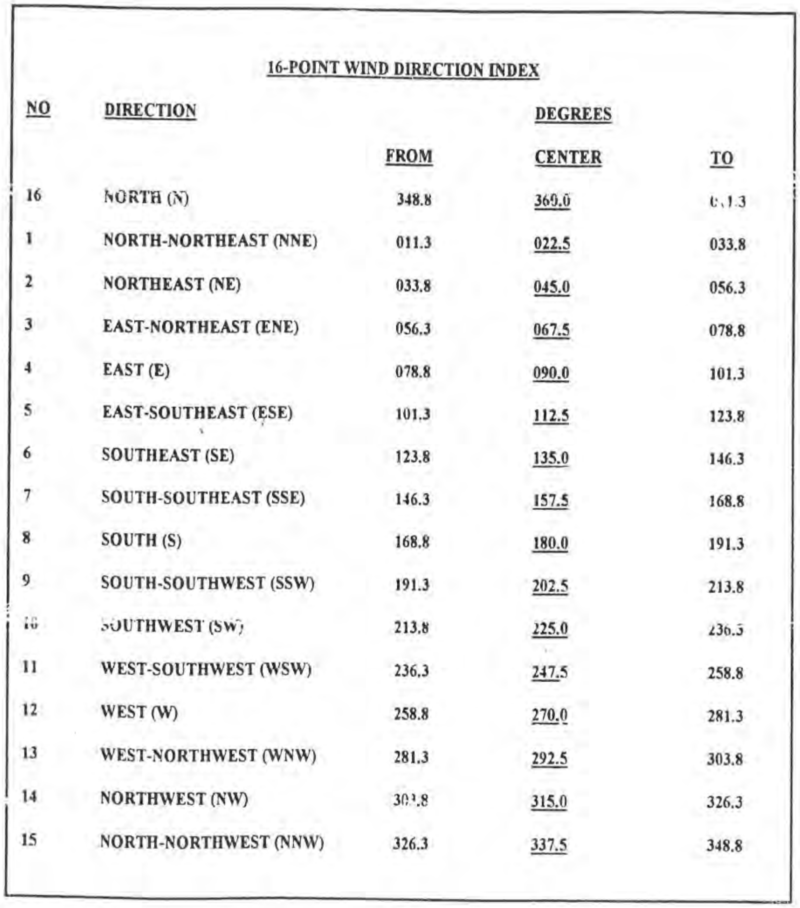
WIND SPEED & DIRECTION CHART ROLL



645091408158

6-7-21

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

Attachment E

Calibration Records

RES
Environmental Inc

CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE Thermo
MODEL TVA1000 EQUIPMENT #: 10 SERIAL # 1026346773
MONITORING DATE 6-8-21 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	2.8 ppm	2.5 ppm

Background Value = 2.5 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	0.30 ppm	24 ppm	1
#2	0.17 ppm	25 ppm	0
#3	0.13 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		1.3 #DIV/0! Must be less than 10%

Performed By Lou L. WADE Date/Time 6-8-21 - 0540

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED

LANDFILL NAME: Glenclyffe INSTRUMENT MAKE Thermo
MODEL TVA1000 EQUIPMENT #: 11 SERIAL # 1036342774
MONITORING DATE 6-8-21 TIME: 0540

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{(\text{Upwind} + \text{Downwind})}{2}$
2.2 ppm	2.8 ppm	2.5 ppm

Background Value = 2.5 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 $\frac{(1+2+3)}{3}$		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	0.26 ppm	27 ppm	1
#2	0.14 ppm	24 ppm	1
#3	0.10 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		2.6 #DIV/0! Must be less than 10%

Performed By Omar Peralta Date/Time 6-8-21 - 0540

RES
Environmental Inc

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE Thermo
MODEL TVA1000 EQUIPMENT #: 12 SERIAL # 1036246741
MONITORING DATE 6-8-21 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	2.8 ppm	2.5 ppm

Background Value = 2.5 **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	0.37 ppm	23 ppm	2
#2	0.12 ppm	25 ppm	0
#3	0.08 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		2.6 #DIV/0! Must be less than 10%

Performed By Nick Banks Date/Time 6-8-21 - 0540

RES
Environmental Inc

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 13 SERIAL #: 1102746775

MONITORING DATE 6-8-21 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	2.8 ppm	2.5 ppm

Background Value = 2.5 **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 $\frac{(1+2+3)}{3}$		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	0.31 ppm	24 ppm	1
#2	0.17 ppm	25 ppm	0
#3	0.14 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		1.3 #DIV/0! Must be less than 10%

Performed By Dwight Anderson Date/Time: 6-8-21 - 0540

RES Environmental Inc

CALIBRATION PROCEDURE AND BACKGROUND REPORT - INTEGRATED

LANDFILL NAME Guadalupe INSTRUMENT MAKE Thermo

MODEL TVA 1000 EQUIPMENT #: 10 SERIAL # 1036346773

MONITORING DATE 6-7-21 TIME 1155

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	**Downwind Background Reading:** (Highest in 30 seconds)	**Background Value:** $\frac{\text{(Upwind + Downwind)}}{2}$
2.2 ppm	2.8 ppm	2.5 ppm

Background Value = 2.5 **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 $\frac{(1+2+3)}{3}$			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	0.27 ppm	23 ppm	2
#2	0.13 ppm	25 ppm	0
#3	0.09 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		2.6 #DIV/0! Must be less than 10%

Performed By LEW LWADE Date/Time 6-7-21 - 1155

RES
Environmental Inc

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE Thermo

MODEL TVA1000 EQUIPMENT #: 11 SERIAL # 1036346774

MONITORING DATE 6-7-21 TIME 1155

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	2.8 ppm	2.5 ppm

Background Value = 2.5 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	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	0.29 ppm	24 ppm	1
#2	0.16 ppm	25 ppm	0
#3	0.14 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 Omar Peralta Date/Time 6-7-21 - 1155

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME Gaaos/upe INSTRUMENT MAKE Thermo

MODEL TVA1100 EQUIPMENT #: 12 SERIAL # 1036246781

MONITORING DATE 6-7-21 TIME 1155

Calibration Procedure:

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

Background Determination Procedure

Upwind Background Reading: (Highest in 30 seconds)	Downwind Background Reading: (Highest in 30 seconds)	Background Value: $\frac{\text{(Upwind + Downwind)}}{2}$
2.2 ppm	2.8 ppm	2.5 ppm

Background Value = 2.5 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	24 ppm	21.6 ppm	6
#3	25 ppm	22.5 ppm	6
Calculate Response Time $\frac{(1+2+3)}{3}$			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	0.33 ppm	23 ppm	2
#2	0.20 ppm	24 ppm	1
#3	0.16 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		4.0 #DIV/0! Must be less than 10%

Performed By NICK BANKS Date/Time 6-7-21-1155

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INTEGRATED

LANDFILL NAME: Guadalupe INSTRUMENT MAKE Thermo

MODEL TVA1000 EQUIPMENT #: 13 SERIAL # 1102746775

MONITORING DATE 6-7-21 TIME 1155

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	2.8 ppm	2.5 ppm

Background Value = 2.5 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	0.41 ppm	24 ppm	1
#2	0.26 ppm	25 ppm	0
#3	0.19 ppm	25 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{25} \times \frac{100}{1}$		1.3 #DIV/0! Must be less than 10%

Performed By DWIGHT ANDERSON Date/Time 6-7-21-1155

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: Guadalupe INSTRUMENT MAKE Thermo

MODEL: TVA1000 EQUIPMENT #: 10 SERIAL #: 1636346777

MONITORING DATE 5-18-21 TIME 0710

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
2.6 ppm	2.8 ppm	2.7 ppm

Background Value = 2.7 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	507 ppm	457 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	0.35 ppm	507 ppm	7
#2	0.22 ppm	500 ppm	0
#3	0.14 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.46 #DIV/0! Must be less than 10%

Performed By Leigh Wade Date/Time 5-18-21 - 0710

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME Goodsluger INSTRUMENT MAKE: tHermo

MODEL: TVA 1000 EQUIPMENT #: 11 SERIAL #: 1636346774

MONITORING DATE: 5-18-21 TIME: 0710

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
2.6 ppm	2.8 ppm	2.7 ppm

Background Value = 2.7 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	0.22 ppm	490 ppm	10
#2	0.25 ppm	500 ppm	0
#3	0.08 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.66 #DIV/0! Must be less than 10%

Performed By omor portella Date/Time 5-18-21 0710

RES
Environmental Inc.

CALIBRATION PROCEDURE AND BACKGROUND REPORT – INSTANTANEOUS

LANDFILL NAME: [illegible] INSTRUMENT MAKE: Thermo

MODEL: TVA1000 EQUIPMENT #: 12 SERIAL #: 1636246741

MONITORING DATE: 5-18-21 TIME: 0710

Calibration Procedure:

1. Allow instrument to zero itself while introducing air.
2. Introduce calibration gas into the probe. Stabilized reading = 560 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
2.6 ppm	2.8 ppm	2.7 ppm

Background Value = 2.7 **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	504 ppm	454 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	0.35 ppm	504 ppm	4
#2	0.17 ppm	495 ppm	5
#3	0.14 ppm	500 ppm	0
Calculate Precision	$\frac{[STD-B1] + [STD-B2] + [STD-B3]}{3} \times \frac{1}{500} \times \frac{100}{1}$		0.60 #DIV/0! Must be less than 10%

Performed By Jesse Rolling Date/Time 5-18-21- 0710

RES
Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Uat #10

SERIAL NUMBER: 1036346773

TECHNICIAN: N. Morgans DATE: 4-3-21

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	493	+/- 125
10000	10000	10,000	+/- 2500
< 1	ZERO GAS	0.08	< 3

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

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

RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #11

SERIAL NUMBER: 1036346774

TECHNICIAN: R. Magnus DATE: 11-3-21

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	10,003	+/- 2500
< 1	ZERO GAS	0.71	< 3

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

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

RES
Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Cart #12

SERIAL NUMBER: 1036246741

TECHNICIAN:

DATE: 4-3-21

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	10,102	+/- 2500
< 1	ZERO GAS	0.79	< 3

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

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

RES
Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #13

SERIAL NUMBER: 1102746775

TECHNICIAN: DATE: 4-3-21

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	0.83	< 3

PID

ISOBUTYLENE GAS NOMINAL (ppm)	CALIBRATION GAS (ppm)	TVA READING (ppm)	TOLERANCE (ppm)
50	50		+/- 12.5
100	100		+/- 25
500	500		+/- 125
< 1	ZERO GAS		< 3

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

RES Environmental Inc.

TVA1000B CALIBRATION VERIFICATION

CUSTOMER: RES Unit #14

SERIAL NUMBER: 1036346771

TECHNICIAN: M Roberts DATE: 4-3-21

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	0.89	< 3

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

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

RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 5-8-21

Time: 0830

Model # TVA 1000B

Serial # #10 1036346773

INSTRUMENT INTEGRITY CHECKLIST

Battery test	[✓ Pass] / Fail
Reading following ignition	2.0 ppm
Leak test	[✓ Pass] / Fail / NA
Clean system check (check valve chatter)	[✓ Pass] / Fail / NA
H_2 supply pressure gauge (acceptable range 9.5 - 12)	[✓ Pass] / Fail / NA
Date of last factory calibration	4-3-21
Factory calibration record w/instrument within 3 months	[✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 7
2. 6
3. 6

Average 6.3

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to C4 gas.

Comments:

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 5-8-21 **Time:** 0845

Model # TVA1000B

Serial # #11 1036346774

INSTRUMENT INTEGRITY CHECKLIST	
Battery test	[✓ Pass] / Fail
Reading following ignition	2.1 ppm
Leak test	[✓ Pass] / Fail / NA
Clean system check (check valve chatter)	[✓ Pass] / Fail / NA
H_2 supply pressure gauge (acceptable range 9.5 - 12)	[✓ Pass] / Fail / NA
Date of last factory calibration	4-3-21
Factory calibration record w/instrument within 3 months	[✓ Pass] Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500
90% of Calibration Gas, ppm 450
Time required to attain 90% of Cal Gas ppm
1. 7
2. 7
3. 6
Average 6.6
Equal to or less than 30 seconds? [✓ Y] N
Instrument calibrated to Cty gas.

Comments:

RES Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 5-8-21 Time: 0900

Model # TVA 1000B

Serial # #12 1036246741

INSTRUMENT INTEGRITY CHECKLIST	
Battery test	[✓ Pass] / Fail
Reading following ignition	2.6 ppm
Leak test	[✓ Pass] / Fail / NA
Clean system check (check valve chatter)	[✓ Pass] / Fail / NA
H_2 supply pressure gauge (acceptable range 9.5 - 12)	[✓ Pass] / Fail / NA
Date of last factory calibration	4-3-21
Factory calibration record w/instrument within 3 months	[✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 5
2. 5
3. 6

Average 5.3

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH4 gas.

Comments:

465

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 5-8-21 Time: 0915

Model # TVA 1000B

Serial # #13 1102246775

INSTRUMENT INTEGRITY CHECKLIST

Battery test [✓ Pass] / Fail

Reading following ignition 19 ppm

Leak test [✓ Pass] / Fail / NA

Clean system check (check valve chatter) [✓ Pass] / Fail / NA

H_2 supply pressure gauge (acceptable range 9.5 - 12) [✓ Pass] / Fail / NA

Date of last factory calibration 4-3-21

Factory calibration record w/instrument within 3 months [✓ Pass] / Fail

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500

90% of Calibration Gas, ppm 450

Time required to attain 90% of Cal Gas ppm

1. 6
2. 6
3. 6

Average 6.0

Equal to or less than 30 seconds? [✓ Y] N

Instrument calibrated to CH_4 gas.

Comments:

465

RES
Environmental Inc.

SURFACE EMISSION MONITORING INSTRUMENT
CALIBRATION LOG

Site:

Purpose:

Operator:

Date: 5-8-21 Time: 0930

Model # TVA-1000B

Serial # #14 1036346711

INSTRUMENT INTEGRITY CHECKLIST		INSTRUMENT CALIBRATION
Battery test	[✓ Pass] / Fail	
Reading following ignition	19 ppm	
Leak test	[✓ Pass] / Fail / NA	
Clean system check (check valve chatter)	[✓ Pass] / Fail / NA	
H_2 supply pressure gauge (acceptable range 9.5 - 12)	[✓ Pass] / Fail / NA	
Date of last factory calibration	4-3-21	
Factory calibration record w/instrument within 3 months	[✓ Pass] / Fail	

INSTRUMENT CALIBRATION

CALIBRATION CHECK

Calibration Gas (ppm)	Actual (ppm)	% Accuracy
500	500	100%

RESPONSE TIME

Calibration Gas, ppm 500
90% of Calibration Gas, ppm 450
Time required to attain 90% of Cal Gas ppm
1. 7
2. 6
3. 6
Average 6.3
Equal to or less than 30 seconds? [✓ Y] N
Instrument calibrated to CH_4 gas.

Comments:

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	

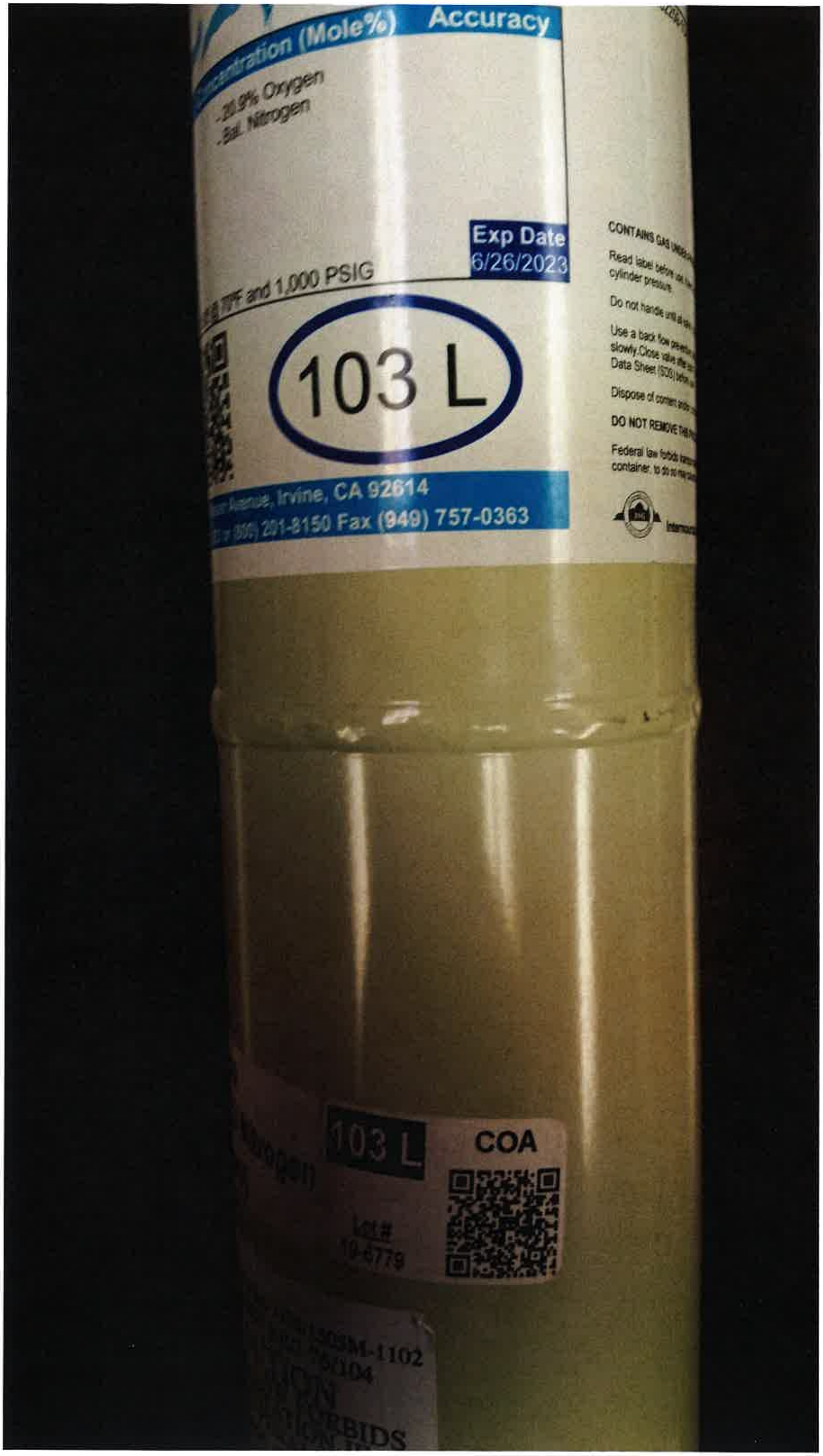
Lot # 19-6779

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
6/26/2023
70°F and 1,000 PSIG
103 L
Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
CONTAINS GAS UNDER
Read label before use
cylinder pressure.
Do not handle until all
Use a back flow preventer
slowly. Close valve after
Data Sheet (SDS) before
Dispose of content and/or
DO NOT REMOVE THIS
Federal law forbids
container, to do so may
103 L
COA
Nitrogen
Lot#
19-6779
M-1102
BIDS

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	

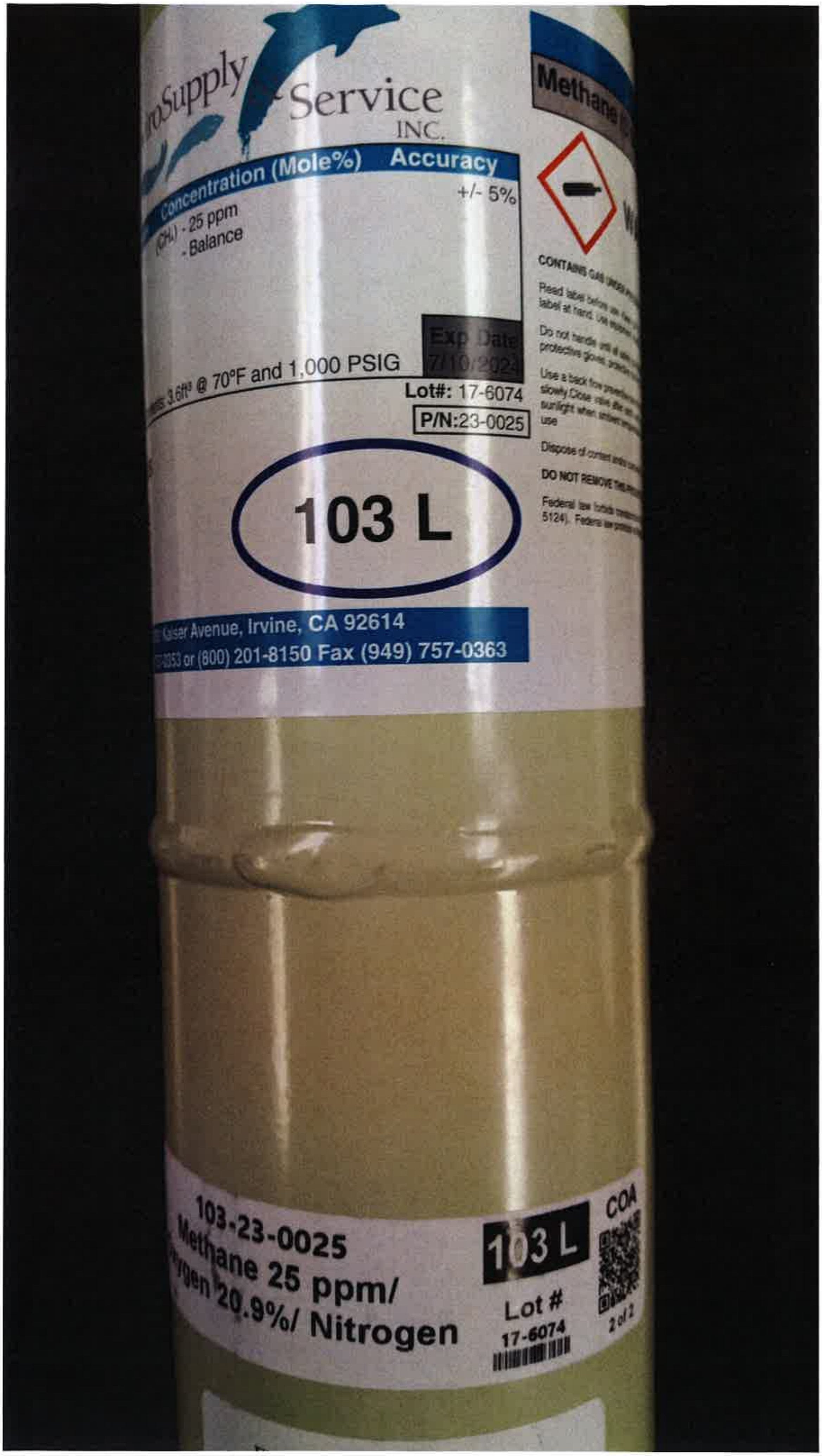
Lot # 17-6074

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


roSupply
Service
INC.
Methane
Concentration (Mole%)
Accuracy
(CH₄) - 25 ppm
- Balance
+/- 5%
Exp Date
7/10/2024
3.6ft³ @ 70°F and 1,000 PSIG
Lot#: 17-6074
P/N:23-0025
CONTAINS GAS
Read label before use
label at hand
Do not handle until all
protective gloves
Use a back flow
slowly Close valve after
sunlight when ambient
use
Dispose of content
DO NOT REMOVE THIS
Federal law forbids
5124). Federal law
103 L
Kaiser Avenue, Irvine, CA 92614
or (800) 201-8150 Fax (949) 757-0363
103-23-0025
Methane 25 ppm/
20.9%/ Nitrogen
103 L
Lot #
17-6074
COA
2 of 2

Intermountain Specialty Gases
520 N. Kings Road
Nampa, ID 83687 (USA)
Phone (800) 552-5003, Fax (208) 466-9143
www.isgases.com

INTERMOUNTAIN
SPECIALTY GASES
"Your calibration gas manufacturer since 1992"

CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy (+/-)
Methane	500 ppm	2%
Oxygen	20.9 %	2%
Nitrogen	Balance UHP	

Lot #	20-7497
Mfg. Date:	7/10/2020
Expiration Date:	
Transfill Date:	see cylinder
Parent Cylinder ID Number:	TWC001763

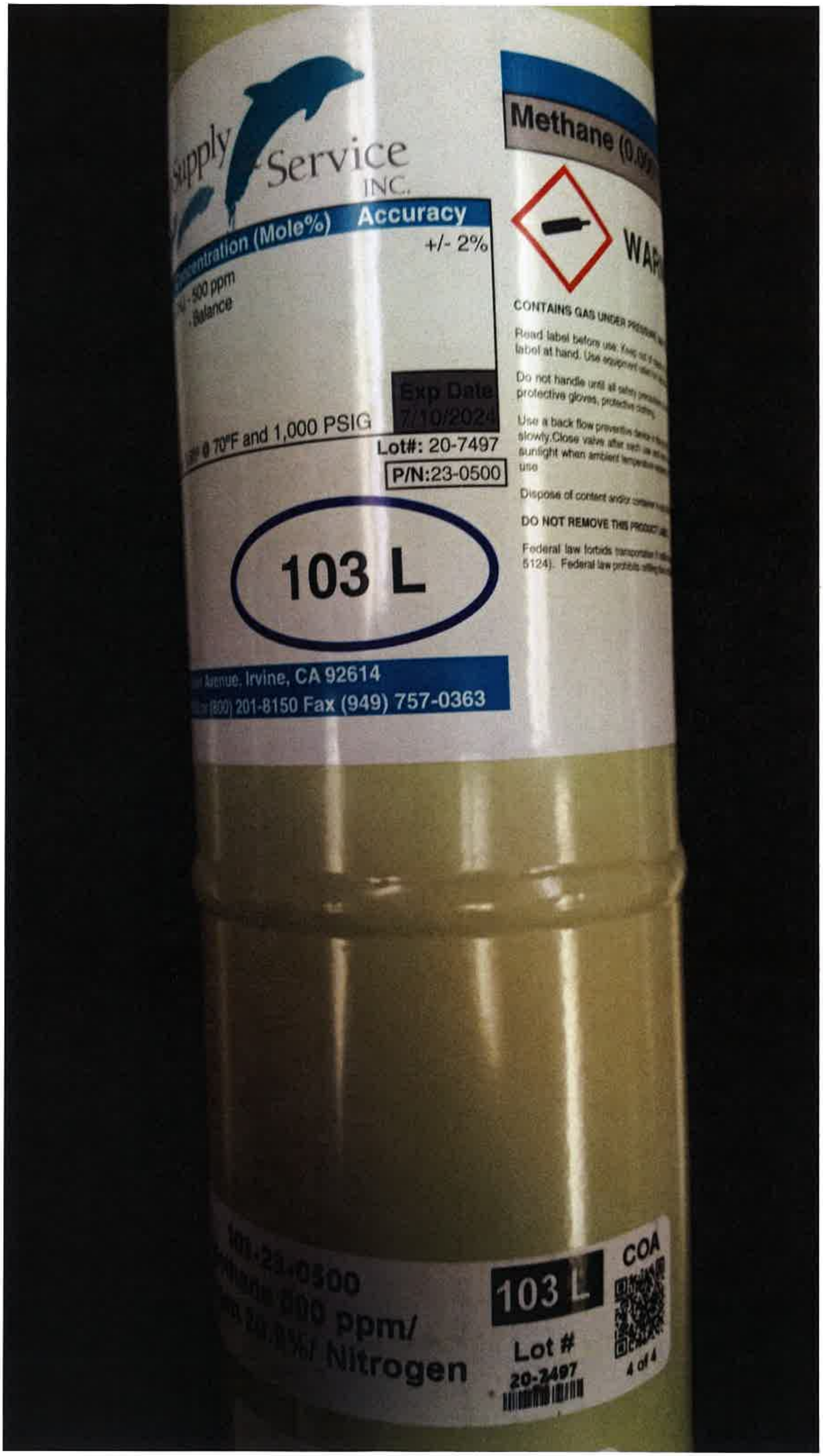
Method of Preparation:

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: 7/10/2020



Service
INC.
Accuracy
+/- 2%
Concentration (Mole%)
- 500 ppm
- Balance
Exp Date
7/10/2024
@ 70°F and 1,000 PSIG
Lot#: 20-7497
P/N:23-0500
103 L
Avenue, Irvine, CA 92614
(800) 201-8150 Fax (949) 757-0363
Methane (0.0
WAR
CONTAINS GAS UNDER PRESSURE
Read label before use.
label at hand.
Do not handle until all safety
protective gloves, protective clothing
Use a back flow preventive device
slowly.Close valve after each use
sunlight when ambient temperature
use
Dispose of content and/or container
DO NOT REMOVE THIS PRODUCT
Federal law forbids transportation
5124). Federal law prohibits
23-0500
ppm/
Nitrogen
103 L
Lot #
20-2497
COA
4 of 4

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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

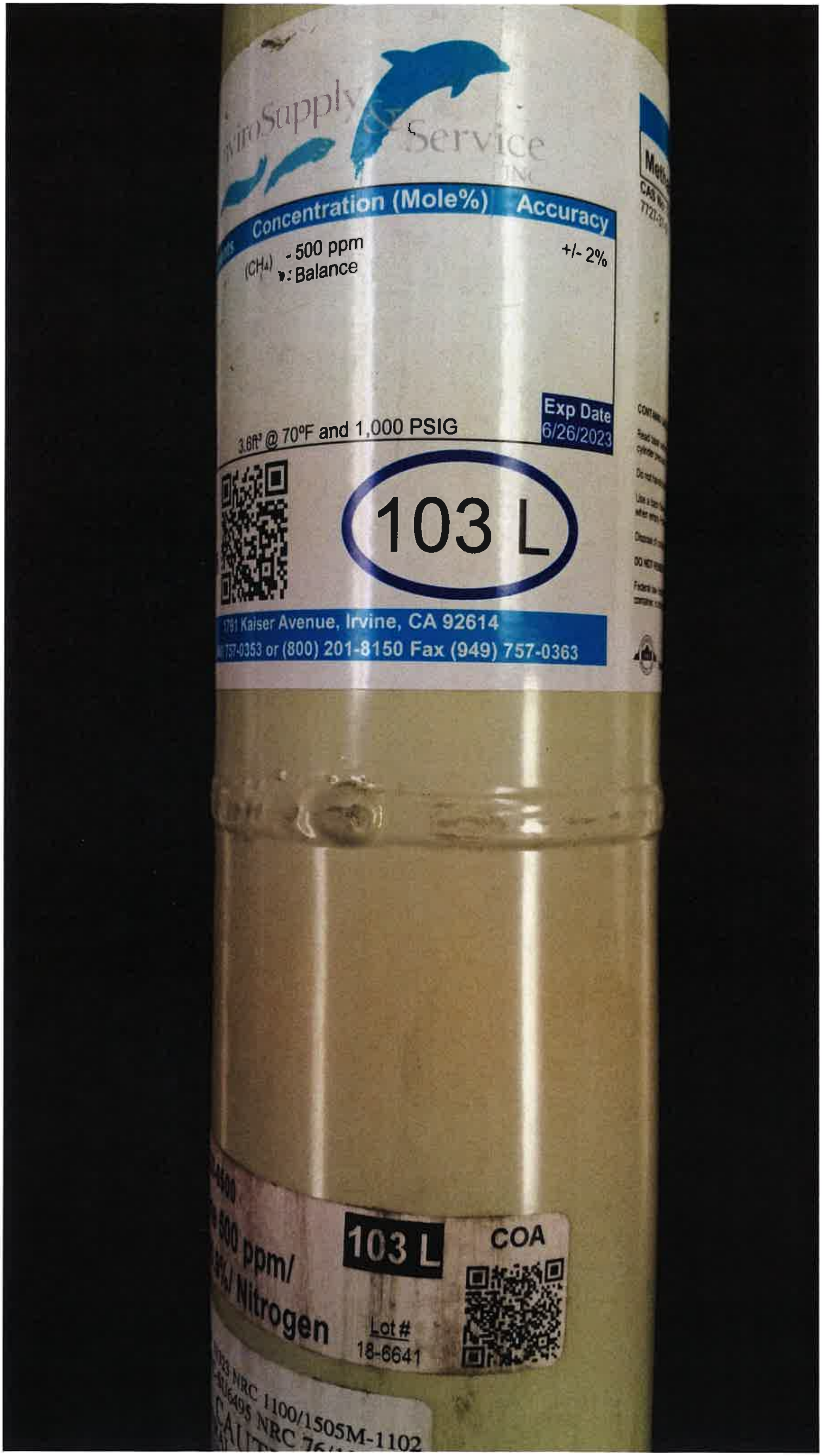
Method of Preparation:

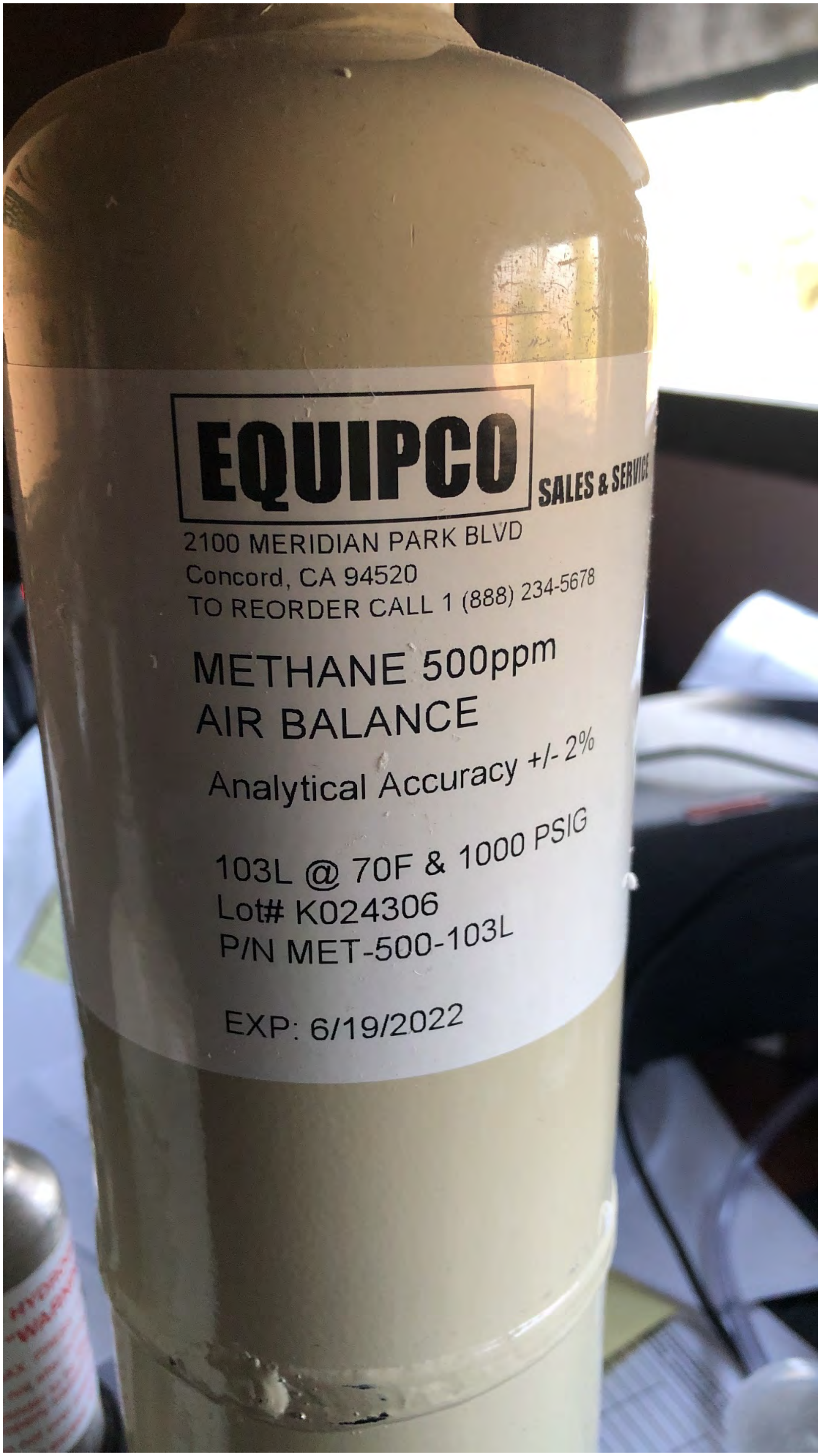
Gravimetric/Pressure Transfilled

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


viroSupply & Service
INC
Concentration (Mole%)
Accuracy
(CH4) - 500 ppm
: Balance
+/- 2%
Exp Date
6/26/2023
3.6ft³ @ 70ºF and 1,000 PSIG
103 L
1791 Kaiser Avenue, Irvine, CA 92614
757-0353 or (800) 201-8150 Fax (949) 757-0363
500 ppm/
Nitrogen
103 L
COA
Lot #
18-6641
NRC 1100/1505M-1102



EQUIPCO SALES & SERVICE

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

METHANE 500ppm
AIR BALANCE

Analytical Accuracy +/- 2%

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

EXP: 6/19/2022

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 5/27/21

Time: ______ AM 12:45 pm PM

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

Calibration Procedure

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

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

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 7 ppm (a)
2. Downwind Reading (highest in 30 seconds): 2 ppm (b)

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 4.5 ppm

Performed by: Markus Bernard

CALIBRATION PRECISION TEST RECORD

Date: 3/3/2021

Expiration Date (3 months): 6/2/2021

Time: 8:48 AM ______ PM

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

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 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: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(500) - (500)| + |(500) - (498)| + |(500) - (496)|\}}{3} \times \frac{1}{500} \times 100$$

1.2 % (must be < than 10%)

Performed by: M. Bernard

RESPONSE TIME TEST RECORD

Date: 3/3/21

Expiration Date (3 months): 6/2/21

Time: 8:48 AM ______ PM

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

Measurement #1:

Stabilized Reading Using Calibration Gas: 500 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 10 seconds (a)

Measurement #2:

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

Measurement #3:

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

Calculate Response Time:

$\frac{(a) + (b) + (c)}{3}$ = 8 seconds (must be less than 30 seconds)

Performed by: M. Bernard

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 6/17/21

Time: 10:00 AM ________ PM

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

Calibration Procedure

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

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

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 4 ppm (a)
2. Downwind Reading (highest in 30 seconds): 1 ppm (b)

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 2.5 ppm

Performed by: Markus Bernard

CALIBRATION PRECISION TEST RECORD

Date: 6/4/2021

Expiration Date (3 months): 9/4/2021

Time: 8:45 AM ______ PM

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

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 496 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: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(496) - (500)| + |(500) - (498)| + |(500) - (496)|\}}{3} \times \frac{1}{500} \times 100$$

1.0 % (must be < than 10%)

Performed by: M. Bernard

RESPONSE TIME TEST RECORD

Date: 6/4/21

Expiration Date (3 months): 9/4/21

Time: 8:50 AM ______ PM

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

Measurement #1:

Stabilized Reading Using Calibration Gas: 496 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 10 seconds (a)

Measurement #2:

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

Measurement #3:

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

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} =$$ 8 seconds (must be less than 30 seconds)

Performed by: M. Bernard

APPENDIX I

MONTHLY SOLID WASTE PLACEMENT TOTALS

Guadalupe Recycling & Disposal Facility, San Jose, CA
Solid Waste Placement Totals
April 1, 2021 through September 30, 2021

Month	Decomposed Waste Disposed in tons	Total Waste Disposed During Reporting Period
Apr-21	9,604	56,881
May-21	9,298	
Jun-21	9,606	
Jul-21	9,335	
Aug-21	9,590	
Sep-21	9,448	

APPENDIX J

WELLFIELD MONITORING LOGS

Guadalupe Recycling & Disposal Facility, San Jose, CA

Wellfield Monitoring Report -April 1, 5, 6, 7, 8, and 9, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	4/6/2021 15:38	48.4	43	0.1	8.5	138.0	138.0	-17.8	-17.7
GDLC0189	4/8/2021 10:49	31	34.5	0.0	34.5	122.0	122.0	-1.6	-1.6
GDLC0190	4/6/2021 15:22	39.1	36.6	0.2	24.1	128.0	128.0	-4.0	-1.3
GDLC0191	4/6/2021 14:10	22.7	34.3	0.1	42.9	122.0	122.0	-3.8	-3.8
GDLC0192	4/5/2021 11:17	50.6	46.9	0.1	2.4	127.0	127.0	-10.4	-11.0
GDLC0193	4/6/2021 14:31	46.5	41	0.0	12.5	130.0	129.0	-0.4	-0.3
GDLC0196	4/7/2021 14:40	31	30.6	0.1	38.3	103.0	102.0	-3.1	-0.7
GDLC0197	4/8/2021 11:07	38.2	34.1	0.0	27.7	118.0	118.0	-0.6	-0.6
GDLC0232	4/7/2021 14:45	39.6	36.8	0.0	23.6	114.0	114.0	-0.4	-0.2
GDLC0233	4/7/2021 14:34	12.2	17.2	6.5	64.1	102.0	93.0	-1.3	-1.2
GDLC0233	4/7/2021 14:36	15	19.3	5.7	60	93.0	93.0	-1.1	-1.1
GDLC0233	4/9/2021 14:42	28.7	30	1.1	40.2	109.0	102.0	-5.5	-2.3
GDLC0233	4/9/2021 14:45	29.4	30.8	0.7	39.1	102.0	102.0	-3.7	-3.3
GDLC0234	4/7/2021 8:30	37.6	35.5	0.1	26.8	120.0	120.0	-0.6	-0.4
GDLC0235	4/5/2021 11:21	52.3	47.5	0.0	0.2	123.0	123.0	-19.5	-18.2
GDLC0236	4/6/2021 14:59	41.7	39.3	0.0	19	122.0	122.0	-0.4	-0.4
GDLC0237	Offline for filling								
GDLC0238	4/5/2021 12:52	21.3	28.8	0.0	49.9	110.0	111.0	-0.1	-0.1
GDLC0239	4/2/2021 14:05	25.1	29.2	0.0	45.7	107.0	107.0	-0.3	-0.2
GDLC0240	4/2/2021 14:02	48.2	40.3	0.0	11.5	116.0	116.0	-2.0	-1.9
GDLC0241	4/2/2021 13:52	53.6	45.7	0.0	0.7	122.0	122.0	-4.2	-4.2
GDLC0242	4/2/2021 13:55	54.5	43.5	0.9	1.1	115.0	116.0	-40.4	-40.3
GDLC0243	4/8/2021 11:24	39.9	42.2	0.0	17.9	82.0	93.0	-0.1	-0.1
GDLC0244	4/5/2021 12:46	32.4	36	0.0	31.6	109.0	109.0	-0.2	-0.2
GUAD0062	4/1/2021 11:56	47.4	37	0.0	15.6	98.0	98.0	-1.7	-1.7
GUAD0062	4/8/2021 13:30	54.4	40.7	0.1	4.8	110.0	110.0	-39.2	-39.7
GUAD0065	4/8/2021 14:30	54.4	40.7	0.1	4.8	110.0	110.0	-39.2	-39.7
GUAD0066	4/1/2021 11:07	43.6	35.3	0.1	21	106.0	104.0	-5.0	-5.0
GUAD0081	4/8/2021 14:19	49.5	39.9	0.0	10.6	114.0	114.0	-19.0	-19.0
GUAD0082	4/9/2021 14:29	46.8	34.4	0.1	18.7	101.0	101.0	-9.2	-9.2
GUAD0112	4/1/2021 11:26	36.6	32.6	0.0	30.8	124.0	125.0	-1.2	-0.8
GUAD0114	4/8/2021 14:03	52.6	40.5	0.1	6.8	133.0	133.0	-2.3	-2.3
GUAD0122	4/6/2021 11:27	56.5	43.3	0.0	0.2	135.0	135.0	-34.4	-34.3
GUAD0124	4/6/2021 14:00	CO was 0 ppm							
GUAD0124	4/6/2021 14:04	55.8	43.9	0.1	0.2	117.0	117.0	0.7	0.6
GUAD0124	4/6/2021 14:06	55.8	43.9	0.1	0.2	117.0	117.0	0.7	0.5
GUAD0124	4/16/2021 15:52	55.6	44.1	0.1	0.2	98.0	98.0	1.0	1.1
GUAD0129	4/2/2021 13:41	57.7	42	0.1	0.2	106.0	106.0	-35.3	-35.2
GUAD0131	4/8/2021 11:33	56.9	42.9	0.0	0.2	108.0	108.0	-40.8	-41.2
GUAD0134	4/8/2021 11:12	46.9	37.6	0.0	15.5	120.0	120.0	-0.8	-0.8
GUAD0135	4/2/2021 13:27	47.7	39	0.1	13.2	132.0	132.0	-2.9	-2.9
GUAD0135	4/2/2021 13:28	47.7	39	0.1	13.2	132.0	132.0	-2.9	-2.9
GUAD0138	4/1/2021 11:00	30.1	31.7	0.1	38.1	96.0	96.0	-0.5	-0.3
GUAD0142	4/1/2021 11:47	47.6	36.6	0.0	15.8	107.0	108.0	-3.7	-3.7
GUAD0146	4/7/2021 15:59	56.2	43.7	0.0	0.1	132.0	132.0	-35.6	-35.9

GUAD0147	4/7/2021 8:45	58.1	41.8	0.0	0.1	118.0	118.0	-2.0	-2.0
GUAD0151	4/6/2021 15:34	55.7	36.2	0.0	8.1	135.0	135.0	-27.7	-27.7
GUAD0152	4/7/2021 15:49	58.3	41.5	0.0	0.2	134.0	134.0	-31.9	-32.0
GUAD0154	4/6/2021 14:38	56	43.9	0.0	0.1	132.0	132.0	-8.9	-9.2
GUAD0156	4/7/2021 15:05	33.9	34.1	0.0	32	106.0	107.0	-2.0	-2.1
GUAD0158	4/7/2021 16:11	23.5	34.6	0.0	41.9	83.0	84.0	-0.9	-0.8
GUAD0161	4/8/2021 16:17	30.4	45.5	1.5	22.6	99.0	88.0	-7.1	-5.0
GUAD0162	4/6/2021 14:50	56.2	43.7	0.0	0.1	139.0	139.0	-12.9	-12.9
GUAD0172	4/8/2021 13:47	46	37.3	0.0	16.7	114.0	114.0	-3.0	-3.0
GUAD0173	4/8/2021 13:53	43.9	38.2	0.0	17.9	113.0	118.0	-0.2	-0.2
GUAD0173	4/8/2021 13:56	CO was 0 ppm							
GUAD0176	4/7/2021 14:26	47	38.7	0.1	14.2	127.0	127.0	-30.6	-29.9
GUAD0177	4/7/2021 14:48	49.7	39.8	0.0	10.5	128.0	128.0	-0.9	-0.9
GUAD0178	4/5/2021 13:37	56.3	43.5	0.0	0.2	97.0	97.0	-34.5	-36.4
GUAD0178	4/7/2021 15:43	56.9	42.1	0.6	0.4	85.0	84.0	-36.5	-36.3
GUAD0179	4/7/2021 14:57	23.9	29.3	0.0	46.8	109.0	106.0	-0.4	-0.3
GUAD0180	4/7/2021 16:07	53.4	41.4	0.3	4.9	129.0	129.0	-38.3	-38.1
GUAD0181	4/7/2021 15:53	54.6	45.3	0.0	0.1	138.0	139.0	-38.0	-37.6
GUAD0183	4/5/2021 11:28	55.3	44.5	0.1	0.1	129.0	129.0	-10.0	-9.7
GUAD0184	4/2/2021 13:47	46	41.7	0.1	12.2	128.0	128.0	-20.8	-20.8
GUAD0185	4/6/2021 14:41	52.2	43.2	0.0	4.6	135.0	135.0	-1.8	-1.9
GUAD0186	4/6/2021 14:33	53.1	44	0.1	2.8	131.0	131.0	-8.8	-8.6
GUAD0186	4/6/2021 14:34	53.1	44	0.1	2.8	131.0	131.0	-8.8	-9.0
GUAD0187	4/8/2021 10:13	55.5	44.2	0.1	0.2	124.0	124.0	-36.7	-36.7
GUAD0198	4/7/2021 15:01	50.4	38.7	0.0	10.9	125.0	126.0	-2.4	-2.4
GUAD0199	4/5/2021 13:25	CO was 0 ppm							
GUAD0199	4/5/2021 13:32	49.3	38.9	0.0	11.8	131.0	131.0	-23.2	-23.0
GUAD0200	4/8/2021 10:59	52.7	41.8	0.1	5.4	127.0	127.0	-35.8	-36.4
GUAD0201	4/8/2021 10:20	54.3	44.5	0.4	0.8	116.0	116.0	-29.4	-29.7
GUAD0202	4/7/2021 15:20	47.8	36.6	0.1	15.5	126.0	126.0	-1.8	-1.7
GUAD0203	4/8/2021 10:30	50	36.4	3.2	10.4	101.0	101.0	-33.8	-33.4
GUAD0204	4/7/2021 8:40	55.4	44.4	0.0	0.2	132.0	133.0	-33.6	-33.4
GUAD0205	4/6/2021 15:18	29.2	33.2	0.0	37.6	134.0	133.0	-1.3	-0.7
GUAD0207	4/6/2021 11:24	22.6	29	0.1	48.3	127.0	128.0	-1.7	-0.1
GUAD0208	4/6/2021 11:18	28.9	33.1	0.1	37.9	126.0	126.0	-0.3	-0.2
GUAD0209	4/6/2021 11:32	52.6	47.1	0.1	0.2	85.0	86.0	-0.1	-0.1
GUAD0211	4/7/2021 16:02	50	39.9	0.0	10.1	101.0	101.0	-0.2	-0.2
GUAD0213	4/6/2021 14:45	53.9	45.1	0.1	0.9	133.0	133.0	-18.0	-18.0
GUAD0214	4/8/2021 16:33	55.6	44.3	0.0	0.1	111.0	111.0	-3.2	-3.2
GUAD0215	4/6/2021 14:55	49.2	42.5	0.0	8.3	132.0	132.0	-0.7	-0.8
GUAD0216	4/6/2021 15:13	46.7	42.3	0.0	11	133.0	133.0	-0.6	-0.6
GUAD0217	4/8/2021 10:04	CO was 0 ppm							
GUAD0217	4/8/2021 10:07	46.1	43.4	0.1	10.4	128.0	128.0	-0.7	-0.7
GUAD0218	4/5/2021 11:42	39.7	40.2	0.0	20.1	123.0	120.0	-0.9	-0.7
GUAD0219	4/5/2021 11:48	48.5	40.7	0.0	10.8	124.0	124.0	-2.2	-2.2
GUAD0219	4/5/2021 11:50	CO was 0 ppm							
GUAD0220	4/5/2021 11:13	53.1	44	0.1	2.8	125.0	124.0	-19.5	-17.2

GUAD0221	4/5/2021 11:51	42.1	37.3	0.0	20.6	118.0	118.0	-1.3	-1.3
GUAD0222	4/8/2021 9:53	16	23.2	0.0	60.8	109.0	109.0	-0.1	-0.1
GUAD0223	4/8/2021 9:49	37	33.8	0.2	29	123.0	123.0	-0.3	-0.1
GUAD0224	4/2/2021 13:21	30.6	29.7	0.2	39.5	117.0	117.0	-1.0	-1.0
GUAD0225	4/1/2021 11:19	47.4	37.2	0.0	15.4	123.0	123.0	-0.3	-0.3
GUAD0226	4/2/2021 13:32	48.5	40.4	0.1	11	121.0	121.0	-26.1	-26.4
GUAD0227	4/1/2021 11:31	46.1	38.1	0.0	15.8	122.0	122.0	-0.5	-0.5
GUAD0228	4/1/2021 11:36	36.2	34.3	0.0	29.5	115.0	115.0	-0.1	-0.1
GUAD0230	4/1/2021 12:07	28.9	29.2	0.0	41.9	113.0	113.0	-4.1	-1.7
GUADH11L	4/8/2021 14:36	45.4	32	4.2	18.4	77.0	77.0	-7.9	-8.3
GUADH12L	4/8/2021 14:28	33.6	20.1	8.4	37.9	92.0	92.0	-2.4	-2.4

Wells 114, 122, 134, 135, 146, 151, 152, 154, 156, 158, 161, 162, 180, 181, 185, 186, 188, 189, 204, 205, 207, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.

There are 90 total collectors (88 vertical wells and 2 horizontal wells) at GRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

Guadalupe Recycling & Disposal Facility, San Jose, CA

Wellfield Monitoring Report -May 7, 8, 12, 13, 14, 17 and 18, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	5/14/2021 14:42	47.8	42.8	0.1	9.3	138	138	-18.00	-18.00
GDLC0189	5/14/2021 14:46	45.1	41.8	0.0	13.1	109	109	-0.10	-0.10
GDLC0190	5/14/2021 14:50	54.2	43	0.0	2.8	94	112	-0.50	-2.90
GDLC0191	5/18/2021 13:26	25.9	33.6	0.0	40.5	109	109	-0.90	-3.00
GDLC0192	5/14/2021 12:46	45.1	44.8	0.1	10	127	127	-11.50	-14.10
GDLC0193	5/17/2021 11:23	49.7	41.8	0.0	8.5	115	115	-0.20	-0.20
GDLC0196	5/14/2021 14:20	44.1	36.1	0.0	19.8	97	97	-0.80	-0.80
GDLC0197	5/18/2021 14:44	39.6	34.8	0.0	25.6	122	122	-0.60	-0.60
GDLC0232	5/14/2021 14:12	34	34.2	0.0	31.8	97	97	-0.30	-0.30
GDLC0233	5/14/2021 14:16	26	29.1	1.0	43.9	114	108	-5.20	-3.50
GDLC0234	5/14/2021 13:42	39.9	36.8	0.0	23.3	110	109	-0.30	-0.30
GDLC0235	5/14/2021 12:49	47.5	45.4	0.1	7	123	123	-20.10	-27.60
GDLC0236	5/17/2021 16:03	41.7	38.9	0.0	19.4	123	117	-0.60	-0.40
GDLC0236	5/17/2021 16:04	41.5	38.9	0.2	19.4	123	123	-0.30	-0.30
GDLC0236	5/18/2021 13:37	40.3	38.1	0.0	21.6	115	116	-0.10	-0.10
GDLC0237	Offline for filling								
GDLC0238	5/14/2021 13:28	19.1	28.8	0.0	52.1	110	111	-5.80	-5.80
GDLC0238	5/14/2021 13:30	19.1	28.8	0.0	52.1	110	110	-5.80	-0.30
GDLC0239	5/13/2021 13:54	25.5	28.9	0.0	45.6	103	107	-0.30	-0.30
GDLC0240	5/13/2021 14:01	44.9	38.4	0.0	16.7	116	117	-2.00	-2.00
GDLC0241	5/13/2021 14:12	50.6	44.4	0.0	5	123	122	-4.30	-4.30
GDLC0242	5/13/2021 14:03	55.1	44.8	0.0	0.1	117	120	-40.80	-40.80
GDLC0243	5/18/2021 13:00	36.6	39.7	0.0	23.7	81	82	-0.10	-0.10
GDLC0243	5/18/2021 13:03	38.1	40.7	0.0	21.2	110	94	-10.40	-0.20
GDLC0244	5/17/2021 11:13	28.6	33.6	0.1	37.7	105	105	-0.10	-0.10
GUAD0062	5/13/2021 10:02	45.8	36.2	0.1	17.9	95	95	-2.60	-2.60
GUAD0065	5/12/2021 12:50	54.2	40.5	0.1	5.2	113	119	-39.00	-38.60
GUAD0066	5/13/2021 13:12	43	34.3	0.1	22.6	106	105	-5.60	-5.00
GUAD0081	5/18/2021 16:12	49.1	39.8	0.0	11.1	114	114	-27.20	-27.60
GUAD0082	5/19/2021 10:57	49.9	34	2.9	13.2	112	112	-2.80	-2.60
GUAD0112	5/13/2021 13:34	35.5	32.1	0.0	32.4	125	125	-0.80	-0.40
GUAD0114	5/18/2021 15:45	51.2	39.8	0.4	8.6	132	132	-2.30	-2.30
GUAD0122	5/17/2021 13:39	56.9	43	0.0	0.1	135	135	-27.00	-27.00
GUAD0124	5/18/2021 13:13	55.1	44.8	0.0	0.1	114	114	1.30	1.40
GUAD0124	5/18/2021 13:14	55.1	44.8	0.0	0.1	114	114	1.30	0.00
GUAD0129	5/13/2021 14:16	58	41.9	0.0	0.1	109	109	-35.80	-35.80
GUAD0131	5/18/2021 15:13	57.6	42.1	0.2	0.1	115	115	-40.30	-40.10
GUAD0134	5/13/2021 10:37	46	37.4	0.0	16.6	122	122	-0.80	-0.80
GUAD0135	5/13/2021 10:54	47	38.8	0.1	14.1	130	130	-2.80	-2.80
GUAD0138	5/13/2021 13:16	53	35.2	0.0	11.8	89	89	-0.10	-0.10
GUAD0142	5/13/2021 13:04	45.4	35.9	0.1	18.6	105	105	-3.90	-3.90
GUAD0146	5/18/2021 13:40	56.2	43.6	0.0	0.2	134	134	-38.30	-38.30
GUAD0146	5/18/2021 13:41	56.2	43.6	0.0	0.2	134	134	-38.30	-38.30

GUAD0147	5/14/2021 14:05	57.4	42.5	0.0	0.1	117	118	-0.90	-0.90
GUAD0151	5/17/2021 13:19	53.8	36.8	0.0	9.4	131	131	-30.20	-30.10
GUAD0152	5/17/2021 13:54	58	41.2	0.6	0.2	133	133	-33.50	-34.00
GUAD0154	5/17/2021 11:49	56.6	43.3	0.0	0.1	137	137	-11.30	-11.40
GUAD0156	5/7/2021 9:23	40.1	43.4	0.0	16.5	96	98	-1.50	-1.40
GUAD0158	5/7/2021 9:49	15	21.3	6.1	57.6	78	94	-2.80	-3.30
GUAD0158	5/7/2021 9:50	NSPS/EG CAI							
GUAD0161	5/18/2021 13:57	45	43.2	0.0	11.8	117	117	-6.70	-6.70
GUAD0162	5/17/2021 11:46	55.9	44	0.0	0.1	139	139	-10.30	-10.30
GUAD0172	5/18/2021 15:23	41	35.1	0.0	23.9	112	112	-3.30	-1.30
GUAD0173	5/18/2021 15:30	41.4	36	0.0	22.6	115	115	-0.20	-0.10
GUAD0176	5/14/2021 14:08	47.6	40.6	0.0	11.8	104	104	-1.10	-1.10
GUAD0177	5/14/2021 14:30	44.6	39	0.0	16.4	128	128	-30.10	-30.00
GUAD0178	5/17/2021 13:26	56.1	43.7	0.0	0.2	95	95	-15.20	-15.80
GUAD0178	5/19/2021 10:07	55.1	44.7	0.0	0.2	89	91	-14.10	-14.10
GUAD0179	5/17/2021 14:35	33.5	33.3	0.0	33.2	110	110	-0.20	-0.30
GUAD0180	5/17/2021 16:07	56.1	43.7	0.1	0.1	129	129	-36.90	-37.60
GUAD0181	5/17/2021 13:50	55	44.9	0.0	0.1	139	139	-36.00	-36.10
GUAD0183	5/14/2021 12:53	56	43.8	0.0	0.2	129	129	-12.70	-12.70
GUAD0184	5/13/2021 14:19	41.9	41.3	0.0	16.8	129	129	-21.40	-21.50
GUAD0185	5/17/2021 11:27	50.8	41.3	0.0	7.9	135	135	-2.10	-2.10
GUAD0186	5/17/2021 11:19	52.2	43.8	0.0	4	121	121	-11.00	-11.50
GUAD0187	5/14/2021 12:42	56.5	43.3	0.1	0.1	125	125	-36.30	-36.20
GUAD0198	5/17/2021 14:39	51.2	39.1	0.0	9.7	125	125	-2.10	-2.10
GUAD0199	5/4/2021 15:19	56.8	42.9	0.2	0.1	128	128	-14.40	-14.40
GUAD0199	5/4/2021 17:23	CO was 0 ppm							
GUAD0199	5/17/2021 13:35	52.1	39.6	0.0	8.3	131	131	-12.1	-12.0
GUAD0200	5/17/2021 15:52	54.4	41.5	0.0	4.1	127	127	-36.2	-36.1
GUAD0201	5/14/2021 13:45	55.5	44.1	0.2	0.2	123	123	-29.3	-29.3
GUAD0202	5/17/2021 14:42	48.3	40.2	0.0	11.5	123	123	-1.9	-1.9
GUAD0203	5/18/2021 14:33	55.7	43.4	0.8	0.1	106	106	-35.8	-35.5
GUAD0204	5/14/2021 14:02	54.6	45.3	0.0	0.1	129	129	-34.6	-34.5
GUAD0205	5/17/2021 13:14	38.8	36.6	0.0	24.6	118	118	-0.2	-0.2
GUAD0207	5/17/2021 13:31	41.9	37.9	0.0	20.2	119	118	-0.1	-0.1
GUAD0208	5/19/2021 9:52	38	36.5	0.1	25.4	125	125	-0.4	-0.5
GUAD0209	5/17/2021 13:42	52.7	47.2	0.0	0.1	92	96	-0.1	-0.1
GUAD0211	5/19/2021 9:46	51	41.7	0.2	7.1	121	121	-0.1	-0.1
GUAD0213	5/17/2021 11:35	54	43.8	0.2	2	134	134	-19.5	-19.8
GUAD0214	5/17/2021 16:14	56.4	43.4	0.1	0.1	118	118	-0.6	-0.6
GUAD0215	5/17/2021 11:54	48.9	42.6	0.0	8.5	131	131	-0.9	-0.9
GUAD0216	5/17/2021 13:06	46	41.5	0.1	12.4	131	131	-0.5	-0.4
GUAD0217	5/14/2021 13:03	44.8	41.6	0.0	13.6	128	128	-0.4	-0.4
GUAD0218	5/14/2021 13:07	40.4	38.8	0.0	20.8	119	117	-0.4	-0.3
GUAD0219	5/14/2021 13:11	42.7	37.9	0.0	19.4	121	120	-2.2	-2.0
GUAD0220	5/18/2021 12:52	46.5	42.2	0.1	11.2	125	125	-22.8	-23.1
GUAD0221	5/18/2021 12:46	37.5	35.7	0.1	26.7	116	116	-1.5	-1.6
GUAD0222	5/13/2021 10:12	25.9	28.1	0.0	46	115	114	-0.7	-0.6
GUAD0223	5/13/2021 10:27	36.7	33.8	0.0	29.5	117	117	-0.1	-0.1

GUAD0224	5/13/2021 10:32	25.1	29.3	0.0	45.6	112	102	-0.2	-0.1
GUAD0225	5/13/2021 13:28	41.4	35.5	0.0	23.1	118	118	-0.3	-0.1
GUAD0226	5/13/2021 11:28	47.3	40.1	0.1	12.5	121	121	-26.0	-26.0
GUAD0227	5/13/2021 13:25	42.6	36.9	0.0	20.5	115	115	-0.6	-0.6
GUAD0228	5/13/2021 13:45	29.2	30.9	0.3	39.6	107	107	-0.2	-0.2
GUAD0230	5/13/2021 10:07	34.9	32.6	0.1	32.4	113	113	-1.4	-0.4
GUADH11L	5/18/2021 16:05	48.7	32.9	3.0	15.4	84	84	-2.6	-2.6
GUADH12L	5/18/2021 16:19	36.3	28	2.6	33.1	87	87	-1.8	-1.8

Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.
There are 87 total collectors (85 vertical wells and 2 horizontal wells) at GRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

Guadalupe Recycling & Disposal Facility, San Jose, CA
Wellfield Monitoring Report -June 3, 9, 10, 11, 15, 16, 18 and 25, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	6/9/2021 10:12	47.3	42.2	0.3	10.2	138	138	-18.8	-18.9
GDLC0189	6/15/2021 13:29	47.6	43.3	0.1	9	109	109	-0.4	-0.8
GDLC0190	6/15/2021 13:33	50.1	41.7	0.1	8.1	107	107	-0.7	-1.5
GDLC0191	6/11/2021 13:10	24.3	32.3	0	43.4	114	123	-3.8	-33.7
GDLC0191	6/11/2021 13:14	24.2	31.9	0	43.9	123	120	-33.3	-7.6
GDLC0192	6/11/2021 13:27	43.9	43.6	0	12.5	127	127	-12	-14.2
GDLC0193	6/15/2021 14:56	51.9	42.4	0.6	5.1	121	120	-4.8	-1.3
GDLC0196	6/15/2021 12:41	30.5	29.8	0	39.7	98	98	-1.1	-1.3
GDLC0197	6/18/2021 10:16	37.7	34.1	0.1	28.1	124	124	-0.8	-0.8
GDLC0232	6/15/2021 12:35	27.5	31.5	0	41	96	96	-0.6	-0.8
GDLC0233	6/15/2021 12:38	20.1	25.7	1.1	53.1	116	116	-7.4	-3.9
GDLC0234	6/15/2021 10:23	38.4	36.4	0	25.2	113	113	-0.3	-0.3
GDLC0235	6/11/2021 13:02	45.8	44.1	0.2	9.9	123	124	-21.3	-21
GDLC0236	6/15/2021 14:19	44.4	39	0	16.6	115	115	-0.2	-0.3
GDLC0237	6/25/2021 14:27	53.9	42.2	0	3.9	126	126	-4.8	-4.75
GDLC0238	6/15/2021 10:10	16.9	28	0.1	55	103	103	-0.2	-0.2
GDLC0239	6/10/2021 12:37	18.3	25.5	0.3	55.9	107	107	-0.8	-0.8
GDLC0239	6/10/2021 12:39	18.5	25.4	0.4	55.7	107	107	-0.7	-0.5
GDLC0239	6/10/2021 12:42	21.2	27.3	0	51.5	107	107	-10.3	-1.1
GDLC0240	6/10/2021 12:47	35.2	34.8	0	30	117	117	-13.6	-10.8
GDLC0241	6/11/2021 12:46	42	42.1	0.2	15.7	123	122	-4.7	-3
GDLC0242	6/3/2021 12:36	55.4	44.5	0	0.1	122	122	-41.7	-42
GDLC0242	6/10/2021 12:55	55.6	44.2	0	0.2	122	122	-43.2	-43
GDLC0243	6/11/2021 13:51	24.9	34.4	0.1	40.6	104	103	-0.8	-0.3
GDLC0244	6/15/2021 10:18	29.4	34.6	0.1	35.9	104	104	-0.1	-0.1
GUAD0062	6/16/2021 12:24	45	35.6	0.4	19	97	97	-2.1	-2.1
GUAD0065	6/10/2021 12:02	45.1	35.3	0.2	19.4	95	95	-2.3	-2.3
GUAD0065	6/15/2021 9:44	54.4	40.7	0.1	4.8	110	110	-42.7	-43.8
GUAD0066	6/15/2021 9:47	43.3	34.7	0.1	21.9	102	102	-4.3	-4.3
GUAD0081	6/15/2021 15:22	55.2	42.5	0	2.3	109	109	-42.2	-41.9
GUAD0082	6/15/2021 15:28	52	37.4	0	10.6	98	102	-10.5	-11.6
GUAD0112	6/11/2021 14:43	41	34.5	0	24.5	125	124	-0.5	-0.3
GUAD0114	6/18/2021 9:27	51.7	40.2	0.4	7.7	129	129	-44	-3.1
GUAD0122	6/16/2021 15:25	56.8	43	0	0.2	133	133	-33.2	-34.9
GUAD0124	6/11/2021 13:05	55.4	44.5	0	0.1	116	116	1.3	1.3
GUAD0124	6/18/2021 11:27	55.5	44.4	0	0.1	127	128	-30.9	-31
GUAD0129	6/11/2021 12:49	58.6	41.2	0	0.2	109	109	-38.1	-38.2
GUAD0131	6/16/2021 12:46	57.7	42	0.2	0.1	107	107	-43.7	-43
GUAD0134	6/10/2021 12:29	45	36.2	0	18.8	122	122	-0.9	-0.9
GUAD0135	6/10/2021 12:34	46.4	38	0	15.6	129	129	-3	-2.9
GUAD0138	6/15/2021 9:51	29.6	30.7	0	39.7	91	88	-0.7	-0.5
GUAD0142	6/15/2021 9:56	44.2	35.5	0	20.3	102	102	-4.6	-4.6
GUAD0146	6/15/2021 14:11	54.3	41.1	1.2	3.4	129	129	-37.3	-37
GUAD0147	6/15/2021 10:44	58	41.3	0.6	0.1	113	111	-0.9	-1.1
GUAD0147	6/18/2021 10:30	47.4	37.9	0	14.7	115	115	-31.8	-32.3

GUAD0151	6/16/2021 15:17	54	38	0	8	129	129	-25.7	-25.3
GUAD0152	6/9/2021 10:35	57.8	42	0	0.2	129	129	-37.8	-37.5
GUAD0154	6/17/2021 13:11	50.8	34.9	2.1	12.2	135	135	-15.9	-14.2
GUAD0161	6/17/2021 14:40	50.8	39.3	0.3	9.6	128	128	-4	-3.9
GUAD0162	6/17/2021 14:59	55.8	43.1	0.1	1	139	139	-7.1	-7.1
GUAD0172	6/18/2021 11:36	59.2	40.7	0	0.1	109	110	-1.8	-1.9
GUAD0173	6/18/2021 11:46	56	39.9	0	4.1	119	119	-0.6	-0.8
GUAD0176	6/15/2021 12:29	45.1	39	0.1	15.8	103	103	-1.2	-1.2
GUAD0177	6/16/2021 14:20	41.4	37.6	0.1	20.9	125	124	-27.2	-24.1
GUAD0178	6/16/2021 14:28	31.4	24.3	8.9	35.4	101	102	-1.2	-1.8
GUAD0178	6/16/2021 14:31	12.8	9.3	15.9	62	102	102	-2.2	-2.1
GUAD0178	6/18/2021 10:53	9.1	6.9	17.1	66.9	98	98	-2.6	-2.6
GUAD0178	6/25/2021 14:42	0	0.3	20.6	79.1	86.2	86.2	-1.6	-1.66
GUAD0179	6/16/2021 14:46	45.4	36	0.1	18.5	112	112	-0.1	-0.1
GUAD0180	6/18/2021 11:05	54.7	44.6	0.6	0.1	114	115	-37.7	-37.8
GUAD0181	6/16/2021 15:55	53.6	44.8	1.5	0.1	135	135	-29.9	-39.7
GUAD0183	6/11/2021 12:59	55.9	44	0	0.1	130	130	-15.7	-15.5
GUAD0184	6/16/2021 12:37	40.3	40.2	0.2	19.3	126	127	-23.5	-25.9
GUAD0185	6/16/2021 15:51	54.5	41.5	0	4	139	139	-39.3	-39.7
GUAD0186	6/15/2021 14:52	51.4	44.1	0.1	4.4	129	129	-39.7	-39.5
GUAD0187	6/11/2021 13:34	56.7	40.9	0.2	2.2	125	125	-39.8	-39.8
GUAD0198	6/16/2021 14:50	52.2	39.3	0.2	8.3	124	124	-1.5	-1.5
GUAD0199	6/16/2021 15:39	CO was 0 ppm							
GUAD0199	6/16/2021 15:40	57	41.2	0	1.8	128	128	-1.8	-1.8
GUAD0199	6/25/2021 14:39	48.7	41.1	0	10.2	128.7	128.9	-1.78	-1.76
GUAD0200	6/16/2021 14:35	52.7	40.8	0.2	6.3	126	127	-36.4	-37.7
GUAD0201	6/15/2021 10:28	55.4	44.1	0.3	0.2	118	118	-28.2	-28.4
GUAD0202	6/15/2021 13:20	52.2	40.3	0.2	7.3	121	118	-1.6	-1.7
GUAD0203	6/18/2021 10:23	56	43.6	0.2	0.2	112	113	-35.3	-35.4
GUAD0204	6/15/2021 10:38	55.3	44.5	0.1	0.1	129	129	-36.2	-36.4
GUAD0205	6/15/2021 13:37	42.8	39.5	0	17.7	123	128	-0.2	-0.2
GUAD0207	6/16/2021 15:37	40.5	37.3	0	22.2	124	127	-0.2	-0.1
GUAD0208	6/16/2021 15:33	29.5	38.9	0	31.6	123	123	0.00	0.00
GUAD0208	6/18/2021 11:23	28.1	39.1	0	32.8	123	123	-0.1	-0.1
GUAD0209	6/16/2021 15:29	40.7	45.7	0	13.6	128	128	-0.2	-0.1
GUAD0211	6/15/2021 14:15	51.4	43.6	0.1	4.9	124	124	-0.8	-0.9
GUAD0213	6/15/2021 14:31	55.7	43.5	0.6	0.2	132	132	-3.1	-3
GUAD0213	6/25/2021 14:33	51.4	43	0	5.6	135	135.1	-27.78	-27.75
GUAD0214	6/17/2021 15:13	57.5	42.3	0	0.2	119	119	0.3	0.3
GUAD0214	6/17/2021 15:16	56.3	42.9	0.7	0.1	119	119	0.3	0.3
GUAD0214	6/25/2021 14:50	40.8	43.7	0	15.5	129.1	127.8	-22.37	-12.08
GUAD0214	6/25/2021 14:53	39.5	42.8	0	17.7	125.3	125.8	-7.76	-7.77
GUAD0215	6/15/2021 15:03	49.2	42.6	0	8.2	128	128	-1	-1
GUAD0216	6/15/2021 13:41	42.8	39.8	0	17.4	124	124	-0.2	-0.2
GUAD0217	6/11/2021 13:19	44	40.9	0	15.1	129	129	-0.3	-0.3
GUAD0218	6/11/2021 13:24	38.4	38.1	0.1	23.4	118	118	-0.3	-0.3
GUAD0219	6/11/2021 13:45	44.3	37.9	0	17.8	123	123	-1.8	-1.8
GUAD0220	6/11/2021 13:32	45.2	41.1	0	13.7	126	125	-26.2	-23.1
GUAD0221	6/11/2021 13:41	37.6	35.3	0.1	27	115	115	-1.5	-1.5

GUAD0222	6/3/2021 12:27	29.6	30.1	0	40.3	116	116	-0.6	-0.6
GUAD0222	6/10/2021 12:11	27.1	28.3	0.1	44.5	115	115	-0.5	-0.5
GUAD0223	6/3/2021 12:32	38.3	35.1	0	26.6	113	114	-0.1	-0.2
GUAD0223	6/11/2021 12:05	37.3	34.6	0.2	27.9	116	116	-0.1	-0.1
GUAD0224	6/10/2021 12:23	21.9	26.7	0.2	51.2	106	106	-0.2	-0.2
GUAD0224	6/10/2021 12:24	21.9	26.8	0.3	51	106	106	-0.2	-0.2
GUAD0225	6/11/2021 14:38	47.9	37.9	0	14.2	117	117	-0.3	-0.4
GUAD0226	6/11/2021 14:23	44	39	0.1	16.9	121	121	-28.2	-28.4
GUAD0227	6/11/2021 14:35	48.3	39	0	12.7	114	115	-0.2	-0.4
GUAD0228	6/11/2021 14:29	31.4	31.8	0	36.8	105	105	-0.1	-0.1
GUAD0230	6/3/2021 12:22	35.7	33.5	0	30.8	113	113	-4.2	-1.6
GUAD0230	6/10/2021 12:08	32.6	32.1	0.3	35	112	111	-1.2	-0.8
GUADH11L	6/15/2021 15:17	52.9	35.5	2	9.6	88	88	-2.6	-3.3
GUADH12L	6/15/2021 15:34	31.1	19.1	8.2	41.6	104	104	-2.9	-2.7

Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.

There are 87 total collectors (85 vertical wells and 2 horizontal wells) at GRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

Guadalupe Recycling & Disposal Facility, San Jose, CA

Wellfield Monitoring Report -July 3, 6, 16, 19,24, 28, and 30, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	7/16/2021 14:02	49.5	43.6	0.3	6.6	133	136	-22.5	-22.7
GDLC0189	7/24/2021 15:52	44.1	45.5	0.1	10.3	130	132	-1	-2.5
GDLC0190	7/24/2021 16:09	44.6	43.6	0.0	11.8	123	123	-3.1	-3
GDLC0191	7/19/2021 18:50	18.7	27.1	0.4	53.8	118	118	-7.6	-3.4
GDLC0192	7/19/2021 18:37	40.5	41.3	0.3	17.9	123	124	-21.3	-15.4
GDLC0193	7/24/2021 13:40	29.5	32.2	0.1	38.2	126	127	-5.4	-0.9
GDLC0196	7/30/2021 7:46	28.2	31.5	0.0	40.3	101	101	-2.5	-2.5
GDLC0197	7/30/2021 17:57	40.8	35.1	0.0	24.1	119	118	-0.9	-1
GDLC0232	7/30/2021 8:00	26.8	32.9	0.0	40.3	108	109	-0.6	-0.7
GDLC0233	7/30/2021 7:50	17.6	23.6	3.0	55.8	81	88	-1	-1.1
GDLC0234	7/24/2021 15:59	36.2	35.5	0.0	28.3	116	117	-0.1	-0.2
GDLC0235	7/19/2021 18:40	44.6	42.7	0.1	12.6	120	120	-37.2	-34.3
GDLC0236	7/24/2021 14:25	29.2	33.6	0.2	37	120	121	-0.4	-0.5
GDLC0237	7/30/2021 16:25	47.3	41	0.0	11.7	123	123	-5.1	-5.7
GDLC0238	7/16/2021 18:22	19.1	28	0.0	52.9	108	108	-0.1	-0.1
GDLC0238	7/24/2021 13:52	51.9	42.2	0.0	5.9	118	120	-6.5	-6
GDLC0239	7/6/2021 13:20	10.4	23.1	0.0	66.5	96	96.5	-0.66	-0.64
GDLC0240	7/6/2021 13:24	33.3	34.2	0.0	32.5	116.2	115.7	-9.77	-2.44
GDLC0241	7/6/2021 13:31	52.1	42.3	0.6	5	121.9	122.7	-43.47	-43.49
GDLC0242	7/30/2021 8:52	54.9	45	0.0	0.1	121	121	-37.3	-37.3
GDLC0243	7/19/2021 17:10	39.2	37.8	0.5	22.5	104	105	-0.1	-0.1
GDLC0244	7/24/2021 17:01	30.1	33.4	0.1	36.4	112	113	-0.1	-0.1
GUAD0062	7/19/2021 16:57	45.4	34.8	0.3	19.5	97	98	-4.9	-2.1
GUAD0065	7/16/2021 17:40	54.2	40	0.0	5.8	110	110	-44.2	-40.9
GUAD0066	7/16/2021 17:23	43.7	34.4	0.0	21.9	109	109	-8.3	-3.5
GUAD0081	7/30/2021 15:36	49.5	38.4	2.0	10.1	106	107	-39.6	-36.8
GUAD0082	7/30/2021 15:45	50	37.6	0.1	12.3	102	103	-13.2	-10.1
GUAD0112	7/16/2021 17:54	43.5	34.1	0.0	22.4	124	124	-6.4	-0.2
GUAD0114	7/30/2021 16:00	52.3	47.3	0.2	0.2	107	107	-1.9	-0.3
GUAD0122	7/3/2021 10:32	55.6	41.9	0.2	2.3	136	136	-33.7	-33.73
GUAD0124	7/19/2021 18:47	56	42.4	0.1	1.5	126	127	-30.6	-30.8
GUAD0129	7/19/2021 17:28	59.9	39	0.6	0.5	106	106	-40.2	-36.8
GUAD0131	7/30/2021 18:08	57.6	42.3	0.0	0.1	112	112	-42.5	-38.5
GUAD0134	7/6/2021 13:11	42.9	36.3	0.0	20.8	124.9	124.6	-1.3	-1.19
GUAD0135	7/6/2021 13:16	44.2	37.4	0.0	18.4	132.2	132.2	-3.16	-2.58
GUAD0138	7/16/2021 17:26	33.1	30.1	0.0	36.8	97	97	-3	-0.3
GUAD0142	7/16/2021 17:18	44.7	34.7	0.1	20.5	104	104	-7.9	-4
GUAD0146	7/24/2021 14:20	53.6	40.4	1.6	4.4	129	129	-37	-33
GUAD0147	7/24/2021 17:22	35.3	32.1	0.0	32.6	117	118	-27.6	-20.6
GUAD0151	7/14/2021 11:56	51.2	35.5	0.4	12.9	128	128	-26.1	-26.3
GUAD0152	7/30/2021 17:45	58.4	38.4	0.0	3.2	126	126	-17.7	-14.5
GUAD0154	7/24/2021 13:30	47.6	36.2	3.3	12.9	131.0	131.0	-21.3	-18.8
GUAD0161	7/24/2021 14:05	44.6	39.2	0.0	16.2	132	133	-30.1	-28.1
GUAD0162	7/24/2021 14:00	54.3	44.3	0.0	1.4	137	138	-39.5	-39.5
GUAD0172	7/30/2021 8:59	43.7	36.8	0.0	19.5	108	108	-3.8	-3.8

GUAD0173	7/30/2021 9:05	29.2	31.1	0.0	39.7	111	108	-1.6	-1.2
GUAD0176	7/24/2021 17:40	42.8	37.8	0.0	19.4	107	108	-0.9	-0.7
GUAD0177	7/24/2021 17:31	45.2	37.7	0.0	17.1	125	126	-20.3	-17.8
GUAD0178	7/3/2021 9:50	0.0	0.2	21.6	78.2	77.4	77.6	-3.01	-2.9
GUAD0178	7/14/2021 16:02	57.2	41.6	0.7	0.5	114	115	-38.6	-38.8
GUAD0178	7/14/2021 16:05	SPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-new jumper installe							
GUAD0179	7/28/2021 18:13	18.5	26.6	0.1	54.8	112	112	-0.5	-0.6
GUAD0179	7/30/2021 8:06	17.3	26.9	0.0	55.8	109	108	-0.8	-0.7
GUAD0180	7/16/2021 18:40	51.3	42.4	0.3	6	125	126	-35.7	-35.9
GUAD0181	7/30/2021 16:35	54.1	45.7	0.1	0.1	137	138	-32.6	-30.1
GUAD0183	7/19/2021 17:32	39.7	38.1	0.2	22	126	126	-28.5	-9.8
GUAD0184	7/19/2021 18:44	56.6	42.2	0.2	1	125	125	-35.5	-35.4
GUAD0185	7/24/2021 13:46	46.2	39.7	0.0	14.1	135	135	-2.1	-2.1
GUAD0186	7/24/2021 13:34	42.1	40.1	0.5	17.3	130	130	-36.8	-36.8
GUAD0187	7/30/2021 8:39	56.1	43.8	0.0	0.1	120	120	-26.6	-26.5
GUAD0198	7/28/2021 18:16	43.4	37.3	0.8	18.5	112	121	-6.2	-2.3
GUAD0198	7/30/2021 8:09	44.1	39.3	0.0	16.6	123	123	-3.1	-2.9
GUAD0199	7/3/2021 9:45	57.8	42.2	0.0	0	129.7	129.8	-1.94	-1.93
GUAD0199	7/16/2021 18:34	49.4	38.8	0.1	11.7	127	128	-36.5	-31.4
GUAD0199	7/16/2021 18:35	49.4	38.8	0.1	11.7	127	128	-36.5	-30.8
GUAD0200	7/28/2021 21:11	49.7	39.4	0.5	10.4	124	124	-33.4	-27.3
GUAD0201	7/24/2021 16:06	52.1	39.2	1.6	7.1	119	109	-20.5	-10.1
GUAD0202	7/30/2021 8:15	38.1	37.9	0.0	24	123	123	-2.2	-1.8
GUAD0203	7/30/2021 17:49	55.4	44.4	0.0	0.2	117	118	-31.5	-28.8
GUAD0204	7/24/2021 17:08	52.2	40.7	1.2	5.9	125	126	-24.7	-24.1
GUAD0205	7/30/2021 17:10	52.8	46.7	0.3	0.2	128	128	-0.5	-0.8
GUAD0207	7/3/2021 9:38	53.8	44.7	0.0	1.5	125	125.2	-0.03	-0.02
GUAD0208	7/30/2021 16:42	36.6	42.9	1.2	19.3	123	123	-0.1	-0.1
GUAD0209	7/3/2021 10:39	31.5	41.2	0.0	27.3	132.7	131.1	-0.65	-0.13
GUAD0209	7/3/2021 10:40	CO was 0 ppm							
GUAD0209	7/3/2021 10:47	32.8	42	0.0	25.2	130.9	131	-0.05	-0.03
GUAD0209	7/14/2021 13:37	CO was 0 ppm							
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7	128	128	-30.2	-30.4
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7	128	128	-30.2	-30.3
GUAD0209	7/14/2021 16:13	43.7	43.9	0.1	12.3	119	97	-0.1	-0.1
GUAD0211	7/24/2021 14:17	43.7	42.5	0.0	13.8	119	119	-0.3	-0.3
GUAD0213	7/24/2021 13:55	46.6	40.6	0.1	12.7	132	132	-27.1	-27.3
GUAD0214	7/24/2021 14:10	45.8	42.6	0.0	11.6	126	126	-6.5	-4.1
GUAD0215	7/24/2021 14:28	40.7	39.6	0.0	19.7	130	130	-4.9	-1.9
GUAD0216	7/30/2021 16:20	47.2	47.1	0.0	5.7	132	133	-0.2	-0.2
GUAD0217	7/19/2021 18:54	27.3	32.1	0.2	40.4	127	126	-12.1	-1.6
GUAD0218	7/19/2021 18:57	33.3	34.4	0.0	32.3	121	121	-8.4	-0.4
GUAD0219	7/30/2021 8:45	42.7	38.6	0.0	18.7	118	119	-0.8	-0.7
GUAD0220	7/19/2021 18:31	44	39.3	0.3	16.4	121	122	-37.9	-32.8
GUAD0221	7/19/2021 19:04	39.4	35.5	0.2	24.9	121	121	-1	-1.4
GUAD0222	7/6/2021 13:38	27.1	27.8	0.0	45.1	75.4	75	-0.21	-0.16
GUAD0223	7/6/2021 13:34	36.5	33.6	0.0	29.9	123.5	124	-0.11	-0.14

GUAD0224	7/6/2021 13:05	19.5	25.5	0.6	54.4	110.5	114.6	-0.49	-0.45
GUAD0225	7/16/2021 17:50	47.5	36.2	0.0	16.3	119	120	-2.8	-0.2
GUAD0226	7/19/2021 17:20	45.6	38.3	0.3	15.8	118	118	-31.2	-28.7
GUAD0227	7/16/2021 17:47	45.1	36.8	0.0	18.1	118	119	-0.3	-0.3
GUAD0228	7/30/2021 7:36	17.9	29	0.0	53.1	109	109	-0.9	-0.9
GUAD0230	7/6/2021 13:41	36.5	32.9	0.0	30.6	110.2	109.9	-0.7	-0.53
GUADH11L	7/30/2021 15:31	46.9	32.4	4.2	16.5	94	94	-4.6	-4.5
GUADH12L	7/30/2021 15:47	49.3	37.2	3.2	10.3	111	112	-3.2	-3.4

Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.

There are 87 total collectors (85 vertical wells and 2 horizontal wells) at GRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

Guadalupe Recycling & Disposal Facility, San Jose, CA
Wellfield Monitoring Report -August 9, 11, 12, and 13, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	8/11/2021 13:34	47.5	46.8	0.1	5.6	137.0	138.0	-16.7	-16.3
GDLC0189	8/11/2021 13:54	41.4	47.4	0.0	11.2	135.0	135.0	-3.7	-3.6
GDLC0190	8/11/2021 14:00	38.4	42.7	0.6	18.3	123.0	122.0	-1.6	-1.5
GDLC0191	8/9/2021 14:28	22.8	29.7	0.1	47.4	118.0	119.0	-2.9	-2.4
GDLC0192	8/9/2021 14:41	39.9	40.5	0.6	19.0	123.0	123.0	-12.4	-11.4
GDLC0193	8/9/2021 16:08	31.8	32.5	0.4	35.3	95.0	95.0	-0.3	-0.3
GDLC0196	8/12/2021 14:01	27.2	29.7	0.0	43.1	104.0	104.0	-2.8	-1.6
GDLC0197	8/13/2021 12:42	32.7	31.2	0.0	36.1	124.0	125.0	-0.5	-0.5
GDLC0232	8/12/2021 14:12	31.2	34.0	0.0	34.8	112.0	112.0	-0.7	-0.7
GDLC0233	8/12/2021 13:57	38.7	32.8	1.0	27.5	114.0	114.0	-3.4	-2.0
GDLC0234	8/11/2021 13:21	31.3	34.0	0.1	34.6	115.0	116.0	-0.3	-0.2
GDLC0235	8/9/2021 14:20	44.2	42.9	0.0	12.9	120.0	121.0	-27.5	-27.9
GDLC0236	8/11/2021 14:23	28.4	33.4	0.1	38.1	126.0	126.0	-0.5	-0.4
GDLC0237	8/9/2021 16:16	42.7	38.7	0.0	18.6	98.0	97.0	-10.7	-5.3
GDLC0238	8/11/2021 13:10	16.6	27.1	0.5	55.8	87.0	87.0	-0.6	-0.4
GDLC0239	8/9/2021 12:14	13.9	23.2	0.1	62.8	113.0	113.0	-4.2	-1.0
GDLC0240	8/9/2021 13:24	45.8	38.1	0.1	16.0	116.0	116.0	-0.8	-1.4
GDLC0241	8/9/2021 14:05	45.0	41.2	0.1	13.7	122.0	122.0	-4.3	-4.4
GDLC0242	8/9/2021 13:31	52.7	41.1	0.7	5.5	120.0	120.0	-40.4	-40.5
GDLC0243	8/9/2021 14:56	30.5	35.2	0.0	34.3	107.0	109.0	-0.1	-0.1
GDLC0244	8/11/2021 13:14	24.8	31.7	0.1	43.4	114.0	114.0	-2.4	-0.1
GUAD0062	8/9/2021 11:47	40.6	33.8	0.3	25.3	95.0	95.0	-6.3	-1.9
GUAD0065	8/9/2021 9:07	50.3	38.8	0.9	10.0	108.0	108.0	-38.4	-38.4
GUAD0066	8/9/2021 8:59	45.1	35.5	0.0	19.4	104.0	104.0	-2.5	-2.5
GUAD0081	8/13/2021 10:39	56.5	41.8	0.2	1.5	106.0	107.0	-43.4	-43.9
GUAD0082	8/13/2021 10:45	49.9	36.6	0.1	13.4	99.0	100.0	-10.8	-11.7
GUAD0112	8/9/2021 9:21	24.6	28.6	0.0	46.8	124.0	126.0	-5.6	-1.8
GUAD0114	8/13/2021 11:50	53.1	40.3	0.6	6.0	132.0	133.0	-3.3	-5.3
GUAD0122	8/12/2021 13:18	55.8	44.0	0.0	0.2	132.0	132.0	-36.1	-35.3
GUAD0124	8/9/2021 14:25	55.8	42.6	0.0	1.6	126.0	126.0	-24.1	-24.1
GUAD0129	8/9/2021 14:09	52.8	35.6	2.1	9.5	104.0	104.0	-35.5	-35.4
GUAD0131	8/13/2021 13:12	59.0	40.9	0.0	0.1	114.0	114.0	-44.9	-42.4
GUAD0134	8/9/2021 8:49	36.6	34.7	0.1	28.6	122.0	122.0	-2.2	-1.6
GUAD0135	8/9/2021 13:18	36.0	35.0	0.0	29.0	129.0	130.0	-7.2	-4.3
GUAD0138	8/9/2021 9:02	30.1	30.6	0.0	39.3	98.0	98.0	-0.8	-0.8
GUAD0142	8/9/2021 8:57	44.4	35.3	0.1	20.2	104.0	104.0	-4.3	-4.2
GUAD0146	8/11/2021 14:27	50.0	39.4	2.1	8.5	128.0	128.0	-35.3	-35.4
GUAD0147	8/13/2021 12:28	38.4	33.1	0.0	28.5	115.0	115.0	-19.4	-10.7
GUAD0151	8/11/2021 13:31	57.9	39.1	0.0	3.0	129.0	129.0	-18.4	-18.4
GUAD0152	8/12/2021 12:52	48.9	37.8	1.2	12.1	124.0	125.0	-34.5	-33.7
GUAD0154	8/9/2021 15:54	55.0	40.0	1.1	3.9	133.0	133.0	-21.9	-17.7
GUAD0161	8/13/2021 12:51	42.1	37.1	0.1	20.7	133.0	134.0	-29.4	-27.9
GUAD0162	8/13/2021 12:54	52.9	42.3	0.0	4.8	136.0	136.0	-40.2	-40.3
GUAD0172	8/13/2021 13:20	34.7	31.5	0.6	33.2	109.0	109.0	-5.1	-2.9

GUAD0173	8/13/2021 12:01	28.9	30.0	0.0	41.1	121.0	121.0	-1.5	-0.7
GUAD0176	8/12/2021 14:05	28.3	31.1	0.0	40.6	107.0	107.0	-6.8	-3.5
GUAD0177	8/12/2021 13:52	49.6	39.9	0.0	10.5	126.0	126.0	-16.8	-16.6
GUAD0178	8/12/2021 12:57	49.7	38.4	2.0	9.9	111.0	112.0	-40.3	-40.2
GUAD0179	8/12/2021 10:59	20.8	27.2	0.1	51.9	109.0	110.0	-0.7	-0.7
GUAD0180	8/12/2021 13:22	49.5	41.6	0.9	8.0	124.0	125.0	-38.0	-37.9
GUAD0181	8/12/2021 13:26	54.3	45.6	0.0	0.1	136.0	138.0	-34.3	-35.8
GUAD0183	8/9/2021 14:16	56.0	42.0	0.0	2.0	127.0	127.0	-27.8	-27.9
GUAD0184	8/9/2021 14:13	40.9	39.0	0.1	20.0	129.0	130.0	-25.7	-22.3
GUAD0185	8/9/2021 15:57	41.0	36.6	0.4	22.0	132.0	133.0	-7.9	-4.0
GUAD0186	8/9/2021 16:05	40.1	37.2	1.6	21.1	129.0	129.0	-36.2	-35.9
GUAD0187	8/9/2021 14:45	54.8	40.6	0.4	4.2	119.0	120.0	-28.3	-28.3
GUAD0198	8/13/2021 12:17	43.7	37.1	0.0	19.2	123.0	123.0	-2.7	-2.7
GUAD0199	8/12/2021 13:00	CO was 0 ppm							
GUAD0199	8/12/2021 13:01	42.0	36.8	0.2	21.0	127.0	128.0	-32.9	-31.5
GUAD0200	8/12/2021 12:45	55.3	43.0	1.6	0.1	125.0	123.0	-29.4	-29.4
GUAD0201	8/11/2021 13:26	50.4	40.3	2.2	7.1	112.0	113.0	-23.0	-20.1
GUAD0202	8/13/2021 11:39	37.8	35.1	0.1	27.0	122.0	123.0	-1.6	-1.4
GUAD0203	8/13/2021 12:34	52.8	41.8	0.5	4.9	116.0	116.0	-33.9	-34.4
GUAD0204	8/11/2021 13:38	53.0	41.5	1.4	4.1	126.0	126.0	-31.0	-29.1
GUAD0205	8/11/2021 13:56	36.1	50.0	0.1	13.8	131.0	132.0	-1.5	-0.7
GUAD0207	8/12/2021 13:06	40.8	40.1	0.0	19.1	127.0	129.0	-0.1	-0.1
GUAD0208	8/12/2021 13:11	34.5	41.4	0.0	24.1	127.0	127.0	-0.5	-0.4
GUAD0209	8/12/2021 13:15	50.4	47.9	0.0	1.7	129.0	129.0	-0.1	-0.1
GUAD0209	8/12/2021 16:12	CO was 0 ppm							
GUAD0211	8/11/2021 14:32	42.0	41.4	0.2	16.4	119.0	117.0	-0.1	-0.1
GUAD0213	8/9/2021 16:13	44.5	38.0	0.8	16.7	131.0	131.0	-27.2	-27.4
GUAD0214	8/11/2021 14:36	42.1	38.3	1.2	18.4	124.0	124.0	-3.3	-3.3
GUAD0215	8/11/2021 14:18	38.9	38.2	0.8	22.1	130.0	129.0	-1.3	-0.9
GUAD0216	8/11/2021 14:04	41.3	40.6	0.3	17.8	133.0	133.0	-4.4	-0.3
GUAD0217	8/9/2021 14:32	30.8	32.7	0.3	36.2	124.0	124.0	-0.6	-0.5
GUAD0218	8/9/2021 14:38	26.1	30.6	0.0	43.3	125.0	126.0	-5.9	-3.5
GUAD0219	8/13/2021 13:06	37.4	33.5	0.9	28.2	115.0	113.0	-0.8	-0.7
GUAD0220	8/9/2021 14:49	44.7	38.5	0.4	16.4	121.0	121.0	-28.8	-28.8
GUAD0221	8/9/2021 14:52	42.8	34.6	1.2	21.4	119.0	120.0	-0.5	-0.4
GUAD0222	8/9/2021 11:54	14.4	22.7	0.2	62.7	112.0	112.0	-0.4	-0.3
GUAD0223	8/9/2021 12:05	24.2	28.5	0.3	47.0	122.0	119.0	-0.4	-0.2
GUAD0224	8/9/2021 12:10	15.5	25.5	0.1	58.9	116.0	116.0	-0.8	-0.3
GUAD0225	8/9/2021 9:16	30.6	32.9	0.0	36.5	120.0	119.0	-0.9	-0.6
GUAD0226	8/9/2021 13:27	43.7	37.3	0.5	18.5	117.0	118.0	-29.7	-29.2
GUAD0227	8/9/2021 9:12	27.0	32.8	0.0	40.2	119.0	120.0	-7.7	-2.4
GUAD0228	8/9/2021 9:26	11.4	23.5	0.2	64.9	109.0	109.0	-1.1	-0.7
GUAD0230	8/9/2021 11:59	18.1	24.5	0.3	57.1	109.0	112.0	-7.1	-1.5
GUADH11L	8/13/2021 10:31	39.7	27.6	6.0	26.7	82.0	83.0	-4.2	-3.3
GUADH12L	8/13/2021 10:53	24.0	22.5	3.6	49.9	87.0	95.0	-2.2	-1.8

Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 209, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.

There are 87 total collectors (85 vertical wells and 2 horizontal wells) at GRDF.

%= percent; in. w.c.= inches in water column
degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

Guadalupe Recycling & Disposal Facility, San Jose, CA

Wellfield Monitoring Report -September 3, 10, 11,and 14, 2021

Device Name	Date Time	CH4 (Methane) (%)	CO2 (Carbon Dioxide)(%)	O2 (Oxygen) (%)	Balance Gas(%)	Initial Temperature (oF)	Adjusted Temperature (oF)	Initial Static Pressure("H2O)	Adjusted Static Pressure("H2O)
GDLC0188	9/3/2021 9:19	45.6	42.6	0.0	11.8	138.3	138.3	-17.6	-17.56
GDLC0188	9/10/2021 14:41	56.3	42.6	0.0	1.1	120	121	-29.6	-29.6
GDLC0189	9/3/2021 10:52	38.8	43.5	0.0	17.7	84.5	84.2	-1.05	-1.24
GDLC0189	9/14/2021 10:50	43.9	45.8	0.1	10.2	135	135	-1.3	-1.2
GDLC0189	9/14/2021 10:51	43.9	45.8	0.1	10.2	135	134	-1.3	-1.1
GDLC0190	9/14/2021 11:06	53.9	43.2	0.3	2.6	105	112	-1	-3.7
GDLC0191	9/14/2021 15:50	25	31.6	0.0	43.4	120	121	-1.4	-1.4
GDLC0192	9/10/2021 14:45	42	43.5	0.0	14.5	124	124	-13.2	-6.2
GDLC0193	9/11/2021 11:53	23.4	29.6	0.0	47	115	114	-8.8	-1.4
GDLC0196	9/3/2021 9:55	32.8	32	0.1	35.1	100.1	100.1	-1.28	-1.26
GDLC0197	9/14/2021 14:03	35.7	32.7	0.0	31.6	125	126	-0.3	-0.3
GDLC0232	9/3/2021 10:06	30	32.1	0.0	37.9	115.3	114.5	-0.93	-0.65
GDLC0233	9/3/2021 10:00	22.4	27.2	4.5	45.9	106.7	106.7	-1.25	-1.19
GDLC0234	9/3/2021 11:03	30.4	33	0.0	36.6	115.9	115.9	-0.37	-0.38
GDLC0235	9/10/2021 15:35	44.1	43.8	0.0	12.1	121	121	-32.5	-31.1
GDLC0236	9/11/2021 12:22	37.2	36.8	0.0	26	126	126	-0.3	-0.2
GDLC0237	9/11/2021 12:04	36.3	36.6	0.1	27	124	125	-14.5	-5.1
GDLC0238	9/2/2021 10:45	15.1	26.9	0.0	58	110	109.5	-0.2	-0.06
GDLC0239	9/11/2021 11:04	19.3	26.7	0.0	54	112	111	-0.8	-0.3
GDLC0240	9/11/2021 11:09	39.3	35.6	0.0	25.1	116	116	-1.7	-1.1
GDLC0241	9/14/2021 15:24	44.5	41.2	0.0	14.3	122	122	-2.8	-1.6
GDLC0242	9/10/2021 16:08	44.6	41.4	0.0	14	122	122	-5.6	-3.7
GDLC0242	9/11/2021 11:18	52.5	41.5	0.0	6	122	122	-43.4	-43.3
GDLC0243	9/10/2021 16:12	25.6	33.2	0.0	41.2	105	105	-0.1	-0.1
GDLC0244	9/14/2021 15:59	20.2	28.7	0.0	51.1	114	114	-0.7	-0.2
GUAD0062	9/14/2021 15:38	46.5	35.4	0.2	17.9	94	95	-1.2	-1.2
GUAD0065	9/10/2021 13:22	47.6	36.2	2.1	14.1	108	108	-40.7	-40.7
GUAD0066	9/10/2021 13:02	48	36.5	0.1	15.4	105	106	-2.3	-2.3
GUAD0081	9/14/2021 13:28	57.1	42.3	0.0	0.6	107	107	-44.9	-44.9
GUAD0082	9/14/2021 13:33	50.4	37	0.0	12.6	102	103	-11.4	-10.8
GUAD0112	9/2/2021 10:18	32.9	31	0.0	36.1	125.6	125.4	-0.89	-0.7
GUAD0112	9/10/2021 13:46	35.4	32.1	0.0	32.5	125	124	-0.6	-0.3
GUAD0114	9/14/2021 16:47	36.3	34.1	0.0	29.6	131	132	-8.5	-6.8
GUAD0122	9/11/2021 13:05	57.5	42.1	0.2	0.2	126	126	-37.5	-36.9
GUAD0124	9/10/2021 15:39	55.8	44	0.0	0.2	126	126	-26.9	-26.9
GUAD0129	9/10/2021 15:54	58.7	41.2	0.0	0.1	105	105	-38.8	-38.9
GUAD0131	9/14/2021 15:07	57.4	40.6	0.2	1.8	114	114	-42.3	-40.7
GUAD0134	9/11/2021 10:32	46	37.6	0.0	16.4	123	123	-1	-1
GUAD0135	9/11/2021 11:01	51.9	39.4	0.0	8.7	129	129	-1.7	-1.7
GUAD0138	9/10/2021 13:13	31.2	30.7	0.0	38.1	100	100	-0.9	-0.7
GUAD0142	9/10/2021 12:54	45.9	35.6	0.2	18.3	104	104	-4.1	-4.1
GUAD0146	9/2/2021 16:41	55	40	1.4	3.6	131	130.9	-35.65	-34.78
GUAD0146	9/11/2021 12:27	55.3	41	0.8	2.9	128	126	-35.6	-34.7
GUAD0147	9/3/2021 10:18	55.5	37.9	0.0	6.6	113.7	115.6	-3.51	-5.62
GUAD0151	9/3/2021 10:27	55.7	35.7	0.0	8.6	129.6	129.6	-19.58	-19.62

GUAD0152	9/3/2021 9:06	56.7	40.6	0.4	2.3	125.2	125.3	-37.41	-37.41
GUAD0152	9/11/2021 13:19	57.7	41.9	0.0	0.4	126	127	-40	-39.2
GUAD0152	9/11/2021 13:20	57.7	41.9	0.0	0.4	126	125	-40	-40.3
GUAD0154	9/11/2021 12:13	56.6	41.6	0.2	1.6	134	135	-18.8	-19.4
GUAD0161	9/14/2021 11:21	44.4	39	0.0	16.6	137	137	-24.1	-22.6
GUAD0162	9/14/2021 11:26	51.4	42.3	0.0	6.3	141	142	-42.4	-42.8
GUAD0162	9/14/2021 11:30	CO was 5 ppm							
GUAD0172	9/14/2021 15:12	44.3	35.2	0.0	20.5	109	110	-1.5	-1.5
GUAD0173	9/14/2021 16:37	50.7	37.8	0.0	11.5	115	116	-0.1	-0.1
GUAD0176	9/2/2021 11:00	30.6	32.7	0.0	36.7	103.9	103.7	-3.01	-1.86
GUAD0177	9/3/2021 10:10	47.2	38.5	0.0	14.3	127.7	127.7	-17.85	-17.87
GUAD0178	9/2/2021 11:31	49.5	38.6	1.5	10.4	95.5	100.1	-42.16	-37.16
GUAD0178	9/11/2021 13:16	55.8	40.6	0.4	3.2	114	115	-39.3	-40
GUAD0179	9/14/2021 11:09	32.9	31.2	0.0	35.9	110	110	-0.8	-0.7
GUAD0180	9/2/2021 17:00	48.9	40.5	0.9	9.7	127.3	127	-38.07	-35.84
GUAD0180	9/11/2021 13:35	51.1	41	0.4	7.5	126	126	-36.8	-35.4
GUAD0181	9/2/2021 12:48	54.5	43.6	0.0	1.9	139.6	139.6	-36.34	-35.83
GUAD0181	9/11/2021 12:45	55	44.9	0.0	0.1	138	138	-37.1	-35.5
GUAD0183	9/10/2021 15:32	56.4	43.4	0.0	0.2	118	118	-36	-33.1
GUAD0184	9/10/2021 15:26	41.2	40.7	0.0	18.1	128	128	-19.4	-19.6
GUAD0185	9/11/2021 11:59	34.1	34.3	0.0	31.6	133	131	-6.9	-2.4
GUAD0186	9/11/2021 11:47	42.8	40.7	0.2	16.3	131	129	-38.6	-29.6
GUAD0187	9/14/2021 15:46	55.8	42.1	0.0	2.1	120	121	-33.9	-33.8
GUAD0198	9/14/2021 13:49	48.8	38.3	0.0	12.9	117	117	-2.5	-2.3
GUAD0199	9/3/2021 8:10	45.1	36	0.2	18.7	127.8	127.8	-32.24	-31.69
GUAD0199	9/3/2021 8:17	CO was 5 ppm							
GUAD0199	9/11/2021 13:08	46.9	37.6	0.1	15.4	127	127	-30.1	-29.9
GUAD0199	9/11/2021 13:10	CO was 0 ppm							
GUAD0200	9/3/2021 9:13	58.4	41.5	0.0	0.1	129.1	129.1	-27.72	-27.41
GUAD0200	9/11/2021 13:26	57.6	42.3	0.0	0.1	129	128	-34.1	-34.4
GUAD0201	9/3/2021 10:58	54.5	42.1	0.3	3.1	120.4	120.4	-22.29	-22.25
GUAD0202	9/3/2021 9:37	44.8	36.3	0.0	18.9	123.8	123.8	-1.01	-0.98
GUAD0203	9/14/2021 13:58	50.4	40.8	0.4	8.4	117	118	-33.3	-33.7
GUAD0204	9/3/2021 10:22	53.3	42.1	0.1	4.5	128.6	128.5	-28.45	-29.39
GUAD0205	9/14/2021 16:05	50.5	46.7	0.0	2.8	128	129	-0.2	-0.1
GUAD0207	9/2/2021 11:17	29.4	43.8	0.3	26.5	130.8	129.7	-0.24	-0.16
GUAD0207	9/11/2021 13:29	43.6	46.5	0.0	9.9	130	131	-0.1	-0.1
GUAD0208	9/3/2021 9:26	31	42.2	0.0	26.8	128.6	128.4	-0.49	-0.23
GUAD0208	9/11/2021 12:50	36.3	43.9	0.0	19.8	127	128	-0.1	-0.1
GUAD0209	9/3/2021 8:42	34.4	44.2	0.0	21.4	132.2	131.4	-0.16	-0.08
GUAD0209	9/3/2021 8:48	CO was 5 ppm							
GUAD0209	9/11/2021 13:02	42	46.3	0.0	11.7	130	132	-0.1	0.00
GUAD0209	9/14/2021 16:20	38.7	45.7	0.0	15.6	128	128	-0.2	-0.1
GUAD0211	9/2/2021 16:50	39.3	37.8	0.7	22.2	119.9	119.7	-0.48	-0.23
GUAD0211	9/11/2021 12:31	45.1	40.2	0.2	14.5	116	116	-0.1	-0.1
GUAD0213	9/11/2021 12:08	44.1	39.4	0.1	16.4	132	133	-33.1	-28.2
GUAD0214	9/11/2021 12:34	46.5	40.7	0.0	12.8	126	127	-5.4	-5.4
GUAD0215	9/11/2021 12:19	45.6	40.7	0.0	13.7	129	130	-0.6	-0.6

GUAD0216	9/14/2021 16:09	46.7	44.3	0.0	9	133	134	-0.4	-0.4
GUAD0217	9/10/2021 15:45	31.2	35.9	0.0	32.9	127	127	-3.3	-2.9
GUAD0218	9/10/2021 15:49	24.1	31.4	0.0	44.5	126	126	-6.2	-3.4
GUAD0219	9/10/2021 14:31	47.2	39.6	0.2	13	118	120	-0.7	-0.9
GUAD0220	9/10/2021 14:37	45.9	41	0.0	13.1	122	122	-28.6	-28.6
GUAD0221	9/10/2021 14:20	39.5	36.3	0.1	24.1	115	114	-0.7	-0.4
GUAD0222	9/11/2021 10:53	19.4	26.2	0.0	54.4	113	113	-0.3	-0.3
GUAD0223	9/11/2021 10:50	29.1	32.2	0.5	38.2	116	116	-0.2	-0.2
GUAD0224	9/11/2021 10:42	18	24	0.0	58	112	112	-0.4	-0.3
GUAD0225	9/10/2021 13:37	38.8	34.5	0.0	26.7	117	114	-0.7	-0.2
GUAD0226	9/11/2021 11:14	45.1	38.7	0.0	16.2	119	120	-19.2	-25.5
GUAD0227	9/2/2021 10:29	38.2	34.3	0.0	27.5	119	119	-2.5	-1.6
GUAD0227	9/10/2021 13:31	41.9	35.3	0.0	22.8	114	114	-0.5	-0.4
GUAD0228	9/14/2021 15:32	37.6	32.2	0.0	30.2	111	112	-0.1	-0.1
GUAD0230	9/11/2021 10:56	25.3	28.7	0.0	46	111	112	-3.6	-0.8
GUADH11L	9/14/2021 13:23	60.1	39.4	0.3	0.2	88	88	-1.9	-2.2
GUADH12L	9/14/2021 13:37	45.9	28	2.6	23.5	106	106	-2.3	-2

Wells 114, 122, 134, 135, 146, 151, 152, 154, 161, 162, 180, 181, 185, 186, 188, 189, 199, 204, 205, 207, 209, 213, 215, and 216 are approved to operate at a temperature HOV of 145°F.

There are 87 total collectors (85 vertical wells and 2 horizontal wells) at GRDF.

%= percent

in. w.c.= inches in water column

degrees F= degrees Fahrenheit

GCCS = Gas Collection and Control System

APPENDIX K

WELLFIELD DEVIATION LOGS

Guadalupe Recycling & Disposal Facility, San Jose, CA
Wellfield Deviation Report
April 1, 2021 - September 30, 2021

REPORT PREPARED BY:	Rajan Phadnis
UPDATED DATE:	10/1/2021
LFG MONITORING DEVICE:	GEM
MODEL:	5000
DATE LAST CALIBRATED:	Daily

Wellhead ID. Number	Date Time	Gas Composition (% by volume)				Initial Temperature(oF)	Adjusted Temperature(oF)	Initial Static Pressure ("H_2O)	Adjusted Static Pressure ("H_2O)	Comments	Duration of Exceedance As of the End of Reporting Period (Days)
		CH_4	CO_2	O_2	Balance						
GUAD0147	3/17/2021 12:48	55.4	44.4	0	0.2	118	119	0.0	0.0	NSPS/EG CAI;Fully Open	
GUAD0147	3/17/2021 12:51	55.5	44.4	0	0.1	119	119	0.0	0.1	NSPS/EG CAI;Fully Open;Pinched	
GUAD0147	4/7/2021 8:45	58.1	41.8	0	0.1	118	118	-2.0	-2.0	NSPS/EG CAI;Fully Open;Surging	21
Well 147 had pressure exceedance during initial monitoring in March 2021. Corrective actions were initiated and exceedance was corrected in April 7, 2021. Additional repairs were completed in June 2021.											
GUAD0199	3/22/2021 15:14	53.5	40	0	6.5	131	131	-19.0	-20.7	Inc. Flow/Vac.	
GUAD0199	3/23/2021 15:15	CO was 0 ppm									
GUAD0199	3/23/2021 15:23	53.1	40	0	6.9	131	131	-22.5	-23.0	NSPS/EG CAI;Surging	
GUAD0199	4/5/2021 13:25	CO was 0 ppm									
GUAD0199	4/5/2021 13:32	49.3	38.9	0	11.8	131.0	131.0	-23.2	-23.0	NSPS/EG CAI;No Adj. Made	
GUAD0199	5/4/2021 15:19	56.8	42.9	0.2	0.1	128	128	-14.4	-14.4	No Adj. Made	
GUAD0199	5/4/2021 17:23	Co was 0 ppm									46
Well 199 had temperature exceedance during March and April 2021. CO readings were below 100 ppm. HOV notification was submitted on May 7, 2021 and well was added to the HOV list.											
GDLC0233	4/7/2021 14:34	12.2	17.2	6.5	64.1	102.0	93.0	-1.3	-1.2	Barely Open;NSPS/EG CAI;Dec. Flow/Vac.;Surging	
GDLC0233	4/7/2021 14:36	15	19.3	5.7	60	93.0	93.0	-1.1	-1.1	NSPS/EG CAI;Barely Open	
GDLC0233	4/9/2021 14:42	28.7	30	1.1	40.2	109.0	102.0	-5.5	-2.3	NSPS/EG CAI;Barely Open	
GDLC0233	4/9/2021 14:45	29.4	30.8	0.7	39.1	102.0	102.0	-3.7	-3.3	NSPS/EG CAI;Barely Open;Dec. Flow/Vac.;Surging	2
Well 233 had oxygen exceedance during initial monitoring in April 2021. Adjustments were made and exceedance was corrected											
GUAD0158	5/7/2021 9:49	15	21.3	6.1	57.6	78	94	-2.8	-3.3	No Adj. Made	1
Well 158 had oxygen exceedance during monitoring in May 2021. Well 158 was deocmmissioned in May 7, 2021 and notification was submitted to the BAAQMD.											
GUAD0124	4/6/2021 14:04	55.8	43.9	0.1	0.2	117.0	117.0	0.7	0.6	No Adj. Made	
GUAD0124	4/6/2021 14:06	55.8	43.9	0.1	0.2	117.0	117.0	0.7	0.5	NSPS/EG CAI;No Adj. Made	
GUAD0124	4/16/2021 15:52	55.6	44.1	0.1	0.2	98.0	98.0	1.0	1.1	NSPS/EG CAI;Pinched	
GUAD0124	5/18/2021 13:13	55.1	44.8	0	0.1	114	114	1.3	1.4	NSPS/EG CAI	
GUAD0124	5/18/2021 13:14	55.1	44.8	0	0.1	114	114	1.3	0.0	NSPS/EG CAI;Pinched	
GUAD0124	6/11/2021 13:05	55.4	44.5	0	0.1	116	116	1.3	1.3	NSPS/EG CAI;Fully Open;Pinched	
GUAD0124	6/18/2021 11:27	55.5	44.4	0	0.1	127	128	-30.9	-31	NSPS/EG CAI;Fully Open	73
Well 124 had pressure exceedance during initial monitoring in April 2021. New lateral was installed and exceedance was cleared.											
GUAD0209	7/3/2021 10:39	31.5	41.2	0	27.3	132.7	131.1	-0.65	-0.13	Dec. Flow/Vac.	
GUAD0209	7/3/2021 10:40	CO was 0 ppm									
GUAD0209	7/3/2021 10:47	32.8	42	0	25.2	130.9	131	-0.05	-0.03	Barely Open;Dec. Flow/Vac.	
GUAD0209	7/14/2021 13:37	CO was 0 ppm									
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7	128	128	-30.2	-30.4	No Adj. Made	
GUAD0209	7/14/2021 16:05	53.4	39.5	0.1	7	128	128	-30.2	-30.3	NSPS/EG CAI;Fully Open	53
Well 209 had temperature exceedance during initial monitoring in July 2021. CO was below 100 ppm. Exceedance was cleared during July 2021. HOV notification was submitted on August 25, 2021 and well was added to the HOV list.											
GUAD0178	6/16/2021 14:28	31.4	24.3	8.9	35.4	101	102	-1.2	-1.8	NSPS/EG CAI;Fully Open;Inc. Flow/Vac.	
GUAD0178	6/16/2021 14:31	12.8	9.3	15.9	62	102	102	-2.2	-2.1	NSPS/EG CAI;Barely Open;Dec. Flow/Vac.	
GUAD0178	6/18/2021 10:53	9.1	6.9	17.1	66.9	98	98	-2.6	-2.6	NSPS/EG CAI;Barely Open	
GUAD0178	6/25/2021 14:42	0	0.3	20.6	79.1	86.2	86.2	-1.6	-1.7	NSPS/EG CAI;Fully Open;Pinched	
GUAD0178	7/3/2021 9:50	0	0.2	21.6	78.2	77.4	77.6	-3.01	-2.9	NSPS/EG CAI;Barely Open;Fully Open;Dec. Flow/Vac.;Pinched	
GUAD0178	7/14/2021 16:02	57.2	41.6	0.7	0.5	114	115	-38.6	-38.8	NSPS/EG CAI;Fully Open	
GUAD0178	7/14/2021 16:05	NSPS/EG Corrective Action Completed (CAC);NSPS/EG Parameter Corrective Action Completed (PCAC_O2)-new jumper installed									28
Well 178 had oxygen exceedance during initial monitoring in June and July 2021. New lateral was installed and exceedance was cleared.											
GUAD0208	6/16/2021 15:33	29.5	38.9	0	31.6	123	123	0.0	0.0	No Adj. Made	
GUAD0208	6/18/2021 11:23	28.1	39.1	0	32.8	123	123	-0.1	-0.1	No Adj. Made	2
Well 208 had pressure exceedance during initial monitoring in June 2021. New lateral was installed and exceedance was cleared.											

Wellhead ID. Number	Date Time	Gas Composition (% by volume)				Initial Temperature(oF)	Adjusted Temperature(oF)	Initial Static Pressure ("H_2O)	Adjusted Static Pressure ("H_2O)	Comments	Duration of Exceedance As of the End of Reporting Period (Days)
		CH_4	CO_2	O_2	Balance						
GUAD0214	6/17/2021 15:13	57.5	42.3	0	0.2	119	119	0.3	0.3	Fully Open;NSPS/EG CAI;Pinched	
GUAD0214	6/17/2021 15:16	56.3	42.9	0.7	0.1	119	119	0.3	0.3	NSPS/EG CAI;Pinched	
GUAD0214	6/25/2021 14:50	40.8	43.7	0	15.5	129.1	127.8	-22.4	-12.1	Dec. Flow/Vac.	
GUAD0214	6/25/2021 14:53	39.5	42.8	0	17.7	125.3	125.8	-7.8	-7.8	NSPS/EG CAI;Dec. Flow/Vac.	8
Well 214 had pressure exceedance during initial monitoring in June 2021. Adjustments were made and exceedance was cleared.											

%= percent
in. w.c.= inches in water column
NSPS= New Source Performance Standards
EG CAI= Emissions Guidelines Corrective Action Initiated
EG CAC= Emissions Guidelines Corrective Action Completed
°F = degrees Fahrenheit

APPENDIX L

MONTHLY LANDFILL GAS FLOW RATES

April 1, 2020 - September 30, 2021 SAR MONTHLY LFG Input to Flare (A-9)
Guadalupe Recycling & Disposal Facility, San Jose, CA

A-9 Old Enclosed Flare

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 MMBTU
April-21	720.00	720.00	0.00	0	49.9	0	0	0
May 2021	744.00	744.00	0.00	0	49.9	0	0	0
June 2021	720.00	720.00	0.00	0	49.9	0	0	0
July 2021	744.00	744.00	0.00	0	49.9	0	0	0
August 2021	744.00	744.00	0.00	0	49.9	0	0	0
September 2021	720.00	720.00	0.00	0	49.9	0	0	0
April 1, 2021 - September 30, 2021 Totals/Avg:	**4,392.00**	**4,392.00**	**0.00**	**0**	**49.9**	**0**	**0**	**0**
2021 (Partial) TOTALS/ AVERAGE :	**6,551.00**	**6,551.00**	**0.00**	**0**	**49.9**	**0**	**0**	**0**

Notes:

*Starting June 24, 2020 methane content determined from flare A-9 April 29, 2020 source test.

scfm= standard cubic feet per minute

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas
CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **April-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
4/1/2021	0.0	49.9	0	0	0	1,013.0	0
4/2/2021	0.0	49.9	0	0	0	1,013.0	0
4/3/2021	0.0	49.9	0	0	0	1,013.0	0
4/4/2021	0.0	49.9	0	0	0	1,013.0	0
4/5/2021	0.0	49.9	0	0	0	1,013.0	0
4/6/2021	0.0	49.9	0	0	0	1,013.0	0
4/7/2021	0.0	49.9	0	0	0	1,013.0	0
4/8/2021	0.0	49.9	0	0	0	1,013.0	0
4/9/2021	0.0	49.9	0	0	0	1,013.0	0
4/10/2021	0.0	49.9	0	0	0	1,013.0	0
4/11/2021	0.0	49.9	0	0	0	1,013.0	0
4/12/2021	0.0	49.9	0	0	0	1,013.0	0
4/13/2021	0.0	49.9	0	0	0	1,013.0	0
4/14/2021	0.0	49.9	0	0	0	1,013.0	0
4/15/2021	0.0	49.9	0	0	0	1,013.0	0
4/16/2021	0.0	49.9	0	0	0	1,013.0	0
4/17/2021	0.0	49.9	0	0	0	1,013.0	0
4/18/2021	0.0	49.9	0	0	0	1,013.0	0
4/19/2021	0.0	49.9	0	0	0	1,013.0	0
4/20/2021	0.0	49.9	0	0	0	1,013.0	0
4/21/2021	0.0	49.9	0	0	0	1,013.0	0
4/22/2021	0.0	49.9	0	0	0	1,013.0	0
4/23/2021	0.0	49.9	0	0	0	1,013.0	0
4/24/2021	0.0	49.9	0	0	0	1,013.0	0
4/25/2021	0.0	49.9	0	0	0	1,013.0	0
4/26/2021	0.0	49.9	0	0	0	1,013.0	0
4/27/2021	0.0	49.9	0	0	0	1,013.0	0
4/28/2021	0.0	49.9	0	0	0	1,013.0	0
4/29/2021	0.0	49.9	0	0	0	1,013.0	0
4/30/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet
MMBTU= million British thermal units
LFG= landfill gas
CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **May-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
5/1/2021	0.0	49.9	0	0	0	1,013.0	0
5/2/2021	0.0	49.9	0	0	0	1,013.0	0
5/3/2021	0.0	49.9	0	0	0	1,013.0	0
5/4/2021	0.0	49.9	0	0	0	1,013.0	0
5/5/2021	0.0	49.9	0	0	0	1,013.0	0
5/6/2021	0.0	49.9	0	0	0	1,013.0	0
5/7/2021	0.0	49.9	0	0	0	1,013.0	0
5/8/2021	0.0	49.9	0	0	0	1,013.0	0
5/9/2021	0.0	49.9	0	0	0	1,013.0	0
5/10/2021	0.0	49.9	0	0	0	1,013.0	0
5/11/2021	0.0	49.9	0	0	0	1,013.0	0
5/12/2021	0.0	49.9	0	0	0	1,013.0	0
5/13/2021	0.0	49.9	0	0	0	1,013.0	0
5/14/2021	0.0	49.9	0	0	0	1,013.0	0
5/15/2021	0.0	49.9	0	0	0	1,013.0	0
5/16/2021	0.0	49.9	0	0	0	1,013.0	0
5/17/2021	0.0	49.9	0	0	0	1,013.0	0
5/18/2021	0.0	49.9	0	0	0	1,013.0	0
5/19/2021	0.0	49.9	0	0	0	1,013.0	0
5/20/2021	0.0	49.9	0	0	0	1,013.0	0
5/21/2021	0.0	49.9	0	0	0	1,013.0	0
5/22/2021	0.0	49.9	0	0	0	1,013.0	0
5/23/2021	0.0	49.9	0	0	0	1,013.0	0
5/24/2021	0.0	49.9	0	0	0	1,013.0	0
5/25/2021	0.0	49.9	0	0	0	1,013.0	0
5/26/2021	0.0	49.9	0	0	0	1,013.0	0
5/27/2021	0.0	49.9	0	0	0	1,013.0	0
5/28/2021	0.0	49.9	0	0	0	1,013.0	0
5/29/2021	0.0	49.9	0	0	0	1,013.0	0
5/30/2021	0.0	49.9	0	0	0	1,013.0	0
5/31/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **June-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
6/1/2021	0.0	49.9	0	0	0	1,013.0	0
6/2/2021	0.0	49.9	0	0	0	1,013.0	0
6/3/2021	0.0	49.9	0	0	0	1,013.0	0
6/4/2021	0.0	49.9	0	0	0	1,013.0	0
6/5/2021	0.0	49.9	0	0	0	1,013.0	0
6/6/2021	0.0	49.9	0	0	0	1,013.0	0
6/7/2021	0.0	49.9	0	0	0	1,013.0	0
6/8/2021	0.0	49.9	0	0	0	1,013.0	0
6/9/2021	0.0	49.9	0	0	0	1,013.0	0
6/10/2021	0.0	49.9	0	0	0	1,013.0	0
6/11/2021	0.0	49.9	0	0	0	1,013.0	0
6/12/2021	0.0	49.9	0	0	0	1,013.0	0
6/13/2021	0.0	49.9	0	0	0	1,013.0	0
6/14/2021	0.0	49.9	0	0	0	1,013.0	0
6/15/2021	0.0	49.9	0	0	0	1,013.0	0
6/16/2021	0.0	49.9	0	0	0	1,013.0	0
6/17/2021	0.0	49.9	0	0	0	1,013.0	0
6/18/2021	0.0	49.9	0	0	0	1,013.0	0
6/19/2021	0.0	49.9	0	0	0	1,013.0	0
6/20/2021	0.0	49.9	0	0	0	1,013.0	0
6/21/2021	0.0	49.9	0	0	0	1,013.0	0
6/22/2021	0.0	49.9	0	0	0	1,013.0	0
6/23/2021	0.0	49.9	0	0	0	1,013.0	0
6/24/2021	0.0	49.9	0	0	0	1,013.0	0
6/25/2021	0.0	49.9	0	0	0	1,013.0	0
6/26/2021	0.0	49.9	0	0	0	1,013.0	0
6/27/2021	0.0	49.9	0	0	0	1,013.0	0
6/28/2021	0.0	49.9	0	0	0	1,013.0	0
6/29/2021	0.0	49.9	0	0	0	1,013.0	0
6/30/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **July-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
7/1/2021	0.0	49.9	0	0	0	1,013.0	0
7/2/2021	0.0	49.9	0	0	0	1,013.0	0
7/3/2021	0.0	49.9	0	0	0	1,013.0	0
7/4/2021	0.0	49.9	0	0	0	1,013.0	0
7/5/2021	0.0	49.9	0	0	0	1,013.0	0
7/6/2021	0.0	49.9	0	0	0	1,013.0	0
7/7/2021	0.0	49.9	0	0	0	1,013.0	0
7/8/2021	0.0	49.9	0	0	0	1,013.0	0
7/9/2021	0.0	49.9	0	0	0	1,013.0	0
7/10/2021	0.0	49.9	0	0	0	1,013.0	0
7/11/2021	0.0	49.9	0	0	0	1,013.0	0
7/12/2021	0.0	49.9	0	0	0	1,013.0	0
7/13/2021	0.0	49.9	0	0	0	1,013.0	0
7/14/2021	0.0	49.9	0	0	0	1,013.0	0
7/15/2021	0.0	49.9	0	0	0	1,013.0	0
7/16/2021	0.0	49.9	0	0	0	1,013.0	0
7/17/2021	0.0	49.9	0	0	0	1,013.0	0
7/18/2021	0.0	49.9	0	0	0	1,013.0	0
7/19/2021	0.0	49.9	0	0	0	1,013.0	0
7/20/2021	0.0	49.9	0	0	0	1,013.0	0
7/21/2021	0.0	49.9	0	0	0	1,013.0	0
7/22/2021	0.0	49.9	0	0	0	1,013.0	0
7/23/2021	0.0	49.9	0	0	0	1,013.0	0
7/24/2021	0.0	49.9	0	0	0	1,013.0	0
7/25/2021	0.0	49.9	0	0	0	1,013.0	0
7/26/2021	0.0	49.9	0	0	0	1,013.0	0
7/27/2021	0.0	49.9	0	0	0	1,013.0	0
7/28/2021	0.0	49.9	0	0	0	1,013.0	0
7/29/2021	0.0	49.9	0	0	0	1,013.0	0
7/30/2021	0.0	49.9	0	0	0	1,013.0	0
7/31/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **August-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
8/1/2021	0.0	49.9	0	0	0	1,013.0	0
8/2/2021	0.0	49.9	0	0	0	1,013.0	0
8/3/2021	0.0	49.9	0	0	0	1,013.0	0
8/4/2021	0.0	49.9	0	0	0	1,013.0	0
8/5/2021	0.0	49.9	0	0	0	1,013.0	0
8/6/2021	0.0	49.9	0	0	0	1,013.0	0
8/7/2021	0.0	49.9	0	0	0	1,013.0	0
8/8/2021	0.0	49.9	0	0	0	1,013.0	0
8/9/2021	0.0	49.9	0	0	0	1,013.0	0
8/10/2021	0.0	49.9	0	0	0	1,013.0	0
8/11/2021	0.0	49.9	0	0	0	1,013.0	0
8/12/2021	0.0	49.9	0	0	0	1,013.0	0
8/13/2021	0.0	49.9	0	0	0	1,013.0	0
8/14/2021	0.0	49.9	0	0	0	1,013.0	0
8/15/2021	0.0	49.9	0	0	0	1,013.0	0
8/16/2021	0.0	49.9	0	0	0	1,013.0	0
8/17/2021	0.0	49.9	0	0	0	1,013.0	0
8/18/2021	0.0	49.9	0	0	0	1,013.0	0
8/19/2021	0.0	49.9	0	0	0	1,013.0	0
8/20/2021	0.0	49.9	0	0	0	1,013.0	0
8/21/2021	0.0	49.9	0	0	0	1,013.0	0
8/22/2021	0.0	49.9	0	0	0	1,013.0	0
8/23/2021	0.0	49.9	0	0	0	1,013.0	0
8/24/2021	0.0	49.9	0	0	0	1,013.0	0
8/25/2021	0.0	49.9	0	0	0	1,013.0	0
8/26/2021	0.0	49.9	0	0	0	1,013.0	0
8/27/2021	0.0	49.9	0	0	0	1,013.0	0
8/28/2021	0.0	49.9	0	0	0	1,013.0	0
8/29/2021	0.0	49.9	0	0	0	1,013.0	0
8/30/2021	0.0	49.9	0	0	0	1,013.0	0
8/31/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate Flare A-9

MONTH: **September-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
9/1/2021	0.0	49.9	0	0	0	1,013.0	0
9/2/2021	0.0	49.9	0	0	0	1,013.0	0
9/3/2021	0.0	49.9	0	0	0	1,013.0	0
9/4/2021	0.0	49.9	0	0	0	1,013.0	0
9/5/2021	0.0	49.9	0	0	0	1,013.0	0
9/6/2021	0.0	49.9	0	0	0	1,013.0	0
9/7/2021	0.0	49.9	0	0	0	1,013.0	0
9/8/2021	0.0	49.9	0	0	0	1,013.0	0
9/9/2021	0.0	49.9	0	0	0	1,013.0	0
9/10/2021	0.0	49.9	0	0	0	1,013.0	0
9/11/2021	0.0	49.9	0	0	0	1,013.0	0
9/12/2021	0.0	49.9	0	0	0	1,013.0	0
9/13/2021	0.0	49.9	0	0	0	1,013.0	0
9/14/2021	0.0	49.9	0	0	0	1,013.0	0
9/15/2021	0.0	49.9	0	0	0	1,013.0	0
9/16/2021	0.0	49.9	0	0	0	1,013.0	0
9/17/2021	0.0	49.9	0	0	0	1,013.0	0
9/18/2021	0.0	49.9	0	0	0	1,013.0	0
9/19/2021	0.0	49.9	0	0	0	1,013.0	0
9/20/2021	0.0	49.9	0	0	0	1,013.0	0
9/21/2021	0.0	49.9	0	0	0	1,013.0	0
9/22/2021	0.0	49.9	0	0	0	1,013.0	0
9/23/2021	0.0	49.9	0	0	0	1,013.0	0
9/24/2021	0.0	49.9	0	0	0	1,013.0	0
9/25/2021	0.0	49.9	0	0	0	1,013.0	0
9/26/2021	0.0	49.9	0	0	0	1,013.0	0
9/27/2021	0.0	49.9	0	0	0	1,013.0	0
9/28/2021	0.0	49.9	0	0	0	1,013.0	0
9/29/2021	0.0	49.9	0	0	0	1,013.0	0
9/30/2021	0.0	49.9	0	0	0	1,013.0	0
Totals/ Average:	**0.0**	**49.9**	**0**	**0**	**0**	**1013.0**	**0**
						Maximum:	**0**

Notes:

*Methane content determined from the the April 29, 2020 source test.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

April 1, 2020 - September 30, 2021 SAR MONTHLY LFG Input to Flare A-17
Guadalupe Recycling & Disposal Facility, San Jose, CA

A-17 Enclosed Flare (Based on the correspondence with the BAAQMD, flare A-14 is now designated as flare A-17)

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 MMBTU
April 2021	720.0	1.6	718.4	1,890	41.4	81,494,284	33,727,460	34,166
May 2021	744.0	0.2	743.8	1,859	40.4	82,965,408	33,547,063	33,983
June 2021	720.0	1.1	718.9	1,982	40.4	85,672,929	34,641,849	35,092
July 2021	744.0	0.0	744.0	2,146	40.4	96,206,587	38,901,133	39,407
August 2021	744.0	0.0	744.0	2,097	40.4	93,438,872	37,782,008	38,273
September 2021	720.0	1.9	718.1	1,887	40.4	81,103,196	32,794,077	33,220
April 1, 2021 - September 30, 2021 Totals/Avg:	**4,392.0**	**4.8**	**4,387.2**	**1,977**	**40.6**	**520,881,276**	**211,393,591**	**214,142**
2021 (Partial) TOTALS/ AVERAGE :	**6,551.0**	**13.9**	**6,537.1**	**1,926**	**41.7**	**756,256,523**	**314,684,487**	**318,775**

Notes:

NA= Initial startup of A-14 flare was on November 17, 2016. Stack was replaced with standard 120 MMBTU/HR stack at the end of October 2020. New designation is flare A-17.

*Starting April 9, 2021,Methane content determined from flare A-17 February 18, 2021 source test.

scfm= standard cubic feet per minute
scf= standard cubic feet
MMBTU= million British thermal units
LFG= landfill gas
CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **April-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
4/1/2021	24.0	43.9	2,035	2,929,924	1,285,753	1,013.0	1,302.5
4/2/2021	24.0	43.9	1,982	2,853,596	1,252,258	1,013.0	1,268.5
4/3/2021	24.0	43.9	1,956	2,816,878	1,236,145	1,013.0	1,252.2
4/4/2021	24.0	43.9	1,958	2,819,434	1,237,266	1,013.0	1,253.4
4/5/2021	24.0	43.9	1,959	2,821,445	1,238,149	1,013.0	1,254.2
4/6/2021	24.0	43.9	1,937	2,789,180	1,223,990	1,013.0	1,239.9
4/7/2021	24.0	43.9	1,892	2,724,406	1,195,565	1,013.0	1,211.1
4/8/2021	24.0	43.9	1,893	2,725,827	1,196,188	1,013.0	1,211.7
4/9/2021	24.0	40.4	1,900	2,736,595	1,106,542	1,013.0	1,120.9
4/10/2021	24.0	40.4	1,908	2,747,326	1,110,881	1,013.0	1,125.3
4/11/2021	24.0	40.4	1,910	2,751,019	1,112,375	1,013.0	1,126.8
4/12/2021	24.0	40.4	1,903	2,740,515	1,108,127	1,013.0	1,122.5
4/13/2021	24.0	40.4	1,882	2,709,663	1,095,652	1,013.0	1,109.9
4/14/2021	24.0	40.4	1,868	2,690,537	1,087,919	1,013.0	1,102.1
4/15/2021	24.0	40.4	1,877	2,702,494	1,092,753	1,013.0	1,107.0
4/16/2021	24.0	40.4	1,874	2,698,579	1,091,170	1,013.0	1,105.4
4/17/2021	24.0	40.4	1,842	2,651,922	1,072,305	1,013.0	1,086.2
4/18/2021	24.0	40.4	1,854	2,670,320	1,079,744	1,013.0	1,093.8
4/19/2021	24.0	40.4	1,847	2,659,299	1,075,288	1,013.0	1,089.3
4/20/2021	24.0	40.4	1,835	2,641,997	1,068,291	1,013.0	1,082.2
4/21/2021	24.0	40.4	1,841	2,651,661	1,072,199	1,013.0	1,086.1
4/22/2021	24.0	40.4	1,843	2,654,542	1,073,364	1,013.0	1,087.3
4/23/2021	24.0	40.4	1,844	2,655,436	1,073,726	1,013.0	1,087.7
4/24/2021	24.0	40.4	1,846	2,657,940	1,074,738	1,013.0	1,088.7
4/25/2021	24.0	40.4	1,824	2,626,192	1,061,901	1,013.0	1,075.7
4/26/2021	24.0	40.4	1,814	2,611,599	1,056,000	1,013.0	1,069.7
4/27/2021	22.4	40.4	1,872	2,519,496	1,018,758	1,013.0	1,032.0
4/28/2021	24.0	40.4	1,917	2,761,088	1,116,446	1,013.0	1,131.0
4/29/2021	24.0	40.4	1,902	2,738,391	1,107,268	1,013.0	1,121.7
4/30/2021	24.0	40.4	1,901	2,736,983	1,106,699	1,013.0	1,121.1
Totals/ Average:	**718.43**	**41.4**	**1,890**	**81,494,284**	**33,727,460**	**1013.0**	**34,166**
Notes:						**Maximum:**	**1,302**

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet
scf= standard cubic feet
MMBTU= million British thermal units
LFG= landfill gas
CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **May-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
5/1/2021	24.0	40.4	1,900	2,736,172	1,106,371	1,013.0	1,120.8
5/2/2021	24.0	40.4	1,896	2,729,986	1,103,870	1,013.0	1,118.2
5/3/2021	24.0	40.4	1,897	2,731,627	1,104,533	1,013.0	1,118.9
5/4/2021	24.0	40.4	1,925	2,772,014	1,120,864	1,013.0	1,135.4
5/5/2021	24.0	40.4	1,946	2,802,815	1,133,318	1,013.0	1,148.1
5/6/2021	24.0	40.4	1,925	2,771,536	1,120,671	1,013.0	1,135.2
5/7/2021	24.0	40.4	1,928	2,776,037	1,122,491	1,013.0	1,137.1
5/8/2021	24.0	40.4	1,937	2,789,593	1,127,972	1,013.0	1,142.6
5/9/2021	24.0	40.4	1,949	2,805,923	1,134,575	1,013.0	1,149.3
5/10/2021	24.0	40.4	1,946	2,802,523	1,133,200	1,013.0	1,147.9
5/11/2021	24.0	40.4	1,952	2,810,248	1,136,324	1,013.0	1,151.1
5/12/2021	24.0	40.4	1,937	2,788,946	1,127,710	1,013.0	1,142.4
5/13/2021	24.0	40.4	1,916	2,758,982	1,115,594	1,013.0	1,130.1
5/14/2021	24.0	40.4	1,893	2,726,571	1,102,489	1,013.0	1,116.8
5/15/2021	23.8	40.4	1,905	2,715,954	1,098,196	1,013.0	1,112.5
5/16/2021	24.0	40.4	1,923	2,768,538	1,119,458	1,013.0	1,134.0
5/17/2021	24.0	40.4	1,893	2,726,244	1,102,357	1,013.0	1,116.7
5/18/2021	24.0	40.4	1,886	2,716,535	1,098,431	1,013.0	1,112.7
5/19/2021	24.0	40.4	1,804	2,597,176	1,050,168	1,013.0	1,063.8
5/20/2021	24.0	40.4	1,784	2,568,573	1,038,602	1,013.0	1,052.1
5/21/2021	24.0	40.4	1,782	2,566,775	1,037,875	1,013.0	1,051.4
5/22/2021	24.0	40.4	1,780	2,562,674	1,036,217	1,013.0	1,049.7
5/23/2021	24.0	40.4	1,770	2,548,901	1,030,648	1,013.0	1,044.0
5/24/2021	24.0	40.4	1,774	2,554,791	1,033,030	1,013.0	1,046.5
5/25/2021	24.0	40.4	1,768	2,545,201	1,029,152	1,013.0	1,042.5
5/26/2021	24.0	40.4	1,765	2,540,928	1,027,424	1,013.0	1,040.8
5/27/2021	24.0	40.4	1,757	2,530,304	1,023,128	1,013.0	1,036.4
5/28/2021	24.0	40.4	1,779	2,561,443	1,035,719	1,013.0	1,049.2
5/29/2021	24.0	40.4	1,758	2,531,764	1,023,719	1,013.0	1,037.0
5/30/2021	24.0	40.4	1,777	2,559,595	1,034,972	1,013.0	1,048.4
5/31/2021	24.0	40.4	1,783	2,567,039	1,037,982	1,013.0	1,051.5
Totals/ Average:	**743.77**	**40.4**	**1,859**	**82,965,408**	**33,547,063**	**1013.0**	**33,983**
						Maximum:	**1,151**

Notes:

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **June-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
6/1/2021	24.0	40.4	1,896	2,730,011	1,103,880	1,013.0	1,118.2
6/2/2021	24.0	40.4	1,966	2,830,952	1,144,695	1,013.0	1,159.6
6/3/2021	24.0	40.4	1,936	2,787,572	1,127,155	1,013.0	1,141.8
6/4/2021	24.0	40.4	1,895	2,729,321	1,103,601	1,013.0	1,117.9
6/5/2021	24.0	40.4	1,896	2,729,648	1,103,733	1,013.0	1,118.1
6/6/2021	24.0	40.4	1,888	2,719,061	1,099,452	1,013.0	1,113.7
6/7/2021	24.0	40.4	1,862	2,681,715	1,084,351	1,013.0	1,098.4
6/8/2021	24.0	40.4	1,852	2,667,102	1,078,443	1,013.0	1,092.5
6/9/2021	24.0	40.4	1,844	2,654,811	1,073,473	1,013.0	1,087.4
6/10/2021	24.0	40.4	1,831	2,636,338	1,066,003	1,013.0	1,079.9
6/11/2021	24.0	40.4	1,817	2,616,231	1,057,873	1,013.0	1,071.6
6/12/2021	24.0	40.4	1,834	2,640,636	1,067,741	1,013.0	1,081.6
6/13/2021	24.0	40.4	1,833	2,640,122	1,067,533	1,013.0	1,081.4
6/14/2021	24.0	40.4	1,817	2,616,694	1,058,060	1,013.0	1,071.8
6/15/2021	24.0	40.4	1,826	2,629,680	1,063,311	1,013.0	1,077.1
6/16/2021	24.0	40.4	1,901	2,737,821	1,107,038	1,013.0	1,121.4
6/17/2021	24.0	40.4	2,033	2,928,124	1,183,987	1,013.0	1,199.4
6/18/2021	24.0	40.4	2,091	3,010,364	1,217,241	1,013.0	1,233.1
6/19/2021	24.0	40.4	2,116	3,046,650	1,231,913	1,013.0	1,247.9
6/20/2021	24.0	40.4	2,066	2,975,403	1,203,104	1,013.0	1,218.7
6/21/2021	23.8	40.4	2,134	3,042,572	1,230,264	1,013.0	1,246.3
6/22/2021	24.0	40.4	2,215	3,189,899	1,289,836	1,013.0	1,306.6
6/23/2021	23.1	40.4	2,123	2,946,268	1,191,323	1,013.0	1,206.8
6/24/2021	24.0	40.4	2,190	3,153,446	1,275,096	1,013.0	1,291.7
6/25/2021	24.0	40.4	2,162	3,113,175	1,258,812	1,013.0	1,275.2
6/26/2021	24.0	40.4	2,129	3,065,500	1,239,535	1,013.0	1,255.6
6/27/2021	24.0	40.4	2,117	3,048,622	1,232,710	1,013.0	1,248.7
6/28/2021	24.0	40.4	2,111	3,039,565	1,229,048	1,013.0	1,245.0
6/29/2021	24.0	40.4	2,113	3,042,075	1,230,063	1,013.0	1,246.1
6/30/2021	24.0	40.4	2,100	3,023,551	1,222,573	1,013.0	1,238.5
Totals/ Average:	**718.90**	**40.4**	**1,982**	**85,672,929**	**34,641,849**	**1013.0**	**35,092**
Notes:						**Maximum:**	**1,307**

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **July-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
7/1/2021	24.0	40.4	2,106	3,033,249	1,226,494	1,013.0	1,242.4
7/2/2021	24.0	40.4	2,099	3,021,937	1,221,920	1,013.0	1,237.8
7/3/2021	24.0	40.4	2,082	2,998,580	1,212,476	1,013.0	1,228.2
7/4/2021	24.0	40.4	2,076	2,990,119	1,209,055	1,013.0	1,224.8
7/5/2021	24.0	40.4	2,071	2,981,850	1,205,711	1,013.0	1,221.4
7/6/2021	24.0	40.4	2,034	2,928,735	1,184,234	1,013.0	1,199.6
7/7/2021	24.0	40.4	1,993	2,869,616	1,160,329	1,013.0	1,175.4
7/8/2021	24.0	40.4	2,059	2,964,247	1,198,593	1,013.0	1,214.2
7/9/2021	24.0	40.4	2,110	3,039,079	1,228,852	1,013.0	1,244.8
7/10/2021	24.0	40.4	2,118	3,050,296	1,233,387	1,013.0	1,249.4
7/11/2021	24.0	40.4	2,103	3,029,030	1,224,788	1,013.0	1,240.7
7/12/2021	24.0	40.4	2,093	3,014,461	1,218,897	1,013.0	1,234.7
7/13/2021	24.0	40.4	2,093	3,014,469	1,218,901	1,013.0	1,234.7
7/14/2021	24.0	40.4	2,071	2,982,109	1,205,816	1,013.0	1,221.5
7/15/2021	24.0	40.4	2,052	2,954,712	1,194,738	1,013.0	1,210.3
7/16/2021	24.0	40.4	2,056	2,960,145	1,196,935	1,013.0	1,212.5
7/17/2021	24.0	40.4	2,042	2,941,192	1,189,271	1,013.0	1,204.7
7/18/2021	24.0	40.4	2,056	2,959,970	1,196,864	1,013.0	1,212.4
7/19/2021	24.0	40.4	2,033	2,927,950	1,183,917	1,013.0	1,199.3
7/20/2021	24.0	40.4	1,963	2,826,492	1,142,892	1,013.0	1,157.7
7/21/2021	24.0	40.4	1,962	2,825,930	1,142,665	1,013.0	1,157.5
7/22/2021	24.0	40.4	2,062	2,969,217	1,200,603	1,013.0	1,216.2
7/23/2021	24.0	40.4	2,249	3,238,383	1,309,440	1,013.0	1,326.5
7/24/2021	24.0	40.4	2,286	3,291,962	1,331,105	1,013.0	1,348.4
7/25/2021	24.0	40.4	2,313	3,331,410	1,347,056	1,013.0	1,364.6
7/26/2021	24.0	40.4	2,363	3,402,226	1,375,690	1,013.0	1,393.6
7/27/2021	24.0	40.4	2,444	3,519,049	1,422,927	1,013.0	1,441.4
7/28/2021	24.0	40.4	2,443	3,517,607	1,422,344	1,013.0	1,440.8
7/29/2021	24.0	40.4	2,452	3,530,971	1,427,748	1,013.0	1,446.3
7/30/2021	24.0	40.4	2,457	3,538,437	1,430,767	1,013.0	1,449.4
7/31/2021	24.0	40.4	2,467	3,553,157	1,436,719	1,013.0	1,455.4
Totals/ Average:	**744.00**	**40.4**	**2,146**	**96,206,587**	**38,901,133**	**1013.0**	**39,407**
						Maximum:	**1,455**

Notes:

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **August-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
8/1/2021	24.0	40.4	2,434	3,505,341	1,417,385	1,013.0	1,435.8
8/2/2021	24.0	40.4	2,419	3,483,434	1,408,527	1,013.0	1,426.8
8/3/2021	24.0	40.4	2,423	3,489,779	1,411,092	1,013.0	1,429.4
8/4/2021	24.0	40.4	2,414	3,476,121	1,405,570	1,013.0	1,423.8
8/5/2021	24.0	40.4	2,421	3,486,447	1,409,745	1,013.0	1,428.1
8/6/2021	24.0	40.4	2,440	3,513,563	1,420,709	1,013.0	1,439.2
8/7/2021	24.0	40.4	2,440	3,513,293	1,420,600	1,013.0	1,439.1
8/8/2021	24.0	40.4	2,434	3,504,867	1,417,193	1,013.0	1,435.6
8/9/2021	24.0	40.4	2,281	3,284,336	1,328,021	1,013.0	1,345.3
8/10/2021	24.0	40.4	2,103	3,028,892	1,224,732	1,013.0	1,240.7
8/11/2021	24.0	40.4	2,089	3,007,651	1,216,144	1,013.0	1,232.0
8/12/2021	24.0	40.4	2,046	2,946,910	1,191,583	1,013.0	1,207.1
8/13/2021	24.0	40.4	1,976	2,845,044	1,150,394	1,013.0	1,165.3
8/14/2021	24.0	40.4	1,932	2,782,777	1,125,216	1,013.0	1,139.8
8/15/2021	24.0	40.4	1,952	2,810,763	1,136,532	1,013.0	1,151.3
8/16/2021	24.0	40.4	1,961	2,823,510	1,141,686	1,013.0	1,156.5
8/17/2021	24.0	40.4	1,951	2,809,190	1,135,896	1,013.0	1,150.7
8/18/2021	24.0	40.4	1,917	2,760,904	1,116,372	1,013.0	1,130.9
8/19/2021	24.0	40.4	1,922	2,767,828	1,119,171	1,013.0	1,133.7
8/20/2021	24.0	40.4	1,920	2,764,413	1,117,790	1,013.0	1,132.3
8/21/2021	24.0	40.4	1,921	2,766,845	1,118,774	1,013.0	1,133.3
8/22/2021	24.0	40.4	1,922	2,767,811	1,119,164	1,013.0	1,133.7
8/23/2021	24.0	40.4	1,919	2,762,774	1,117,128	1,013.0	1,131.7
8/24/2021	24.0	40.4	1,920	2,765,515	1,118,236	1,013.0	1,132.8
8/25/2021	24.0	40.4	1,934	2,784,979	1,126,106	1,013.0	1,140.7
8/26/2021	24.0	40.4	1,949	2,806,980	1,135,002	1,013.0	1,149.8
8/27/2021	24.0	40.4	1,973	2,841,129	1,148,811	1,013.0	1,163.7
8/28/2021	24.0	40.4	1,974	2,843,142	1,149,624	1,013.0	1,164.6
8/29/2021	24.0	40.4	1,955	2,815,046	1,138,264	1,013.0	1,153.1
8/30/2021	24.0	40.4	1,958	2,819,160	1,139,927	1,013.0	1,154.7
8/31/2021	24.0	40.4	1,986	2,860,428	1,156,614	1,013.0	1,171.7
Totals/ Average:	**744.00**	**40.4**	**2,097**	**93,438,872**	**37,782,008**	**1013.0**	**38,273**
						Maximum:	**1,439**

Notes:

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

Guadalupe Recycling & Disposal Facility

San Jose, CA

Heat Input Rate **Flare A-17**

MONTH: **September-21**

Date	Runtime (hours)	CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (scf)	CH_4 Volume (scf)	Heating Value of CH_4 (BTU/scf)	Heat Input (MMBTU)/Day
9/1/2021	24.0	40.4	2,267	3,264,861	1,320,147	1,013.0	1,337.3
9/2/2021	24.0	40.4	2,204	3,173,969	1,283,394	1,013.0	1,300.1
9/3/2021	24.0	40.4	2,087	3,004,620	1,214,918	1,013.0	1,230.7
9/4/2021	24.0	40.4	2,079	2,993,811	1,210,547	1,013.0	1,226.3
9/5/2021	24.0	40.4	2,090	3,009,989	1,217,089	1,013.0	1,232.9
9/6/2021	24.0	40.4	2,096	3,018,688	1,220,606	1,013.0	1,236.5
9/7/2021	24.0	40.4	2,097	3,019,015	1,220,739	1,013.0	1,236.6
9/8/2021	24.0	40.4	2,098	3,021,055	1,221,564	1,013.0	1,237.4
9/9/2021	24.0	40.4	2,079	2,993,360	1,210,365	1,013.0	1,226.1
9/10/2021	24.0	40.4	2,025	2,916,224	1,179,175	1,013.0	1,194.5
9/11/2021	24.0	40.4	1,867	2,688,382	1,087,047	1,013.0	1,101.2
9/12/2021	24.0	40.4	1,790	2,577,566	1,042,239	1,013.0	1,055.8
9/13/2021	24.0	40.4	1,806	2,600,904	1,051,676	1,013.0	1,065.3
9/14/2021	24.0	40.4	1,796	2,586,901	1,046,013	1,013.0	1,059.6
9/15/2021	24.0	40.4	1,760	2,534,082	1,024,656	1,013.0	1,038.0
9/16/2021	24.0	40.4	1,744	2,511,930	1,015,699	1,013.0	1,028.9
9/17/2021	24.0	40.4	1,742	2,507,840	1,014,045	1,013.0	1,027.2
9/18/2021	24.0	40.4	1,736	2,500,544	1,011,095	1,013.0	1,024.2
9/19/2021	24.0	40.4	1,756	2,528,064	1,022,223	1,013.0	1,035.5
9/20/2021	24.0	40.4	1,784	2,568,341	1,038,509	1,013.0	1,052.0
9/21/2021	24.0	40.4	1,789	2,576,629	1,041,860	1,013.0	1,055.4
9/22/2021	24.0	40.4	1,794	2,582,918	1,044,403	1,013.0	1,058.0
9/23/2021	24.0	40.4	1,785	2,570,143	1,039,237	1,013.0	1,052.7
9/24/2021	24.0	40.4	1,773	2,553,628	1,032,559	1,013.0	1,046.0
9/25/2021	24.0	40.4	1,739	2,504,142	1,012,550	1,013.0	1,025.7
9/26/2021	24.0	40.4	1,734	2,496,660	1,009,524	1,013.0	1,022.6
9/27/2021	24.0	40.4	1,742	2,508,605	1,014,354	1,013.0	1,027.5
9/28/2021	22.1	40.4	1,724	2,283,181	923,204	1,013.0	935.2
9/29/2021	24.0	40.4	1,728	2,488,916	1,006,393	1,013.0	1,019.5
9/30/2021	24.0	40.4	1,749	2,518,228	1,018,245	1,013.0	1,031.5
Totals/ Average:	**718.07**	**40.4**	**1,887**	**81,103,196**	**32,794,077**	**1013.0**	**33,220**
						Maximum:	**1,337**

Notes:

*Methane content determined from flare A-14 February 26, 2020 source test results.

scfm= standard cubic feet per minute

BTU/scf= British thermal unit per square cubic feet

scf= standard cubic feet

MMBTU= million British thermal units

LFG= landfill gas

CH_4= methane

APPENDIX M

GAS MIGRATION MONITORING REPORTS

WASTE MANAGEMENT
910 Coyote Creek Golf Drive,
San Jose, CA 95037

October 6, 2021

Ms. Becky Azevedo
Guadalupe Recycling & Disposal Facility
15999 Guadalupe Mines Road
San Jose, CA 95120

Re: Third Quarter 2021 Perimeter Gas and Methane in Structure Monitoring Report Guadalupe Recycling & Disposal Facility

Dear Ms. Azevedo:

This report for the Guadalupe Recycling & Disposal Facility (GRDF) contains the results of the Third Quarter 2021 Perimeter Gas and Methane in Structure Monitoring conducted at the GRDF. All monitoring was conducted by GRDF personnel.

REGULATORY REQUIREMENTS

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A). Results for both probes and structures are summarized in Table 1. Field data are presented in Attachment B.

Table 1 Monitoring Results

Probe ID	Time	CH_4 (%)	Probe Pressure (in-$H_2$0)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
GUADGP01	09/13/2021;3:29 PM	0	0.15	Yes	Yes	
GUADGP02	09/13/2021;3:22 PM	0	0.13	Yes	Yes	
GUADGP03	09/13/2021;3:15PM	0	0.00	Yes	Yes	
GUADGP04	09/13/2021;2:52PM	0	-0.47	Yes	Yes	
GUADGP05	09/13/2021;2:45PM	0	0.04	Yes	Yes	
GUADGP6S	09/13/2021;2:34PM	0	0.03	Yes	Yes	
GUADGP6D	09/13/2021;2:36 PM	0	0.02	Yes	Yes	

STRUCTURE FID MONITORING DATA

Analyst: M. Bernard **Date: 9/22/2021**
Instrument: TVA 1000 **Serial #:0928538411**

Monitored Location	Time	PPM	Comments
Scale House #1 Occupied Space	12:00 PM	0	
Scale House #1 Electrical Closet	12:02 PM	0	
Scale House #2 Occupied Space	12:05 PM	105	
Scale House #2 Electrical Closet	12:07 PM	0	
Scale House #3 Occupied Space	12:10 PM	0	
Scale House #3 Electrical Closet	12:12 PM	0	
Admin Office Crawl Space	12:20 PM	0	
Admin Office Electrical Closet	12:25 PM	0	
Admin Trailer	12:30 PM	0	
Security Trailer	12:40 PM	0	
MRF Scale House	12:50 PM	0	
MRF Building East Electrical	12:52 PM	0	
Maintenance Building Office Outlet	1:05 PM	0	
Maintenance Building Kitchen Outlet	1:10 PM	0	
Maintenance Building Shower Drain	1:15 PM	0	
Maintenance Building Electrical Box	1:20 PM	0	
Training Room Trailer	1:25 PM	0	

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

ND = No detection
California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:
(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.
(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.
Note: The reading should not exceed 25% LEL = 1.25% CH_4 = 12,500 ppm CH_4

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.

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

Perimeter Gas Monitoring

The Third Quarter 2021 monitoring was conducted by M.Bernard on September 13, 2021, using a GEM 2000. The static pressure of each probe was monitored using the GEM 5000. Following the measurement of the static pressure, the probes were monitored to determine methane concentration.

Facility Structures

M. Bernard used a Toxic Vapor Analyzer (TVA1000) to monitor buildings and structures to check for the presence of methane on September 22, 2021. The instrument was calibrated on September 22, 2021, using 500 parts per million by volume (ppm$_v$) methane standard.

Combustible Methane Gas Monitor Calibration

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. This event was conducted by M.Bernard on September 24, 2021.

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	09/13/2021
General Conditions	Sunny
Temperature (°F) Low/High	79/82
Wind Speed (mph)	9.3
Wind Direction	NW
Barometric Pressure ("Hg)	29.85

CLOSING

If you have any questions regarding this notification, please do not hesitate to contact me at rphadnis@wm.com.

Thank you,

Waste Management,

Rajan Phadnis
Environmental Protection Specialist

ATTACHMENT A

PROBE LOCATION MAP

LEGEND

LGP-04 ● LFG MIGRATION MONITORING PROBE AND DESIGNATION

○ 1000 FT RADIUS FROM LFG MIGRATION MONITORING PROBE

N

0 500 1000

SCALE IN FEET

TITLE:

PERIMETER GAS PROBE LOCATIONS

LOCATION:

Guadalupe Rubbish Disposal Company, Inc.
15999 Guadalupe Mines Roads, San Jose CA

GeoTrans, Inc.
A TETRA TECH COMPANY

APPROVED	KH	FIGURE
DRAFTED	CP	1
PROJECT#	117-2402070.01	
DATE	10-7-09	

P:\ACAD\2402-070-GUAD\2402070001A.DWG

ATTACHMENT B

FIELD DATA

Guadalupe Rubbish Disposal Facility
Perimeter Gas Monitoring Probe Results

Analyst: Markus Bernard
Date: 9-13-21__ __
Instrument: Gem 2000 Serial #: GM11977______
Atmospheric Temperature (Deg F): _88_
Barometric Pressure: 29__Inch of HG
Wind Speed: 11 mph_ Wind Direction: __NW___
Weather Condition: _Sunny

Probe ID	Time	CH_4 (%)	Probe Pressure (in-$H_2$0)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
GUADGP01	3:29 PM	0	0.15	Yes	Yes	
GUADGP02	3:22 PM	0	0.13	Yes	Yes	
GUADGP03	3:15PM	0	0.0	Yes	Yes	
GUADGP04	2:52PM	0	-0.47	Yes	Yes	
GUADGP05	2:45PM	0	0.04	Yes	Yes	
GUADGP6S	2:34PM	0	0.03	Yes	Yes	
GUADGP6D	2:36 PM	0	0.02	Yes	Yes	

Immediately notify compliance personnel of any readings in excess of 5 percent methane.

STRUCTURE FID MONITORING DATA

Analyst: M. Bernard **Date: 9/22/2021**
Instrument: TVA 1000 **Serial #: 0928538411**

Monitored Location	Time	PPM	Comments
Scale House #1 Occupied Space	12:00 PM	0	
Scale House #1 Electrical Closet	12:02 PM	0	
Scale House #2 Occupied Space	12:05 PM	105	
Scale House #2 Electrical Closet	12:07 PM	0	
Scale House #3 Occupied Space	12:10 PM	0	
Scale House #3 Electrical Closet	12:12 PM	0	
Admin Office Crawl Space	12:20 PM	0	
Admin Office Electrical Closet	12:25 PM	0	
Admin Trailer	12:30 PM	0	
Security Trailer	12:40 PM	0	
MRF Scale House	12:50 PM	0	
MRF Building East Electrical	12:52 PM	0	
Maintenance Building Office Outlet	1:05 PM	0	
Maintenance Building Kitchen Outlet	1:10 PM	0	
Maintenance Building Shower Drain	1:15 PM	0	
Maintenance Building Electrical Box	1:20 PM	0	
Training Room Trailer	1:25 PM	0	

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

ND = No detection
California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH_4 = 12,500 ppm CH_4

WASTE MANAGEMENT

GAS DETECTOR CALIBRATION RECORD

LOCATION: Guadalupe Recycling and Disposal Inc.

MANUFACTURER & MODEL NUMBER: Sierra Monitor Corporation Model # 2001

CALIBRATED BY/INSTRUMENT USED: / Sierra Monitor Corporation

CALIBRATION GAS EXPIRATION DATE: September 27, 2021

LOCATION	DATE CALIBRATED	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED/ COMMENTS ON MONITOR CONDITION
Scale House #1	9-24-21	1500700093GAM	Yes	Good Condition
Scale House #2	9-24-21	1500700098GAM	Yes	Good Condition
Scale House #3	9-24-21	1500700101GAM	Yes	Good Condition
Training Room Trailer	9-24-21	1500700096GAM	Yes	Good Condition
Admin. Trailer	9-24-21	1500700097GAM	Yes	Good Condition
Main Office	9-24-21	1500700090GAM	Yes	Good Condition
MRF Scale House	9-24-21	1500700099GAM	Yes	Good Condition
Materials Yard Trailer	9-24-21	1500700091GAM	Yes	Good Condition
Shop Office #1	9-24-21	1500700010GAM	Yes	Good Condition
Shop Office #2	9-24-21	1500700094GAM	Yes	Good Condition
Shop Office #3	9-24-21	1500700095GAM	Yes	Good Condition
Shop Office #4	9-24-21	1500700092GAM	Yes	Good Condition

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

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 9/22/21

Time: 9:00 AM ________ PM

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

Calibration Procedure

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

   Stable Reading = 500 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 3 ppm (a)
2. Downwind Reading (highest in 30 seconds): 1 ppm (b)

Calculate Background Value:

$\frac{(a) + (b)}{2}$ Background = 2.0 ppm

Performed by: Markus Bernard

CALIBRATION PRECISION TEST RECORD

Date: 8/25/2021

Expiration Date (3 months): 11/25/2021

Time: 8:35 AM ______ PM

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

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 500 ppm (b)

Measurement #2:

Meter Reading for Zero Air: 0 ppm (c)

Meter Reading for Calibration Gas: 499 ppm (d)

Measurement #3:

Meter Reading for Zero Air: 0 ppm (e)

Meter Reading for Calibration Gas: 500 ppm (f)

Calculate Precision:

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

0.0 % (must be < than 10%)

Performed by: M. Bernard

RESPONSE TIME TEST RECORD

Date: 8/25/21

Expiration Date (3 months): 11/25/21

Time: 8:35 AM ______ PM

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

Measurement #1:

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

Measurement #2:

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

Measurement #3:

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

Calculate Response Time:

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

Performed by: M. Bernard

WASTE MANAGEMENT
910 Coyote Creek Golf Drive,
San Jose, CA 95037

July 14, 2021

Ms. Becky Azevedo
Guadalupe Recycling & Disposal Facility
15999 Guadalupe Mines Road
San Jose, CA 95120

Re: Second Quarter 2021 Perimeter Gas and Methane in Structure Monitoring Report Guadalupe Recycling & Disposal Facility

Dear Ms. Azevedo:

This report for the Guadalupe Recycling & Disposal Facility (GRDF) contains the results of the Second Quarter 2021 Perimeter Gas and Methane in Structure Monitoring conducted at the GRDF. All monitoring was conducted by GRDF personnel.

REGULATORY REQUIREMENTS

Requirements for monitoring are outlined in 40 CFR 258.23, Title 27 California Code of Regulations (CCR), Article 6, Gas Monitoring at Active and Closed Disposal Sites. These regulations require periodic monitoring to ensure that methane concentrations are less than 5 percent at the property boundary and less than 1.25 percent in on-site buildings and structures. Reporting requirements are presented in Title 27 §20934.

MONITORING RESULTS AND MAP [TITLE 27 §20934(a)(1), (2), (3) AND (5)]

Monitoring was conducted in accordance with 40 CFR 258.23 and Title 27, Article 6 at the locations shown in the attached map (Attachment A). Results for both probes and structures are summarized in Table 1. Field data are presented in Attachment B.

Table 1 Monitoring Results

Probe ID	Time	CH_4 (%)	Probe Pressure (in-H_20)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
GUADGP01	4/22/2021;12:27 PM	0	0.15	Yes	Yes	
GUADGP02	4/22/2021;12:39 PM	0	0.13	Yes	Yes	
GUADGP03	4/22/2021;12:46 PM	0	0.00	Yes	Yes	
GUADGP04	4/22/2021;1:12 PM	0	-1.90	Yes	Yes	
GUADGP05	4/22/2021;1:05 PM	0	0.04	Yes	Yes	
GUADGP6S	4/22/2021;1:00 PM	0	0.03	Yes	Yes	
GUADGP6D	4/22/2021;12:58 PM	0	0.02	Yes	Yes	

STRUCTURE FID MONITORING DATA

Analyst: M. Bernard **Date: 06/24/2021**
Instrument: TVA 1000 **Serial #:0928538411**

Monitored Location	Time	PPM	Comments
Scale House #1 Occupied Space	1:00 PM	0	
Scale House #1 Electrical Closet	1:02 PM	0	
Scale House #2 Occupied Space	1:05 PM	100	
Scale House #2 Electrical Closet	1:07 PM	0	
Scale House #3 Occupied Space	1:10 PM	0	
Scale House #3 Electrical Closet	1:12 PM	0	
Admin Office Crawl Space	1:20 PM	0	
Admin Office Electrical Closet	1:25 PM	0	
Admin Trailer	12:30 PM	0	
Security Trailer	12:40 PM	0	
MRF Scale House	12:50 PM	0	
MRF Building East Electrical	12:52 PM	0	
Maintenance Building Office Outlet	12:05 PM	0	
Maintenance Building Kitchen Outlet	12:10 PM	0	
Maintenance Building Shower Drain	12:15 PM	0	
Maintenance Building Electrical Box	12:20 PM	0	
Training Room Trailer	12:25 PM	0	

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

ND = No detection

California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.

(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH_4 = 12,500 ppm CH_4

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.

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

Perimeter Gas Monitoring

The Second Quarter 2021 monitoring was conducted by M.Bernard on April 22, 2021 using a GEM 2000. The static pressure of each probe was monitored using the GEM 5000. Following the measurement of the static pressure, the probes were monitored to determine methane concentration.

Facility Structures

M. Bernard used a Toxic Vapor Analyzer (TVA1000) to monitor buildings and structures to check for the presence of methane on June 24, 2021. The instrument was calibrated on June 24, 2021, using 500 parts per million by volume (ppm_v) methane standard.

Combustible Methane Gas Monitor Calibration

Some facility structures are monitored continuously using Sierra Monitors. The monitor is calibrated at a frequency determined by the manufacturer. This event was conducted by M.Bernard on June 24, 2021.

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	04/22/2021
General Conditions	Partly Cloudy
Temperature (ºF) Low/High	52/55
Wind Speed (mph)	13.1
Wind Direction	NNW
Barometric Pressure ("Hg)	29.97

CLOSING

If you have any questions regarding this notification, please do not hesitate to contact me at rphadnis@wm.com.

Thank you,

Waste Management,

Rajan Phadnis
Environmental Protection Specialist

ATTACHMENT A

PROBE LOCATION MAP

LEGEND

LGP-04 ●	LFG MIGRATION MONITORING PROBE AND DESIGNATION
◌	1000 FT RADIUS FROM LFG MIGRATION MONITORING PROBE

TITLE:

PERIMETER GAS PROBE LOCATIONS

LOCATION:

Guadalupe Rubbish Disposal Company, Inc.
15999 Guadalupe Mines Roads, San Jose CA

GeoTrans, Inc.
A TETRA TECH COMPANY

APPROVED	KH	FIGURE
DRAFTED	CP	1
PROJECT#	117-2402070.01	
DATE	10-7-09	

P:\ACAD\2402-070-GUAD\2402070001A.DWG

ATTACHMENT B

FIELD DATA

Guadalupe Rubbish Disposal Facility
Perimeter Gas Monitoring Probe Results

Analyst: Markus Bernard
Date: 4/22/21__ __
Instrument: Gem 2000 Serial #: GM11977______
Atmospheric Temperature (Deg F): _61_
Barometric Pressure: 29__Inch of HG
Wind Speed: 8 mph_ Wind Direction: __NW _ _ _
Weather Condition: _Sunny

Probe ID	Time	CH_4 (%)	Probe Pressure (in-H_20)	Probe Condition (clean, capped, locked)		Comments
				Arrival	Departure	
GUADGP01	12:27 PM	0	0.15	Yes	Yes	
GUADGP02	12:39 PM	0	0.13	Yes	Yes	
GUADGP03	12:46PM	0	0.0	Yes	Yes	
GUADGP04	1:12 PM	0	-1.9	Yes	Yes	
GUADGP05	1:05 PM	0	0.04	Yes	Yes	
GUADGP6S	1:00PM	0	0.03	Yes	Yes	
GUADGP6D	12:58 PM	0	0.02	Yes	Yes	

Immediately notify compliance personnel of any readings in excess of 5 percent methane.

STRUCTURE FID MONITORING DATA

Analyst: M. Bernard **Date: 6/24/2021**
Instrument: TVA 1000 **Serial #: 0928538411**

Monitored Location	Time	PPM	Comments
Scale House #1 Occupied Space	1:00 PM	0	
Scale House #1 Electrical Closet	1:02 PM	0	
Scale House #2 Occupied Space	1:05 PM	100	
Scale House #2 Electrical Closet	1:07 PM	0	
Scale House #3 Occupied Space	1:10 PM	0	
Scale House #3 Electrical Closet	1:12 PM	0	
Admin Office Crawl Space	1:20 PM	0	
Admin Office Electrical Closet	1:25 PM	0	
Admin Trailer	12:30 PM	0	
Security Trailer	12:40 PM	0	
MRF Scale House	12:50 PM	0	
MRF Building East Electrical	12:52 PM	0	
Maintenance Building Office Outlet	12:05 PM	0	
Maintenance Building Kitchen Outlet	12:10 PM	0	
Maintenance Building Shower Drain	12:15 PM	0	
Maintenance Building Electrical Box	12:20 PM	0	
Training Room Trailer	12:25 PM	0	

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

ND = No detection
California Code of Regulations Title 27, Division 2, Chapter 3, Article 6, §20921 require that:

(1) The concentration of methane gas must not exceed 1.25 percent by volume in air within any portion of any on-site structures.(2) The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with §20925.

Note: The reading should not exceed 25% LEL = 1.25% CH_4 = 12,500 ppm CH_4

GAS DETECTOR CALIBRATION RECORD

LOCATION: Guadalupe Recycling and Disposal Inc.

MANUFACTURER & MODEL NUMBER: Sierra Monitor Corporation Model # 2001

CALIBRATED BY/INSTRUMENT USED: / Sierra Monitor Corporation

CALIBRATION GAS EXPIRATION DATE: September 27, 2021

LOCATION	DATE CALIBRATED	SERIAL NUMBER	Methane LEL* SENSOR alarm 10,000 ppm	MAINTENANCE PERFORMED/ COMMENTS ON MONITOR CONDITION
Scale House #1	6-24-21	1500700093GAM	Yes	Good Condition
Scale House #2	6-24-21	1500700098GAM	Yes	Good Condition
Scale House #3	6-24-21	1500700101GAM	Yes	Good Condition
Training Room Trailer	6-24-21	1500700096GAM	Yes	Good Condition
Admin. Trailer	6-24-21	1500700097GAM	Yes	Good Condition
Main Office	6-24-21	1500700090GAM	Yes	Good Condition
MRF Scale House	6-24-21	1500700099GAM	Yes	Good Condition
Materials Yard Trailer	6-24-21	1500700091GAM	Yes	Good Condition
Shop Office #1	6-24-21	1500700010GAM	Yes	Good Condition
Shop Office #2	6-24-21	1500700094GAM	Yes	Good Condition
Shop Office #3	6-24-21	1500700095GAM	Yes	Good Condition
Shop Office #4	6-24-21	1500700092GAM	Yes	Good Condition

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

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Landfill Name: Guadalupe Rubbish Disposal Date: 6/24/21

Time: 11:30 AM ________ PM

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

Calibration Procedure

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

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

Background Determination Procedure

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

Calculate Background Value:

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

Performed by: Markus Bernard

CALIBRATION PRECISION TEST RECORD

Date: 6/4/2021

Expiration Date (3 months): 9/4/2021

Time: 8:45 AM ______ PM

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

Measurement #1:

Meter Reading for Zero Air: 0 ppm (a)

Meter Reading for Calibration Gas: 496 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: 496 ppm (f)

Calculate Precision:

$$\frac{\{|(496) - (500)| + |(500) - (498)| + |(500) - (496)|\}}{3} \times \frac{1}{500} \times 100$$

1.0 % (must be < than 10%)

Performed by: M. Bernard

RESPONSE TIME TEST RECORD

Date: 6/4/21

Expiration Date (3 months): 9/4/21

Time: 8:50 AM ______ PM

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

Measurement #1:

Stabilized Reading Using Calibration Gas: 496 ppm
90% of the Stabilized Reading: 450 ppm
Time to Reach 90% of Stabilized Reading after switching from Zero Air to Calibration Gas: 10 seconds (a)

Measurement #2:

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

Measurement #3:

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

Calculate Response Time:

$$\frac{(a) + (b) + (c)}{3} = \underline{\quad 8 \quad}$$ seconds (must be less than 30 seconds)

Performed by: M. Bernard

APPENDIX N

SOURCE TEST SUMMARY AND RESULTS

Guadalupe Rubbish Disposal Facility (GRDF)

Facility # 3294

Compliance Emissions Test Report #20122
Landfill Gas Control Flare- Source A-9

Located at:
15999 Guadalupe Mines Road,
San Jose, CA

Prepared For:
Dave Bearden
SCS Engineers
3117 Fite Circle, Suite 108
Sacramento, CA 95827
(916) 361-1297
dbearden@scsengineers.com

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

Testing Performed On:
April 29th, 2020

Final Report Submitted On:
June 24th, 2020

Performed and Reported by:
Blue Sky Environmental, Inc.
624 San Gabriel Avenue
Albany, CA 94706
bluesky@blueskyenvironmental.com
Office (510) 525 1261
Cell (510) 508 3469

REVIEW AND CERTIFICATION

Team Leader:

The work performed herein was conducted under my supervision, and I certify that: a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program; b) that the sampling and analytical procedures and data presented in the report are authentic and accurate; c) that all testing details and conclusions are accurate and valid, and: d) that the production rate and/or heat input rate during the source test are reported accurately.

If this report is submitted for Compliance purposes it should only be reproduced in its entirety. If there are any questions concerning this report, please contact me at (510) 508-3469.

Guy Worthington
Principal Project Manager

TABLE of CONTENTS

SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc was contracted to perform emissions testing on the A-9 Landfill Gas (LFG) Flare at Guadalupe Rubbish Disposal Facility. (GRDF), 15999 Guadalupe Mines Road, San Jose, California. This report presents the results of the test program. Table 1 summarizes the source test information. Table 2 summarizes the results compared to the emission limits. The flare met all compliance emission criteria when tested with Condensate On and Condensate Off.

Table 1. Source Test Information

Test Location:	Guadalupe Rubbish Facility (GRDF), 15999 Guadalupe Mines Road, San Jose, California, 95120, Site Number 3294
Source Contact:	Becky Azeredo (408) 960 - 0769
Source Tested:	Enclosed Gas Flare (A-9)
Source Test Date:	April 29th, 2020
Test Objective:	Determine Compliance with BAAQMD Regulation 8, Rule 34, AB32 Landfill Methane Rule and BAAQMD Permit Condition 6188
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Ave., Albany, CA 94706 Guy Worthington (510) 508-3469 Blueskyenvironmental@yahoo.com
Test Parameters:	**Landfill Gas** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur Species, Volumetric Flow rate **Flare Emissions** THC, CH_4, NMOC, NO_X, CO, O_2, SO_2, Volumetric Flow rate.

Table 2. Compliance Summary

Condensate On	**Average Test Result**	**Permit Limit**	**Compliance Status**
NO_X, ppmvd @ 15% O_2	9.5	16	In Compliance
CO, ppmvd @ 15% O_2	<3.3	134	In Compliance
SO_2, ppmvd	55.4	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<0.5	30	In Compliance
NMOC Destruction Efficiency	>99.89	98%	In Compliance
Methane Destruction Efficiency	>99.998	99%	In Compliance
Condensate Off	**Average Test Result**	**Permit Limit**	**Compliance Status**
NO_X, ppmvd @ 15% O_2	8.4	16	In Compliance
CO, ppmvd @ 15% O_2	<3.4	134	In Compliance
SO_2, ppmvd	46.4	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	<1.6	30	In Compliance
NMOC Destruction Efficiency	>99.65	98%	In Compliance
Methane Destruction Efficiency	>99.996	99%	In Compliance

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This performance test was conducted to demonstrate that the LFG flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) Title V Permit for Site Number 3294 and BAAQMD Regulation 8, Rule 34. Testing was also performed to demonstrate compliance with the State Landfill Methane Gas Rule AB32 for Flare performance with Condensate On and Condensate Off.

2.2. Pollutants Tested

The following EPA and 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, CH_4 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
ASTM 1945/3588	LFG Gas analysis for BTU and F-Factor
ASTM 5504	Sulfur Species, H_2S and TRS

2.3. Test Date(s)

Testing was conducted on April 29th, 2020.

2.4. Sampling and Observing Personnel

Testing was performed by Guy Worthington and Timothy Eandi representing Blue Sky Environmental.

Dave Bearden of SCS Engineers was present to operate the Flare 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 dated April 8th, 2020 (NST #5928). A Source Test Protocol acknowledgement was received on April 8th, 2020, but no agency observers were present to witness the testing. A copy of the source test protocol and related email correspondence can be found in Appendix I.

2.5. Source/Process Description

The enclosed LFG flare at GRDF consists of a 70 million British Thermal Units per hour (MMBtu/hr) multiple nozzle burner manufactured by LFG Specialties, Inc. The flare shell is 35 feet high and 9.5 feet in diameter. The inside diameter (ID) is approximately 8.5 feet.

The flare was operated at an average 901 standard cubic feet per minute (SCFM). The flare set-point was established at 1,645 Degrees Fahrenheit (°F). Methane quality is typically about 46-49 percent (%), and the Oxygen content typically around 1% or less. Landfill gas condensate that is collected is periodically injected into the flare via one vertical nozzle positioned near the burner.

2.6. Source Operating Conditions

The flare operating temperature and the LFG flow rate records are contained in Appendix-F. The condensate injection rate was 0.9 gallons per minute (gpm).

The flare was operated at 1,642 - 1,643 °F average (avg.). The average LFG flow rate ranged between 885 – 919 standard cubic feet per minute (scfm).

The LFG methane content ranged between 49.4 and 50.2 percent (%). The average LFG Methane content of the six test runs was 49.9%.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The Flare sampling was conducted in the 8 feet 6 inch diameter ID stack (102”), via ports approximately 30 feet above grade, accessible by boom-lift. Four, 4-inch flange ports are available approximately 5 stack diameters downstream from the burners and ~2 stack diameters upstream from the exit.

3.2. Point description/Labeling – ports/stack

Blue Sky Environmental, Inc. conducted two perpendicular 8-point traverses per BAAQMD ST-18 and found O_2 stratification about 10% therefore subsequent CEM sampling was conducted with 8-point traverses per port to achieve the required (BAAQMD ST-7, 6.6) representative sampling of the emissions.

The traverse points for the exhaust of the flare with 8 feet 6 inch (102”) diameter plus 4 inch ports were 7.3, 14.7, 23.8, 36.9, 73.1, 86.2, 95.3 and 102.7 inches.

3.3. Sample train description

Sampling system diagrams are included in the appendices. Additional descriptive information is included in the following section.

3.4. Sampling procedure description

Three, 30-minute minimum test runs were conducted with the Condensate Injection Off, and three 30-minute test runs with the Condensate Injection 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.

EPA Method 3A (O_2, CO_2), 7E (NO_X) and 10 (CO) 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, a heated Teflon sample line, glass-fiber particulate filter, glass moisture-knockout condensers in ice, followed by thermoelectric coolers, Teflon sample transfer tubing, diaphragm pump and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI was provided to each analyzer to avoid pressure variable response differences. The entire sampling system was leak checked prior to and at the end of the sampling program. The sampling and analytical system (for EPA Methods) was checked for linearity with zero, mid (40-60%) and high span (80-100%) calibrations, and is checked for system bias at the beginning and end of each run. System bias is determined by introducing calibration gas to the probe and pulling it through the entire sampling system. Individual test run calibrations usually use the calibration gas that most closely matches the stack gas effluent. Along with the Sampling System Bias, the Zero and Calibration Drift values were determined for each test. Methods 3A, 7E and 10 all defer to EPA Method 7E for the calculations of effluent concentration, Span, Calibration Gas, Analyzer Calibration Error (Linearity), Sampling System Bias, Zero Drift, Calibration Drift and Response Time. In addition, the NO_X analyzer NO_2 to NO conversion efficiency check defers to EPA Method 20 section 5.6 for the criteria and procedure.

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DPR3000 strip chart recorder supported by a Data Acquisition System (DAS).

System Performance Criteria

Instrument Linearity	≤2% Full Scale
Instrument Bias	≤5% Full Scale
System Response Time	≤± 2 minutes
NO_X Converter Efficiency (EPA 7E)	≥ 90%
Instrument Zero Drift	≤± 3% Full Scale
Instrument Span Drift	≤± 3% Full Scale

EPA Method 25A Total Hydrocarbons, Methane and Non-Methane Hydrocarbons. EPA Method 25A employs a heated FID, Teflon sample gas transfer lines to provide a continuous sample to the heated FID Hydrocarbon Analyzer. Heated lines were used if necessary to avoid moisture or hydrocarbon condensation. Calibration gases are selected to fall within 25-35%, 45-55% and 80-90% of Range for Total Hydrocarbon.

Methane in the exhaust is usually determined per EPA Methods (M18). An integrated tedlar bag or SUMMA canister is collected and either analyzed by GC or onsite using a charcoal scrubber to remove the non-methane organics, and determining the difference between the total hydrocarbon and non-methane hydrocarbon concentrations. Where the total hydrocarbon numbers are well below detection limits and less than 5 ppm for example, the methane may not be determined separately.

EPA Method 18 (VOC or Methane) is used to measure the Methane and ethane to subtract from the THC of Method 25A. This method is used to determine emissions of volatile organics or Methane analyzed by gas chromatograph/mass spectroscopy (GC/MS). Gaseous emissions are drawn through a teflon sample line to a pre-evacuated 6-Liter SUMMA canister. Sample is drawn into the canister by pre-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 between 20 to 60 minutes. The canister samples are taken to a laboratory and analyzed within 72 hours.

To prevent moisture condensation, a condenser may be used before the canister and the condensate analyzed separately, or the canister can be partially pre-filled with a known quantity zero air or nitrogen, prior to collecting the gas sample, or the system can be heated and kept heated above the condensation point until analysis.

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 O_2, CO_2, CO, N_2, H_2, CH_4, 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 from combustion 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 sum of the raw fuel analysis before normalization, is subtracted from 100.

ASTM Method 1945/5504/25C Concurrent with the exhaust sampling, Blue Sky collected a total of six 6-L Silco Canisters of the LFG for analysis. The canisters were equipped with a 30 minute flow controller and vacuum gauge to aim for a final internal vacuum of the canister of approximately above 5" of Hg. The samples were collected directly from the inlet line. All the samples were analyzed for NMOC, HHV, F-Factor, Fixed Gases, Sulfur Species (including H_2S and TRS). The inlet volumetric flow rate was continuously measured and recorded by the LFG Flowmeter.

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42C	NO_X	Chemiluminescence
TECO 42C	NO	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfisch RS-55	THC	FID
Fuji ZRH	CO_2	IR
Servomex 1440	O_2	Paramagnetic

The instrument response was recorded on strip charts, but the analyzer data collected on the DAS was used for reporting the results. The averages were corrected for drift using 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 Charts**
F.	**Process Information**
G.	**Calibration Certifications and Quality Assurance Records**
H.	**Sample Train Configuration and Stack Diagrams**
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K.	**Flare Flow Meter Calibration Document**

A

Tabulated Results

TABLE #1

WM - GRDF
Flare A-9
LFG - Condensate On

RUN	1	2	3	AVERAGE	LIMITS
Test Date	4/29/20	4/29/20	4/29/20		
Test Time	1018-1100	1127-1205	1231-1309		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,643	1,642	1,643	1,643	
Condensate Injection, gpm	0.9	0.9	0.9	0.9	
Fuel Flow Rate, SCFM	885	901	919	902	
Fuel Heat Input, MMBTU/Hr	26.3	26.7	27.4	26.8	
Exhaust Flow Rate, DSCFM (Method 19)	9,850	10,127	10,365	10,114	
Oxygen, O_2, %	12.0	12.1	12.1	12.1	
Carbon Dioxide, CO_2, %	7.9	7.9	7.8	7.9	
Water Vapor, H_2O, % M4.16	5.6	5.4	5.6	5.5	
NO, ppm	14.6	14.6	14.5	14.6	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.07	<0.07	<0.07	<0.07	
NOx, ppm	14.2	14.2	14.3	14.2	
NOx, ppm @ 15% O_2	**9.4**	**9.5**	**9.6**	**9.5**	**16**
NOx, lbs/hr	0.99	1.03	1.06	1.03	
CO, ppm	<5.0	<5.0	<5.0	<5.0	
CO, ppm @ 15% O_2	**<3.3**	**<3.3**	**<3.3**	**<3.3**	**134**
CO, lbs/hr	<0.21	<0.22	<0.23	<0.22	
Total Sulfurs as H_2S in fuel, ppm	678	641	544	621	
SO_2 calculated emission, ppm	**60.9**	**57.0**	**48.3**	**55.4**	**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	<0.03	<0.03	<0.03	<0.03	
CH_4, ppm (M18)	0.9	0.8	0.7	0.8	
CH_4, lbs/hr	0.02	0.02	0.02	0.02	
NMOC, ppm as CH_4	<0.2	<0.3	<0.4	<0.3	
NMOC, lbs/hr as CH_4	<0.00	<0.01	<0.01	<0.01	
NMOC, ppm @ 3% O_2 as CH_4	**<0.3**	**<0.5**	**<0.7**	**<0.5**	**30**
INLET TNMOC (Method 25C)	2,424	2,843	2,732	2,666	
INLET NMOC, lbs/hr as CH_4	5.3	6.4	6.2	6.0	
NMOC Removal Efficiency	**99.93%**	**99.90%**	**99.85%**	**99.89%**	**98**
INLET CH_4, ppm	495,000	494,000	497,000	495,333	
INLET CH_4, lbs/hr	1,088	1,104	1,134	1,109	
CH_4 Removal Efficiency	**>99.998%**	**>99.998%**	**>99.998%**	**>99.998%**	**99**
INLET THC (TOC), ppm as CH_4	497,424	496,843	499,732	498,000	
INLET THC (TOC), lbs/hr as CH_4	1,093	1,111	1,141	1,115	
THC (TOC) Removal Efficiency	**99.998%**	**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 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

WM - GRDF
Flare A-9
LFG - Condensate Off

RUN	1	2	3	AVERAGE	LIMITS
Test Date	4/29/20	4/29/20	4/29/20		
Test Time	1346-1428	1448-1527	1604-1642		
Standard Temp., °F	70	70	70		
Flare Temperature, °F Average	1,642	1,643	1,643	1,643	
Condensate Injection, gpm	0.0	0.0	0.0	0.0	
Fuel Flow Rate, SCFM	913	891	894	899	
Fuel Heat Input, MMBTU/Hr	27.5	26.9	27.0	27.1	
Exhaust Flow Rate, DSCFM (Method 19)	10,738	10,506	10,427	10,557	
Oxygen, O_2, %	12.4	12.4	12.3	12.3	
Carbon Dioxide, CO_2, %	7.6	7.6	7.6	7.6	
Water Vapor, H_2O, % M4.16	5.5	5.5	5.7	5.6	
NO, ppm	12.1	12.3	12.6	12.3	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.08	<0.08	<0.08	<0.08	
NOx, ppm	11.9	12.1	12.4	12.1	
NOx, ppm @ 15% O_2	**8.2**	**8.4**	**8.5**	**8.4**	**16**
NOx, lbs/hr	0.91	0.91	0.92	0.91	
CO, ppm	<5.0	<5.0	<5.0	<5.0	
CO, ppm @ 15% O_2	**<3.5**	**<3.5**	**<3.4**	**<3.4**	**134**
CO, lbs/hr	<0.23	<0.23	<0.23	<0.23	
Total Sulfurs as H_2S in fuel, ppm	616	583	436	545	
SO_2 calculated emission, ppm	**52.4**	**49.5**	**37.4**	**46.4**	**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	<0.03	<0.03	<0.03	<0.03	
CH_4, ppm (M18)	1.5	1.9	1.9	1.8	
CH_4, lbs/hr	0.04	0.05	0.05	0.05	
NMOC, ppm as CH_4	<0.5	<0.9	<0.9	<0.8	
NMOC, lbs/hr as CH_4	<0.01	<0.02	<0.02	<0.02	
NMOC, ppm @ 3% O_2 as CH_4	**<1.0**	**<1.9**	**<1.9**	**<1.6**	**30**
INLET TNMOC (Method 25C)	2,454	2,625	2,608	2,562	
INLET NMOC, lbs/hr as CH_4	5.6	5.8	5.8	5.7	
NMOC Removal Efficiency	**99.76%**	**99.60%**	**99.60%**	**99.65%**	**98**
INLET CH_4, ppm	501,000	502,000	502,000	501,667	
INLET CH_4, lbs/hr	1,135.3	1,110.9	1,113.7	1,120	
CH_4 Removal Efficiency	**>99.996%**	**>99.996%**	**>99.996%**	**>99.996%**	**99**
INLET THC (TOC), ppm as CH_4	503,454	504,625	504,608	504,229	
INLET THC (TOC), lbs/hr as CH_4	1,141	1,117	1,119	1,126	
THC (TOC) Removal Efficiency	**99.998%**	**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 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

B
Calculations

Guadalupe Rubbish Disposal Facility (GRDF)

BAAQMD Facility # 3294

Initial Compliance Test Report #21054

Landfill Gas Flare A-17

Located at:
Guadalupe Recycling and Disposal Facility
15999 Guadalupe Mines Road
San Jose, CA 95120

Prepared for:
SCS Engineers
3117 Fite Circle, Suite 108
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Attn: Michael O'Connor
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For Submittal to:
Bay Area Air Quality Management District
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gespena@baaqmd.gov/mhernandez@baaqmd.gov
sourcetest@baaqmd.gov

Testing Performed on:
February 18th, 2021

Final Report Submitted on:
April 7th, 2021

Performed and Reported by:
Blue Sky Environmental, Inc.
624 San Gabriel Avenue
Albany, CA 94706
Office (510) 508-3469/Mobile (510) 508 3469
bluesky@blueskyenvironmental.com

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
Blue Sky Environmental, Inc.

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SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, Inc. was contracted by SCS Engineers to perform the emissions testing for Waste Management (WM), at the Guadalupe Recycling and Disposal Facility (GRDF), located in San Jose, California. This initial source test was conducted to demonstrate that Landfill Gas Flare A-17 (previously Flare A-14) is operating in compliance with the Bay Area Air Quality Management District (BAAQMD) Authority to Construct 21927 for Facility #3294. Results of the test program are presented in this report. The source test information is summarized in Table 1. Test results derived from the source test are summarized in Table 2. Results for individual test runs are provided in Appendix A. The flare met all compliance emission criteria.

Table 1. Source Test Information

Test Location:	Guadalupe Recycling and Disposal Facility (GRDF), 15999 Guadalupe Mines Road, San Jose, CA 95120
Source Contact:	Michael O'Connor, SCS Engineers (707) 236-3791
Source Tested:	LFG Specialties, Inc. Enclosed Landfill Gas Flare A-17, 120 MMBtu/hr
Source Test Date:	February 18th, 2020
Test Objective:	Determine Compliance with Bay Area Air Quality Management District (BAAQMD) Authority to Construct 21927 for Plant #3294, Condition 25320; Regulation 8, Rule 34; and the State Landfill Methane Gas Rule under AB32 for Flare performance.
Test Performed By:	Blue Sky Environmental, Inc 624 San Gabriel Avenue, Albany, CA 94706 Chuck Arrivas (925) 338-4875 carrivas@blueskyenvironmental.com
Test Parameters:	**Landfill Gas** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur Species, Volumetric Flow rate **Flare Emissions** THC, CH_4, NMOC, NO_X, CO, O_2, SO_2, Moisture, Volumetric Flow rate.

Table 2. Compliance Summary

Condensate On

Emission Parameter	Average Results (Condensate ON)	Permit Limit	Compliance Status
NO_X, ppm @ 15% O_2	13.3	15	In Compliance
CO, ppm @ 15% O_2	1.24	81	In Compliance
SO_2, ppm	51.3	300	In Compliance
NMOC, (ppm @ 3% O_2 as CH_4)	<5.79	30	In Compliance
NMOC Destruction Efficiency	98.57	>98%	In Compliance
CH_4 Destruction Efficiency	>99.974	>99%	In Compliance

Condensate Off

Emission Parameter	Average Results (Condensate OFF)	Permit Limit	Compliance Status
NO_X, ppm @ 15% O_2	10.3	15	In Compliance
CO, ppm @ 15% O_2	2.50	81	In Compliance
SO_2, ppm	53.9	300	In Compliance
NMOC, (ppm @ 3% O_2 as CH_4)	<2.6	30	In Compliance
NMOC Destruction Efficiency	99.53	>98%	In Compliance
CH_4 Destruction Efficiency	>99.973	>99%	In Compliance

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This initial source test was performed to demonstrate that landfill gas Flare A-17 (previously A-14) is operating in accordance with Bay Area Air Quality Management District (BAAQMD) Authority to Construct Application #21927 for Facility #3294, Condition 25320 and Regulation 8, Rule 34. This testing also satisfies the compliance requirements outlined in the State Landfill Methane Gas Rule under AB32 for Flare performance.

2.2. Pollutants Tested

The following U.S. Environmental Protection Agency (EPA) and ASTM International 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 16.4	Moisture Calculation
EPA Method 18	CH_4, THC, NMOC
EPA Method 19	Flow Rate Calculation DSCFM
EPA Method 25A	VOC Emissions
EPA Method 25C	TNMHC (NMOC) in fuel
ASTM D-1945/3588	BTU, F-Factor and Fixed Gases in Fuel
ASTM D-5504	Sulfur Species, Hydrogen Sulfide (H_2S) and TRS

2.3. Test Date(s)

Testing was conducted on February 18th, 2021.

2.4. Sampling and Observing Personnel

Testing was conducted by Chuck Arrivas and Guy Worthington, representing Blue Sky Environmental, Inc.

Rajan Phadnis, Ben Tarver and Marcus Bernard of Waste Management (WM) were present to operate the Flare and assist in coordinating testing and the collection of process data during testing. Jon Silva of SCS Engineers was also on site to coordinate and assist.

The BAAQMD was notified of the scheduled testing in a plan submitted by SCS Engineering on behalf of Waste Management on January 27th, 2021. A Source Test Protocol acknowledgement (NST #6330) was received on February 9th, 2021; however, no agency observers were present during testing. A copy of the source test protocol and email correspondence are provided in Appendix I.

2.5. Source/Process Description

The Guadalupe Recycling and Disposal Facility, located in San Jose, CA, is a multi-material landfill with a gas collection system that is abated by an industrial landfill gas flare. Flare A-17 has a 120 MMBtu/hr multiple nozzle burner. The flare shell is 50 feet high and 12 feet in diameter. The inside diameter (ID) is approximately 130 inches.

The flare is typically operated at an average 1,945 standard cubic feet per minute (SCFM) with the Condensate On and 1,976 SCFM with the Condensate Off. The flare set-point is established at 1,500 °F. Methane quality typically ranges from 39-41 %, with an oxygen content of ≤4.5%. Landfill gas condensate that is collected is periodically injected into the flare via one vertical nozzle positioned near the burner.

2.6. Source Operating Conditions

The flare was operated on landfill gas under normal operating conditions during testing with the condensate injection both on and off. The condensate injection rate was approximately 1.88 gallons per minute (gpm).

The average exhaust temperature at normal operating condition was 1,499 °F. The LFG flowrate ranged from 1,937 to 1,984 SCFM. The operating exhaust temperature, and LFG flowrate records are provided in Appendix F.

Landfill gas samples collected at the head of the flare showed an average methane content of 40.4% and an oxygen content of 4.5%.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port Location

Sampling was conducted in the 130-inch diameter ID stack of the flare through ports that were accessed with a 60-foot boom lift. The four 4-inch flange ports were located approximately 45 feet above grade, five stack diameters downstream from the burners and one stack diameters upstream from the exhaust.

3.2. Point Description/Labeling – Ports/Stack

Blue Sky Environmental, Inc. conducted two perpendicular 8-point traverses to check for the presence of cyclonic flow. O_2 stratification was greater than 10%; therefore, subsequent CEM sampling was conducted using all traverse points. Sampling was performed for two minutes per point for a total of 16 points over a 32-minute test run. The traverse points for the 130-inch diameter stack with 8-inch ports were 4.2, 13.7, 25.2, 42.0, 88.0, 104.8, 116.4 and 125.8 inches from the inside wall of 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

Six consecutive 32-minute gaseous emissions tests were performed for oxides of nitrogen (NO_X), nitric oxide (NO), carbon monoxide (CO), carbon dioxide (CO_2), oxygen (O_2), and total hydrocarbons (THC) at the flare exhaust stack. Three tests were performed with the Condensate Injection On and three tests were performed with the Condensate Injection Off. The gas flow was controlled with a rotameter to collect the 32-minute integrated samples.

The sampling system was checked for leaks before the start of the testing, by plugging the sample probe and observing the sample rotameter flow drop to zero. Instrument linearity and system bias were checked. The system response time for each analyzer was recorded. The temperatures of the heated sample line between the probe and sample conditioner/condenser, and the condenser exhaust temperatures were maintained within limits during each test run.

Analyzer external calibrations were performed before and after each run using EPA protocol certified gas standards. Calibration gases were introduced to the sample manifold at the same flow rate as the sample. Any drift or bias was corrected using equation 100-3 from CARB Method 100. A NOx analyzer converter efficiency check was performed before the first test run and achieved an efficiency greater than 90%.

Concurrent with the exhaust sampling, Blue Sky collected a total of nine integrated fuel samples (three samples with the condensate injection on and six samples with the condensate injection off) for off-site analysis by Atmospheric Analysis & Consulting, Inc., located in Ventura, CA. The samples were collected in 6-liter SUMMA canisters and analyzed for hydrocarbons by EPA Method 25, sulfur species (incl. H_2S and TRS) by ASTM D-5504, and HHV, F-factor, fixed gases, volatile organic compounds (VOCs), nonmethane organic compounds (NMOCs) and C^1-C^{6+} hydrocarbons by EPA Method 25C and ASTM D-1945. Three landfill gas samples collected while the condensate injection was off were analyzed for toxic organic compounds by EPA Method TO-15 (AP-42 2.4-1).

The sampling and analysis procedures are summarized below:

EPA Method 1 – Sample and Velocity Traverses for Stationary Sources
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.

EPA Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)
This method is used to measure oxygen and carbon dioxide in stationary source emissions using a continuous instrumental analyzer to determine the molecular weight of the stack gas.

EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources
This method is used to measure carbon monoxide from integrated or continuous gas samples extracted from a sampling point.

EPA Method 7E – Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)
This method is used to measure nitrogen oxides in stationary source emissions using a continuous instrumental analyzer. Section 16.2.2 of the method is used to determine the NO_X analyzer NO_2 to NO conversion efficiency.

EPA Methods 3A, 7E and 10 are all 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 continuing emissions monitoring (CEM) test van. The sampling system consists of a stainless steel sample probe, Teflon sample line, glass-fiber particulate filter, and glass moisture-knockout condensers in ice, followed by thermoelectric coolers (optional), Teflon sample transfer tubing, a diaphragm pump, and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI is provided to each analyzer to avoid pressure variable response differences. The entire sampling system is leak checked prior to and at the end of the sampling program.

The sampling and analytical system is 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 use the calibration gas that most closely matches the stack gas effluent. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test. EPA 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.

System Performance Criteria

Instrument Linearity	≤2% Full Scale
Instrument Bias	≤5% Full Scale
System Response Time	≤± 2 minutes
NO$_X$ Converter Efficiency (EPA 7E)	≥ 90%
Instrument Zero Drift	≤± 3% Full Scale
Instrument Span Drift	≤± 3% Full Scale

EPA Method 4-16.4 – Determination of Moisture Content in Stack Gas

This is an acceptable alternative to EPA Method 4 for the determination of moisture using F-factors. The mole fraction of 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 of 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 or directly measured by wet bulb, dry bulb of the landfill gas, and 3) the mole fraction of hydrogen in the fuel. To determine the moisture in the fuel, the raw fuel analysis before normalization to 100% is referenced.

EPA Method 18 – Measurement of Gaseous Organic Compound Emissions by Gas Chromatography

This method is used to determine emissions of volatile organics by gas chromatograph/mass spectroscopy (GC/MS). Gaseous emissions are drawn through a Teflon sample transfer line to a Tedlar bag held in a rigid leak proof bag container. The 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 the collection time. The bag samples are taken to a laboratory and analyzed within 72 hours.

EPA Method 19 – Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emission Rates

This method is used to determine stack gas volumetric flow rates using oxygen-based F-factors. F-factors are ratios of combustion gas volumes to heat inputs. The heating value of the fuel in Btu per cubic foot is determined from analysis of fuel gas samples using ASTM D1946/1945 gas chromatography analytical procedures. 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 are used to determine emission rates. 301.

EPA Method 25A – Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

This method is used to measure total hydrocarbons, methane, and non-methane hydrocarbons in stationary source emissions using a gas chromatograph with a flame ionization detector (GC/FID). Heated Teflon sample gas transfer lines are used to provide a continuous sample to the heated GC/FID hydrocarbon analyzer. Heated lines are used to avoid moisture or hydrocarbon condensation.

The sampling and analytical system is checked for linearity with zero, low (25-35%), mid (45-55%), and high (80-90%) span calibrations. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test.

EPA Method 25C – Determination of Nonmethane Organic Compounds (NMOC) in Landfill Gas

This method is used to sample and measure NMOC in landfill gases. The method is written for evacuated tank sampling but is adaptable to Tedlar bag sampling procedures. The sampling equipment consists of a stainless steel or glass lined probe with a short stainless-steel or Teflon transfer line to a Tedlar bag housed in a sealed chamber. The chamber is evacuated by pump at a prescribed rate for the test duration and the Tedlar bag capacity, so the sample is integrated over the test period. The sample is injected into a GC column where the methane and CO_2 are flushed through and removed then the NMOC (ROC) fraction is oxidized to form CO_2 then reduced to methane and analyzed

ASTM D1945 – Analysis of Natural Gas by Gas Chromatography

This method is used to measure fixed gases (such as oxygen, nitrogen, carbon monoxide, and carbon dioxide) and methane by gas chromatography (GC/TCD). Light hydrocarbons, including C1-C7, are analyzed by GC/FID.

ASTM D-3588 – Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels

This method uses the molar composition of gaseous fuel determined from Method ASTM D-1945 to calculate the heating value and F-factor.

ASTM D-5504 – Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence

This method is used for the determination of speciated volatile sulfur-containing compounds in high methane content gaseous fuels by gas chromatography. Sulfur compounds are processed using a flame ionization detector (GC/FID). The products are then analyzed with a sulfur chemiluminescence detector (GC/SCD). Samples may be collected in Tedlar bags and analyzed within 24 hours or in Silco SUMMA canisters and analyzed 7 days.

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO Model 42C	NO_X/NO	Chemiluminescence
TECO Model 48C	CO	GFC/IR
TECO Model 55C	$NMOC/CH_4$	FID
CAI Fuji ZRH	CO_2	IR
Servomex Model 1440	O_2	Paramagnetic

The analyzer data recording system consists of a Honeywell DPR300 strip chart recorder, supported by a Data Acquisition System (DAS). The instrument response is recorded on strip charts and DAS. The averages are corrected for drift using BAAQMD and EPA Method 7E equations. All system performance criteria were met.

3.6. Comments: Limitations and Data Qualifications

This source test was performed in accordance with the protocol submitted to the BAAQMD. No deviations from the protocol or anomalies were observed during testing. The measured emissions from the flare comply with the permit limits.

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. **QC Calibration Certificates and Quality Assurance Records**

H. **Sample Train Configuration and Stack Diagrams**

I. **Related Correspondence (Source Test Plan and Email)**

J. **BAAQMD Permit Conditions**

K. **Flare Flow Meter Calibration Records**

A
Tabulated Results

TABLE #1

Guadalue Recycling and Disposal Facility (GRDF)
Flare A-17
1,498°F - Condensate ON

RUN	**1**	**2**	**3**	**AVERAGE**	**LIMITS**
Test Date	2/18/21	2/18/21	2/18/21		
Test Time	0857-0934	1002-1040	1106-1142		
Standard Temperature, °F	70	70	70		
Flare Temperature, °F Average	1,498	1,499	1,498	1,498	
Condensate Injection, gpm	1.87	1.86	1.92	1.88	
Fuel Flow Rate, SCFM	1,948	1,937	1,950	1,945	
Fuel Heat Input, MMBTU/hr	46.3	46.4	47.0	46.6	
Exhaust Flow Rate, DSCFM *(EPA M19)*	19,071	18,845	18,427	18,781	
Oxygen, O_2, %	12.7	12.6	12.3	12.6	
Carbon Dioxide, CO_2, %	7.3	7.3	7.2	7.2	
Water Vapor, H_2O, % *(EPA M4.16)*	8.57	8.68	9.17	8.81	
NO, ppm	19.3	19.1	18.5	18.9	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.05	<0.05	<0.05	<0.05	
NOx, ppm	19.0	18.9	18.2	18.7	
NOx, ppm @ 15% O_2	**13.7**	**13.5**	**12.6**	**13.3**	**15**
NOx, lbs/hr	2.59	2.54	2.40	2.51	
CO, ppm	2.26	1.42	1.56	1.75	
CO, ppm @ 15% O_2	**1.63**	**1.01**	**1.08**	**1.24**	**81**
CO, lbs/hr	0.19	0.12	0.13	0.14	
TRS as H_2S, ppm in Fuel	484	511	492	496	
SO_2, ppm Exhaust (calculated)	**49.4**	**52.5**	**52.1**	**51.3**	**300**
THC, ppm wet *(Sum NMOC + CH_4)*	<14.2	<11.0	<12.1	<12.5	
THC, ppm dry	<15.6	<12.0	<13.3	<13.6	
THC, lbs/hr as CH_4	<0.737	<0.563	<0.607	<0.636	
CH_4, ppm wet *(EPA ALT 097)*	<10.0	<10.0	<10.0	<10.0	
CH_4, ppm dry	<10.9	<10.9	<10.9	<10.9	
CH_4, lbs/hr	<0.518	<0.512	<0.500	<0.510	
TNMHC, ppm as CH_4 *(EPA ALT 097)*	4.23	<1.00	2.13	<2.45	
TNMHC, ppm dry as CH_4	4.63	<1.09	2.33	<2.68	
TNMHC, lbs/hr as CH_4	0.219	<0.051	0.106	<0.126	
TNMHC, ppm @ 3% O_2 as CH_4	**10.14**	**<2.37**	**4.87**	**<5.79**	**30**
INLET TNMOC *(EPA M25C)*	1,735	1,845	1,981	1,854	**or**
INLET NMOC lbs/hr as CH_4	8.4	8.9	9.6	9.0	
NMOC Destruction Efficiency	**97.39%**	**99.42%**	**98.89%**	**98.57%**	**98**
INLET CH_4, ppm	398,000	401,000	403,000	400,667	
INLET CH_4 lbs/hr	1,924.6	1,928.2	1,950.8	1,935	
CH_4 Destruction Efficiency	**>99.973%**	**>99.973%**	**>99.974%**	**>99.974%**	**99**
INLET THC (TOC) ppm as CH_4	399,735	402,845	404,981	402,520	
INLET THC (TOC) lbs/hr as CH_4	1,933	1,937	1,960	1,943	
THC (TOC) Destruction Efficiency	**99.962%**	**99.971%**	**99.969%**	**99.967%**	

< Value = 2% of Analyzer Range

WHERE,

ppm = Parts per Million Concentration
Lbs/hr = Pound per Hour Emission Rate
Tstd. = Standard Temperature (°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)
TNMOC = Total Non-Methane Hydrocarbons (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 * 8.223 E-05 * DSCFM * 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

Guadalue Recycling and Disposal Facility (GRDF)
Flare A-17
1,499°F - Condensate OFF

RUN	**1**	**2**	**3**	**AVERAGE**	**LIMITS**
Test Date	2/18/21	2/18/21	2/18/21		
Test Time	1205-1244	1313-1350	1412-1447		
Standard Temperature, °F	70	70	70		
Flare Temperature, °F Average	1,499	1,499	1,499	1,499	
Condensate Injection, gpm	0.00	0.00	0.00	0.00	
Fuel Flow Rate, SCFM	1,965	1,978	1,984	1,976	
Fuel Heat Input, MMBTU/hr	47.9	48.4	48.3	48.2	
Exhaust Flow Rate, DSCFM *(EPA M19)*	20,953	21,018	22,488	21,486	
Oxygen, O_2, %	13.23	13.18	13.70	13.37	
Carbon Dioxide, CO_2, %	6.47	6.47	5.99	6.31	
Water Vapor, H_2O, % *(EPA M4.16)*	7.64	7.75	7.19	7.53	
NO, ppm	13.43	13.67	12.50	13.20	
NO_2, ppm	<1.0	<1.0	<1.0	<1.0	
NO_2/NO	<0.07	<0.07	<0.08	<0.08	
NOx, ppm	13.30	13.67	12.39	13.12	
NOx, ppm @ 15% O_2	10.2	10.4	10.2	10.3	
NOx, ppm @ 15% O_2	**10.2**	**10.4**	**10.2**	**10.3**	**15**
NOx, lbs/hr	1.99	2.05	1.99	2.01	
CO, ppm	2.55	3.05	3.90	3.17	
CO, ppm @ 15% O_2	**1.96**	**2.33**	**3.20**	**2.50**	**81**
CO, lbs/hr	0.23	0.28	0.38	0.30	
TRS as H_2S, ppm in Fuel	485	772	494	584	
SO_2, ppm Exhaust (calculated)	**45.5**	**72.7**	**43.6**	**53.9**	**300**
THC, ppm wet *(EPA M25A)*	<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	<0.056	<0.057	<0.060	<0.058	
CH_4, ppm wet *(EPA ALT 097)*	<10.0	<10.0	<10.0	<10.0	
CH_4, ppm dry	<10.8	<10.8	<10.8	<10.8	
CH_4, lbs/hr	<0.520	<0.522	<0.558	<0.533	
TNMHC, ppm as CH_4 *(EPA ALT 097)*	<1.08	<1.08	<1.08	<1.08	
TNMHC, ppm dry as CH_4	<1.2	<1.2	<1.2	<1.2	
TNMHC, lbs/hr as CH_4	<0.056	<0.057	<0.060	<0.058	
TNMHC, ppm @ 3% O_2 as CH_4	**<2.5**	**<2.5**	**<2.7**	**<2.6**	**30**
INLET TNMOC *(EPA M25C)*	2,223	3,112	2,386	2,574	
INLET NMOC lbs/hr as CH_4	10.8	15.3	11.8	12.6	**or**
NMOC Destruction Efficiency	**99.48%**	**99.63%**	**99.49%**	**99.53%**	**98**
INLET CH_4, ppm	408,000	409,000	407,000	408,000	
INLET CH_4 lbs/hr	1,990.2	2,008.3	2,004.5	2,001	
CH_4 Destruction Efficiency	**>99.974%**	**>99.974%**	**>99.972%**	**>99.973%**	**99**
INLET THC (TOC) ppm as CH_4	410,223	412,112	409,386	410,574	
INLET THC (TOC) lbs/hr as CH_4	2,001	2,024	2,016	2,014	
THC (TOC) Destruction Efficiency	**99.997%**	**99.997%**	**99.997%**	**99.997%**	

< Value = 2% of Analyzer Range

WHERE,

ppm = Parts per Million Concentration
Lbs/hr = Pound per Hour Emission Rate
Tstd. = Standard Temperature (°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)
TNMOC = Total Non-Methane Hydrocarbons (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 * 8.223 E-05 * DSCFM * 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