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1. ☐ RECEIVED IN ENFORCEMENT: 07/31/2023

BAAQMD Rule 8-34 Semi-Annual Report and Title V Semi-Annual Report

City of Sunnyvale Landfill and SMaRT Station®
Sunnyvale, California (Facility No. 5905)

Prepared for:

Sunnyvale

City of Sunnyvale
Environmental Services Department
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For Submittal to:

Bay Area Air Quality Management District
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San Francisco, CA 94105

SCS ENGINEERS

01200220.07 Tasks 59 | July 2023

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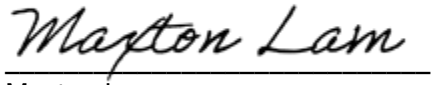
This submittal consisting of the Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report and the Title V Semi-Annual Monitoring Report for the Sunnyvale Landfill in Sunnyvale, California, dated July 2023, was prepared and reviewed by the following:



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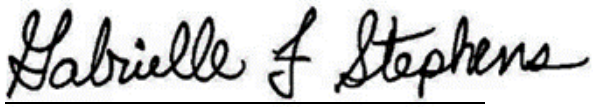

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SECTION I. BAAQMD RULE 8-34 SEMI-ANNUAL REPORT

1.0 INTRODUCTION

This Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report for the Sunnyvale Landfill (Landfill) is for the January 1, 2023 through June 30, 2023 reporting period. As approved by the BAAQMD on November 13, 2013, Rule 8-34 reports are synchronized with the reporting periods specified in the Landfill's Initial Major Facility Review (MFR or Title V) Permit, which was issued by the District on September 19, 2013. As such, the semi-annual Reports cover the semi-annual period January 1 through June 30 and July 1 through December 31; with respective reporting deadlines of July 31 and January 31. This semi-annual report was prepared by SCS Engineers (SCS) on behalf of the City of Sunnyvale Environmental Services Department (City) for submittal to the BAAQMD.

The Landfill was originally assigned BAAQMD Plant No. 2253; however, this designation was changed to No. 5905 when it was combined with the SMaRT Station®. This change was made in anticipation of these two facilities being placed under a single Title V permit. The Semi-Annual Report pertains to the landfill gas (LFG) collection and control system (GCCS) operated at the Landfill.

This report includes the following information, as required by BAAQMD Rule 8-34-411 for small design capacity landfills:

- All system and/or component downtime and reasons for the shutdown (8-34-501.1)
- All emission control system downtime and reason for the shutdown (8-34-501.2)
- Continuous temperature monitoring and dates of any excesses (8-34-501.3 and 507)
- Testing performed to satisfy the requirements of this rule (8-34-501.4)
- Monthly landfill gas flow rates and excesses (8-34-501.5)
- Collection and emission control system leak testing and any excesses, action taken to correct excesses, and re-monitored concentrations (8-34-501.6 and 503)
- Annual waste acceptance rate and the current amount of waste in-place (8-34-501.7)
- Records of non-degradable waste if area is excluded from LFG collection (8-34-501.8)
- Continuous flow monitoring (8-34-501.10 and 508)

Information summarizing the monitoring activities associated with the above-listed items is provided in the following sections.

2.0 SITE BACKGROUND INFORMATION

The Sunnyvale Landfill is located in Sunnyvale, California and is owned and operated by the City. The 93-acre site is a closed landfill site.

The Landfill began accepting waste circa 1920. Until about 1957, most combustible wastes received were burned. In the late 1970's, the site was permitted to operate as a sanitary landfill by the State of California.

Filling operations ceased in September 1993. Closure was completed in October 1994 with an estimated 2.29 million Megagrams (Mg) of waste in place. The Landfill comprises 93 acres in four separate hills referred to as the West Hill, Recycle Hill, South Hill, and East Hill. The maximum height of the Landfill is approximately 90 feet.

2.1 EXISTING PERMITS AND PERMIT MODIFICATIONS

The City maintains a BAAQMD Permit to Operate (PTO) (Plant No. 5905) and a Major Facility Review (MFR)/Title V permit for the entire Landfill, the LFG collection system, the LFG flare, and the SMaRT Station. A Title V permit was initially issued on September 19, 2013. The current Title V permit was issued on December 14, 2017. An application for renewal of the Title V permit for the Landfill and SMaRT Station was submitted to the BAAQMD on March 6, 2018.

The City also maintains a BAAQMD Title V Permit (Plant No. 733) to operate the City of Sunnyvale Water Pollution Control Plant (WPCP), which includes a Power Generation Facility (PGF) that utilizes LFG. The WPCP will continue to operate under a separate Title V permit with separate Title V reporting.

LFG is currently collected from all areas of the Landfill where municipal solid waste was placed and diverted to one or both methane-fired internal combustion (IC) engine generators at the PGF or to the flare located within the flare station at the WPCP. Note that the old flare (designated by the BAAQMD as abatement device 8 (A-8) on the Title V Permit) was replaced by a new flare (A-9). Flare A-8 was permanently taken out of service on September 3, 2013; flare A-9 began operating on September 24, 2013, with a subsequent, initial source test performed on October 2, 2013.

2.2 EXISTING LANDFILL GAS COLLECTION AND CONTROL SYSTEM

The GCCS for the site was installed and became operational in 1987. Several extraction wells were added to the collection system when the final cover was constructed in 1994, and two additional wells were added in 2000.

The gas collection system consists of a header piping network, vertical extraction wells, and horizontal gas collectors. The emission control system (ECS) consists of one enclosed flare and the PGF with two methane-fired engine generators. Note that Digester Gas (Digas), in addition to LFG, is burned in the enclosed flare. Both Digas and air-blended natural gas (ABNG), in addition to LFG, are used to fuel the PGF. The existing GCCS provides LFG control throughout the entire area of the Landfill property where municipal solid waste was placed. Additional details can be found in the GCCS Design Plan, which was prepared for the site by SCS in 2001 and submitted to the BAAQMD. A diagram of the GCCS displaying system component locations is shown in the site plan(s) provided in Appendix A.

3.0 MONITORING AND RECORDS

3.1 CONTINUOUSLY MONITORED PARAMETERS

To comply with this regulation, the Landfill owner/operator is required to maintain full-time operation of the LFG collection system, control devices, and individual extraction wells. Operation is documented by continuously monitoring flow to the flare as well as flare combustion temperature, or flow to the PGF. Downtime for any of these components must be reported in the Rule 8-34 Semi-Annual Report. This information is summarized below and in the attached tables. Records of continuously monitored parameters are available for inspection at the site.

3.1.1 Gas Extraction System Downtime

During this reporting period, the gas extraction/collection system shut down on ten (10) occasions for a total elapsed time of 108.18 hours.

The WPCP, on which the PGF, the LFG Flare, and the blowers are located, is undergoing major construction and rehabilitation. The WPCP began operation in 1956, and the subject reconstruction/rehabilitation project is anticipated to take 20 years to complete. This work is taking place on the same site as the existing WPCP that must remain operational during the construction/rehabilitation. Portions of the WPCP's electrical system, which includes the electrical components of the gas collection and control system (that provide electricity to the blowers, the LFG and the PGF, as well as the associated instrumentation, meters, etc.), occasionally require shutdowns to upgrade equipment, add new lines, or to incorporate new lines for new and improved processes/equipment. During this reporting period, 7.66 hours of GCCS downtime were recorded due to both WPCP and LFGCCS planned maintenance. Refer to **Table 1** (attached) for the Log of GCCS/ECS downtime.

Five (5) of the ten (10) downtime events involved the shutdown of the entire GCCS and was deemed by the City to meet the Rule 8-34-113 exemption criteria for downtime due to maintenance and inspection. These downtime events are shown in **Table 1** (attached).

In addition, it is the City's understanding that the remaining five (5) downtime events, which were unplanned shutdowns, did not meet the District's Rule 8-34-113 exemption criteria, and the City submitted a Reportable Compliance Activity (RCA) Notification Form, requesting Breakdown relief for each occurrence.

The first event occurred on December 31, 2022 continuing into January 1-2, 2023, resulting in 26.43 hours of downtime. BAAQMD assigned Breakdown Relief ID 08P76 for this event. The second event occurred on January 9, 2023, resulting in 6.28 hours of downtime. BAAQMD assigned Breakdown Relief ID 08P98 for this event. The third event occurred on January 16, 2023, resulting in 59.01 hours of downtime. BAAQMD assigned Breakdown Relief ID 08Q12 for this event. The fourth event occurred on January 19, 2023, resulting in 7.7 hours of downtime. BAAQMD assigned Breakdown Relief ID 08Q22 for this event. The fifth event occurred on January 31, 2023, resulting in 1.1 hours of downtime. BAAQMD assigned Breakdown Relief ID 08Q50 for this event. City staff previously submitted RCA notification forms as well as the 10-day/30-day Title V deviation reports for these events, which are included in the Title V report provided as **Appendix C**.

On March 8, 2023, a Notice of Violation (NOV) ID A60929 was issued to the City of Sunnyvale in response to the less than continuous operation of the Landfill Gas Collection and Control System (LFGCCS). The RCAs from December 31, 2022 to January 19, 2023 are combined into one NOV as all breakdowns were related to the condensate blockage due to heavy rains. To prevent similar incidents in the future, Sunnyvale have taken preventative measures to work on a solution to the vapor lock issues. These measures include purchasing large diaphragm pumps as an emergency backup, re-establishing a pump maintenance service schedule with a contractor, and plans to hire an emergency service contractor, among other measures. The NOV is included in the Title V report provided as **Appendix C**.

In the event of a shutdown of an ECS component due to unforeseen circumstances, the City would be aware of downtime events because personnel are automatically notified of the downtime via an alarm system that notifies on-site facility personnel of such an event.

Because the gas extraction system and ECS are designed to work in concert, downtime for the extraction system results in downtime for the flare and the PGF. If sufficient Digas and ABNG were available to maintain PGF operation, the operator could choose to run the PGF rather than purchase electricity.

3.1.2 Emission Control System Downtime

Because of the redundancies built into the GCCS at the Landfill (e.g., multiple control devices), it is unusual for both of the methane-fired engine generators and the enclosed flare to be unable to operate at the same time during an unplanned event. During this reporting period, total GCCS downtime was 108.18 hours. Five (5) downtime events totaling 7.66 hours was allowable under Rule 8-34-113 and the remaining five (5) downtime events totaling 100.52 hours were not allowed, as mentioned above.

The City was aware of each flare downtime event either because it was a scheduled maintenance event, or, if it was an unplanned event, because facility personnel are automatically notified via an alarm system of such a shutdown. For unplanned events, facility personnel promptly performed inspection and corrective action as needed to avoid excess emissions. During all GCCS startup, shutdown, and malfunction events, City staff and/or their contractors or consultants inspected the system and conducted the necessary activities (e.g., inspections, maintenance, or repairs) to bring the GCCS back on-line, and maintain compliance.

Please note that because the LFG extraction system and control devices are designed to work in concert, downtime for the entire control system also results in downtime for the extraction system. When the LFG flare goes off-line, an automatic valve is actuated which interrupts LFG and Digas flow to the flare, and an electric relay is triggered, which turns off the extraction system (i.e., LFG blower). When the flare is off-line and both generator sets (gensets) are also not operating, there is no free venting of gas because the gas is constrained by the inoperative gensets and has no alternative outlet. In such circumstances, the blower would be shut down manually. During this reporting period, there were no instances where LFG flow passed through the control system uncontrolled (i.e., free venting). Additionally, there is no bypass that could allow the collected LFG stream to be diverted from the control devices.

3.1.3 Individual Well Downtime

Although the entire GCCS may not go off-line, individual extraction wells are occasionally taken off-line for inspection, maintenance, repair, and other unforeseen circumstances. These are generally planned events, although such events can occur without notice. In each case, the City was able to bring the extraction wells back on-line and maintain compliance.

A summary of the instances of individual well downtime during the reporting period is provided in Table 2, including the date, well identification number, reason for the downtime, a description of what was done to bring the well back on-line, and the total elapsed downtime. At no time during the reporting period were more than five (5) wells offline concurrently, or a single well for more than 24 hours. The well identification numbers are listed on the drawing provided in Appendix A. Each of these instances was allowed under Section 117 of Rule 8-34.

3.1.4 Flow Meter and Temperature Gauge Downtime

The continuous operation of the LFG collection system and control devices is measured through the continuous measurement of LFG flow. Operation of the LFG flare in compliance with the PTO is monitored via flare temperature. As required by Rule 8-34, the GCCS at the Landfill is equipped with flow measuring devices and a temperature gauge, which provide continuous readout displays, as well as electronic data records from a video-graphic recorder. Additionally, flow and temperature data are recorded on the optical coupling device, "OPTO", which periodically backs up its data. The OPTO data allows retrieval of information to fill in any gaps in the video-graphic recorders' records. Review of the data from the OPTO and the video-graphic recorder indicates there was one (1) gap during the reporting period. Per District Rule 1-523.1, no District notification is required for periods of inoperation of parametric monitors of less than 24 hours.

The gap that occurred during the reporting period did not exceed 24 hours and occurred on February 1, 2023. On February 1, 2023 from 2:05 to 3:08, there was a gap due to the flow meter not recording.

3.2 COMPONENT LEAK QUARTERLY MONITORING

3.2.1 First Quarter 2023 Monitoring

The Landfill GCCS components and the PGF were both tested on February 16, 2023 for any leaks with a methane concentration of greater than 500 parts per million by volume (ppmv) as required by the California Air Resources Board (CARB) AB 32 Landfill Methane Rule (LMR) or greater than 1,000 ppmv as required by BAAQMD Rule 8-34-503. Testing was performed by SCS Field Services (SCSFS) using an organic vapor analyzer (OVA), which was calibrated on the same day. Calibration records are available upon request.

During the monitoring events, no component leaks in excess of 500 ppmv were detected in the Landfill GCCS components or the PGF, and therefore compliance was demonstrated. A summary of the data from SCSFS for the 2023 first quarter monitoring event can be found in Appendix B.

3.2.2 Second Quarter 2023 Monitoring

The Landfill GCCS components and the PGF were both tested on April 14, 2023, for any leaks with a methane concentration of greater than 500 ppmv as required by the CARB AB-32 LMR, or 1,000

ppmv as required by BAAQMD Rule 8-34-503. Testing was performed by SCSFS using an OVA, which was calibrated on the same day.

During the monitoring events, no component leaks in excess of 500 ppmv were detected in the Landfill GCCS components or the PGF, and therefore compliance was demonstrated. A summary of the data from SCSFS for the 2023 second quarter monitoring event can be found in **Appendix B**.

3.3 CONTROL EFFICIENCY

The LFG flare (A-9) is required, under the provisions of the Initial Title V Permit, to be tested annually to demonstrate compliance with the control efficiency standard of greater than 98 percent (%) non-methane organic compound (NMOC) destruction efficiency or an outlet concentration of less than 30 ppmv of NMOCs as methane at 3 % oxygen (for flares) as required by BAAQMD Rule 8-34-301.4, 8-34-412 and 8-34-413. Initial testing of this flare was performed by Blue Sky Environmental, Inc. on October 2, 2013, followed by two annual flare testing events conducted in October 2014 and October 2015. Per Condition 11586 Part 12 of the City's PTO, after three consecutive annual source tests demonstrate compliance, the testing frequency can be reduced to once every three years. The most recent source test was conducted on September 20, 2021. The Source Test report dated November 9, 2021, indicated the flare was in compliance. A copy of the full report has been submitted to the District. The next LFG flare source testing is required by September 2024.

3.4 WELLHEAD AND SURFACE EMISSIONS MONITORING

There was no wellhead monitoring activity pursuant to Rule 8-34 performed at the site because the monitoring is not required per the limited exemption for small design capacity landfills (8-34-120). However, monthly wellhead monitoring for pressure is performed under the AB 32 LMR, and will be reported in a separate annual report to the BAAQMD, which has been delegated by the CARB to implement the LMR. Similarly, landfill surface emissions monitoring (SEM) is not required by Rule 8-34, however, SEM is performed annually at the subject site, as required under the AB 32 LMR.

3.5 COVER INTEGRITY MONITORING

The integrity of the landfill cover is monitored on a monthly basis by the City in accordance with BAAQMD Rule 8-34-510 using procedures specified in the GCCS Design Plan (SCS, 2001). During the reporting period, cover integrity monitoring was conducted on January 30, February 21, March 31, April 28, May 26, and June 29, 2023. During the reporting period, the observations during these monthly monitoring events indicated the landfill surface was in good condition. In the event visual evidence suggests otherwise, the surface will be promptly repaired.

3.6 MONTHLY LANDFILL GAS FLOW RATES

The Sunnyvale Landfill is not subject to Rule 8-34-404 because the Landfill does not operate less than continuously. Therefore, monthly flow data are not required to be reported.

3.7 ANNUAL WASTE ACCEPTANCE RATE AND REFUSE IN PLACE

The Sunnyvale Landfill is a closed landfill that has not accepted waste since 1993. The City only has records of quantities of waste that the facility received since 1976; earlier acceptance rates for the

Landfill are estimated since no records are available to describe any previous waste disposal operations. The site has an estimated 2.29 million Mg of refuse in place.

3.7.1 Non-Degradable Waste Areas

A non-degradable monofill area exists at the Landfill between the East and South Hills. This Biosolids Monofill is not within the area covered by the GCCS and is not designated on the GCCS drawing. There were 50 cubic yards deposited to the Biosolids Monofill during the reporting period. Records are available upon request.

SECTION II. TITLE V SEMI-ANNUAL REPORT

As specified in 40 Code of Federal Regulation (CFR) Part 70, reports of any required monitoring must be submitted at least every 6 months. All instances of deviations from permit requirements for the semi-annual reporting period, specified in the Landfill's Initial Title V Permit as January 1 through June 30 and July 1 through December 31, must be clearly identified in each report. This Title V Report covers the January 1, 2023 through June 30, 2023 reporting period.

This report has been prepared based on Part VII (Applicable Limits and Compliance Monitoring Requirements) of the Landfill's MFR Permit. The report includes a certification by a responsible official, consistent with §70.5(d).

The full Title V Semi-Annual Report, including certification by a responsible official, is provided as Appendix C.

Tables

Log of Gas Collection and Control System (GCCS) Downtime OR Emission Control System (ECS) Downtime

(Total Allowed Time for **either** GCCS or ECS downtime is 240 hours per calendar year)

2023 Reporting Period (January 1, 2023 - June 30, 2023)

Date	Initial Cause of Downtime*			Reason for Downtime**	Time System Went Offline	Time System Came Online	Duration Offline	Balance of Hours***
	GCCS	ECS	Other					
								240.00
3/24/23	X			East Hill condensate trap modification/relocation.	06:55	12:45	5.83	234.17
3/31/23	X			Pumping condensate from CT-7E.	09:37	10:58	1.35	232.82
6/10/23			X	PG&E shutdown - flare connected to portable generator power	08:42	08:53	0.18	232.64
6/28/23			X	Maint SCADA update	09:55	10:10	0.25	232.39
6/10/23			X	PG&E shutdown - flare returned to normal power generation	10:28	10:31	0.05	232.34
				(disconnected generator)				

Total Time Off-Line **7.66**

Notes:

* Place a checkmark in the box under the system that was the initial cause of the shutdown. (e.g. A break in the GCCS system, a problem with the Flare or Gensets, and a plant power outage would result in the "GCCS", "ECS", and "other" box being checked, respectively.)

** Provide a brief explanation of the cause of the downtime. (eg: There was a break in a lfg line; while the engines were undergoing maintenance the flare malfunctioned; and a plant-wide power outage occurred.)

*** Please convert minutes into hundredths of an hour (e.g. 5 hrs, 13 min would be recorded as 5.22 hours) and subtract from prior line's balance of hours.

Summary of Downtime Events
(Not under the District's Rule 8-34-113 exemption criteria)

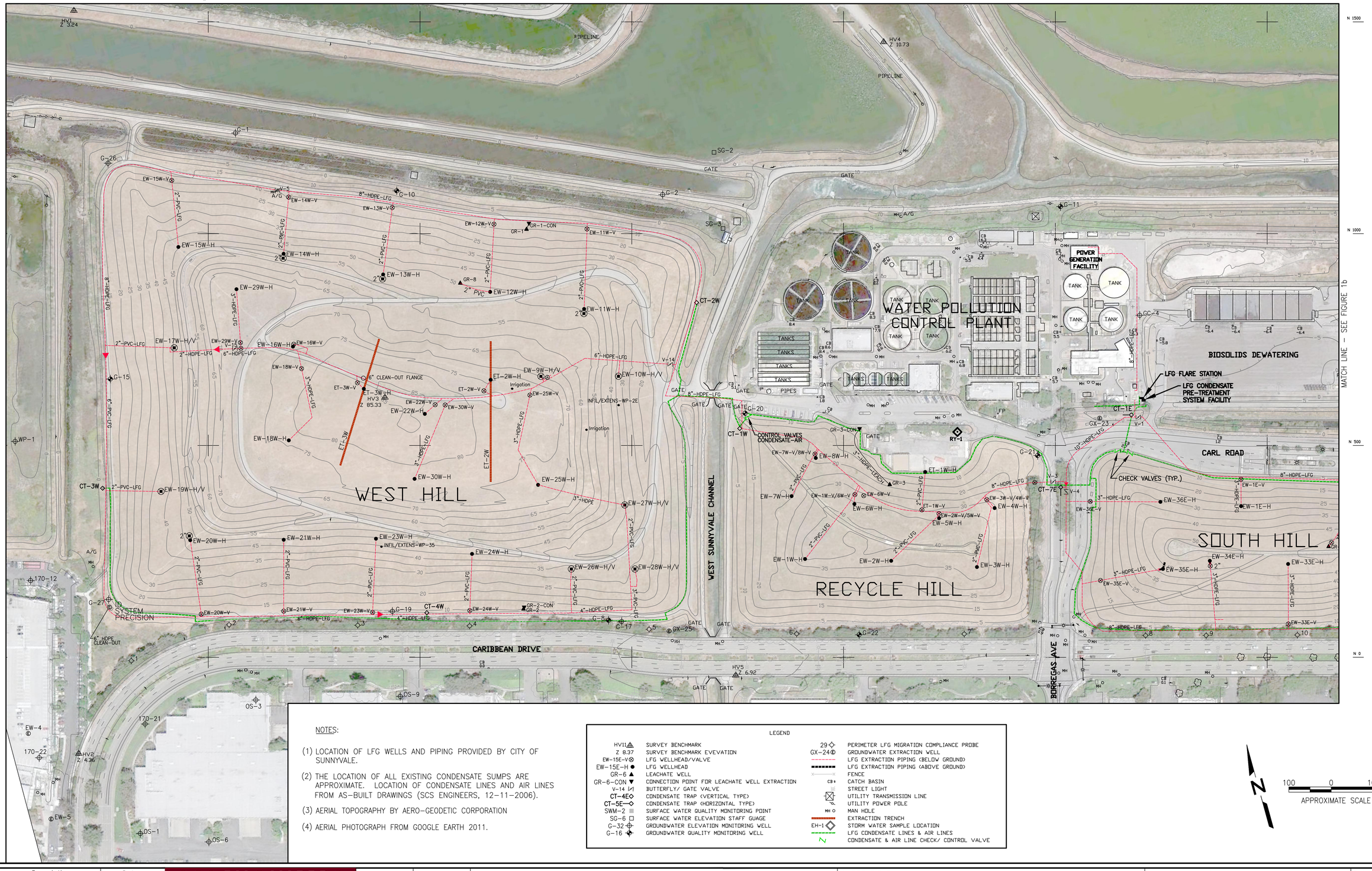
Date	Reason For Downtime	Time System Went Offline	Time System Came Online	Duration Offline (hrs)	Adjusted Offline Hours*
12/31/2022	Increased landfill gas condensate generation	12/31/2022 23:02	1/2/2023 7:08	32.10	26.43
1/9/2023	Increased landfill gas condensate generation	1/9/2023 9:18	1/9/2023 16:20	7.03	6.28
1/16/2023	Increased landfill gas condensate generation	1/16/2023 0:39	1/18/2023 14:43	62.07	59.01
1/19/2023	Increased landfill gas condensate generation	1/19/2023 2:38	1/19/2023 10:20	7.70	7.70
1/31/2023	Power outage	1/31/2023 20:51	1/31/2023 21:57	1.10	1.10

Notes:

* During the downtime duration, there were mutliple short durations when the LFG Flare was running. The adjusted offline hours accounts for that.

Downtime of Individual Gas Collection Wells
Reporting Period - January 1, 2023 through June 30, 2023

Well No.	Date Off-Line	Reason for Improvement	Corrective Action	Date On-Line	Offline (hours)
EW-12E	6/14/23	Damaged flex hose.	Replaced flex hose.	6/14/23	0.33



NOTES:

(1) LOCATION OF LFG WELLS AND PIPING PROVIDED BY CITY OF SUNNYVALE.

(2) THE LOCATION OF ALL EXISTING CONDENSATE SUMPS ARE APPROXIMATE. LOCATION OF CONDENSATE LINES AND AIR LINES FROM AS-BUILT DRAWINGS (SCS ENGINEERS, 12-11-2006).

(3) AERIAL TOPOGRAPHY BY AERO-GEODETIC CORPORATION

(4) AERIAL PHOTOGRAPH FROM GOOGLE EARTH 2011.

LEGEND

HV11	SURVEY BENCHMARK	29	PERIMETER LFG MIGRATION COMPLIANCE PROBE
Z 8.37	SURVEY BENCHMARK EVEVATION	GX-24	GROUNDWATER EXTRACTION WELL
EW-15E-V	LFG WELLHEAD/VALVE		LFG EXTRACTION PIPING (BELOW GROUND)
EW-15E-H	LFG WELLHEAD		LFG EXTRACTION PIPING (ABOVE GROUND)
GR-6	LEACHATE WELL		FENCE
GR-6-CON	CONNECTION POINT FOR LEACHATE WELL EXTRACTION	CB	CATCH BASIN
V-14	BUTTERFLY/ GATE VALVE		STREET LIGHT
CT-4E	CONDENSATE TRAP (VERTICAL TYPE)		UTILITY TRANSMISSION LINE
CT-5E	CONDENSATE TRAP (HORIZONTAL TYPE)		UTILITY POWER POLE
SWM-2	SURFACE WATER QUALITY MONITORING POINT	MH	MAN HOLE
SG-6	SURFACE WATER ELEVATION STAFF GUAGE		EXTRACTION TRENCH
G-32	GROUNDWATER ELEVATION MONITORING WELL	EH-1	STORM WATER SAMPLE LOCATION
G-16	GROUNDWATER QUALITY MONITORING WELL		LFG CONDENSATE LINES & AIR LINES
			CONDENSATE & AIR LINE CHECK/ CONTROL VALVE

100 0 100 200

APPROXIMATE SCALE IN FEET

Rev.	Description	Date

SCS ENGINEERS

ENVIRONMENTAL CONSULTANTS

6601 KOLL CENTER PKWY, SUITE 140
PLEASANTON, CA 94566
PH. (925) 426-0080 FAX. (925) 426-0707

Scale:	AS SHOWN
Designed By:	TMS
Drawn By:	TMS
Checked By:	JJM
SCS Job No.:	01211339.00

SHEET TITLE: SITE PLAN WEST

PROJECT TITLE: LANDFILL GAS
AND OTHER ENVIRONMENTAL MONITORING AND CONTROL SYSTEMS
SUNNYVALE LANDFILL

City of Sunnyvale
Environmental
Services Department

456 West Olive Avenue
P.O. Box 3707
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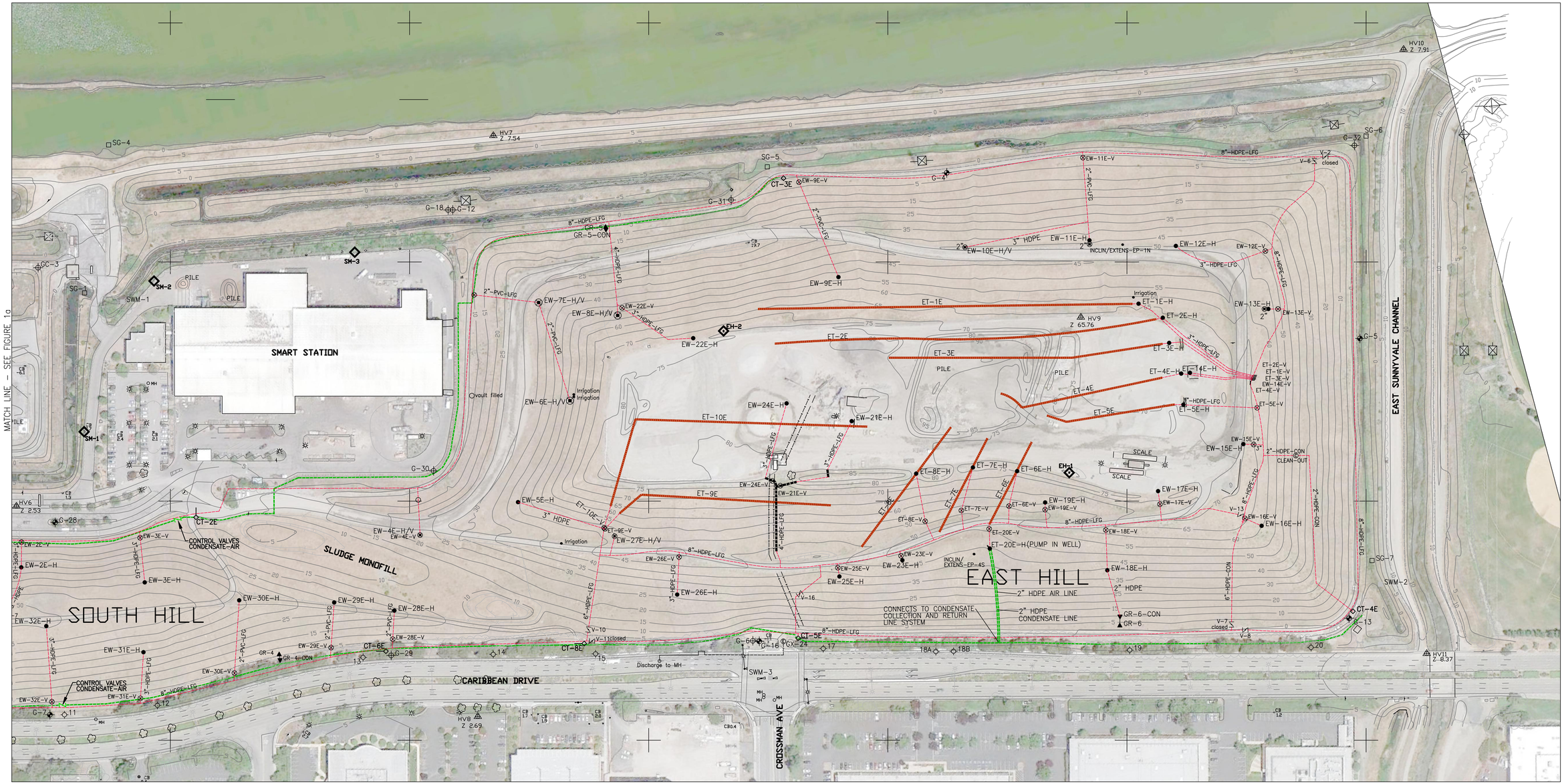
Date: 5/4/2012

Drawing No. 1a



NOTES:

(1) LOCATION OF LFG WELLS AND PIPING PROVIDED BY CITY OF SUNNYVALE.

(2) THE LOCATION OF ALL EXISTING CONDENSATE SUMPS ARE APPROXIMATE. LOCATION OF CONDENSATE LINES AND AIR LINES FROM AS-BUILT DRAWINGS (SCS ENGINEERS, 12-11-2006).

(3) AERIAL TOPOGRAPHY BY AERO-GEODETIC CORPORATION

(4) AERIAL PHOTOGRAPH FROM GOOGLE EARTH 2011.

LEGEND

HV11 Z 8.37	SURVEY BENCHMARK / SURVEY BENCHMARK EVEVATION	----------	LFG EXTRACTION PIPING (BELOW GROUND)
EW-15E-V	LFG WELLHEAD/VALVE	==========	LFG EXTRACTION PIPING (ABOVE GROUND)
EW-15E-H	LFG WELLHEAD	x---x	FENCE
GR-6	LEACHATE WELL	CB	CATCH BASIN
GR-6-CON	CONNECTION POINT FOR LEACHATE WELL EXTRACTION		STREET LIGHT
V-14	BUTTERFLY/ GATE VALVE		UTILITY TRANSMISSION LINE
CT-4E	CONDENSATE TRAP (VERTICAL TYPE)		UTILITY POWER POLE
CT-5E	CONDENSATE TRAP (HORIZONTAL TYPE)	MH	MAN HOLE
SWM-2	SURFACE WATER QUALITY MONITORING POINT	T-3W	EXTRACTION TRENCH
SG-6	SURFACE WATER ELEVATION STAFF GUAGE	EH-1	STORM WATER SAMPLE LOCATION
G-32	GROUNDWATER ELEVATION MONITORING WELL	----------	LFG CONDENSATE LINES & AIR LINES
G-16	GROUNDWATER QUALITY MONITORING WELL	N	CONDENSATE & AIR LINE CHECK/ CONTROL VALVE
29	PERIMETER LFG MIGRATION COMPLIANCE PROBE		
GX-24	GROUNDWATER EXTRACTION WELL		

N

100 0 100 200

APPROXIMATE SCALE IN FEET

Rev.	Description	Date

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PH. (925) 426-0080 FAX. (925) 426-0707

Scale:	AS SHOWN
Designed By:	TMS
Drawn By:	TMS
Checked By:	JJM
SCS Job No.:	01211339.00

SHEET TITLE: SITE PLAN EAST

PROJECT TITLE: LANDFILL GAS
AND OTHER ENVIRONMENTAL MONITORING AND CONTROL SYSTEMS
SUNNYVALE LANDFILL

City of Sunnyvale
Environmental
Services Department

456 West Olive Avenue
P.O. Box 3707
Sunnyvale, California
94088-3707

Date: 5/4/2012

Drawing No. 1b

Appendix B – SCSFS Quarterly LFG Collection System Component Leak/Emissions Testing and Component Emissions Monitoring Results

April 11, 2023
File No. 07218240.00

Mr. William Theyskens
City of Sunnyvale
Environmental Services Department
456 West Olive Avenue
Post Office Box 3707
Sunnyvale, California 94086

Subject: First Quarter 2023 Landfill Gas (LFG) Collection System Component Leak/Emissions Testing at the Sunnyvale Landfill, Sunnyvale, California

Dear Mr. Theyskens:

This letter provides results of the landfill gas collection system component leak/emissions monitoring for the first quarter of 2023 (January through March) as required by the Landfill Methane Rule (LMR) and Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34. All work was performed by SCS Field Services (SCS) in accordance with City approval and our approved Work Scope.

CONCLUSIONS AND RECOMMENDATIONS

On February 16, 2023, LFG component (e.g., well/valve vaults) leak/emissions monitoring showed no exceedances of the LMR limit of 500 ppmv or the BAAQMD Regulation 8, Rule 34 threshold of 1,000 parts per million (ppm), respectively. Therefore, no additional testing is recommended until the second quarter 2023.

BACKGROUND

The Sunnyvale Landfill site is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The Sunnyvale property contains a system to control the combustible gases generated in the landfill.

The gases produced in the landfill will either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties. If the soil surrounding a landfill consists of permeable materials, there is a greater likelihood that the LFG will migrate to offsite locations. If the methane gas component of LFG is allowed to accumulate in a confined area (i.e., utility lines, irrigation valve boxes, vaults, basements, wall spaces, etc.) and is exposed to an ignition source, it can be explosive at concentrations between 5 and 15 percent by volume.

LFG COMPONENT EMISSIONS MONITORING

On February 16, 2023, LFG component leak/emissions monitoring was performed at the subject site. The intent of the monitoring was to identity any specific locations (e.g., well/valve vaults and components) with organic compound concentrations exceeding the LMR threshold of 500 ppmv or BAAQMD, Regulation 8, Rule 34 threshold limit value of 1,000 ppmv measured as methane, respectively.

TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the LFG component leak/emissions testing consisted of the following:

- Thermo Scientific TVA-2020 portable Flame Ionization Detector (FID). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The FID meets BAAQMD requirements and was calibrated in accordance with manufacturer specifications and EPA Method 21.

LFG COMPONENT EMISSIONS MONITORING PROCEDURES

LFG component leak/emissions monitoring was conducted in accordance with BAAQMD Regulation 8, Rule 34 and the LMR. Monitoring was performed with the FID inlet held within 1 to 2 centimeters above all accessible LFG system components including extraction well and control valve vault boxes and flanges, etc.

TESTING RESULTS

On February 16, 2023, quarterly LFG component/leak emissions testing of the collection system valve and wellhead boxes and flare station was performed as required by the BAAQMD. No methane gas concentrations in excess of the LMR limit of 500 ppmv or Rule 8-34 limit of 1000 ppmv limit were detected during this testing. See attached table for monitoring results. Therefore, the next required quarterly testing is due by the end of June 2023.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test date only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the emissions at the subject site.

Should you have any questions, do not hesitate to contact either of the undersigned.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Stephen Harquail
Project Manager
SCS Field Services

cc: Silviana Ruiz
Cameron Kostigen Mumper

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson, Ricardo Yepez, Emmanuel Pa
Date: 2-16-23
Weather: cloudy
ppm = parts per million
NR = Not Required

Temperature: 45
Barometric Pressure: 30.08
Wind Speed/Direction: sse 5
Instrument: TVA-2020
Calibration: 2-16-23

East Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	2.3	1.4	
2E	1.5	1.3	
3E	1.6	1.6	
4E	1.7	1.7	
5E	2.0	1.5	
6E	1.7	1.4	
7E	1.6	1.3	
8E	1.4	1.6	
9E	1.5	1.7	
10E	1.4	1.1	

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson, Ricardo Yepez, Emmanuel Pa
Date: 2-16-23
Weather: cloudy
ppm = parts per million
NR = Not Required

Temperature: 45
Barometric Pressure: 30.08
Wind Speed/Direction: sse 5
Instrument: TVA-2020
Calibration: 2-16-23

East Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	2.3	2.4	
2E	2.4	2.3	
3E	2.2	2.3	
4E	2.2	2.4	
5E	2.3	2.4	
6E	2.5	2.3	
7E	2.3	2.4	
8E	2.3	2.4	
9E	2.4	2.4	
10E	2.2	2.3	
11E	2.2	2.2	
12E	2.4	2.1	
13E	2.5	.2.6	
14E	2.3	2.5	
15E	2.3	2.3	
16E	2.5	2.4	
17E	2.6	2.4	
18E	2.6	2.4	
19E	2.4	2.6	
20E	2.4	2.1	
21E	2.3	2.3	
22E	2.3	2.1	

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson, Ricardo Yepez, Emmanuel Pa
Date: 2-16-23
Weather: cloudy
ppm = parts per million
NR = Not Required
East Hill Verticals (continued)

Temperature: 45
Barometric Pressure: 30.08
Wind Speed/Direction: sse 5
Instrument: TVA-2020
Calibration: 2-16-23

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
23E	2.3	2.1	
24E	2.4	2.3	
25E	2.3	2.1	
26E	2.4	2.0	
27E	2.6	2.1	
28E	2.6	2.2	
29E	2.2	2.1	
30E	2.1	2.1	
31E	2.3	2.0	
32E	2.4	2.0	
33E	2.6	2.1	
34E	2.8	2.3	
35E	2.2	2.1	
36E	2.1	2.1	

West Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	2.6	2.6	
2W	2.3	2.5	
3W	2.6	2.3	

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson, Ricardo Yepez, Emmanuel Pa
Date: 2-16-23
Weather: cloudy
ppm = parts per million
NR = Not Required

Temperature: 45
Barometric Pressure: 30.08
Wind Speed/Direction: sse 5
Instrument: TVA-2020
Calibration: 2-16-23

West Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	2.2	2.3	
2W	2.3	2.1	
3W	2.1	2.4	
4W	2.3	2.4	
5W	2.1	2.1	
6W	2.3	2.4	
7W	2.2	2.3	
8W	2.3	2.5	
9W	2.1	2.1	
10W	2.1	2.2	
11W	2.4	2.3	
12W	2.1	2.4	
13W	2.3	2.3	
14W	2.3	2.1	
15W	2.4	2.2	
16W	2.1	.2.3	
17W	2.2	2.5	
18W	2.2	2.6	
19W	2.4	2.4	
20W	2.2	2.2	
21W	2.1	2.3	

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson, Ricardo Yepez, Emmanuel Pa
Date: 2-16-23
Weather: cloudy
ppm = parts per million
NR = Not Required

Temperature: 45
Barometric Pressure: 30.08
Wind Speed/Direction: sse 5
Instrument: TVA-2020
Calibration: 2-16-23

West Hill Verticals (continued)

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
22W	2.2	2.4	
23W	2.4	2.6	
24W	2.3	2.3	
25W	2.2	2.1	
26W	2.4	2.4	
27W	2.3	2.3	
28W	2.5	2.1	
29W	2.3	2.4	
30W	2.3	2.1	

April 7, 2023
File No. 07218240.00

Mr. Cameron Kostigen Mumper
City of Sunnyvale
Post Office Box 3707
Sunnyvale, California 94086

Subject: First Quarter 2023 Power Generation Facility (PGF) and Landfill Gas (LFG) Flare System Component Leak/Emissions Testing at the Sunnyvale Landfill, Sunnyvale, California

Dear Mr. Kostigen Mumper:

This letter provides results of the first quarter 2023 PGF and LFG flare system component leak/emissions monitoring as required by Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34 and the Landfill Methane Rule (LMR). All work was performed by SCS Field Services (SCS) in accordance with City approved Purchase Order.

CONCLUSIONS AND RECOMMENDATIONS

On February 16, 2023, PGF and LFG flare positive pressure component (e.g., leak/emissions) monitoring showed no exceedances of BAAQMD Regulation 8, Rule 34 or LMR threshold of 1000 and 500 parts per million (ppm), respectively. Therefore, no additional testing is recommended until the second quarter 2023.

BACKGROUND

The Sunnyvale Landfill site is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The Sunnyvale property contains a system to control the combustible gases generated in the landfill.

The gases produced in the landfill will either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties. If the soil surrounding a landfill consists of permeable materials, there is a greater likelihood that the LFG will migrate to offsite locations. If the methane gas component of LFG is allowed to accumulate in a confined area (i.e., utility lines, irrigation valve boxes, vaults, basements, wall spaces, etc.) and is exposed to an ignition source, it can be explosive at concentrations between 5 and 15 percent by volume. At higher concentrations, methane gas is flammable. However, the presence of methane gas in site soil does not mean there is an immediate threat of explosion because flames cannot typically propagate through soil.

LFG COMPONENT EMISSIONS MONITORING

On February 16, 2023, PGF and Flare landfill gas component leak/emissions monitoring was performed at the subject site. The intent of the monitoring was to identity any specific locations at the PGF with organic compound concentrations exceeding BAAQMD, Regulation 8, Rule 34 and LMR threshold limit value of 1000 ppmv or 500 ppmv, respectively measured as methane.

TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the LFG component leak/emissions testing consisted of the following:

- Thermo-Scientific TVA-2020 (TVA). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The TVA-2020 meets BAAQMD requirements and was calibrated in accordance with manufacturer specifications and EPA Method 21.

LFG COMPONENT EMISSIONS MONITORING PROCEDURES

LFG component leak/emissions monitoring was conducted in accordance with BAAQMD Regulation 8, Rule 34 and the LMR. Monitoring was performed with the TVA-2020 inlet held within 1 to 2 centimeters above all/accessible PGF system components under positive pressure including valves, flanges, blower seals, etc.

TESTING RESULTS

On February 16, 2023, quarterly LFG component/leak emissions testing of the PGF and LFG Flare Station were performed as required by the BAAQMD (see attached data table). No location tested exceeded the Rule 8-34 1000 ppmv limit and LMR 500 ppmv limit during our monitoring event. Therefore, the next required quarterly testing for all components is due by the end of June 2023.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test date only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the emissions at the subject site.

Should you have any questions, do not hesitate to contact either of the undersigned.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Stephen Harquail
Project Manager
SCS Field Services

cc: William Theyskens
Melody Tovar
Bryan Berdeen
Silviana Ruiz

First Quarter 2023
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 2/16/2023
Weather: Sunny
ppm = parts per million
NR = Not Required

Temp: 82
Barometric Pressure: 29
Wind Speed/Direction: NN11
Instrument: TVA-2020
Calibration: 2/16/2023

Flare Station

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Blowers	17		
Valves	2		
Piping	2		
Flanges	3		

Power Generation Facility

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Compressor	6.3		
Valves	6.2		
Piping	6.2		
Flanges	6.5		
Blowers	6.6.		
Engines	39.9		

July 7, 2023
File No. 07218240.00

Mr. William Theyskens
City of Sunnyvale
Environmental Services Department
456 West Olive Avenue
Post Office Box 3707
Sunnyvale, California 94086

Subject: Second Quarter 2023 Landfill Gas (LFG) Collection System Component Leak/Emissions Testing at the Sunnyvale Landfill, Sunnyvale, California

Dear Mr. Theyskens:

This letter provides results of the landfill gas collection system component leak/emissions monitoring for the second quarter of 2023 (April through June) as required by the Landfill Methane Rule (LMR) and Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34. All work was performed by SCS Field Services (SCS) in accordance with City approval and our approved Work Scope.

CONCLUSIONS AND RECOMMENDATIONS

On April 14, 2023, LFG component (e.g., well/valve vaults) leak/emissions monitoring showed no exceedances of the LMR limit of 500 ppmv or the BAAQMD Regulation 8, Rule 34 threshold of 1,000 parts per million (ppm), respectively. Therefore, no additional testing is recommended until the third quarter 2023.

BACKGROUND

The Sunnyvale Landfill site is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The Sunnyvale property contains a system to control the combustible gases generated in the landfill.

The gases produced in the landfill will either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties. If the soil surrounding a landfill consists of permeable materials, there is a greater likelihood that the LFG will migrate to offsite locations. If the methane gas component of LFG is allowed to accumulate in a confined area (i.e., utility lines, irrigation valve boxes, vaults, basements, wall spaces, etc.) and is exposed to an ignition source, it can be explosive at concentrations between 5 and 15 percent by volume.

LFG COMPONENT EMISSIONS MONITORING

On April 14, 2023, LFG component leak/emissions monitoring was performed at the subject site. The intent of the monitoring was to identity any specific locations (e.g., well/valve vaults and components) with organic compound concentrations exceeding the LMR threshold of 500 ppmv or BAAQMD, Regulation 8, Rule 34 threshold limit value of 1,000 ppmv measured as methane, respectively.

TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the LFG component leak/emissions testing consisted of the following:

- Thermo Scientific TVA-2020 portable Flame Ionization Detector (FID). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The FID meets BAAQMD requirements and was calibrated in accordance with manufacturer specifications and EPA Method 21.

LFG COMPONENT EMISSIONS MONITORING PROCEDURES

LFG component leak/emissions monitoring was conducted in accordance with BAAQMD Regulation 8, Rule 34 and the LMR. Monitoring was performed with the FID inlet held within 1 to 2 centimeters above all accessible LFG system components including extraction well and control valve vault boxes and flanges, etc.

TESTING RESULTS

On April 14, 2023, quarterly LFG component/leak emissions testing of the collection system valve and wellhead boxes and flare station was performed as required by the BAAQMD. No methane gas concentrations in excess of the LMR limit of 500 ppmv or Rule 8-34 limit of 1000 ppmv limit were detected during this testing. See attached table for monitoring results. Therefore, the next required quarterly testing is due by the end of September 2023.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test date only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the emissions at the subject site.

Should you have any questions, do not hesitate to contact either of the undersigned.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Stephen Harquail
Project Manager
SCS Field Services

cc: Silviana Ruiz
Cameron Kostigen Mumper

Second Quarter 2023
Landfill Gas (LFG) Collection System Component Leak/Emissions Testing
City of Sunnyale, Sunnyvale, California

Technician: Don Gibson
Date: 4-14-23
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 62
Barometric Pressure: 29
Wind Speed/Direction: W6
Instrument: TVA-2020
Calibration: zero-500

East Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	1.1	1.1	
2E	1.2	1.1	
3E	1.1	1.0	
4E	1.2	1.0	
5E	1.1	1.0	
6E	1.1	1.1	
7E	1.2	1.1	
8E	1.0	1.1	
9E	1.3	1.1	
10E	1.2	1.1	

Second Quarter 2023
Landfill Gas (LFG) Collection System Component Leak/Emissions Testing
City of Sunnyale, Sunnyvale, California

Technician: Don Gibson
Date: 4-14-23
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 62
Barometric Pressure: 29
Wind Speed/Direction: W6
Instrument: TVA-2020
Calibration: zero-500

East Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	1.1	1.1	
2E	1.2	1.1	
3E	1.0	1.1	
4E	1.3	1.2	
5E	1.2	1.1	
6E	1.1	1.0	
7E	1.2	1.0	
8E	1.2	1.1	
9E	1.1	1.1	
10E	1.1	1.0	
11E	1.2	1.2	
12E	1.1	1.1	
13E	1.0	1.1	
14E	1.2	1.0	
15E	1.1	1.0	
16E	1.2	1.1	
17E	1.1	1.0	
18E	1.0	1.1	
19E	1.0	1.1	
20E	1.0	1.1	
21E	1.1	1.0	
22E	1.1	1.0	

Second Quarter 2023
Landfill Gas (LFG) Collection System Component Leak/Emissions Testing
City of Sunnyale, Sunnyvale, California

Technician: Don Gibson
Date: 4-14-23
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 62
Barometric Pressure: 29
Wind Speed/Direction: W6
Instrument: TVA-2020
Calibration: zero-500

East Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
23E	1.1	1.1	
24E	1.2	1.1	
25E	1.2	1.1	
26E	1.1	1.0	
27E	1.1	1.1	
28E	1.2	1.1	
29E	1.1	1.1	
30E	1.1	1.0	
31E	1.1	1.0	
32E	1.0	1.1	
33E	1.0	1.0	
34E	1.0	1.1	
35E	1.0	1.0	
36E	1.1	1.1	

West Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	1.1	1.1	
2W	1.2	1.1	
3W	1.2	1.1	

Second Quarter 2023
Landfill Gas (LFG) Collection System Component Leak/Emissions Testing
City of Sunnyale, Sunnyvale, California

Technician: Don Gibson
Date: 4-14-23
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 62
Barometric Pressure: 29
Wind Speed/Direction: W6
Instrument: TVA-2020
Calibration: zero-500

West Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	1.1	1.0	
2W	1.2	1.1	
3W	1.1	1.1	
4W	1.0	1.0	
5W	1.0	1.1	
6W	1.2	1.1	
7W	1.1	1.1	
8W	1.2	1.0	
9W	1.1	1.1	
10W	1.1	1.0	
11W	1.1	1.1	
12W	1.1	1.1	
13W	1.1	1.1	
14W	1.0	1.2	
15W	1.0	1.1	
16W	1.1	1.1	
17W	1.1	1.0	
18W	1.2	1.1	
19W	1.1	1.0	
20W	1.0	1.1	
21W	1.0	1.1	

Second Quarter 2023
Landfill Gas (LFG) Collection System Component Leak/Emissions Testing
City of Sunnyale, Sunnyvale, California

Technician: Don Gibson
Date: 4-14-23
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 62
Barometric Pressure: 29
Wind Speed/Direction: W6
Instrument: TVA-2020
Calibration: zero-500

West Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
22W	1.1	1.0	
23W	1.2	1.1	
24W	1.1	1.0	
25W	1.1	1.1	
26W	1.0	1.1	
27W	1.0	1.1	
28W	1.1	1.0	
29W	1.1	1.1	
30W	1.2	1.1	

July 7, 2023
File No. 07218240.00

Mr. Cameron Kostigen Mumper
City of Sunnyvale
Post Office Box 3707
Sunnyvale, California 94086

Subject: Second Quarter 2023 Power Generation Facility (PGF) and Landfill Gas (LFG) Flare System Component Leak/Emissions Testing at the Sunnyvale Landfill, Sunnyvale, California

Dear Mr. Kostigen Mumper:

This letter provides results of the second quarter 2023 PGF and LFG flare system component leak/emissions monitoring as required by Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 34 and the Landfill Methane Rule (LMR). All work was performed by SCS Field Services (SCS) in accordance with City approved Purchase Order.

CONCLUSIONS AND RECOMMENDATIONS

On April 14, 2023, PGF and LFG flare positive pressure component (e.g., leak/emissions) monitoring showed no exceedances of BAAQMD Regulation 8, Rule 34 or LMR threshold of 1000 and 500 parts per million (ppm), respectively. Therefore, no additional testing is recommended until the third quarter 2023.

BACKGROUND

The Sunnyvale Landfill site is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The Sunnyvale property contains a system to control the combustible gases generated in the landfill.

The gases produced in the landfill will either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties. If the soil surrounding a landfill consists of permeable materials, there is a greater likelihood that the LFG will migrate to offsite locations. If the methane gas component of LFG is allowed to accumulate in a confined area (i.e., utility lines, irrigation valve boxes, vaults, basements, wall spaces, etc.) and is exposed to an ignition source, it can be explosive at concentrations between 5 and 15 percent by volume. At higher concentrations, methane gas is flammable. However, the presence of methane gas in site soil does not mean there is an immediate threat of explosion because flames cannot typically propagate through soil.

LFG COMPONENT EMISSIONS MONITORING

On April 14, 2023, PGF and Flare landfill gas component leak/emissions monitoring was performed at the subject site. The intent of the monitoring was to identity any specific locations at the PGF with organic compound concentrations exceeding BAAQMD, Regulation 8, Rule 34 and LMR threshold limit value of 1000 ppmv or 500 ppmv, respectively measured as methane.

TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the LFG component leak/emissions testing consisted of the following:

- Thermo-Scientific TVA-2020 (TVA). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The TVA-2020 meets BAAQMD requirements and was calibrated in accordance with manufacturer specifications and EPA Method 21.

LFG COMPONENT EMISSIONS MONITORING PROCEDURES

LFG component leak/emissions monitoring was conducted in accordance with BAAQMD Regulation 8, Rule 34 and the LMR. Monitoring was performed with the TVA-2020 inlet held within 1 to 2 centimeters above all/accessible PGF system components under positive pressure including valves, flanges, blower seals, etc.

TESTING RESULTS

On April 14, 2023, quarterly LFG component/leak emissions testing of the PGF and LFG Flare Station were performed as required by the BAAQMD (see attached data table). No location tested exceeded the Rule 8-34 1000 ppmv limit and LMR 500 ppmv limit during our monitoring event. Therefore, the next required quarterly testing for all components is due by the end of September 2023.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test date only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the emissions at the subject site.

Should you have any questions, do not hesitate to contact either of the undersigned.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Stephen Harquail
Project Manager
SCS Field Services

cc: William Theyskens
Melody Tovar
Bryan Berdeen
Silviana Ruiz

Second Quarter 2023

Power Generation Facility (PGF) and Landfill Gasd Flare Station Component/Leak Emissions Testing

City of Sunnyvale, Sunnyvale, California

Technician:	**Don Gibson**	**temp:**	**62**
Date:	**04-14-23**	**Barometric Pressure:**	**29**
Weather:	**Sunny**	**Wind Speed/Direction:**	**N7**
ppm = parts per million		**Instrument:**	**TVA-2020**
NR = Not Required		**Calibration:**	**04-14-23**

Flare Station

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Blowers	3,7		
Valves	1		
Piping	1		
Flanges	1		

Power Generation Facility

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Compressor	2.1		
Valves	2.3		
Piping	12		
Flanges	45.6		
Blowers	117		
Engines	2.4		

Appendix C – Title V Semi-Annual Report (with Certification)

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**FACILITY ID#:** A5905
REPORTING PERIOD: *from 01/1/2023 through 6/30/2023*	

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that, based on information and belief formed after reasonable inquiry, all information provided in this reporting package is true, accurate, and addresses all deviations during the reporting period:

Ramana Chinnakotla
Signature of Responsible Official

7/31/2023
Date

Ramana Chinnakotla
Name of Responsible Official (please print)

Director of Environmental Services
Title of Responsible Official (please print)

Mail to:

Director of Compliance and Enforcement
BAAQMD
375 Beale Street
San Francisco, CA 94105
Attn: Title V reports

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-8 Sunnyvale Landfill with Gas Collection System and A-9 Landfill Gas Flare	**Reporting Period:** *from 01/1/2023 through 06/30/2023*

SITE: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**FACILITY ID#:** A5905
REPORTING PERIOD: *from 01/1/2023 through 06/30/2023*	

List of Permitted Sources and Abatement Device

Permit Unit Number	**Equipment Description**
S-#	**Description**
S-1	Solid Waste Transfer Station
S-2	Wood Waste Unloading Operation
S-3*	Wood Shredder
S-4*	Conveyor
S-5	Wood Chip Processing
S-6**	Wood Chip Screening
S-7	Diesel Engine (Emergency Standby Generator)
S-8	Gas Collection System: 66 Vertical Extraction Wells and 13 Horizontal Collectors
S-10****	Wood Shredder
S-11****	Conveyor
A-1	Wet Suppression System
A-5	Bag House Dust Collector
A-8***	Landfill Gas Flare, 45 MM BTU/hr
A-9	Landfill Gas Flare, 600 SCFM of waste gas, 18 MM BTU/hr

*Notes: *S-3 was replaced by S-10 and S-4 was replaced by S-11 per application #26967. Permit to Operate (PTO) issued August 6, 2015.*
***S-6 was taken out of service permanently on 12/5/2016.*
****A-8 was taken out of service permanently on 9/3/13; A-9 was started up on 9/3/13*
*****S-10 and S-11 were included in the PTO issued January 21, 2022*

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-8 Sunnyvale Landfill with Gas Collection System and A-9 Landfill Gas Flare	**Reporting Period:** *from 01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.4	Operating records for all parametric monitors (gas flow meters and temperature monitors)	Periodic/ Daily	BAAQMD 1-523.1 and 1-523.2	Inoperation < 24 hours; ≤ 15 consecutive days per incident and ≤ 30 calendar days per 12-month period	Continuous	N/A
Opacity	None	NA	None	BAAQMD 6-1-301 and SIP 6-301	Ringelmann No. 1 for < 3 minutes in any hour (applies to flare)	Continuous	N/A
FP	None	NA	None	BAAQMD 6-1-310 and SIP 6-310	≤ 0.15 grains/dscf (applies to flare)	Continuous	N/A
Continuous Operation	BAAQMD 8-34-501.1, 8-34-501.2, 8-34-501.10, 8-34-508 and BAAQMD Condition # 11586, Parts 3, 6, and 7	Gas Flow Meter and Recorder (every 15 minutes) Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime and Collection System Components	Continuous	BAAQMD 8-34-301 and 301.1 and BAAQMD Condition #11586, Parts 2-7	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system.	Intermittent	Five unplanned shutdowns of the GCCS occurred on December 31, 2022 into January 1-2, 2023 and January 9, 16, 19, and 31, 2023. RCA Notification Forms and follow-up reports were submitted by the City and breakdown relief was requested. Submittals are provided in Attachment D. The RCAs from December 31, 2022 to January 19, 2023 are combined into one NOV, issued on March 8, 2023, as all breakdowns were related to the condensate blockage due to heavy rains.

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-8 Sunnyvale Landfill with Gas Collection System and A-9 Landfill Gas Flare	**Reporting Period:** *from 01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection and Control Systems Shutdown Time	BAAQMD 8-34-501.1	Operating Records	Periodic/ Daily	BAAQMD 8-34-113.2	≤ 240 hours per year and ≤ 5 consecutive days	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic/ Daily	BAAQMD 8-34-117.4	No more than 5 wells at a time or 10% of total collection system, whichever is less	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-501.6 and 503	Records	Periodic/ Daily	BAAQMD 8-34-117.5	≤ 24 hours per well	Continuous	N/A
TOC (Total Organic Compounds Plus Methane)	BAAQMD 8-34-501.6 and 503	Quarterly Inspection of collection and control system components with portable analyzer and Records	Periodic/ Quarterly	BAAQMD 8-34-301.2	Component Leak Limit: ≤ 1,000 ppmv as methane	Continuous	N/A
TOC	BAAQMD 8-34-415, 416, 501.4, 501.6, and 510	Monthly visual inspection of cover, quarterly inspection of surface with portable analyzer, various re-inspection times for leaking areas, and records	Periodic/ Monthly, Quarterly, and Event basis	BAAQMD 8-34-303	Surface Leak Limit ≤ 500 ppmv as methane at 2 inches above surface	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-8 Sunnyvale Landfill with Gas Collection System and A-9 Landfill Gas Flare	**Reporting Period:** *from 01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Non-Methane Organic Compounds (NMOC)	BAAQMD 8-34-501.4 and BAAQMD Condition # 11586, Part 12	Annual Source Tests and Records	Periodic/ Annual	BAAQMD 8-34-301.3 and BAAQMD Condition # 11586, Part 10	Flare Destruction Efficiency: > 98% removal by weight OR Flare Outlet Concentration: < 30 ppmv, expressed as methane, dry basis @ 3% O_2	Continuous	N/A
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min., and ≤ 0.05 ppm for 24 hours	Continuous	N/A
SO_2	BAAQMD Condition # 11586, Parts 12-13	Source Tests, Sulfur analysis of landfill gas and Records	Periodic/ Annual	BAAQMD 9-1-302	For Flare: ≤ 300 ppm (dry basis)	Continuous	N/A
H_2S	None	N/A	None	BAAQMD 9-2-301	Property Line Ground Level Limits: ≤ 0.06 ppm averaged over 3 min. and ≤ 0.03 ppm for 60 min.	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-8 Sunnyvale Landfill with Gas Collection System and A-9 Landfill Gas Flare	**Reporting Period:** *from 01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NO_x	BAAQMD Condition # 11586, Part 12	Annual Source Test and Records (upon start-up of A-9 Flare).	Periodic/ Annual	BAAQMD Condition # 11586, Part 8	A-9 Flare: < 0.06 pounds NOx (calculated as NO_2) per MM BTU	Continuous	N/A
CO	BAAQMD Condition # 11586, Part 12	Annual Source Test and Records (upon start-up of A-9 Flare).	Periodic/ Annual	BAAQMD Condition # 11586, Part 9	A-9 Flare: $\leq$ 0.20 pounds CO per MM BTU	Continuous	N/A
Source Test Submittal	BAAQMD Condition # 11586, Part 12	Report Submittal	Annual	BAAQMD Condition # 11586, Part 12	60 days after testing performed	Continuous	N/A
Temperature of Combustion Zone (CT)	BAAQMD 8-34-501.3, 8-34-507, and BAAQMD Condition # 11586, Part 11	Temperature Sensor and Recorder (continuous)	Continuous	BAAQMD Condition # 11586, Part 11	Flare CT: $\geq$ 1400 °F, averaged over any 3-hour period	Continuous	N/A
Shut Down Date	BAAQMD Condition # 11586, Part 14	Notification and Records	Periodic/ Event Basis	BAAQMD Condition # 11586, Part 14	Deleted after A-8 was removed from service	N/A	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-10 Wood Shredder and A-5 Baghouse Dust Collector	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Periods of In-operation for Parametric Monitors	BAAQMD 1-523.4	Operating Records for All Parametric Monitors (manometer at baghouse)	Periodic/ Event Based	BAAQMD 1-523.2	≤ 15 consecutive days per incident and ≤ 30 calendar days per 12-month period	Continuous	N/A
Opacity	BAAQMD Condition # 5369, Parts 5 and 6	Continuous Pressure Drop Across Baghouse, Weekly Inspections, and Records	Continuous and Periodic/ Weekly	BAAQMD Regulation 6-301 and SIP 6-301	≤ Ringelmann No. 1 for 3 minutes/hour	Continuous	N/A
Filterable Particulate (FP)	None	N/A	None	BAAQMD 6-1-310 and SIP 6-310	≤ 0.15 grains/dscf	Continuous	N/A
Particulate Matter (PM)	BAAQMD Condition # 5369, Part 7	Calculations and Records	Periodic/ Daily	BAAQMD 6-1-311 and SIP 6-311	$E = 0.026(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >57,320 lb/hr (or P > 28.66 tons/hr)	Continuous	N/A
Wood Waste Throughput	BAAQMD Condition # 5369, Part 7	Records	Periodic/ Daily	BAAQMD Condition # 5369, Part 3	< 255 tons per calendar day	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-11 CONVEYOR AND S-5 WOOD CHIP PROCESSING HOPPERS	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD Condition # 5370, Part 3	Visual Observation of Operations	Periodic / Event basis	BAAQMD Regulation 6-301 and SIP 6-301	≤ Ringelmann No. 1 for 3 minutes/hour	Continuous	N/A
PM	BAAQMD Condition # 5370, Part 2	Calculations and Records	Periodic/ Daily	BAAQMD 6-1-311 and SIP 6-311	$E = 0.026(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >57,320 lb/hr (or P > 28.66 tons/hr)	Continuous	N/A
Wood Waste Throughput	BAAQMD Condition # 5370, Part 1	Records	Periodic / Daily	BAAQMD Condition # 5370, Part 2	≤ 255 tons per calendar day	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-6 WOOD CHIP SCREENING OPERATION	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD Condition # 5371, Part 3	Visual Observation of Operations	Periodic / Event basis	BAAQMD Regulation 6-301 and SIP 6-301	≤ Ringelmann No. 1 for 3 minutes/hour	Continuous	N/A
PM	BAAQMD Condition # 5371, Part 4	Calculations and Records	Periodic/ Daily	BAAQMD 6-1-311 and SIP 6-311	$E = 0.026(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >57,320 lb/hr (or P > 28.66 tons/hr)	Continuous	NA
Wood Waste Throughput	BAAQMD Condition # 5371, Part 4	Records	Periodic / Daily	BAAQMD Condition # 5371, Part 1	≤ 255 tons per calendar day	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-7 DIESEL ENGINE FOR AN EMERGENCY STANDBY GENERATOR	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	None	N/A	None	BAAQMD 6-1-303 and SIP 6-303	≤ Ringelmann 2.0 for 3 minutes in any hour	Continuous	N/A
FP	None	N/A	None	BAAQMD 6-1-310 and SIP 6-310	≤ 0.15 grains/dscf	Continuous	N/A
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 minutes and ≤ 0.05 ppm for 24 hours	Continuous	N/A
SO_2	CCR Title 13 Title 13, Section 2281(a) (2 and 5), CCR, Title 17, Sections 93115.5 and 93115.10	CARB Diesel Fuel Sulfur Content Limits, Sales Restrictions, Usage Requirement and Records	Periodic / Event basis	BAAQMD 9-1-302	≤ 300 ppm (dry basis)	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-7 DIESEL ENGINE FOR AN EMERGENCY STANDBY GENERATOR	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Liquid Fuel Sulfur Content	CCR Title 13 Title 13, Section 2281(a) (2 and 5), CCR, Title 17, Sections 93115.5 and 93115.10	CARB Diesel Fuel Sulfur Content Limits, Sales Restrictions, Usage Requirement and Records	Periodic / Event basis	BAAQMD 9-1-304	< 0.5 % sulfur by weight	Continuous	N/A
Liquid Fuel Sulfur Content	CCR, Title 17, Sections 93115.5 and 93115.10	CARB Diesel Fuel Sulfur Content Limits, Sales Restrictions, Usage Requirement and Records	Periodic / Event basis	CCR Title 17, Section 93115.5 (b) and CCR, Title 13, Section 2281(a) (2 and 5)	Standby Engines must use CARB Diesel Fuel or other CARB Approved Alternative Fuel, which has Fuel Sulfur Limits of: ≤ 15 ppmw of S	Continuous	N/A
Operating Hours	BAAQMD 9-8-530 and CCR, Title 17, Section 93115.10 (d)(1) and (f)(1) and BAAQMD Condition # 22820, Parts 3-4	Hour Meter and Records	Continuous and Periodic/ Monthly	BAAQMD 9-8-330.3 and CCR, Title 17, Section 93115.6 (b)(3)(A) (1)(a) and BAAQMD Condition # 22820, Part 1	Operating Hours for Reliability-Related Activities: ≤ 20 hours in a calendar year	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-7 DIESEL ENGINE FOR AN EMERGENCY STANDBY GENERATOR	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Operating Hours	40 CFR 63.6625(f) and 63.6655(f)(2)	Hour Meter and Records		40 CFR 63.6640 (f)(1)(ii)	Operating Hours for Maintenance Checks, Readiness Testing, and Other Non-Emergency Operation: ≤ 100 hours in a calendar year	Continuous	N/A
Operating Hours	40 CFR 63.6625(f) and 63.6655(f)(2)	Hour Meter and Records		40 CFR 63.6640 (f)(1)(iii)	Operating Hours for Non-Emergency Operation: ≤ 50 hours in a calendar year	Continuous	N/A
Idle Time	None	N/A	None	40 CFR 63.6625(h)	≤30 minutes for start-up	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-7 DIESEL ENGINE FOR AN EMERGENCY STANDBY GENERATOR	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Maintenance Events	40 CFR 63.6655(e)	Records	Periodic/ Event Basis	40 CFR, Part 63, Subpart ZZZZ, Table 2d 4.a.	Change Oil and Filter: Every 500 hours of operation or annually, whichever comes first	Continuous	N/A
Maintenance Events	40 CFR 63.6655(e)	Records	Periodic/ Event Basis	40 CFR, Part 63, Subpart ZZZZ, Table 2d 4.b.	Inspect Air Cleaner: Every 1,000 hours of operation or annually, whichever comes first	Continuous	N/A
Maintenance Events	40 CFR 63.6655(e)	Records	Periodic/ Event Basis	40 CFR, Part 63, Subpart ZZZZ, Table 2d 4.c.	Inspect Hoses and Belts and (if necessary) Replace Hoses and Belts: Every 500 hours of operation or annually, whichever comes first	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-1 SOLID WASTE TRANSFER STATION AND A-1 WET SUPPRESSION SYSTEM	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD Condition # 5367, Part 3	Visual Observation of Operations	Periodic / Event basis	BAAQMD 6-1-301, SIP 6-301, and BAAQMD Condition # 5367, Part 2	≤ Ringelmann No. 1 for 3 minutes/hour	Continuous	N/A
Refuse Throughput	BAAQMD Condition # 5367, Part 4	Records	Periodic / Daily	BAAQMD Condition # 5367, Part 1	≤ 1500 tons per calendar day	Continuous	N/A

City of Sunnyvale Landfill and SMaRT Station®

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**Facility ID#:** A5905
Permitted Unit: S-2 WOOD WASTE UNLOADING OPERATION	**Reporting Period:** from *01/1/2023 through 06/30/2023*

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD Condition # 5368, Part 5	Visual Observation of Operations	Periodic / Event basis	BAAQMD 6-1-301 and SIP 6-301	≤ Ringelmann No. 1 for 3 minutes/hour	Continuous	N/A
Wood Waste Throughput	BAAQMD Condition # 5368, Part 6	Records	Periodic / Daily	BAAQMD Condition # 5368, Part 3	≤ 298 tons per calendar day	Continuous	N/A

Appendix D – RCA Forms and Deviation Letters

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [x] **BREAKDOWN RELIEF: *District Use Only* BREAKDOWN REFERENCE #:**

2. [x] **MONITOR EXCESS EMISSION or EXCURSION: *District Use Only* REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE: *District Use Only* REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD): *District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	City of Sunnyvale, ESD, Solid Waste Div.	Site #	5905
Address	Borregas Avenue and Caribbean Drive	Source #	S-8
Reported by	William Theyskens	Phone #	408 730-7718
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	01:49, 11/8/22	Clear Time	02:30, 11/9/22
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [x] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

Rainfall on November 7th through 9th, 2022, was apparently responsible for an inability to transport Landfill Gas to the PGF or to the LFG Flare. Efforts to remove the "liquid plug" present at condensate trap CT-1, adjacent to main Valve V-1, were not immediately successful. After pumping liquid from CT-1, and noting a decrease in the liquid level, additional attempts were made to start the flare and continue to clean out the pipe network. The LFGF was then started successfully at approximately 02:30. At approximately 03:00, the switch was successfully made to the PGF.

District Use Only		
Received by	Date	Time

General Instructions

- ✓ Check the Box numbers 1- 4 that apply to the RCA you are trying to report or request and read the detailed instructions.
- ✓ You will receive an ID # for each RCA you submit. In the case of a request for Breakdown Relief where multiple monitors are affected, you do not need to submit multiple forms, as long as all necessary information is given on one form. RCA reported during other than core business hours will be assigned an ID # the following working day. If you do not receive an ID #, it is your responsibility to contact the BAAQMD to get one.
- ✓ You may submit only one request for breakdown relief per form. However, you may submit multiple indicated excess, inoperative monitors and PRD reports on one form, provided that the start and end times given for the events in the required information section is inclusive of all events. Information on parameters exceeded, units of measurement and allowable limits can be provided in the event description box or when contacted by District staff with questions.
- ✓ Fill out the "Site Information and Description Information Required" areas of this form and email to *rca@baaqmd.gov*
- ✓ **A 30-day written follow-up report is required for Breakdown Requests and PRD Releases**. Reports for these types of RCA must contain a quantification of emissions, the calculations used to derive the emissions, and their duration. Reference Breakdown Admissions Advisory dated 12/3/04. Send 30-day report letters to: BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPORT, 375 Beale Street, Ste. 600 San Francisco, CA 94105. NOTE: **You may have additional report requirements under Title V.**

Detailed Instructions

Box 1: To Request Breakdown Relief (Regulations 1-112, 1-113, 1-208, 1-431, 1-432)

If you have an equipment malfunction (e.g.; breakdown) that leads to the release of air pollutants above the regulatory or your permitted levels, you may request relief from BAAQMD enforcement action.

- Check Box #1.
- **NOTE:** Start and end times given for these events in the required information section must be inclusive of all events.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Requests for breakdown relief may not be withdrawn and must be called in or faxed to the BAAQMD immediately upon discovery of an equipment malfunction.
- Receipt of an RCA ID# for a breakdown does not mean relief has been granted. An Inspector will visit your facility to determine compliance.

Box 2: Monitor Indicates Excess Emission or Excursion (Regulation 1-522.7, 1-523.3, 1-542)

When a BAAQMD-required monitor indicates an excess or excursion, you must report it to the BAAQMD.

- Check Box #2.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Any excess emission indicated by a CEM or excursion of a parametric monitor, shall be reported to the BAAQMD within 96 hours.
- Area concentration excesses over the limits prescribed in District regulations shall be reported to the BAAQMD within the next normal working day following the examination of data.

Box 3: Monitor Is Inoperative (Regulations 1-522, 1-523, 1-530)

When a BAAQMD-required monitor is inoperative for greater than 24 hours, you must report it to the BAAQMD.

- Check Box #3 only if inoperative for greater than 24 hours.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All reports of inoperative monitors must be reported by the following BAAQMD working day and additionally be cleared by a notification of resumption of monitoring. To notify the BAAQMD regarding the resumption of monitoring, do not send in a separate RCA form; call (415) 749-4979 and give the RCA ID #, date, and the time of resumption.
- Inoperative monitors (except parametric monitors) with downtime greater than 15 days must furnish proof of expedited repair in a follow-up report.

Box 4: Pressure Relief Device (PRD) Is Released (Regulation 8-28-401)

When a PRD at your refinery/chemical plant vents to the atmosphere, you must report it to the BAAQMD.

- Check Box #4 only if a pressure relief device is released.
- Separate RCA ID #'s can be applied to monitor(s) affected by a PRD by also checking Box #2 if other monitors record an excess or excursion.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All PRD release reports must be reported by the following BAAQMD working day.

Sunnyvale

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

November 18, 2022

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"…all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08N18 (Breakdown Relief) and #08N19 (Monitor Excess Emission or Excursion). The subject incident involves a relatively short-term shutdown of the Sunnyvale Landfill (Source S- 8) gas collection and control system (GCCS).

Incident Description

Rainfall from November 7th through November 9th is believed to have contributed to a higher than usual amount of LFG condensate generation, which appears to have contributed to issues encountered with the transport of LFG through the pipe network. At 0145 a blown transformer caused loss of power to the LFG and mixed gas (MG) flow meters. Temporary power was supplied to the LFG and MG flow meters at 1322. Although the MG meter showed flow the LFG showed zero flow. It was assumed the LFG meter was not functioning when in fact, it was functioning but LFG flows were too low for the meter to record. At 0242, LFG flows to PGF

started to decline, as indicated by an increase of MG flow to PGF. At 1556, one of the two PGF engines was secured due to a decline in LFG flow. Efforts were made to reduce the excess condensate in the pipe network in two locations in the field, which were suspected of restricting gas flow. Unfortunately, the resulting flow of gas was not sufficient to sustain PGF. It was later apparent that condensate trap CT-1E was full of condensate and backing up in the pipe network, causing a restriction of LFG flow. CT-1E is located directly in front of the LFGF station, where all LFG flow merges and is then directed to either the PGF or LFGF. The pump inside CT-1E had issues with pumping the large amounts of condensate as fast as it was coming into the trap. On 11/9/22 at 0915 the LFG field isolation valve was closed to allow the condensate level to be drawn down at CT-1E. At 1254 the field isolation valve was opened and unsuccessful efforts were made to start the PGF due to poor gas quality. The decision was made to start the LFGF. After a few attempts to start the LFGF, it was successfully started at 1313. At 1433, the LFGF was secured and #2 PGF was started. At 1454, #2 PGF was identified as being unstable, so it was taken offline and #1 PGF was started. At 1513 both the PGFs were in service at their normal 600kw output, signaling the gas system was back to normal operating mode.

Based on this data and the fact that it had rained for several days, we believe it is unlikely that a significant release of LFG would have occurred during the downtime.

Sincerely,

David Krueger

David Krueger
Solid Waste Programs Division Manager

1108 110922_10- and 30-day report

Final Audit Report 2022-11-19

Created:	2022-11-18
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6nLE4nzPIP7QPL7rXsGWJ7M8D9hweeV4

"1108 110922_10- and 30-day report" History

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2022-11-19 - 0:47:50 AM GMT

Document e-signed by David Krueger (dkrueger@sunnyvale.ca.gov)
Signature Date: 2022-11-19 - 0:48:15 AM GMT - Time Source: server

Agreement completed.
2022-11-19 - 0:48:15 AM GMT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [X] **BREAKDOWN RELIEF: *District Use Only* BREAKDOWN REFERENCE #:**

2. [x] **MONITOR EXCESS EMISSION or EXCURSION: *District Use Only* REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE: *District Use Only* REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD): *District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	City of Sunnyvale, ESD, Solid Waste	Site #	5905
Address	Borregas Avenue and Caribbean Drive	Source #	S-8
Reported by	William Theyskens	Phone #	408 730-7718
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	22:50; 31 December 2022	Clear Time	
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [x] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

Saturday (12/31/22) evening's rain event had a definite negative impact on the Landfill gas flow, with decreasing flows starting around 19:55 and dropping from 219 scfm to 144 ppm. Flow continued to drop through the night so condensate was pumped and flow increased to 200 scfm. PGF generator # 1 subsequently shut down at 22:50 due to poor gas quality, with LFG at 51 scfm. The heavy rains increased and at 02:00 on 1/1/23 LFG flow was fluctuating from 0 to 40 scfm.

District Use Only		
Received by	Date	Time

General Instructions

- ✓ Check the Box numbers 1- 4 that apply to the RCA you are trying to report or request and read the detailed instructions.
- ✓ You will receive an ID # for each RCA you submit. In the case of a request for Breakdown Relief where multiple monitors are affected, you do not need to submit multiple forms, as long as all necessary information is given on one form. RCA reported during other than core business hours will be assigned an ID # the following working day. If you do not receive an ID #, it is your responsibility to contact the BAAQMD to get one.
- ✓ You may submit only one request for breakdown relief per form. However, you may submit multiple indicated excess, inoperative monitors and PRD reports on one form, provided that the start and end times given for the events in the required information section is inclusive of all events. Information on parameters exceeded, units of measurement and allowable limits can be provided in the event description box or when contacted by District staff with questions.
- ✓ Fill out the "Site Information and Description Information Required" areas of this form and email to *rca@baaqmd.gov*
- ✓ **A 30-day written follow-up report is required for Breakdown Requests and PRD Releases**. Reports for these types of RCA must contain a quantification of emissions, the calculations used to derive the emissions, and their duration. Reference Breakdown Admissions Advisory dated 12/3/04. Send 30-day report letters to: BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPORT, 375 Beale Street, Ste. 600 San Francisco, CA 94105. NOTE: **You may have additional report requirements under Title V.**

Detailed Instructions

Box 1: To Request Breakdown Relief (Regulations 1-112, 1-113, 1-208, 1-431, 1-432)

If you have an equipment malfunction (e.g.; breakdown) that leads to the release of air pollutants above the regulatory or your permitted levels, you may request relief from BAAQMD enforcement action.

- Check Box #1.
- **NOTE:** Start and end times given for these events in the required information section must be inclusive of all events.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Requests for breakdown relief may not be withdrawn and must be called in or faxed to the BAAQMD immediately upon discovery of an equipment malfunction.
- Receipt of an RCA ID# for a breakdown does not mean relief has been granted. An Inspector will visit your facility to determine compliance.

Box 2: Monitor Indicates Excess Emission or Excursion (Regulation 1-522.7, 1-523.3, 1-542)

When a BAAQMD-required monitor indicates an excess or excursion, you must report it to the BAAQMD.

- Check Box #2.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Any excess emission indicated by a CEM or excursion of a parametric monitor, shall be reported to the BAAQMD within 96 hours.
- Area concentration excesses over the limits prescribed in District regulations shall be reported to the BAAQMD within the next normal working day following the examination of data.

Box 3: Monitor Is Inoperative (Regulations 1-522, 1-523, 1-530)

When a BAAQMD-required monitor is inoperative for greater than 24 hours, you must report it to the BAAQMD.

- Check Box #3 only if inoperative for greater than 24 hours.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All reports of inoperative monitors must be reported by the following BAAQMD working day and additionally be cleared by a notification of resumption of monitoring. To notify the BAAQMD regarding the resumption of monitoring, do not send in a separate RCA form; call (415) 749-4979 and give the RCA ID #, date, and the time of resumption.
- Inoperative monitors (except parametric monitors) with downtime greater than 15 days must furnish proof of expedited repair in a follow-up report.

Box 4: Pressure Relief Device (PRD) Is Released (Regulation 8-28-401)

When a PRD at your refinery/chemical plant vents to the atmosphere, you must report it to the BAAQMD.

- Check Box #4 only if a pressure relief device is released.
- Separate RCA ID #'s can be applied to monitor(s) affected by a PRD by also checking Box #2 if other monitors record an excess or excursion.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All PRD release reports must be reported by the following BAAQMD working day.

Sunnyvale

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

January 10, 2023

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08P76 (Breakdown Relief) and RCA #08P77 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08P76 (Breakdown Relief) and RCA #08P77 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From 12/31/2022-1/2/2023, we received 5.38" of rainfall (per California Irrigation Management Information System (CIMIS)), which contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network.
During this RCA reporting period, the total downtime of the LFGF was 32 hours and 6 minutes. It began at 2302 on 12/31/22 and ended at 0708 on 1/2/23. During this duration, there were multiple short durations when the LFG Flare (LFGF) was running.

<u>Background Information:</u>
On 12/31/22 at 1955, LFG flows to the Power Generation Facility (PGF) engines started to decline, and gas flow continued to drop through 1/1/23.

Furthermore, on 1/31/22, at 0200 due to the decreasing gas flow PGF #1shut down. Staff tried to pump out the LFG condensate line but were unable to keep up with the amount of condensate. Eventually, on 1/1/2023, at 1100, PGF#2 also went offline. Note that during this time period, the staff attempted to start the LFGF multiple times with little to no success. On 1/2/23, at 0708, the LFGF was back in service, with flow back to normal.

Based on this data, and the fact that it had rained for several days straight (5.38 inches during the three days of the RCA), we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Environmental Services Director

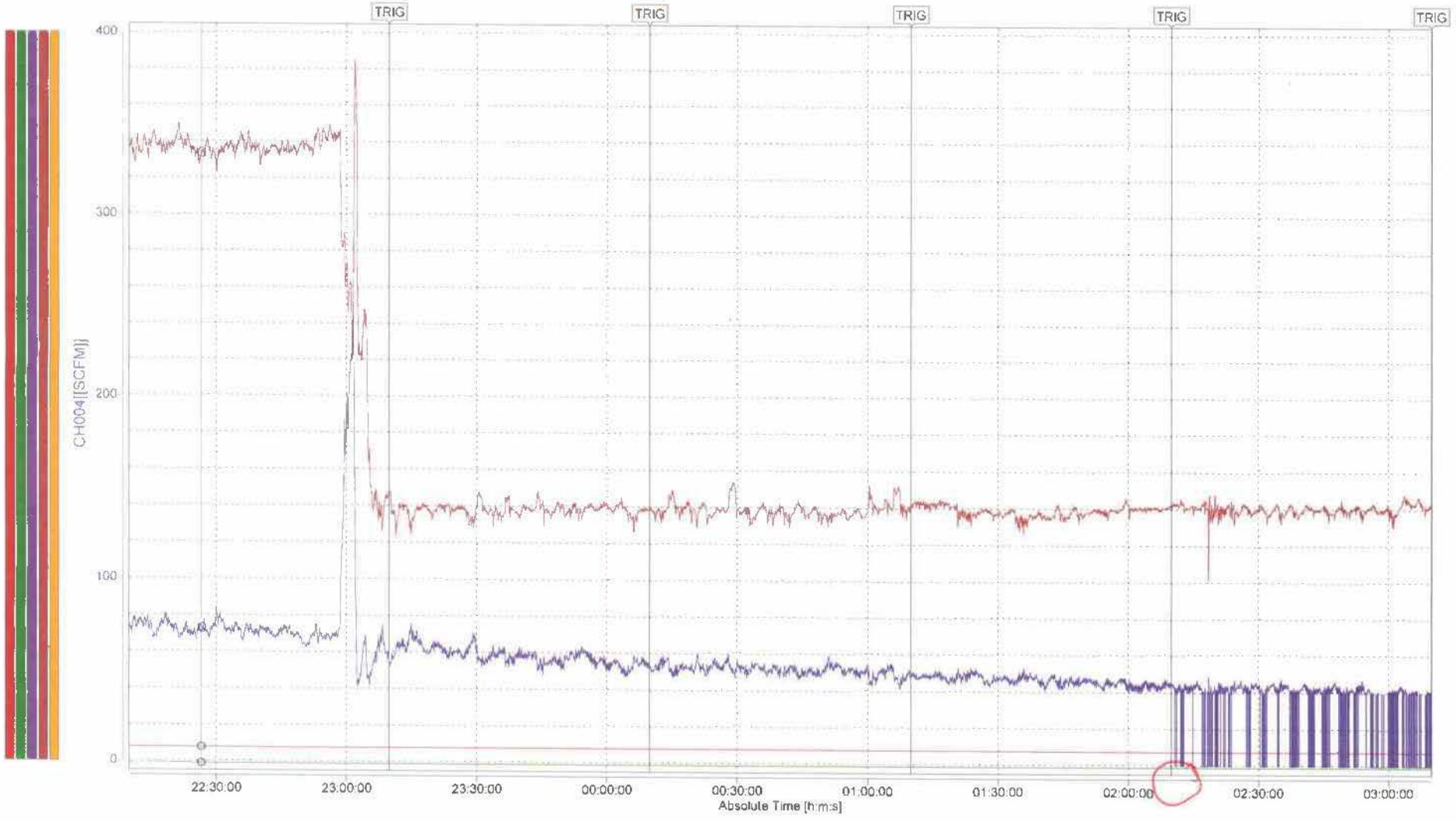
cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	:
File Name	: 080899_221231_220954.DAD,...,080903_230101_020954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0
Printed Group	: GROUP 1
Printed Range	: 2022/12/31 22:09:54.000 - 2023/01/01 03:09:52.000
Comment	:

12-31-22
1-1-23

Data Count	: 9000
Sampling Interval	: 2.000 sec
Start Time	: 2022/12/31 22:09:54.000
Stop Time	: 2023/01/01 03:09:52.000
Trigger Time	: 2023/01/01 03:09:52.000
Trigger No.	: 8999
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

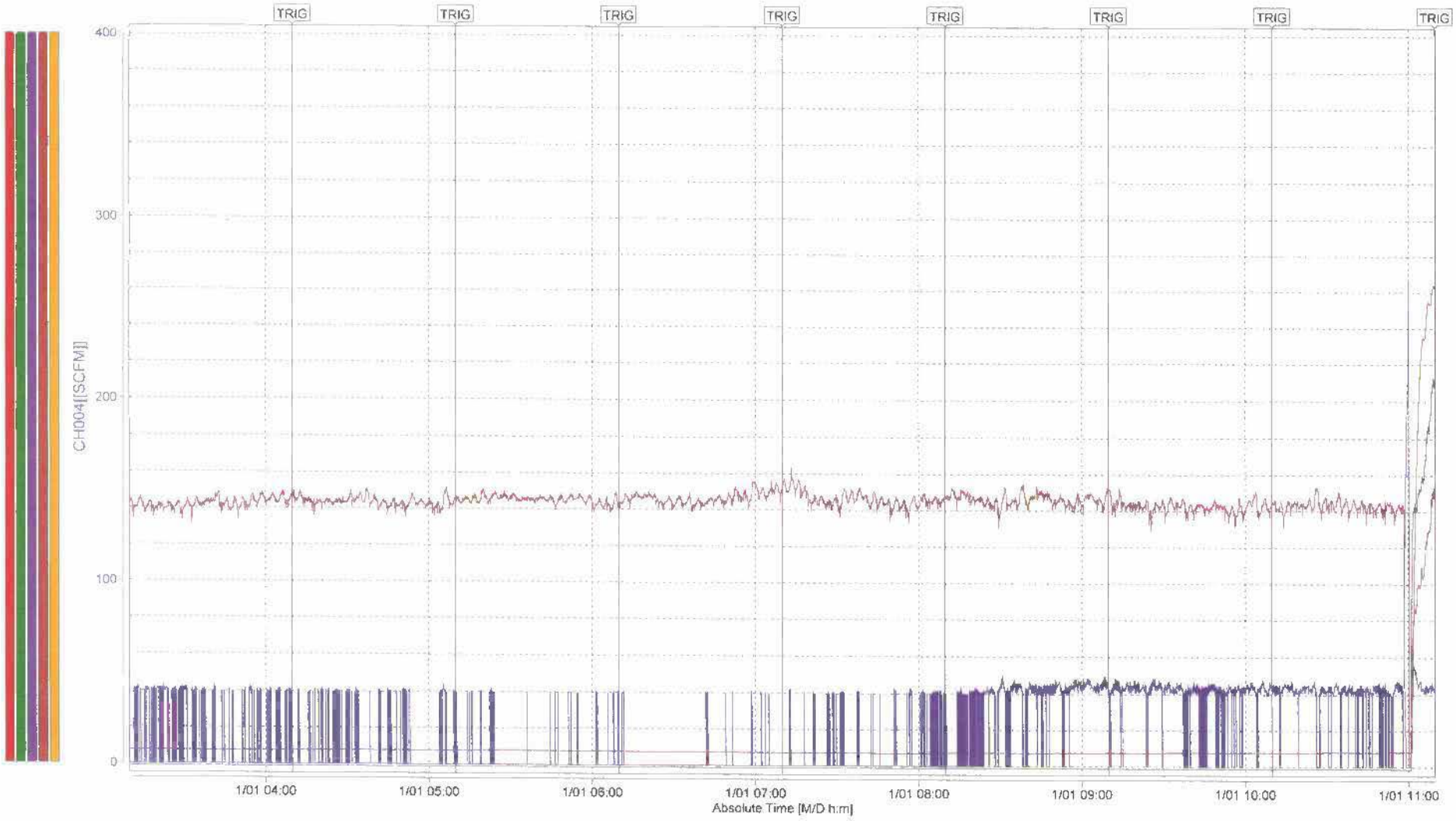


File Message	:
File Name	: 080904_230101_030954.DAD,...,080911_230101_100954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 14400
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/01 03:09:54.000
Stop Time	: 2023/01/01 11:09:52.000
Trigger Time	: 2023/01/01 11:09:52.000
Trigger No.	: 14399
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

Printed Group	: GROUP 1
Printed Range	: 2023/01/01 03:09:54.000 - 2023/01/01 11:09:52.000
Comment	:

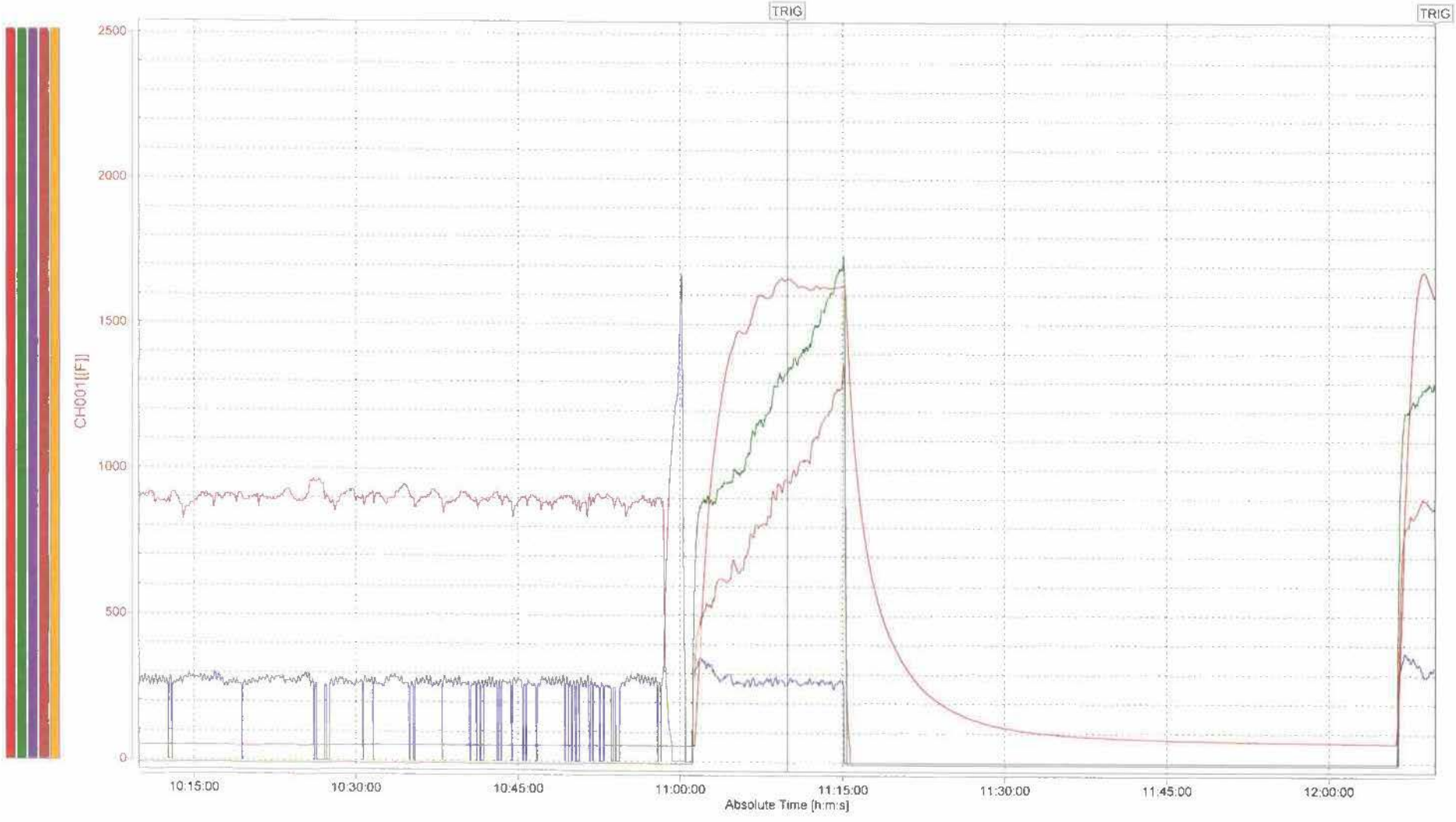
1-1-23



File Message	:
File Name	: 080911_230101_100954.DAD, 080912_230101_110954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 3600
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/01 10:09:54.000
Stop Time	: 2023/01/01 12:09:52.000
Trigger Time	: 2023/01/01 12:09:52.000
Trigger No.	: 3599
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

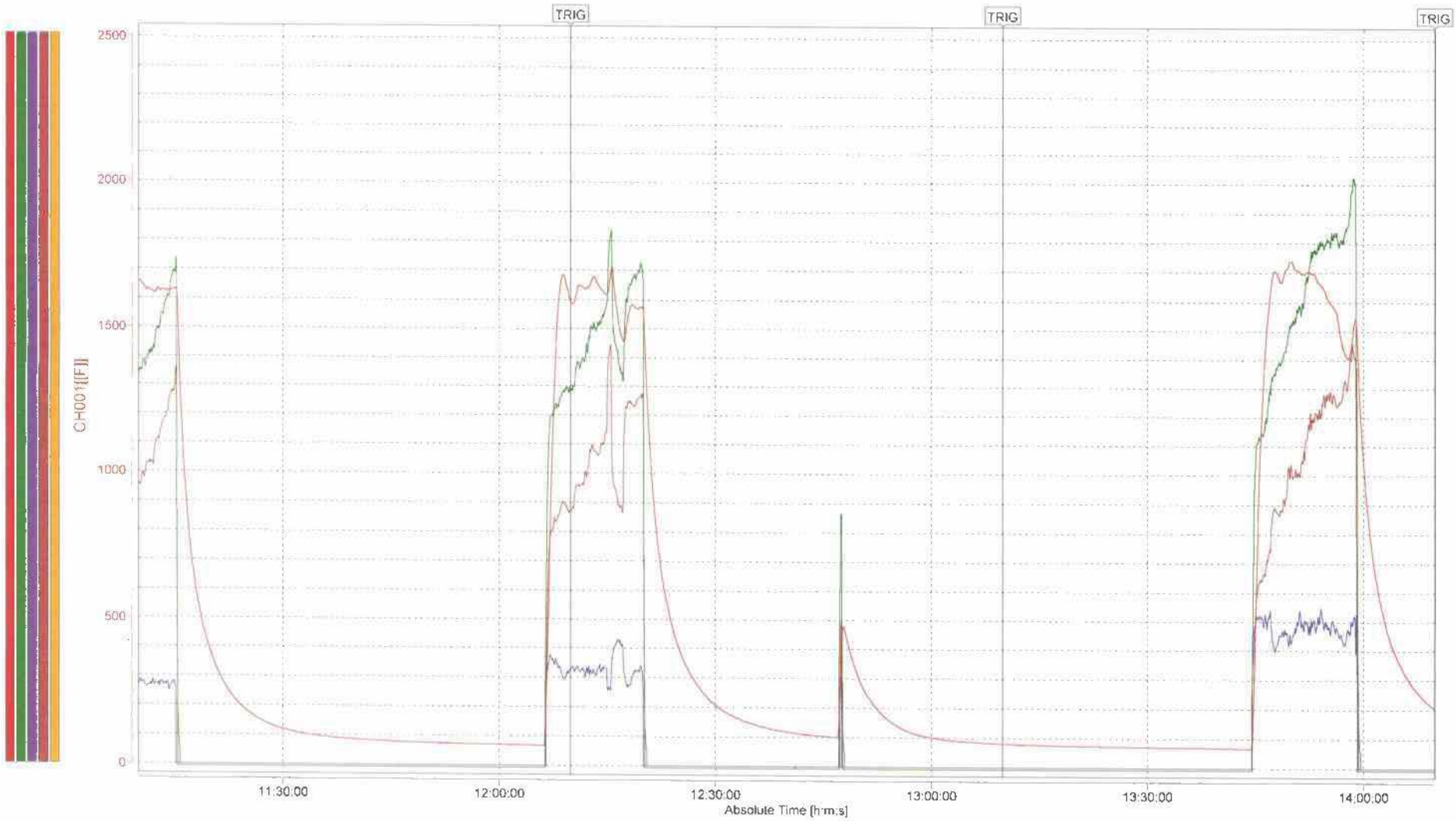
Printed Group	: GROUP 1
Printed Range	: 2023/01/01 10:09:54.000 - 2023/01/01 12:09:52.000
Comment	:



File Message	:
File Name	: 080912_230101_110954.DAD...,080914_230101_130954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 5400
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/01 11:09:54.000
Stop Time	: 2023/01/01 14:09:52.000
Trigger Time	: 2023/01/01 14:09:52.000
Trigger No.	: 5399
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

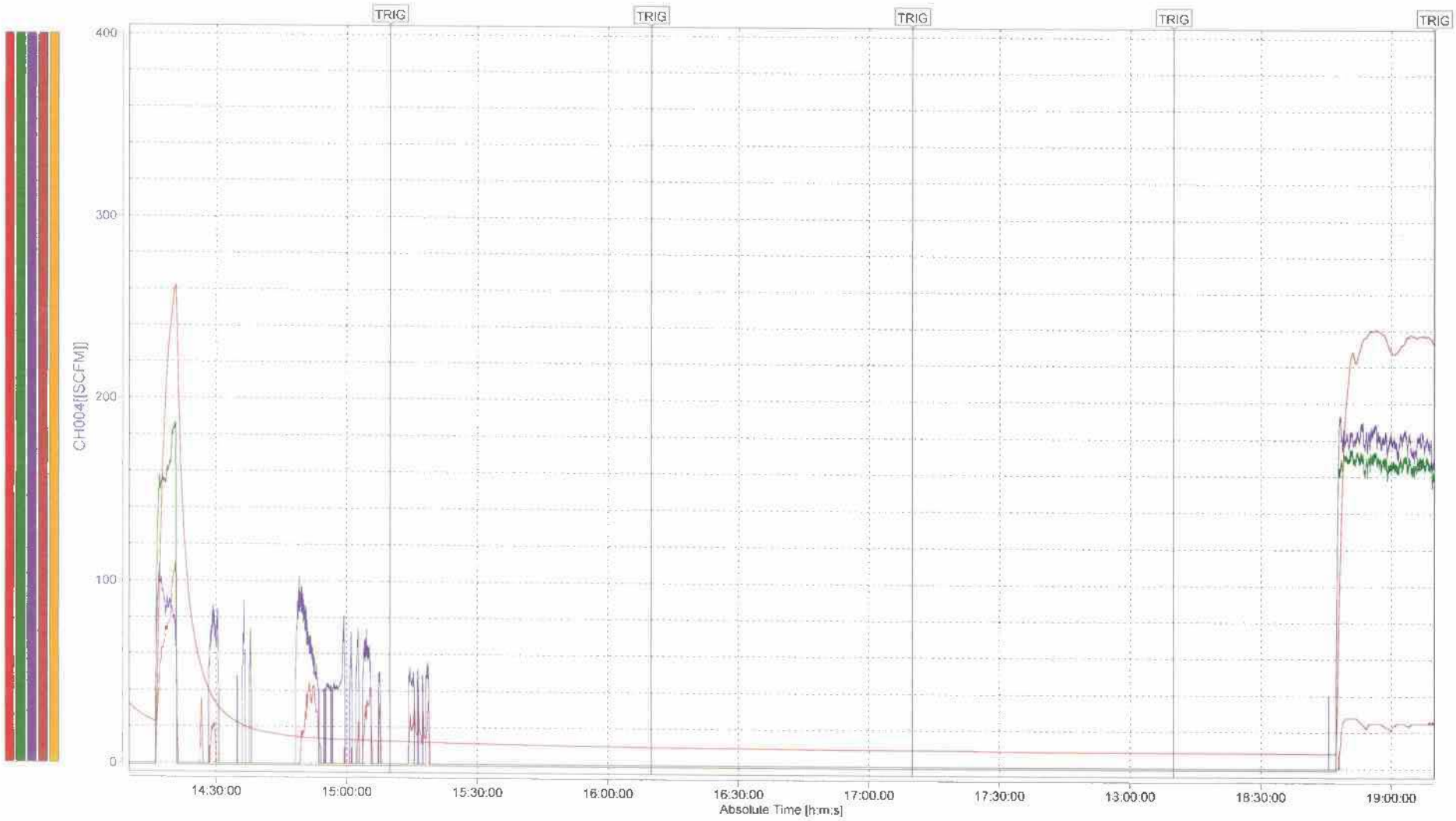
Printed Group	: GROUP 1
Printed Range	: 2023/01/01 11:09:54.000 - 2023/01/01 14:09:52.000
Comment	:



File Message	:
File Name	: 080915_230101_140954.DAD,...,080919_230101_180954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 9000
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/01 14:09:54.000
Stop Time	: 2023/01/01 19:09:52.000
Trigger Time	: 2023/01/01 19:09:52.000
Trigger No.	: 8999
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

Printed Group	: GROUP 1
Printed Range	: 2023/01/01 14:09:54.000 - 2023/01/01 19:09:52.000
Comment	:

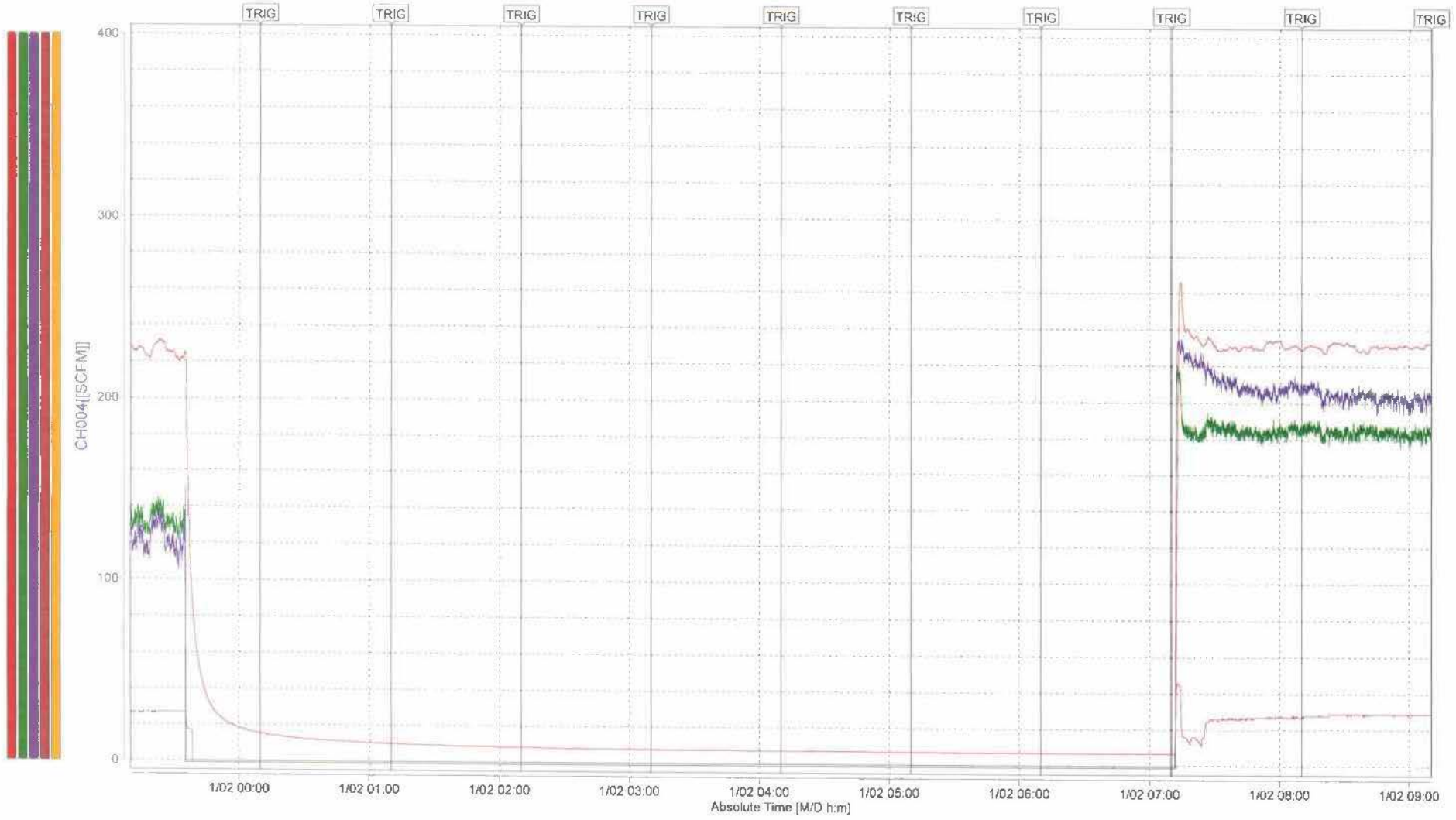


File Message	
File Name	080924_230101_230954.DAD,...,080933_230102_080954.DAD
Device Type	DX1000
Serial No.	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch.	6
Math Ch.	0
Ext Ch.	0

Data Count	18000
Sampling Interval	2.000 sec
Start Time	2023/01/01 23:09:54.000
Stop Time	2023/01/02 09:09:52.000
Trigger Time	2023/01/02 09:09:52.000
Trigger No.	17999
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]

Printed Group	GROUP 1
Printed Range	2023/01/01 23:09:54.000 - 2023/01/02 09:09:52.000
Comment	

1-1 +0 1-2.



BAAQMD -FacilityA5905 RCA08P76 -10- and 30-day Deviation Report

Final Audit Report 2023-01-10

Created:	2023-01-10
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA4QDAilygyyzzSz8ou4dT9jUp-T4YpV8g

"BAAQMD -FacilityA5905 RCA08P76 -10- and 30-day Deviation Report" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
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2023-01-10 - 10:58:07 PM GMT

Document e-signed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
Signature Date: 2023-01-10 - 10:58:17 PM GMT - Time Source: server

Agreement completed.
2023-01-10 - 10:58:17 PM GMT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [X] **BREAKDOWN RELIEF: *District Use Only* BREAKDOWN REFERENCE #:**

2. [X] **MONITOR EXCESS EMISSION or EXCURSION: *District Use Only* REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE: *District Use Only* REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD): *District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	City of Sunnyvale	Site #	5905
Address	Borregas Avenue and Caribbean Drive	Source #	S-8
Reported by	William Theyskens	Phone #	408 730-7718
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	09:15; 9 January, 2023	Clear Time	
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [X] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

Power Generation Facility (PGF) generator shutdown, with the Landfill Gas Flare (LFGF) not starting initially. At 0:925 the LFGF was in service. At 0:9:37, the LFGF shutdown. The PGF shutdown appeared to be caused by a loss of LFG flow resulting from condensate build-up in condensate trap CT-1E, located just south of the LFGF. Efforts were made to pump down the condensate in CT-1E. The LFGF was subsequently reported to be back in service.

District Use Only		
Received by	Date	Time

General Instructions

- ✓ Check the Box numbers 1- 4 that apply to the RCA you are trying to report or request and read the detailed instructions.
- ✓ You will receive an ID # for each RCA you submit. In the case of a request for Breakdown Relief where multiple monitors are affected, you do not need to submit multiple forms, as long as all necessary information is given on one form. RCA reported during other than core business hours will be assigned an ID # the following working day. If you do not receive an ID #, it is your responsibility to contact the BAAQMD to get one.
- ✓ You may submit only one request for breakdown relief per form. However, you may submit multiple indicated excess, inoperative monitors and PRD reports on one form, provided that the start and end times given for the events in the required information section is inclusive of all events. Information on parameters exceeded, units of measurement and allowable limits can be provided in the event description box or when contacted by District staff with questions.
- ✓ Fill out the "Site Information and Description Information Required" areas of this form and email to *rca@baaqmd.gov*
- ✓ **A 30-day written follow-up report is required for Breakdown Requests and PRD Releases**. Reports for these types of RCA must contain a quantification of emissions, the calculations used to derive the emissions, and their duration. Reference Breakdown Admissions Advisory dated 12/3/04. Send 30-day report letters to: BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPORT, 375 Beale Street, Ste. 600 San Francisco, CA 94105. NOTE: **You may have additional report requirements under Title V.**

Detailed Instructions

Box 1: To Request Breakdown Relief (Regulations 1-112, 1-113, 1-208, 1-431, 1-432)

If you have an equipment malfunction (e.g.; breakdown) that leads to the release of air pollutants above the regulatory or your permitted levels, you may request relief from BAAQMD enforcement action.

- Check Box #1.
- **NOTE:** Start and end times given for these events in the required information section must be inclusive of all events.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Requests for breakdown relief may not be withdrawn and must be called in or faxed to the BAAQMD immediately upon discovery of an equipment malfunction.
- Receipt of an RCA ID# for a breakdown does not mean relief has been granted. An Inspector will visit your facility to determine compliance.

Box 2: Monitor Indicates Excess Emission or Excursion (Regulation 1-522.7, 1-523.3, 1-542)

When a BAAQMD-required monitor indicates an excess or excursion, you must report it to the BAAQMD.

- Check Box #2.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Any excess emission indicated by a CEM or excursion of a parametric monitor, shall be reported to the BAAQMD within 96 hours.
- Area concentration excesses over the limits prescribed in District regulations shall be reported to the BAAQMD within the next normal working day following the examination of data.

Box 3: Monitor Is Inoperative (Regulations 1-522, 1-523, 1-530)

When a BAAQMD-required monitor is inoperative for greater than 24 hours, you must report it to the BAAQMD.

- Check Box #3 only if inoperative for greater than 24 hours.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All reports of inoperative monitors must be reported by the following BAAQMD working day and additionally be cleared by a notification of resumption of monitoring. To notify the BAAQMD regarding the resumption of monitoring, do not send in a separate RCA form; call (415) 749-4979 and give the RCA ID #, date, and the time of resumption.
- Inoperative monitors (except parametric monitors) with downtime greater than 15 days must furnish proof of expedited repair in a follow-up report.

Box 4: Pressure Relief Device (PRD) Is Released (Regulation 8-28-401)

When a PRD at your refinery/chemical plant vents to the atmosphere, you must report it to the BAAQMD.

- Check Box #4 only if a pressure relief device is released.
- Separate RCA ID #'s can be applied to monitor(s) affected by a PRD by also checking Box #2 if other monitors record an excess or excursion.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All PRD release reports must be reported by the following BAAQMD working day.

January 13, 2023

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08P98 (Breakdown Relief) and RCA #08P99 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08P98 (Breakdown Relief) and RCA #08P99 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From 1/9/23 - 1/11/23, we received 2.03" of rainfall (per California Irrigation Management Information System (CIMIS)) which is believed to have contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/9/23 at 0918 LFG flow was lost to the #2 PGF (note that the #1 PGF is out of service for maintenance). The loss of landfill gas flow was attributed to a buildup of condensate in condensate trap CT-1E, which caused blockage of LFG flow, and resulted in the shutting down of the generator. During this time period, landfill staff pumped condensate in an effort to

increase LFG flow, and the flow was resumed at 1502. At 1547, the LFGF was set up to switch over to the PGF, and at 1620 the PGF (one genset) was in service.

This RCA episode started at 0918 and ended at 1620 on 1/9/23, a total of 7 hours and 2 minutes. During this episode, there was a relatively short duration of approximately 45 minutes when the LFG Flare was running.

Based on the available rainfall data and the saturated landfill cover, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Environmental Services Director

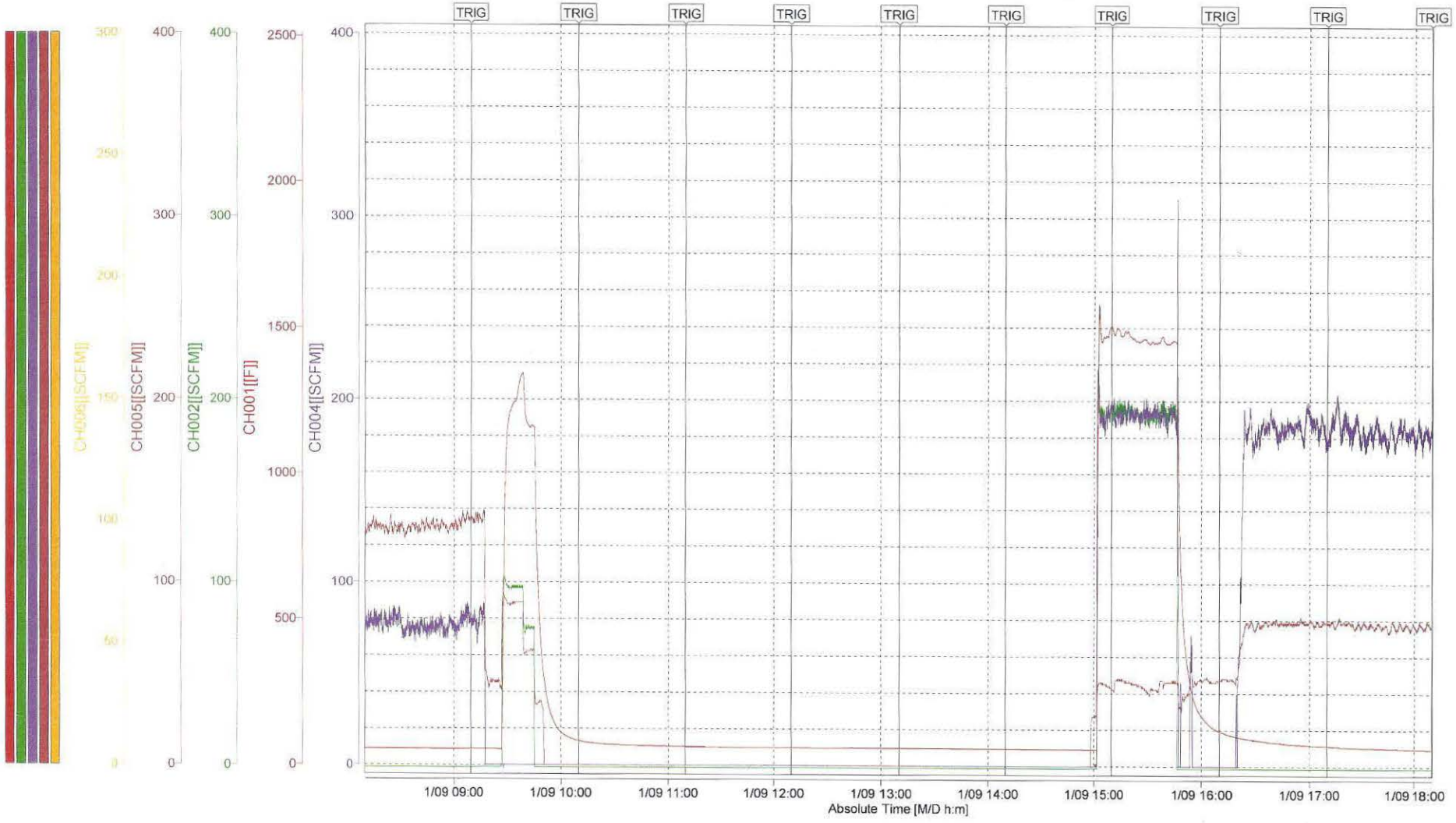
cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	:
File Name	: 081101_230109_080954.DAD,...,081110_230109_170954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 18000
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/09 08:09:54.000
Stop Time	: 2023/01/09 18:09:52.000
Trigger Time	: 2023/01/09 18:09:52.000
Trigger No.	: 17999
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

Printed Group	: GROUP 1
Printed Range	: 2023/01/09 08:09:54.000 - 2023/01/09 18:09:52.000
Comment	:



BAAQMD RCA report

Final Audit Report 2023-01-13

Created:	2023-01-13
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAnobDgeCeUBkB8flkt84s2cMQ1OfKAFZL

"BAAQMD RCA report" History

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2023-01-13 - 8:43:19 PM GMT

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Document e-signed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
Signature Date: 2023-01-13 - 9:18:58 PM GMT - Time Source: server

Agreement completed.
2023-01-13 - 9:18:58 PM GMT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [x] **BREAKDOWN RELIEF:** ***District Use Only*** **BREAKDOWN REFERENCE #:** 08Q12

2. [x] **MONITOR EXCESS EMISSION or EXCURSION:** ***District Use Only*** **REFERENCE #:** 08Q13

3. [ ] **MONITOR IS INOPERATIVE:** ***District Use Only*** **REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD):** ***District Use Only*** **PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)

Company	City of Sunnyvale, ESD, Solid Waste	Site #	5905
Address	Borregas Avenue and Caribbean Drive	Source #	S-8
Reported by	William Theyskens	Phone #	408 730-7718
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	00:39/1/16/23	Clear Time	

Monitor/device type(s): [ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor

Monitor description(s):

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [x] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

Heavy rains continued to have a negative impact on landfill gas flow (LFG), with flow dropping from 150 ppm at 2251, to between 0 and 40 scfm at 0039. At 0140 PGF #2 started, but UGP started dropping at 0142. Main engines were all put on Natural Gas (NG). At 1:55, PGF Genset # 2 shutdown again. An attempt to start the LFGF again failed, with LFGF at 0 scfm. Condensate in CT-1E and in the LFG east header P-trap in front of Gate D were pumped down. Started the PGF genset at 1448 hours, with it running at 600 KW output. Lost LFG flow indication at 1747.

District Use Only

Received by Date Time

General Instructions

January 24, 2023

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08Q12 (Breakdown Relief) and RCA #08Q13 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"... all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08Q12 (Breakdown Relief) and RCA #08Q13 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From1/16/23 - 1/18/23 we received 1.07" of rainfall (per California Irrigation Management Information System (CIMIS)) which is believed to have contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/16/23 at 00:39 the Power Generation Facility (PGF) shutdown due to loss of LFG flow. The loss of LFG flow was attributed to a buildup of condensate in the landfill gas collection system, which caused blockage of LFG flow, and resulted in the shutting down of the PGF. During this time period, landfill staff inspected condensate pumps and portions of the landfill gas collection system to try to determine where the blockage was located. Landfill staff hired a

contractor to perform a camera inspection of the landfill pipes in several locations. It was determined there was a blockage in condensate trap CT-7E. Staff immediately pumped condensate at this location in an effort to increase LFG flow. At 1247 on 1/18/23, the LFGF was in service. At 1421, the LFGF was set up to switch over to the PGF, and at 1443 the PGF was in service.

This RCA episode started at 00:39 on 1/16/23 and ended at 1443 on 1/18/23, a total of 61.07 hours. During this episode, there was a duration of approximately 1.92 hours when the LFG Flare was running.

Based on the available rainfall data and the saturated landfill cover, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Karen Gissibl (Jan 24, 2023 13:41 PST)

Karen Gissibl
Environmental Programs Manager

cc: Joe Muehleck (BAAQMD), email

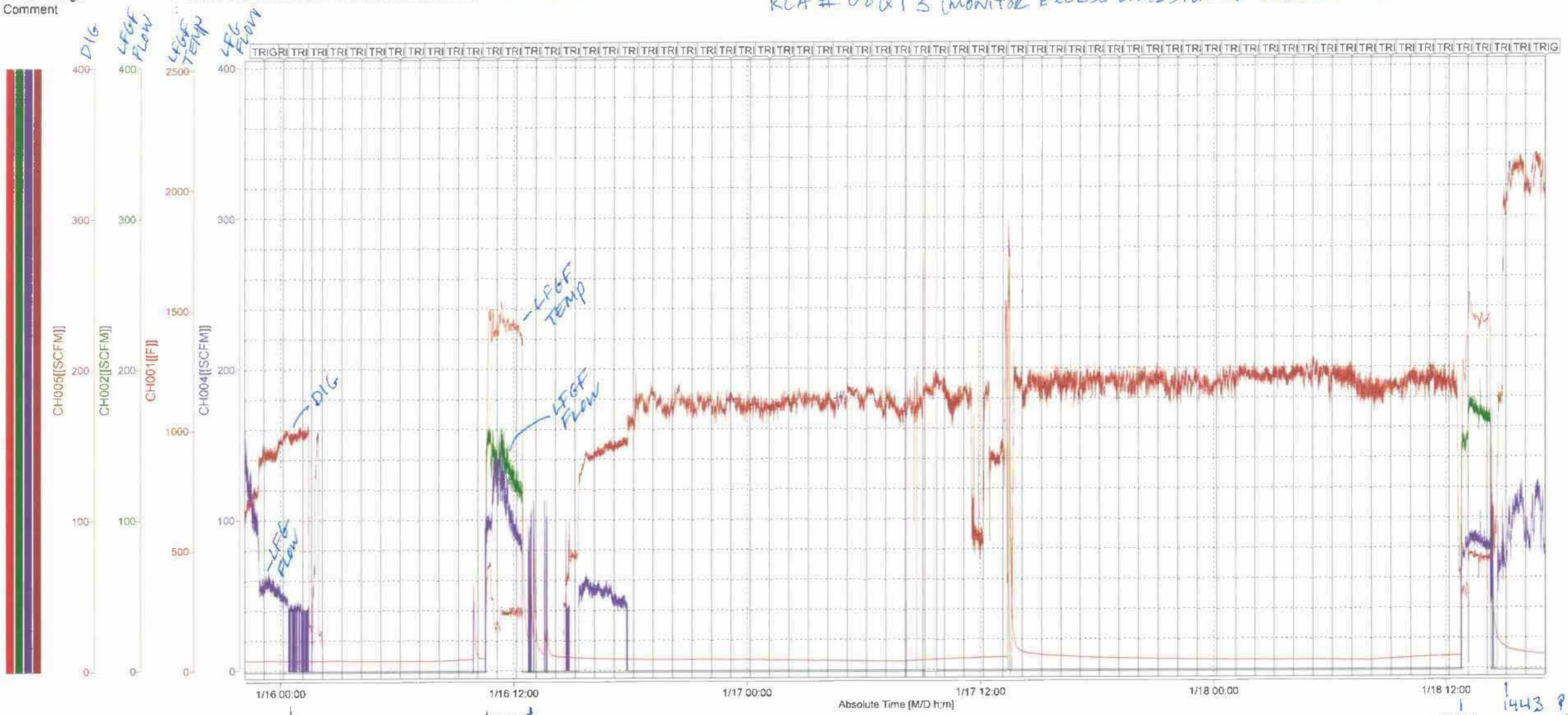
Attachment: Flow Chart

File Message	:
File Name	: 081259_230115_220954.DAD,...081325_230118_160954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
Starting Condition	: Auto
Dividing Condition	: Auto
Meas Ch.	: 6
Math Ch.	: 0
Ext Ch.	: 0

Data Count	: 120600
Sampling Interval	: 2.000 sec
Start Time	: 2023/01/15 22:09:54.000
Stop Time	: 2023/01/18 17:09:52.000
Trigger Time	: 2023/01/18 17:09:52.000
Trigger No.	: 120599
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]

Printed Group	: CROUP 1
Printed Range	: 2023/01/15 22:09:54.000 - 2023/01/18 17:09:52.000
Comment	:

1/16/23 to 1/18/23 RCA # 08Q12 (BREAKDOWN RELIEF)
RCA # 08Q13 (MONITOR EXCESS EMISSION OR EXCURSION)



00:39 LOSS OF LFG FLOW

TEMPORARILY RUN LFGF

1247 LFGF IN SERVICE

1443 PGF IN SERVICE

BAAQMD- RCA 08Q12 and 08Q13_10- and 30-day report (1)

Final Audit Report 2023-01-24

Created:	2023-01-24
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAeQKJ4CPRneEv_4kPF9tbSX07Lu7LWaUL

"BAAQMD- RCA 08Q12 and 08Q13_10- and 30-day report (1)" History

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Signature Date: 2023-01-24 - 9:41:10 PM GMT - Time Source: server

Agreement completed.
2023-01-24 - 9:41:10 PM GMT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [x] **BREAKDOWN RELIEF: *District Use Only* BREAKDOWN REFERENCE #:**

2. [x] **MONITOR EXCESS EMISSION or EXCURSION: *District Use Only* REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE: *District Use Only* REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD): *District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	City of Sunnyvale, ESD, Solid Waste	Site #	
Address	Borregas Avenue and Caribbean Drive	Source #	
Reported by	William Theyskens	Phone #	
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	02:38/01/19/23	Clear Time	10:20/01/19/23
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [x] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

At 0238 Landfill Gas Flow (LFG) from the field was lost. The LFG flow reading was zero, and vacuum dropped considerably. Genset #1 was still running on other fuel so there was no need to run the flare. Efforts continued to pump condensate from the Gas Collection and Control System (GCCS). At 1020 enough condensate had been removed that LFG was again being pulled from the landfill in significant quantities. As of 1919 LFG flow was still being pulled from the landfill in significant quantities.

District Use Only		
Received by	Date	Time

General Instructions

- ✓ Check the Box numbers 1- 4 that apply to the RCA you are trying to report or request and read the detailed instructions.
- ✓ You will receive an ID # for each RCA you submit. In the case of a request for Breakdown Relief where multiple monitors are affected, you do not need to submit multiple forms, as long as all necessary information is given on one form. RCA reported during other than core business hours will be assigned an ID # the following working day. If you do not receive an ID #, it is your responsibility to contact the BAAQMD to get one.
- ✓ You may submit only one request for breakdown relief per form. However, you may submit multiple indicated excess, inoperative monitors and PRD reports on one form, provided that the start and end times given for the events in the required information section is inclusive of all events. Information on parameters exceeded, units of measurement and allowable limits can be provided in the event description box or when contacted by District staff with questions.
- ✓ Fill out the "Site Information and Description Information Required" areas of this form and email to *rca@baaqmd.gov*
- ✓ **A 30-day written follow-up report is required for Breakdown Requests and PRD Releases**. Reports for these types of RCA must contain a quantification of emissions, the calculations used to derive the emissions, and their duration. Reference Breakdown Admissions Advisory dated 12/3/04. Send 30-day report letters to: BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPORT, 375 Beale Street, Ste. 600 San Francisco, CA 94105. NOTE: **You may have additional report requirements under Title V.**

Detailed Instructions

Box 1: To Request Breakdown Relief (Regulations 1-112, 1-113, 1-208, 1-431, 1-432)

If you have an equipment malfunction (e.g.; breakdown) that leads to the release of air pollutants above the regulatory or your permitted levels, you may request relief from BAAQMD enforcement action.

- Check Box #1.
- **NOTE:** Start and end times given for these events in the required information section must be inclusive of all events.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Requests for breakdown relief may not be withdrawn and must be called in or faxed to the BAAQMD immediately upon discovery of an equipment malfunction.
- Receipt of an RCA ID# for a breakdown does not mean relief has been granted. An Inspector will visit your facility to determine compliance.

Box 2: Monitor Indicates Excess Emission or Excursion (Regulation 1-522.7, 1-523.3, 1-542)

When a BAAQMD-required monitor indicates an excess or excursion, you must report it to the BAAQMD.

- Check Box #2.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Any excess emission indicated by a CEM or excursion of a parametric monitor, shall be reported to the BAAQMD within 96 hours.
- Area concentration excesses over the limits prescribed in District regulations shall be reported to the BAAQMD within the next normal working day following the examination of data.

Box 3: Monitor Is Inoperative (Regulations 1-522, 1-523, 1-530)

When a BAAQMD-required monitor is inoperative for greater than 24 hours, you must report it to the BAAQMD.

- Check Box #3 only if inoperative for greater than 24 hours.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All reports of inoperative monitors must be reported by the following BAAQMD working day and additionally be cleared by a notification of resumption of monitoring. To notify the BAAQMD regarding the resumption of monitoring, do not send in a separate RCA form; call (415) 749-4979 and give the RCA ID #, date, and the time of resumption.
- Inoperative monitors (except parametric monitors) with downtime greater than 15 days must furnish proof of expedited repair in a follow-up report.

Box 4: Pressure Relief Device (PRD) Is Released (Regulation 8-28-401)

When a PRD at your refinery/chemical plant vents to the atmosphere, you must report it to the BAAQMD.

- Check Box #4 only if a pressure relief device is released.
- Separate RCA ID #'s can be applied to monitor(s) affected by a PRD by also checking Box #2 if other monitors record an excess or excursion.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All PRD release reports must be reported by the following BAAQMD working day.

January 27, 2023

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08Q22 (Breakdown Relief) and RCA #08Q23 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"... all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08Q22 (Breakdown Relief) and RCA #08Q23 (Monitor Excess Emission or Excursion). The subject incident involves a relatively short-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

Large quantities of rain were received at the landfill site for the month of January, 8.24" of rainfall (per California Irrigation Management and Information System (CIMIS)), which contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/19/23 at 0238 there was a loss of LFG flow. The loss of LFG flow was attributed to a buildup of condensate in the landfill gas collection system, which caused blockage of LFG flow, and resulted in the shutting down of the GCCS. The #1 PGF continued to operate on mixed gas (MG), a combination of digester gas and air blended natural gas. During this time period,

landfill staff inspected condensate pumps and areas of the landfill gas collection system to determine where the blockage was located. It was determined there was a blockage in condensate trap CT-7E. Staff immediately pumped condensate at this location in an effort to increase LFG flow. Staff replaced the pump in CT-7E with a new one. At 1020, there was sufficient LFG flow available to send to the #1 PGF. At 1140, the #2 PGF was placed in service and both engines were operating at normal output.

This RCA episode started at 0238 and ended at 1020 on 1/19/23, a total of 7.7 hours.

Based on the available rainfall data, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Karen Gissibl (Jan 27, 2023 09:08 PST)

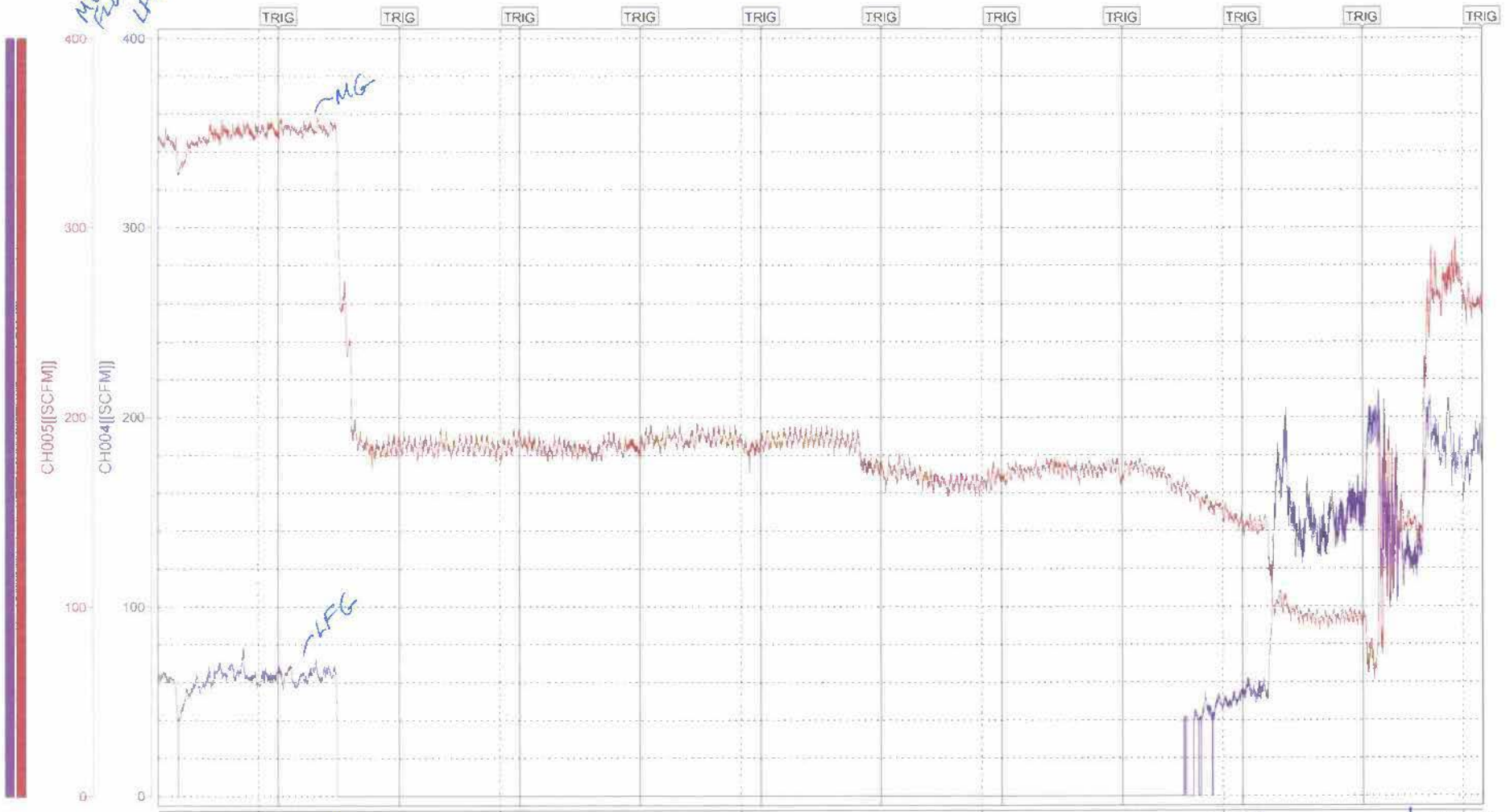
Karen Gissibl
Environmental Programs Manager

cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	:		
File Name	:	081334_230119_010954.DAD,...,081344_230119_110954.DAD	
Device Type	:	DX1000	
Serial No.	:	S5N408394	
Time Correction	:	None	
Starting Condition	:	Auto	
Dividing Condition	:	Auto	
Meas Ch.	:	6	
Math Ch.	:	0	
Ext Ch.	:	0	
Data Count	:	19800	
Sampling Interval	:	2.000 sec	
Start Time	:	2023/01/19 01:09:54.000	
Stop Time	:	2023/01/19 12:09:52.000	
Trigger Time	:	2023/01/19 12:09:52.000	
Trigger No.	:	19799	
Damage Check	:	Not Damaged	
Started by	:	[Key In]	
Stopped by	:	[Running]	
Printed Group	:	GROUP 1	
Printed Range	:	2023/01/19 01:09:54.000 - 2023/01/19 12:09:52.000	1/19/23 RCA # 08Q22 08Q23
Comment	:		

MG FLOW (MIXED GAS)
LFG FLOW



0238 LOSS OF LFG FLOW

1020 LFG FLOW TO #1 PGF

1140 BOTH PGF's IN SERVICE

BAAQMD- RCA 08Q22 and 08Q23_10- and 30-day report1 (1)

Final Audit Report 2023-01-27

Created:	2023-01-27
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA-YH7_MH3_uCULZAb3JJfwFkuGTDVevMA

"BAAQMD- RCA 08Q22 and 08Q23_10- and 30-day report1 (1)" History

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Signature Date: 2023-01-27 - 5:08:36 PM GMT - Time Source: server

Agreement completed.
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [X] **BREAKDOWN RELIEF: *District Use Only* BREAKDOWN REFERENCE #:**

2. [X] **MONITOR EXCESS EMISSION or EXCURSION: *District Use Only* REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE: *District Use Only* REFERENCE #:**

4. [ ] **PRESSURE RELIEF DEVICE (PRD): *District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	City of Sunnyvale, ESD, Solid Waste	Site #	5905
Address	Borregas Avenue and Caribbean Drive	Source #	S-8
Reported by	Silviana Ruiz	Phone #	408 730-7545
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	20:50; 31 January 2023	Clear Time	21:57; 31 Jan. 2023
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [ ] ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

[ ] ▶NO_x [ ] ▶SO_2 [ ] ▶CO [ ] ▶CO_2 [ ] ▶H_2S [ ] ▶TRS [ ] ▶NH_3
[ ] ▶O_2 [ ] ▶H_2O [ ] ▶Opacity [ ] ▶Lead [ ] ▶Gauge Pressure [x] ▶Flow
[ ] ▶Hydrocarbon Breakthrough (VOC) [ ] ▶Temperature [ ] ▶Wind Speed
[ ] ▶Wind Direction [ ] ▶Steam [ ] ▶Other (describe)

Unit(s) of Measurement

[ ] ▶ppm [ ] ▶ppb [ ] ▶min/hr > 20% [ ] ▶inches H_2O [ ] ▶mmHg
[ ] ▶psig [ ] ▶pH [ ] ▶^{0}Fahrenheit [ ] ▶Other (describe)

Event Description:

PG&E performing planned maintenance to install new equipment. PGF was secured and LFGF in service during the PG&E work. WPCP lost power at 2050 when 52-0 (main breaker to WPCP utility) open, due to PG&E work. WPCP Maintenance staff enroute to close 52-0 to restore power and at 2157 LFGF placed back in service. Total downtime of LFG system is 1.78 hours.

District Use Only		
Received by	Date	Time

General Instructions

- ✓ Check the Box numbers 1- 4 that apply to the RCA you are trying to report or request and read the detailed instructions.
- ✓ You will receive an ID # for each RCA you submit. In the case of a request for Breakdown Relief where multiple monitors are affected, you do not need to submit multiple forms, as long as all necessary information is given on one form. RCA reported during other than core business hours will be assigned an ID # the following working day. If you do not receive an ID #, it is your responsibility to contact the BAAQMD to get one.
- ✓ You may submit only one request for breakdown relief per form. However, you may submit multiple indicated excess, inoperative monitors and PRD reports on one form, provided that the start and end times given for the events in the required information section is inclusive of all events. Information on parameters exceeded, units of measurement and allowable limits can be provided in the event description box or when contacted by District staff with questions.
- ✓ Fill out the "Site Information and Description Information Required" areas of this form and email to *rca@baaqmd.gov*
- ✓ **A 30-day written follow-up report is required for Breakdown Requests and PRD Releases**. Reports for these types of RCA must contain a quantification of emissions, the calculations used to derive the emissions, and their duration. Reference Breakdown Admissions Advisory dated 12/3/04. Send 30-day report letters to: BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPORT, 375 Beale Street, Ste. 600 San Francisco, CA 94105. NOTE: **You may have additional report requirements under Title V.**

Detailed Instructions

Box 1: To Request Breakdown Relief (Regulations 1-112, 1-113, 1-208, 1-431, 1-432)

If you have an equipment malfunction (e.g.; breakdown) that leads to the release of air pollutants above the regulatory or your permitted levels, you may request relief from BAAQMD enforcement action.

- Check Box #1.
- **NOTE:** Start and end times given for these events in the required information section must be inclusive of all events.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Requests for breakdown relief may not be withdrawn and must be called in or faxed to the BAAQMD immediately upon discovery of an equipment malfunction.
- Receipt of an RCA ID# for a breakdown does not mean relief has been granted. An Inspector will visit your facility to determine compliance.

Box 2: Monitor Indicates Excess Emission or Excursion (Regulation 1-522.7, 1-523.3, 1-542)

When a BAAQMD-required monitor indicates an excess or excursion, you must report it to the BAAQMD.

- Check Box #2.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- Any excess emission indicated by a CEM or excursion of a parametric monitor, shall be reported to the BAAQMD within 96 hours.
- Area concentration excesses over the limits prescribed in District regulations shall be reported to the BAAQMD within the next normal working day following the examination of data.

Box 3: Monitor Is Inoperative (Regulations 1-522, 1-523, 1-530)

When a BAAQMD-required monitor is inoperative for greater than 24 hours, you must report it to the BAAQMD.

- Check Box #3 only if inoperative for greater than 24 hours.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All reports of inoperative monitors must be reported by the following BAAQMD working day and additionally be cleared by a notification of resumption of monitoring. To notify the BAAQMD regarding the resumption of monitoring, do not send in a separate RCA form; call (415) 749-4979 and give the RCA ID #, date, and the time of resumption.
- Inoperative monitors (except parametric monitors) with downtime greater than 15 days must furnish proof of expedited repair in a follow-up report.

Box 4: Pressure Relief Device (PRD) Is Released (Regulation 8-28-401)

When a PRD at your refinery/chemical plant vents to the atmosphere, you must report it to the BAAQMD.

- Check Box #4 only if a pressure relief device is released.
- Separate RCA ID #'s can be applied to monitor(s) affected by a PRD by also checking Box #2 if other monitors record an excess or excursion.
- Fill out all the information in the "Site Information and Description Information (Required)" area of the form.
- All PRD release reports must be reported by the following BAAQMD working day.

February 9, 2023

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

Sunnyvale
SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08Q50 (Breakdown Relief) and RCA #08Q51 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"…all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08Q50 (Breakdown Relief) and RCA #08Q51 (Monitor Excess Emission or Excursion). The subject incident involves a relatively short-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

PG&E had planned new equipment installation and notified the city about the power outage on 1/31/2023. Typically, during such PGE projects, Water Pollution Control Plant (WPCP) main service is switched to another source and PGF's at the WPCP come offline. In anticipation of this planned activity, on 1/31/2023, the city prepared the PGF's, and the flare to be put in service. Unfortunately, during switching from the main service to the other source, an underground cable failed resulting in a power outage at 2051. As a result, the main utility breaker 52-0 to the WPCP opened and the whole facility lost power and flow to the landfill flare was lost. The flow was restored at 2157. Total downtime during this incident was 1hr and 6 minutes. Attached are documents to demonstrate the timeline and PGE explanation.
Please reach out to me at 415-730-7791 or djain@sunnyvale.ca.gov if you have any questions.

Sincerely,
Deepti Jain
Deepti Jain
Environmental Programs Manager

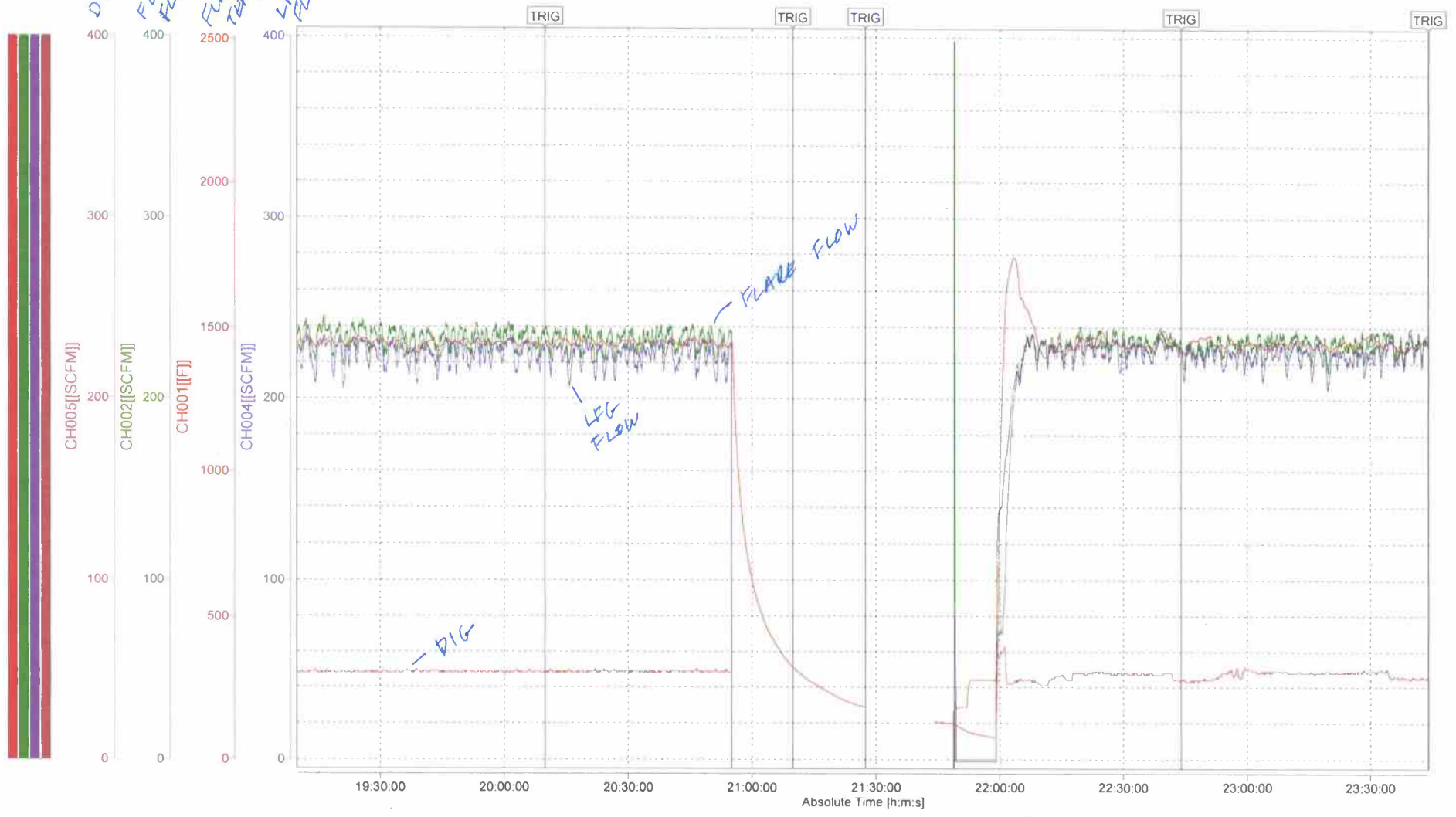
cc: Joe Muehleck (BAAQMD), email

File Message	:		
File Name	:	081640_230131_190954.DAD,...,081644_230131_224400.DAD	
Device Type	:	DX1000	
Serial No.	:	S5N408394	
Time Correction	:	None	
Starting Condition	:	Auto	
Dividing Condition	:	Auto	
Meas Ch.	:	6	
Math Ch.	:	0	
Ext Ch.	:	0	

Data Count	:	8223
Sampling Interval	:	2.000 sec
Start Time	:	2023/01/31 19:09:54.000
Stop Time	:	2023/01/31 23:43:58.000
Trigger Time	:	2023/01/31 23:43:58.000
Trigger No.	:	8222
Damage Check	:	Not Damaged
Started by	:	[Key In]
Stopped by	:	[Running]

Printed Group	:	GROUP 1
Printed Range	:	2023/01/31 19:09:54.000 - 2023/01/31 23:43:58.000
Comment	:	

1-31-23 RCA # 08050



A5905 - RCA # 08050 & 08051 - ATTACHMENT A - GAS FLOW GRAPH

Hi Bryan,
DEVCON is doing work out near your plant area. Unfortunately, Co Gen will need to come off line while your main service is switched to another source:

NOTICE OF PLANNED ELECTRIC SERVICE INTERRUPTION

CITY OF SUNNYVALE – WATER TREATMENT PLANT Co Gen only

PG&E will be installing new equipment which will impact one or more of your electric supply sources. Please be prepared to be without service on the following dates (weather permitting) and for the **estimated** times indicated:

DATE:	Tuesday, January 31, 2023
TIME:	8:00 am to 6:30 pm
AFFECTED SERVICE:	1444 BORREGAS AVE, SUNNYVALE
METER #:	Co Generator

1/31/23 AFW 23-0021555

TYPE B GEN. 1108/2 HAS DTT FOR SUNNYVALE WATER TREATMENT MUST COME OFFLINE WHEN 1108 IS OFFLOADED TO ANOTHER CIRCUIT

It is important to note the following: The distribution operator on the hot desk the day of will be making the customer contact to **408-398-4843**

We appreciate your cooperation and thank you for your patience.

Sincerely,

Teri

Therese (Teri) M Vetere
PGE
Local Customer Relationship Manager
De Anza & Central Coast Divisions
831-359-9933
Pacific Gas and Electric Company
www.pge.com/pspsupdates

ATTACHMENT B- PGE NOTICE

From:	Vetere, Therese
To:	Silviana Ruiz
Cc:	Bryan Berdeen
Subject:	FW: PG&E - NOTICE OF PLANNED ELECTRIC SERVICE INTERRUPTION
Date:	Tuesday, February 7, 2023 1:53:21 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png
Importance:	High

Hello Silvana,
Please see below for outage response from our DO (distribution operations):

Yes the WWTP plant experienced an outage at 2051 on 1/31/23. During switching on the planned log an underground cable failed.

Let me know if you need anything more to complete your filing.

Sincerely,

Teri

Therese (Teri) M Vetere
PGE
Local Customer Relationship Manager
De Anza & Central Coast Divisions
831-359-9933
Pacific Gas and Electric Company.
www.pge.com/pspsupdates

From: Silviana Ruiz <SRuiz@sunnyvale.ca.gov>
Sent: Monday, February 6, 2023 2:27 PM
To: Vetere, Therese <TXVE@pge.com>; Bryan Berdeen <BBerdeen@sunnyvale.ca.gov>; Patrick Lenoir <PLenoir@sunnyvale.ca.gov>; Leonard Espinoza <lespinoza@sunnyvale.ca.gov>; Michael Herrera <mherrera@sunnyvale.ca.gov>

ATTACHMENT C - PGE Explanation email 2/7/2023

March 20, 2023

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

Mr. Jeff Gove
Director of Compliance and Enforcement
Bay Area Air Quality Management District
Compliance & Enforcement Division
375 Beale Street, Suite 600
San Francisco, CA 94105

Subject: 10-Day Response Letter for Notice of Violation ID A60929, City of Sunnyvale Landfill, Facility #A5905

Dear Mr. Gove

The City of Sunnyvale (Sunnyvale) is submitting this letter in response to NOV #A60929 issued on March 8, 2023, in response to the less than the continuous operation of the Landfill Gas Collection and Control System (LFGCCS), S-8 at the closed Sunnyvale Landfill (Facility #A5905). The following is a summary of the incident and corrective/preventive actions, documented in more detail in the 10/30-day Reports attached herein.

Excessive rainfall received between November 8, 2022, - January 16, 2023, has contributed to higher than the usual amount of Landfill Gas (LFG) condensate generation at two of the Condensate traps, which led to issues encountered with the transport of LFG through the landfill gas pipe network.
Condensate traps CT-1E and CT-7E, which had issues, are located where the two main LFG headers merge from the west and east sides of the landfill before LFG is sent to the Power Generation Facility (PGF) or the LFG Flare (LFGF). The pneumatic pumps inside these two condensate traps are low pump rate pumps and typically function well during normal field conditions. Apparently, during the heavy rains, the pump rates were insufficient for the amount of condensate generated.
Information related to five TV Deviations mentioned in the NOV A60929 and immediate corrective actions taken is described in Table 1, attached as Attachment B.

To prevent similar incidents in the future, Sunnyvale is taking the following preventive measures:

- On 3/7/23, two large diaphragm pumps (high pump rates), were purchased as an emergency backup.

- Staff is working with a contractor to modify the existing ancillary equipment for these new pumps and work on a solution to the vapor lock issues.
- In addition to re-establishing a pump maintenance service schedule with the contractor, staff is working on hiring an emergency service contractor in near future.
- Staff is coordinating efforts with the City Water Pollution Control Plant (WPCP) staff to ensure available support during evenings and weekends to respond to LFGCCS issues. City is also considering hiring a part-time staff person to assist landfill staff.
- To study condensate-related issues with the LFGCCS, staff is developing a Request for Proposals for an LFGCCS assessment study.

We humbly request that you consider the following factors concerning the subject violation when you review the need for a penalty:

- We self-reported all these incidents to the assigned Air District Inspector as soon as we discovered them.
- The LFGCCS has been in operation for over 30 years, and this is the first violation in the history of the landfill due to unprecedented weather conditions.

If you have questions regarding this letter, please contact Deepti Jain at 408-730-7791 or me at 408-730-7785.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Environmental Services Director

Attachment A: Copy of the NOV#A60929
Attachment B: Table 1- Summary of TV deviations 7271, 7343, 7349, 7360, 7366
Attachment C: 10/30-day Deviation reports for S-8 (TV deviations 7271, 7343, 7349, 7360, 7366)
Attachment D: Site map of CT-1E and CT-7E locations and photographs of diaphragm pumps

Cc: Joseph Muehleck, Senior Air Quality Inspector, BAAQMD
Shikha Gupta, Solid Waste Programs Division Manager, Sunnyvale
Deepti Jain, Environmental Programs Manager, Sunnyvale

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

NOTICE OF VIOLATION No. A60929

ISSUED TO: City of Sunnyvale ☑P ☐G ☐N# A5905
ADDRESS: 301 Carl Road
CITY: Sunnyvale STATE: CA ZIP: 94089
PHONE: (408) 730-7791
☑ N# Mailing Address on F61

OCCURRENCE
NAME:
ADDRESS: ☑ Same As Above
CITY: ZIP
SOURCE: S# 8 NAME: Landfill with gas collection system
EMISSION PT: P# NAME:
DATE: 11/8/22 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 8 RULE 34 SECTION 301.1 CODE
☐ REG RULE SECTION CODE

Details: Less than continuous LGCS operation (TV Deviations 7271, 7343, 7349, 7360, 7366)

RECIPIENT NAME: Deepti Jain
TITLE: Environmental Programs Manager

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT X Deepti Jain

→ 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: J. Muehleck (issued via email) INSP # 858
DATE: 3/8/23 TIME: 1015 HRS ☑ MAILED

PLEASE PRESS HARD

Continued On Reverse

INSTRUCTIONS

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

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

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

ALL OTHER VIOLATIONS

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

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

	Table: Notice of Violation #A60929 - Summary of Title V Deviations					
	Date(s) of Occurrence	**TV Deviation #**	**Amount of Downtime (Hrs)**	**Root Cause**	**Rain (Inches)**	**Timeline Information**
1	11/8/22 - 11/9/22	7271	34.52	Chart recorder lost power due to a blown transformer. Heavy rains caused loss of flow due to condensate blockage at CT-1E.	1.91	Power restored to chart recorder but LFG flow not indicated; condensate due to heavy rains blocked gas flow. On 11/8, CT-1E and CT-7E pumps were inspected and appeared to be ok. A p-trap, connected to header was pumped down, still no flow. On 11/9, CT-1E was pumped down and flow restored.
2	12/31/22 - 1/2/23*	7343	26.43**	Heavy rains caused loss of flow due to condensate blockage at CT-1E.	5.38	on 1/1/23, several attempts were made to manually pump condensate and to start LFG flare. A different pump (diaphragm pump) placed in service at CT-1E. Flow restored. Pump contractor called on site to check all condensate pumps.
3	1/9/2023	7349	6.28**	Heavy rains caused loss of flow due to condensate blockage at CT-1E.	1.35	Perform inspection on pump and it appears the pumps in the condensate sumps are experiencing a vapor lock (no space to exhaust) due to the high water level in the trap. A different pump was used to manually pump condensate. Flow restored after continual pumping of condensate.
4	1/16/23 - 1/18/23	7360	59.01**	Heavy rains caused loss of flow due to condensate blockage at CT-7E.	1.07	Hired contractor to conduct camera inspection of pipes in several sections of the landfill. Found blockage at CT-7E. Inspected pumps and manually pumped and restored flow as needed. A new diaphragm pump was purchased on 1/12 (before this RCA event) but the pump was not received until 1/19 due to shipping delays.
5	1/19/2023	7366	7.7	Heavy rains caused loss of flow due to condensate blockage at CT-7E.	0.03**	On 1/19, new pump was installed at CT-7E. Flow restored after manually pumping condensate. Inspected and repaired pump.

Notes:

**RCA Form submittal notates start of breakdown on 12/31/22 at 22:50. Actual start of breakdown (loss of flow) was on 1/1/23 at approximately 0200.*

***Duration of landfill gas flare operation subtracted from reported downtime in 10 and 30 day reporting.*

****Previous day (1/18/23) rain 0.27 inches*

Rain data source: California Irrigation Management and Information System

Sunnyvale

SMaRT Station ®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

November 18, 2022

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08N18 (Breakdown Relief) and #08N19 (Monitor Excess Emission or Excursion). The subject incident involves a relatively short-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

Rainfall from November 7th through November 9th is believed to have contributed to a higher than usual amount of LFG condensate generation, which appears to have contributed to issues encountered with the transport of LFG through the pipe network. At 0145 a blown transformer caused loss of power to the LFG and mixed gas (MG) flow meters. Temporary power was supplied to the LFG and MG flow meters at 1322. Although the MG meter showed flow the LFG showed zero flow. It was assumed the LFG meter was not functioning when in fact, it was functioning but LFG flows were too low for the meter to record. At 0242, LFG flows to PGF

Sunnyvale

started to decline, as indicated by an increase of MG flow to PGF. At 1556, one of the two PGF engines was secured due to a decline in LFG flow. Efforts were made to reduce the excess condensate in the pipe network in two locations in the field, which were suspected of restricting gas flow. Unfortunately, the resulting flow of gas was not sufficient to sustain PGF. It was later apparent that condensate trap CT-1E was full of condensate and backing up in the pipe network, causing a restriction of LFG flow. CT-1E is located directly in front of the LFGF station, where all LFG flow merges and is then directed to either the PGF or LFGF. The pump inside CT-1E had issues with pumping the large amounts of condensate as fast as it was coming into the trap. On 11/9/22 at 0915 the LFG field isolation valve was closed to allow the condensate level to be drawn down at CT-1E. At 1254 the field isolation valve was opened and unsuccessful efforts were made to start the PGF due to poor gas quality. The decision was made to start the LFGF. After a few attempts to start the LFGF, it was successfully started at 1313. At 1433, the LFGF was secured and #2 PGF was started. At 1454, #2 PGF was identified as being unstable, so it was taken offline and #1 PGF was started. At 1513 both the PGFs were in service at their normal 600kw output, signaling the gas system was back to normal operating mode.

Based on this data and the fact that it had rained for several days, we believe it is unlikely that a significant release of LFG would have occurred during the downtime.

Sincerely,

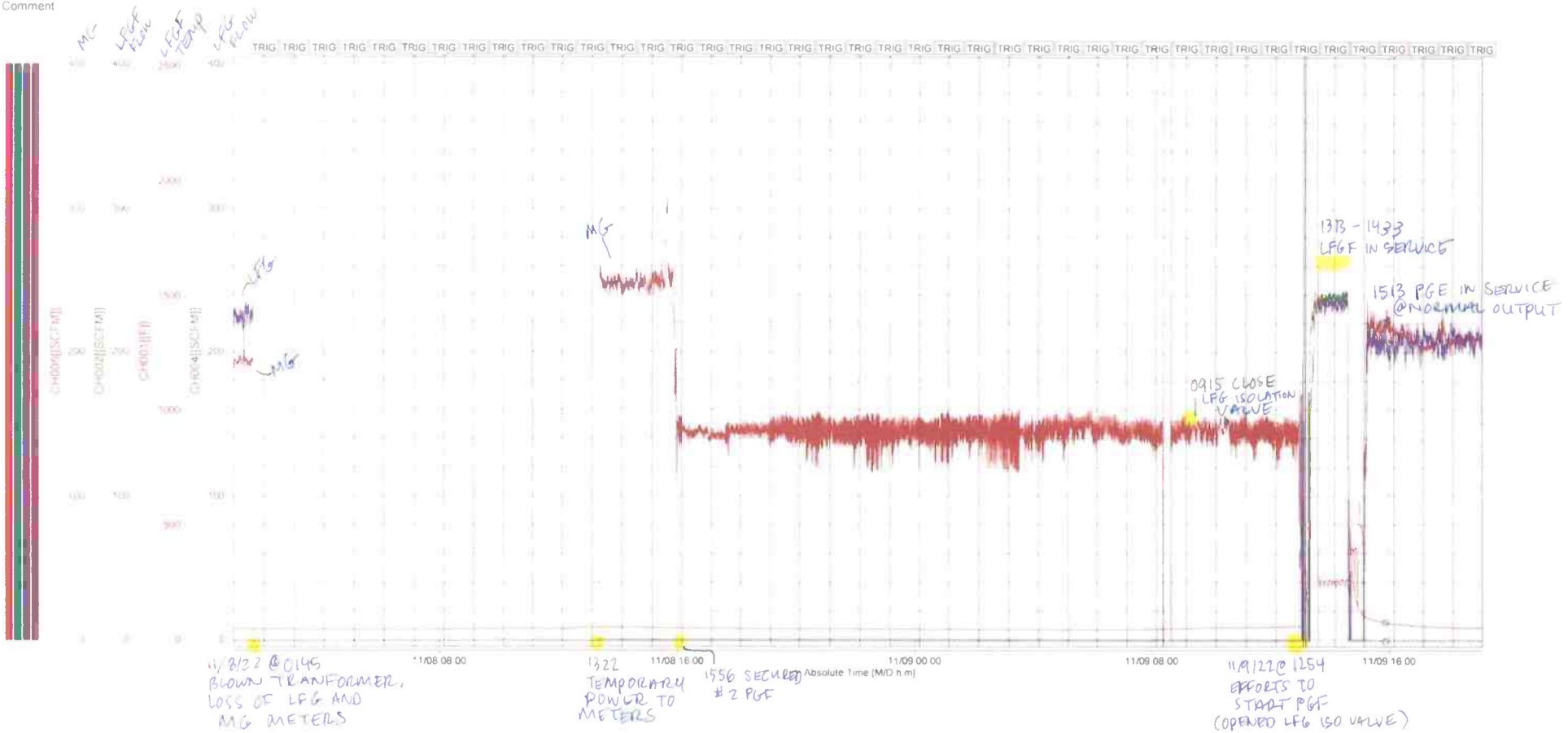
David Krueger

David Krueger
Solid Waste Programs Division Manager

File Message	
File Name	079606_221108_010954.DAD 079647_221109_180954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2022/11/08 01:09:54.000 - 2022/11/09 19:09:52.000
Comment	

Data Count	75600
Sampling Interval	2.000 sec
Start Time	2022/11/08 01:09:54.000
Stop Time	2022/11/09 19:09:52.000
Trigger Time	2022/11/09 19:09:52.000
Trigger No	75599
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]

11-8-22 TO 11-9-22 RCA # 08N18



1108 110922_10- and 30-day report

Final Audit Report 2022-11-19

Created:	2022-11-18
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6nLE4nzPIP7QPL7rXsGWJ7M8D9hweeV4

"1108 110922_10- and 30-day report" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
2022-11-18 - 7:32:45 PM GMT

Document emailed to David Krueger (dkrueger@sunnyvale.ca.gov) for signature
2022-11-18 - 7:33:07 PM GMT

Email viewed by David Krueger (dkrueger@sunnyvale.ca.gov)
2022-11-19 - 0:47:50 AM GMT

Document e-signed by David Krueger (dkrueger@sunnyvale.ca.gov)
Signature Date: 2022-11-19 - 0:48:15 AM GMT - Time Source: server

Agreement completed.
2022-11-19 - 0:48:15 AM GMT

Sunnyvale

SMaRT Station®
301 Carl Road
Sunnyvale, CA 94089
TDD/TYY 408-730-7501
sunnyvale.ca.gov

January 10, 2023

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08P76 (Breakdown Relief) and RCA #08P77 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08P76 (Breakdown Relief) and RCA #08P77 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From 12/31/2022-1/2/2023, we received 5.38" of rainfall (per California Irrigation Management Information System (CIMIS)), which contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network.
During this RCA reporting period, the total downtime of the LFGF was 32 hours and 6 minutes. It began at 2302 on 12/31/22 and ended at 0708 on 1/2/23. During this duration, there were multiple short durations when the LFG Flare (LFGF) was running.

Background Information:
On 12/31/22 at 1955, LFG flows to the Power Generation Facility (PGF) engines started to decline, and gas flow continued to drop through 1/1/23.

Deviation #7343

Sunnyvale

Furthermore, on 1/31/22, at 0200 due to the decreasing gas flow PGF #1shut down. Staff tried to pump out the LFG condensate line but were unable to keep up with the amount of condensate. Eventually, on 1/1/2023, at 1100, PGF#2 also went offline. Note that during this time period, the staff attempted to start the LFGF multiple times with little to no success. On 1/2/23, at 0708, the LFGF was back in service, with flow back to normal.

Based on this data, and the fact that it had rained for several days straight (5.38 inches during the three days of the RCA), we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Environmental Services Director

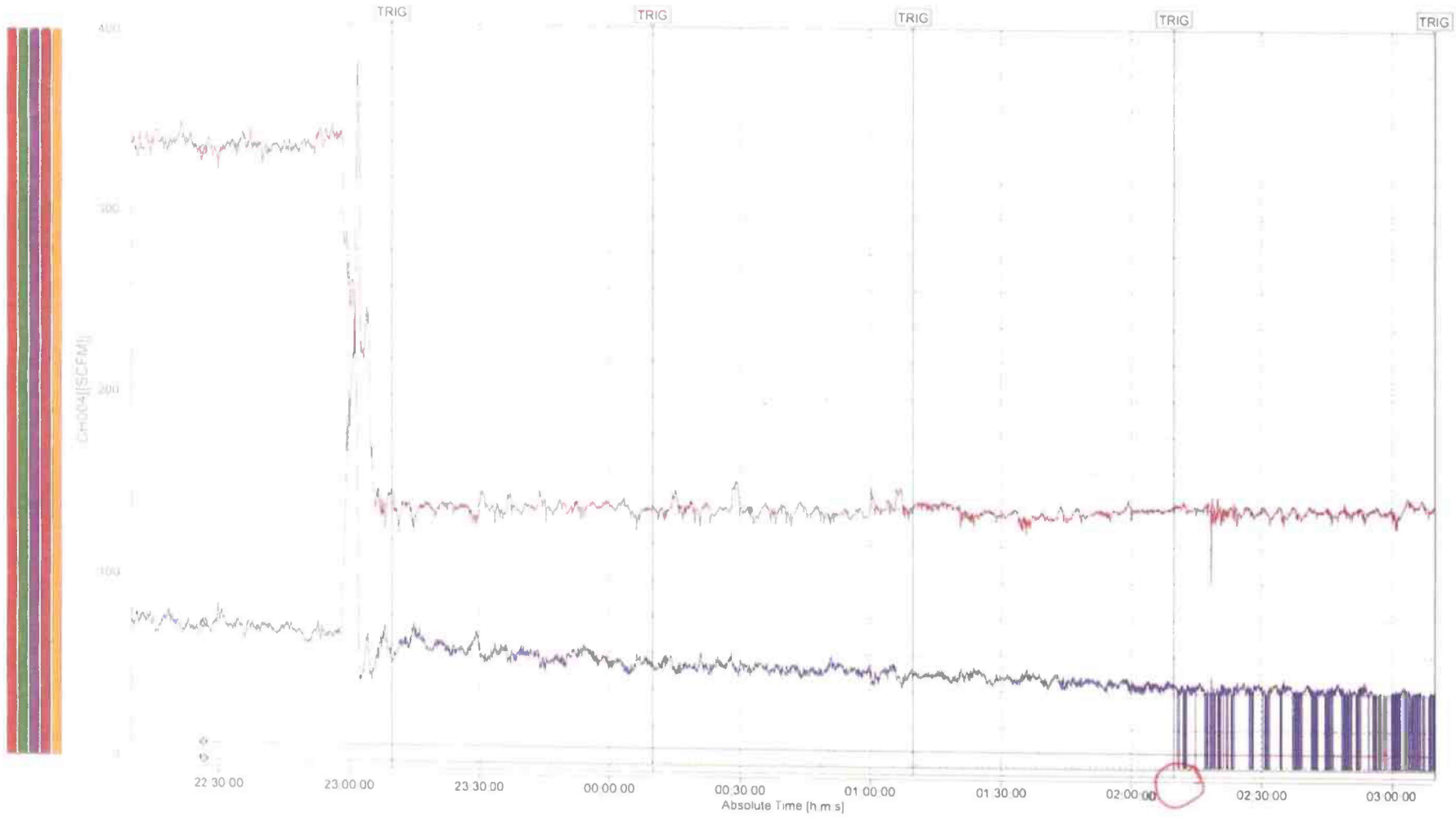
cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	
File Name	080899_221231_220954.DAD, ,080903_230101_020954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2022/12/31 22:09:54.000 - 2023/01/01 03:09:52.000
Comment	

12-31-22
1-1-23

Data Count	9000
Sampling Interval	2.000 sec
Start Time	2022/12/31 22:09:54.000
Stop Time	2023/01/01 03:09:52.000
Trigger Time	2023/01/01 03:09:52.000
Trigger No.	8999
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]



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Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/01 03:09:54.000 - 2023/01/01 11:09:52.000
Comment	

1-1-23

Data Count	14400
Sampling Interval	2.000 sec
Start Time	2023/01/01 03:09:54.000
Stop Time	2023/01/01 11:09:52.000
Trigger Time	2023/01/01 11:09:52.000
Trigger No	14399
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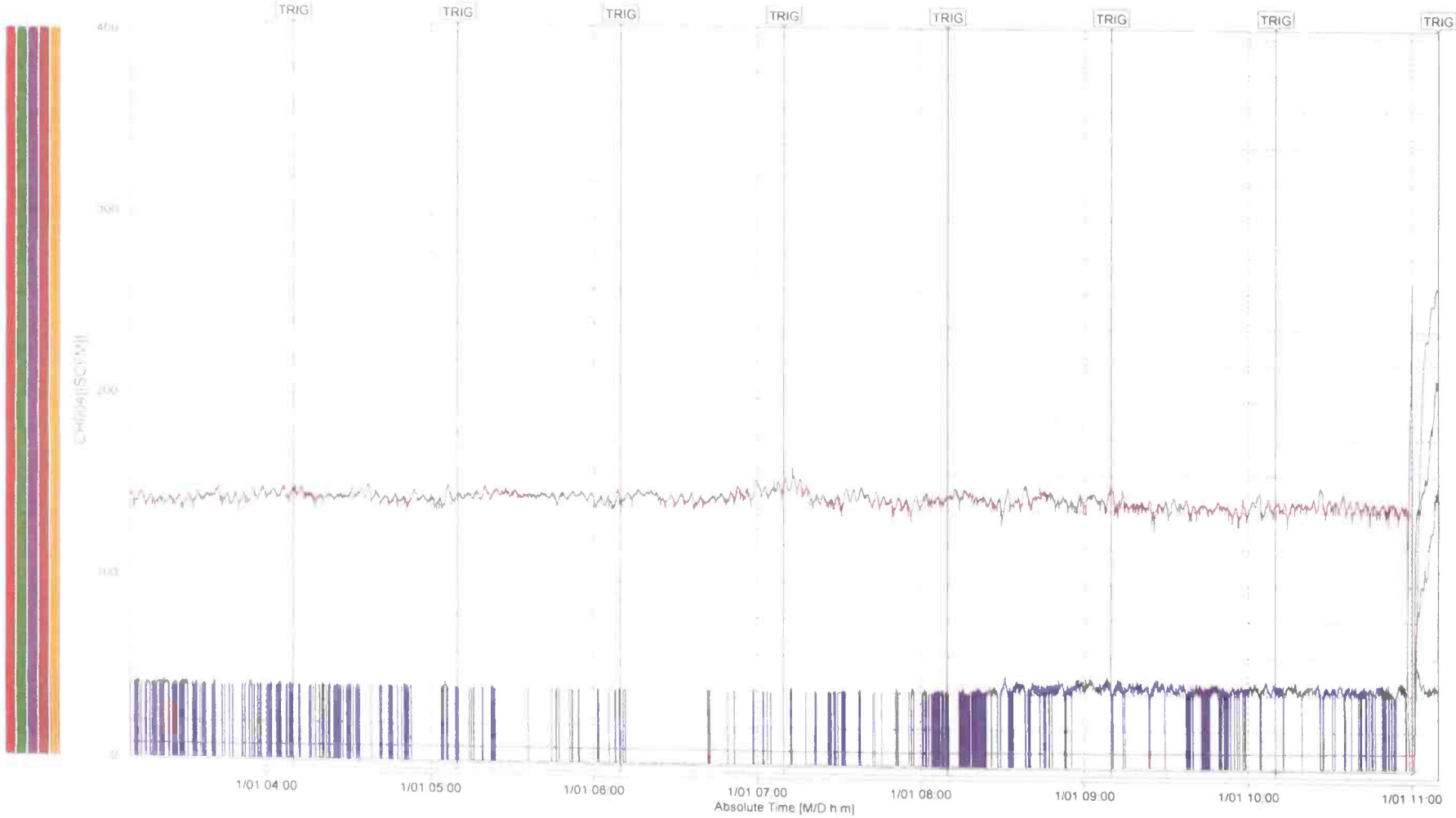
Stopped by	[Running]



File Message	
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Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/01 10:09:54.000 - 2023/01/01 12:09:52.000
Comment	

Data Count	3600
Sampling Interval	2.000 sec
Start Time	2023/01/01 10:09:54.000
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Trigger No.	3599
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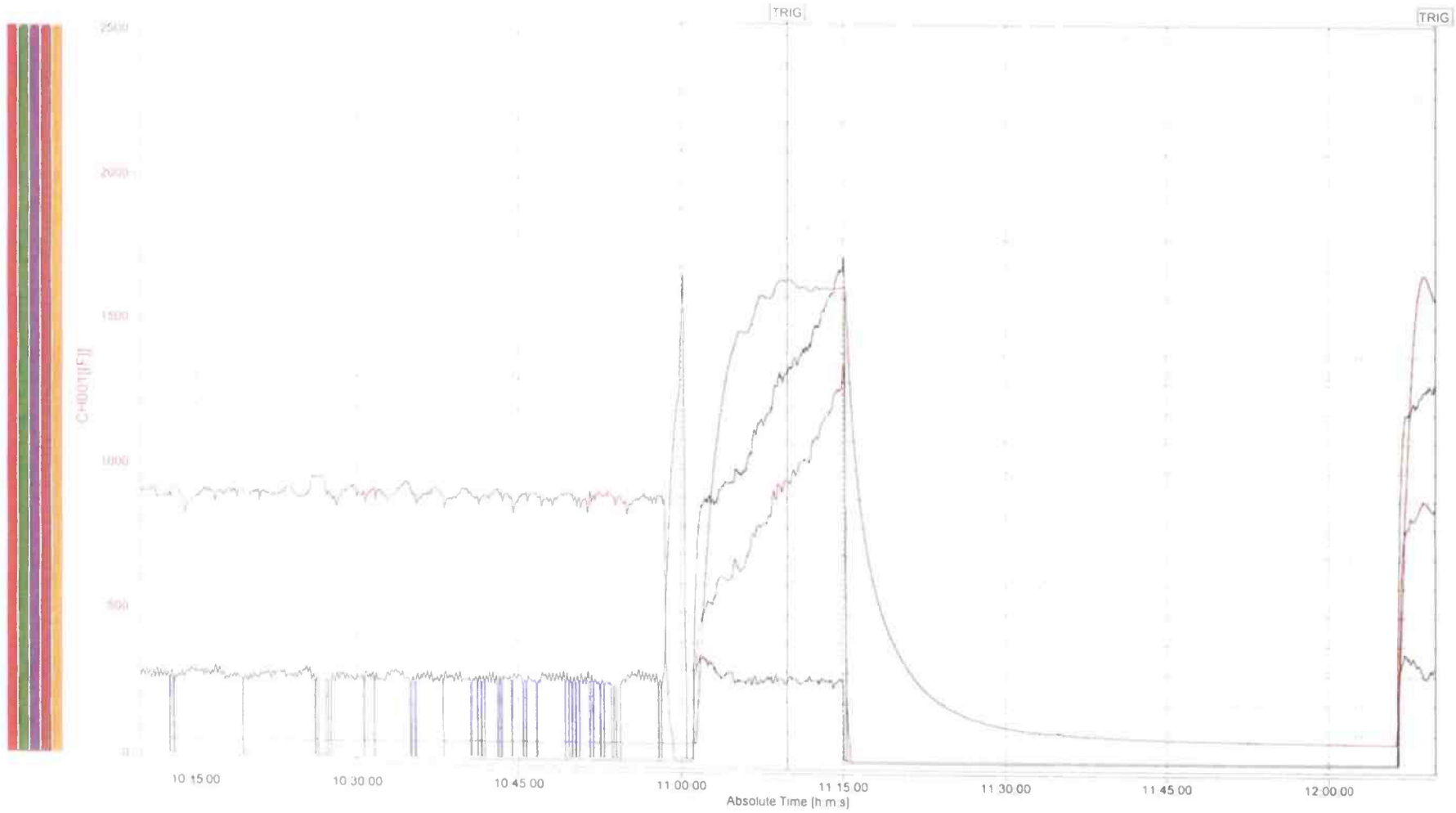
Stopped by	[Running]



File Message	
File Name	080912_230101_110954.DAD, ...080914_230101_130954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/01 11:09:54.000 - 2023/01/01 14:09:52.000
Comment	

Data Count	5400
Sampling Interval	2.000 sec
Start Time	2023/01/01 11:09:54.000
Stop Time	2023/01/01 14:09:52.000
Trigger Time	2023/01/01 14:09:52.000
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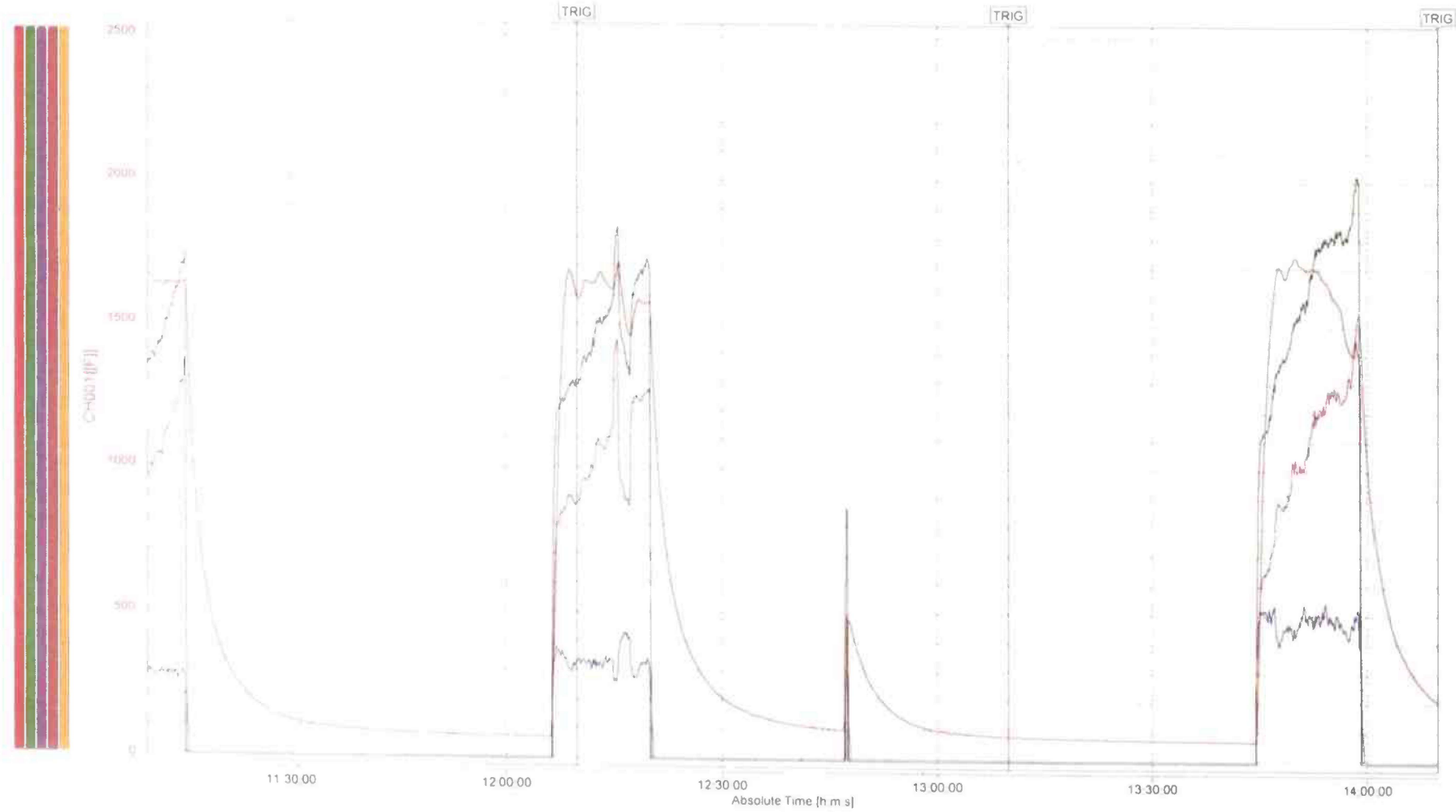
Stopped by	[Running]



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File Name	080915_230101_140954.DAD, ,080919_230101_180954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/01 14:09:54.000 - 2023/01/01 19:09:52.000
Comment	

Data Count	9000
Sampling Interval	2.000 sec
Start Time	2023/01/01 14:09:54.000
Stop Time	2023/01/01 19:09:52.000
Trigger Time	2023/01/01 19:09:52.000
Trigger No	8999
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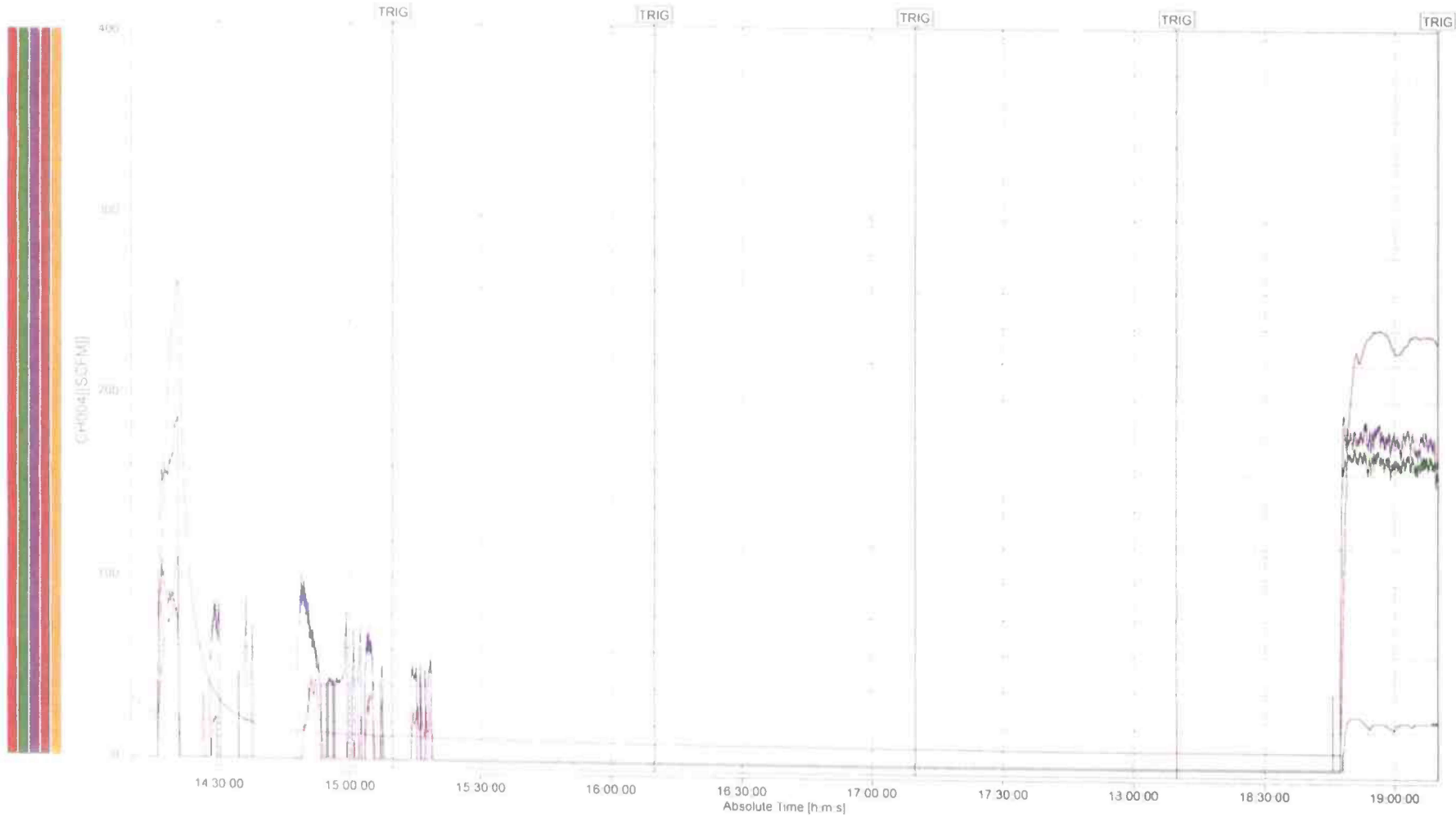
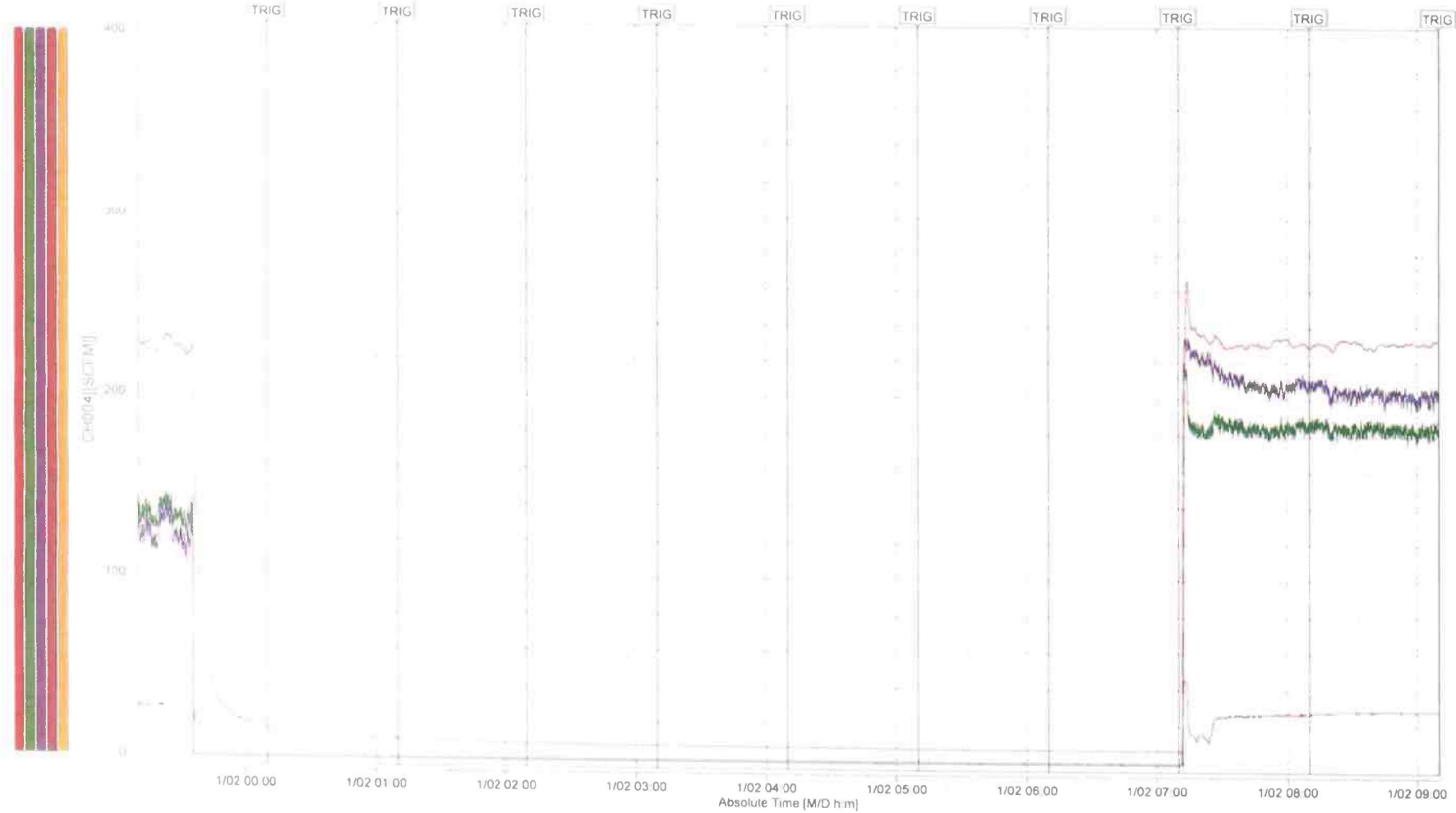
Started by	[Key In]
Stopped by	[Running]



File Message	
File Name	080924_230101_230954.DAD, ,080933_230102_080954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/01 23:09:54.000 - 2023/01/02 09:09:52.000
Comment	1-1 +0 1-2.

Data Count	18000
Sampling Interval	2.000 sec
Start Time	2023/01/01 23:09:54.000
Stop Time	2023/01/02 09:09:52.000
Trigger Time	2023/01/02 09:09:52.000
Trigger No.	17999
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]



BAAQMD -FacilityA5905 RCA08P76 -10- and 30-day Deviation Report

Final Audit Report 2023-01-10

Created:	2023-01-10
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA4QDAilygyyzzSz8ou4dT9jUp-T4YpV8g

"BAAQMD -FacilityA5905 RCA08P76 -10- and 30-day Deviation Report" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
2023-01-10 - 10:23:07 PM GMT

Document emailed to Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov) for signature
2023-01-10 - 10:23:58 PM GMT

Email viewed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
2023-01-10 - 10:58:07 PM GMT

Document e-signed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
Signature Date: 2023-01-10 - 10:58:17 PM GMT - Time Source: server

Agreement completed.
2023-01-10 - 10:58:17 PM GMT

January 13, 2023

Sunnyvale

SMaRT Station®
301 Carl Road
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TDD/TYY 408-730-7501
sunnyvale.ca.gov

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08P98 (Breakdown Relief) and RCA #08P99 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08P98 (Breakdown Relief) and RCA #08P99 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From 1/9/23 - 1/11/23, we received 2.03" of rainfall (per California Irrigation Management Information System (CIMIS)) which is believed to have contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/9/23 at 0918 LFG flow was lost to the #2 PGF (note that the #1 PGF is out of service for maintenance). The loss of landfill gas flow was attributed to a buildup of condensate in condensate trap CT-1E, which caused blockage of LFG flow, and resulted in the shutting down of the generator. During this time period, landfill staff pumped condensate in an effort to

Deviation # 7349

Sunnyvale

increase LFG flow, and the flow was resumed at 1502. At 1547, the LFGF was set up to switch over to the PGF, and at 1620 the PGF (one genset) was in service.

This RCA episode started at 0918 and ended at 1620 on 1/9/23, a total of 7 hours and 2 minutes. During this episode, there was a relatively short duration of approximately 45 minutes when the LFG Flare was running.

Based on the available rainfall data and the saturated landfill cover, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Environmental Services Director

cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	:
File Name	: 081101_230109_080954.DAD,...,081110_230109_170954.DAD
Device Type	: DX1000
Serial No.	: S5N408394
Time Correction	: None
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Dividing Condition	: Auto
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Math Ch.	: 0
Ext Ch.	: 0
Printed Group	: GROUP 1
Printed Range	: 2023/01/09 08:09:54.000 - 2023/01/09 18:09:52.000
Comment	:

Data Count	: 18000
Sampling Interval	: 2.000 sec
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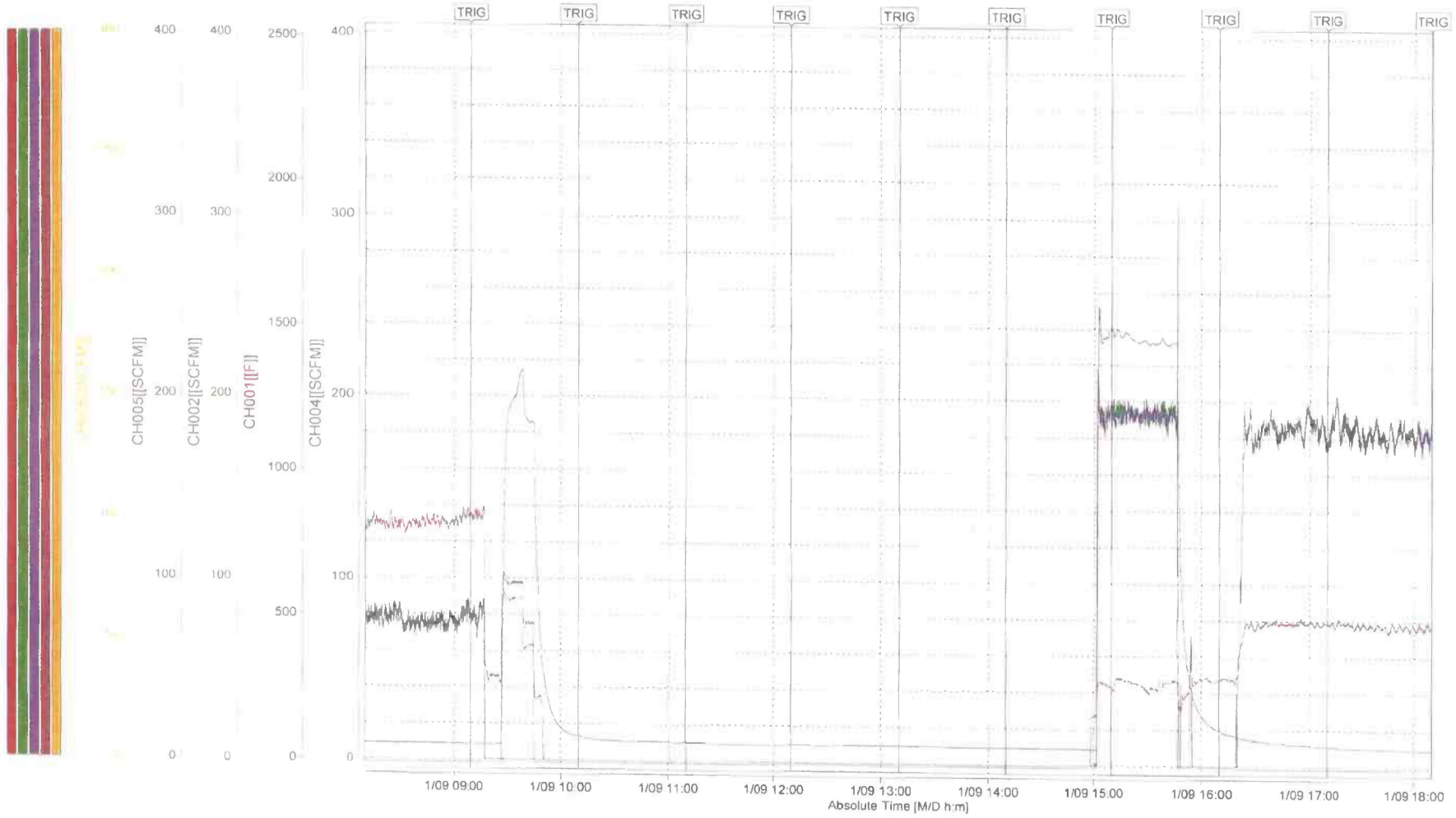
Stop Time	: 2023/01/09 18:09:52.000
Trigger Time	: 2023/01/09 18:09:52.000
Trigger No.	: 17999
Damage Check	: Not Damaged
Started by	: [Key In]
Stopped by	: [Running]



BAAQMD RCA report

Final Audit Report 2023-01-13

Created:	2023-01-13
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAnobDgeCeUBkB8flkt84s2cMQ1OfKAFZL

"BAAQMD RCA report" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
2023-01-13 - 8:43:19 PM GMT

Document emailed to Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov) for signature
2023-01-13 - 8:44:01 PM GMT

Email viewed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
2023-01-13 - 9:18:31 PM GMT

Document e-signed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
Signature Date: 2023-01-13 - 9:18:58 PM GMT - Time Source: server

Agreement completed.
2023-01-13 - 9:18:58 PM GMT

January 24, 2023

Sunnyvale

SMaRT Station ®
301 Carl Road
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TDD/TYY 408-730-7501
sunnyvale.ca.gov

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

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08Q12 (Breakdown Relief) and RCA #08Q13 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08Q12 (Breakdown Relief) and RCA #08Q13 (Monitor Excess Emission or Excursion). The subject incident involves a moderate-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

From1/16/23 - 1/18/23 we received 1.07" of rainfall (per California Irrigation Management Information System (CIMIS)) which is believed to have contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/16/23 at 00:39 the Power Generation Facility (PGF) shutdown due to loss of LFG flow. The loss of LFG flow was attributed to a buildup of condensate in the landfill gas collection system, which caused blockage of LFG flow, and resulted in the shutting down of the PGF. During this time period, landfill staff inspected condensate pumps and portions of the landfill gas collection system to try to determine where the blockage was located. Landfill staff hired a

Deviation# 7360

Sunnyvale

contractor to perform a camera inspection of the landfill pipes in several locations. It was determined there was a blockage in condensate trap CT-7E. Staff immediately pumped condensate at this location in an effort to increase LFG flow. At 1247 on 1/18/23, the LFGF was in service. At 1421, the LFGF was set up to switch over to the PGF, and at 1443 the PGF was in service.

This RCA episode started at 00:39 on 1/16/23 and ended at 1443 on 1/18/23, a total of 61.07 hours. During this episode, there was a duration of approximately 1.92 hours when the LFG Flare was running.

Based on the available rainfall data and the saturated landfill cover, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Karen Gissibl (Jan 24, 2023 13:41 PST)

Karen Gissibl
Environmental Programs Manager

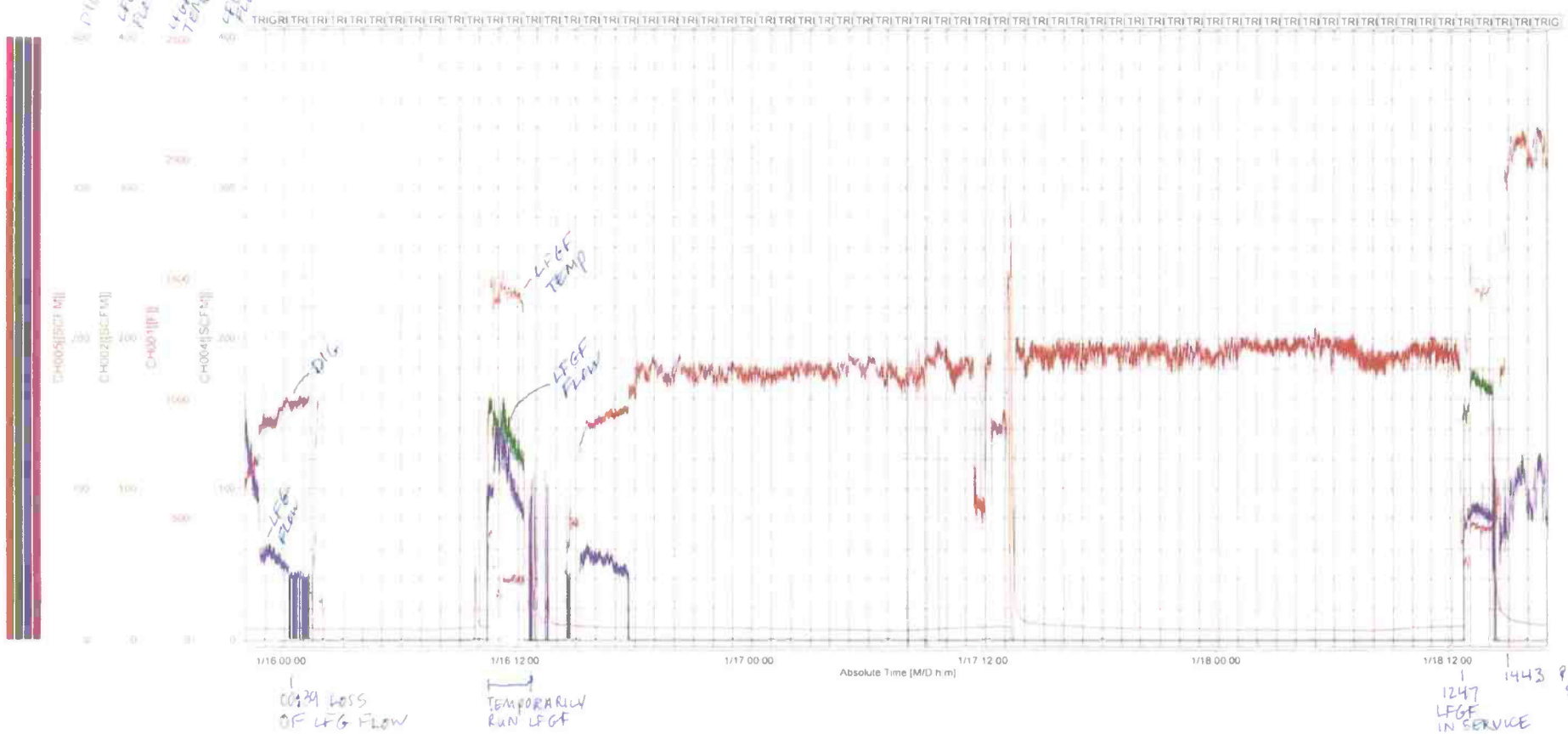
cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	
File Name	081259_230115_220954.DAD 081325_230118_160954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
Starting Condition	Auto
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/15 22:09:54.000 - 2023/01/18 17:09:52.000
Comment	

Data Count	120600
Sampling Interval	2.000 sec
Start Time	2023/01/15 22:09:54.000
Stop Time	2023/01/18 17:09:52.000
Trigger Time	2023/01/18 17:09:52.000
Trigger No	120599
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]

1/16/23 to 1/18/23 RCA # 08Q12 (BREAKDOWN RELIEF)
RCA # 08Q13 (MONITOR EXCESS EMISSION OR EXCURSION)



BAAQMD- RCA 08Q12 and 08Q13_10- and 30-day report (1)

Final Audit Report 2023-01-24

Created:	2023-01-24
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAeQKJ4CPRneEv_4kPF9tbSX07Lu7LWaUL

"BAAQMD- RCA 08Q12 and 08Q13_10- and 30-day report (1)" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
2023-01-24 - 8:48:00 PM GMT

Document emailed to Karen Gissibl (kgissibl@sunnyvale.ca.gov) for signature
2023-01-24 - 8:48:40 PM GMT

Email viewed by Karen Gissibl (kgissibl@sunnyvale.ca.gov)
2023-01-24 - 9:39:15 PM GMT

Document e-signed by Karen Gissibl (kgissibl@sunnyvale.ca.gov)
Signature Date: 2023-01-24 - 9:41:10 PM GMT - Time Source: server

Agreement completed.
2023-01-24 - 9:41:10 PM GMT

January 27, 2023

Sunnyvale

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TDD/TYY 408-730-7501
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Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: 10-day/30-day Deviation Report for S-8 City of Sunnyvale Sanitary Landfill, Facility #A5905 - RCA #08Q22 (Breakdown Relief) and RCA #08Q23 (Monitor Excess Emission or Excursion)

To whom it may concern,

This Deviation Report is submitted in compliance with Provision I.F of the Title V-Major Facility Review Permit for Plant #A5905, which states that, *"...all instances of non-compliance with permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions."* This report is intended to serve as the 10-day and 30-day Deviation Report, and the 30-day RCA report requirements for RCA #08Q22 (Breakdown Relief) and RCA #08Q23 (Monitor Excess Emission or Excursion). The subject incident involves a relatively short-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

Large quantities of rain were received at the landfill site for the month of January, 8.24" of rainfall (per California Irrigation Management and Information System (CIMIS)), which contributed to a higher than usual amount of landfill gas (LFG) condensate generation. As a result, we encountered issues with the transport of LFG through the pipe network. We are continuing to investigate the higher than usual volume of condensate and the frequency of blockages in the piping system.

On 1/19/23 at 0238 there was a loss of LFG flow. The loss of LFG flow was attributed to a buildup of condensate in the landfill gas collection system, which caused blockage of LFG flow, and resulted in the shutting down of the GCCS. The #1 PGF continued to operate on mixed gas (MG), a combination of digester gas and air blended natural gas. During this time period,

Deviation # 7366

Sunnyvale

landfill staff inspected condensate pumps and areas of the landfill gas collection system to determine where the blockage was located. It was determined there was a blockage in condensate trap CT-7E. Staff immediately pumped condensate at this location in an effort to increase LFG flow. Staff replaced the pump in CT-7E with a new one. At 1020, there was sufficient LFG flow available to send to the #1 PGF. At 1140, the #2 PGF was placed in service and both engines were operating at normal output.

This RCA episode started at 0238 and ended at 1020 on 1/19/23, a total of 7.7 hours.

Based on the available rainfall data, we believe it is highly unlikely that a significant release of LFG through the landfill cover would have occurred during this downtime.

Sincerely,

Karen Gissibl (Jan 27, 2023 09:08 PST)

Karen Gissibl
Environmental Programs Manager

cc: Joe Muehleck (BAAQMD), email

Attachment: Flow Chart

File Message	
File Name	081334_230119_010954.DAD, ..,081344_230119_110954.DAD
Device Type	DX1000
Serial No	S5N408394
Time Correction	None
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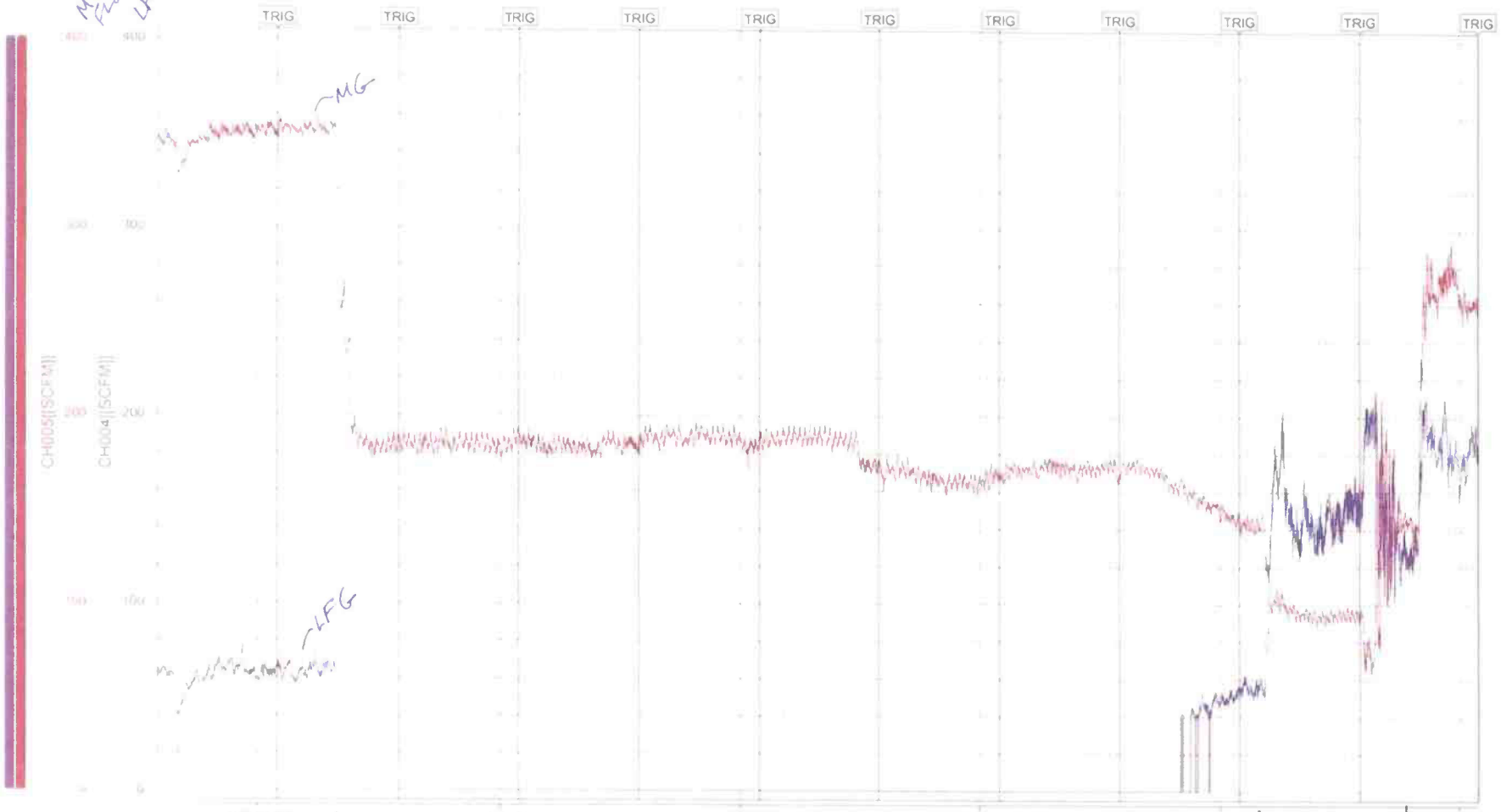
Dividing Condition	Auto
Meas Ch	6
Math Ch	0
Ext Ch	0
Printed Group	GROUP 1
Printed Range	2023/01/19 01:09:54.000 - 2023/01/19 12:09:52.000
Comment	

Data Count	19800
Sampling Interval	2.000 sec
Start Time	2023/01/19 01:09:54.000
Stop Time	2023/01/19 12:09:52.000
Trigger Time	2023/01/19 12:09:52.000
Trigger No	19799
Damage Check	Not Damaged
Started by	[Key In]
Stopped by	[Running]

MG (MIXED GAS) FLOW
LFG FLOW

1/19/23 RCA # 08022 08023



0238 LOSS OF LFG FLOW

1020 LFG FLOW TO #1 P&F

1140 BOTH P&F's IN SERVICE

BAAQMD- RCA 08Q22 and 08Q23_10- and 30-day report1 (1)

Final Audit Report 2023-01-27

Created:	2023-01-27
By:	McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA-YH7_MH3_uCULZAb3JJfwFkuGTDVevMA

"BAAQMD- RCA 08Q22 and 08Q23_10- and 30-day report1 (1)" History

Document created by McKendra Lafferty (MLafferty@sunnyvale.ca.gov)
2023-01-27 - 4:52:28 PM GMT

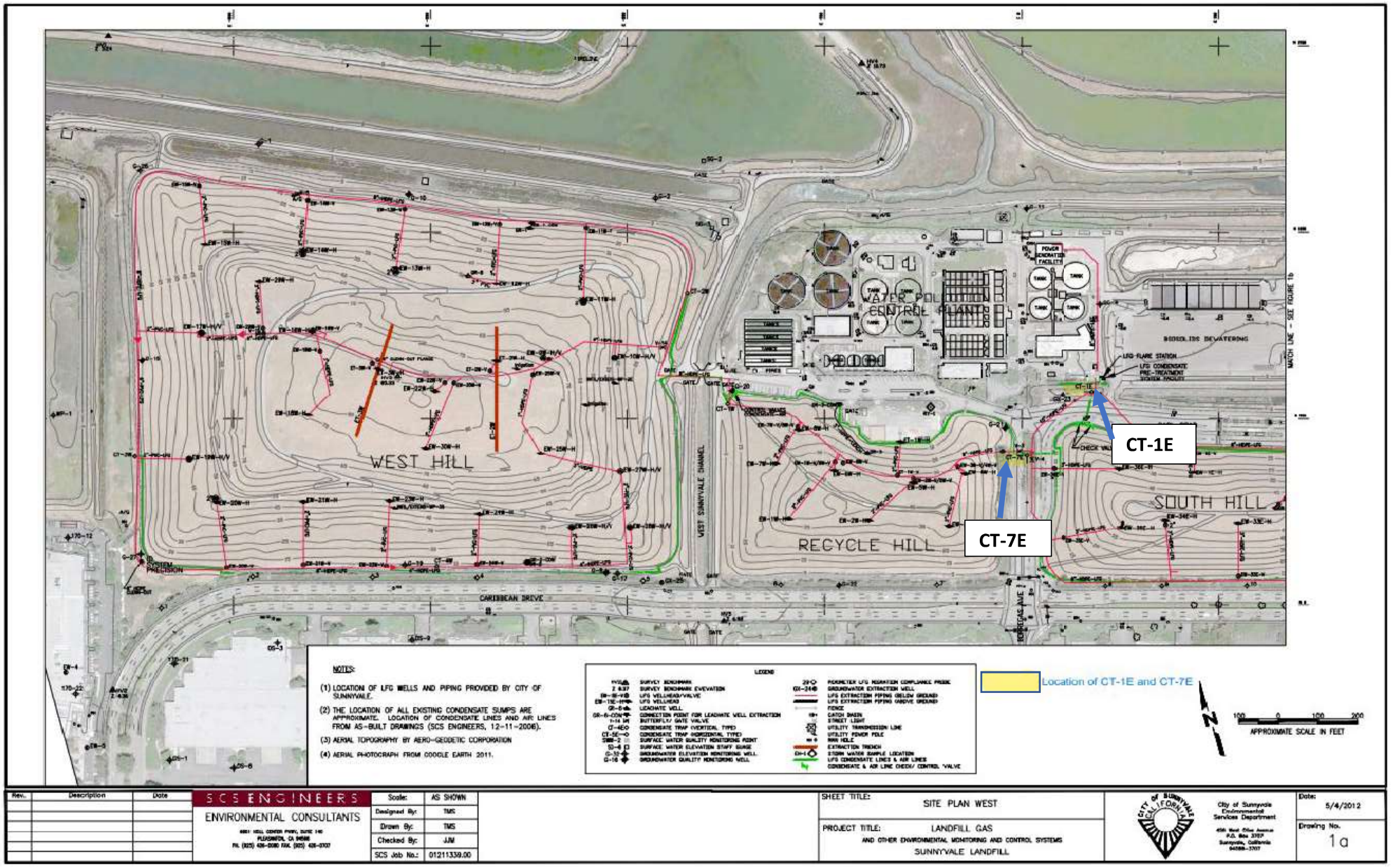
Document emailed to Karen Gissibl (kgissibl@sunnyvale.ca.gov) for signature
2023-01-27 - 4:53:22 PM GMT

Email viewed by Karen Gissibl (kgissibl@sunnyvale.ca.gov)
2023-01-27 - 5:04:43 PM GMT

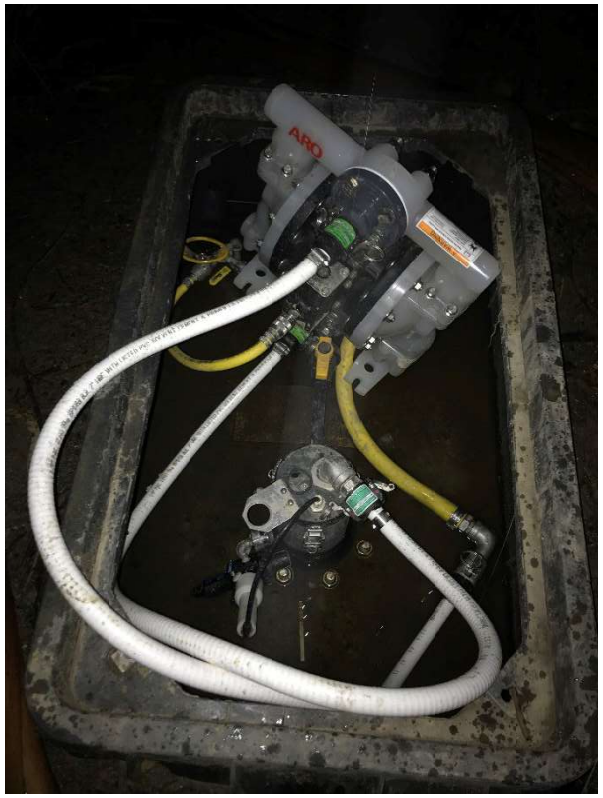
Document e-signed by Karen Gissibl (kgissibl@sunnyvale.ca.gov)
Signature Date: 2023-01-27 - 5:08:36 PM GMT - Time Source: server

Agreement completed.
2023-01-27 - 5:08:36 PM GMT

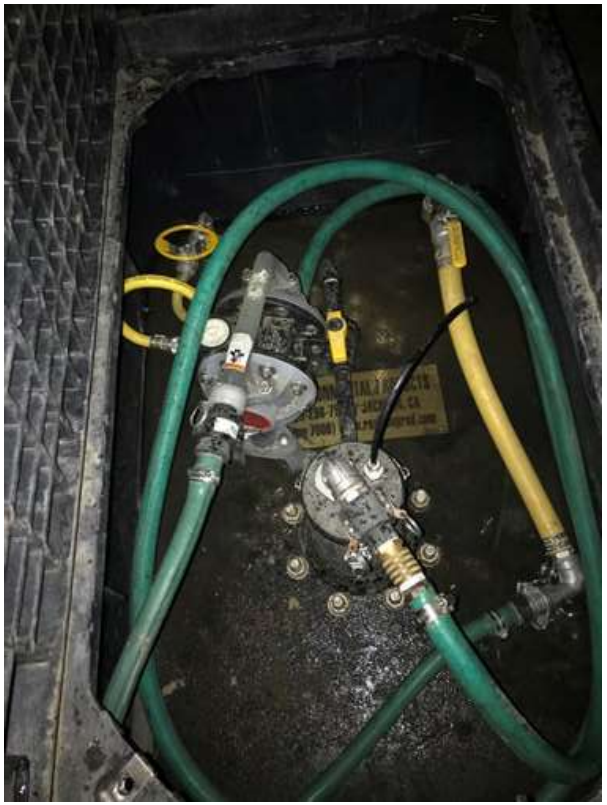
Attachment D - CT-1E and CT-7E location map and photos of the new pumps



Attachment D - CT-1E and CT-7E location map and photos of the new pumps



New CT-7E Condensate Trap



New CT-1E Condensate Trap