TV Tracking #: 378

1. ☐ RECEIVED IN ENFORCEMENT: 01/27/2022

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

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

Prepared for:

Sunnyvale

City of Sunnyvale
Environmental Services Department
456 West Olive Avenue
PO Box 3707
Sunnyvale, CA 94088-3707

For Submittal to:

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

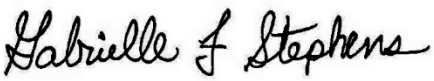
SCS ENGINEERS

01200220.07 Task 59 | January 2022

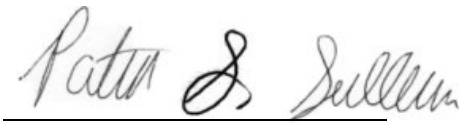
3843 Brickway Boulevard, Suite 208
Santa Rosa, CA 95403
707-546-9461

This submittal consisting of the Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report, the Title V Semi-Annual Monitoring Report, and the Title V Annual Compliance Certification for the Sunnyvale Landfill in Sunnyvale, California, dated January 2022, was prepared and reviewed by the following:

Anne Liu
Staff Professional
SCS ENGINEERS



Gabrielle Fourie Stephens
Senior Project Manager
SCS ENGINEERS



Patrick S. Sullivan, REA, CPP, BCES
Senior Vice President
SCS ENGINEERS

Table of Contents

Section Page

Tables

Appendices

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 July 1, 2021 through December 31, 2021 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 six occasions for a total elapsed time of 3.23 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, no GCCS downtime occurred due to WPCP maintenance.

Four of the six downtime events involved the shutdown of the ECS or of the entire GCCS, were deemed by the City to meet the Rule 8-34-113 exemption criteria for downtime for maintenance and inspection. These downtime events, totaling 1.4 hours, are summarized in **Table 1** (attached).

In addition, it is the City's understanding that two downtime events, which were unplanned shutdowns, did not meet the District's Rule 8-34-113 exemption criteria, and the City submitted Reportable Compliance Activity (RCA) Notification Forms, requesting Breakdown relief for these occurrences.

The first event occurred on July 1, 2021 from 14:08 to 14:58. The BAAQMD assigned Breakdown Relief ID 08A31 and the Monitor Excess Emission ID 08A32 for this event. On July 1, 2021, the flare unexpectedly shutdown. Earlier the same morning, a herd of goats was delivered to the Recycle Hill of the landfill, along with a shepherd and equipment to set up an electric fence to contain the herd, and protect the GCCS. While assessing the Recycle Hill's GCCS, following the unexpected shutdown, WPCP staff observed an as-yet unprotected GCCS well with the flex pipe completely disconnected from the GCCS' lateral. WPCP staff immediately reconnected the flex hose from the well to the lateral and tightened the clamp and contacted WPCP staff inside the WPCP to re-start the flare. The LFG Flare was back in service at 14:58, with a resulting downtime of 50 minutes (0.83 hours).

The second event occurred on October 8, 2021 from 09:10 to 10:10. The BAAQMD assigned Breakdown Relief ID 08C26 and the Monitor Excess Emission ID 08C27 for this event. On October 8, 2021, the uninterruptable power supply (UPS) for the control panel had shut down, and the UPS was

alarming with the overload code. The local Human-Machine Interface (HMI) message indicated that no software was loaded. WPCP staff checked the control room and the LFG Flare HMI and it still had all indications. Operations and maintenance (O&M) staff indicated that the LFG Flare should be able to light since the indications were there. O&M staff reset the flare and the LFG Flare restarted at 10:10, with a resulting downtime of 60 minutes (1 hour).

City Staff previously submitted RCA forms for these events, as well as the 10-day/30-day Title V deviation reports, which are included in the Title V Annual Compliance Certification provided as Appendix D.

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, however, neither the flare nor the PGF has been operated without LFG to date.

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 3.23 hours, and all downtime was allowable under Rule 8-34-113 except for the two incidents mentioned above which totaled 1.83 hours. Total GCCS downtime for the calendar year 2021 was approximately 3.23 hours, well within the Rule limit of 240 hours per calendar year, as there was no GCCS downtime for the first half of 2021.

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.

During the reporting period, one extraction well, EW-24E-w, was taken offline for approximately 1.13 hours for repairs, as the wellhead coupling and pipe was replaced.

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 were three gaps during the reporting period.

The first gap occurred on October 12, 2021 from 07:35 to 08:40, for a total duration of 1.08 hours due to electrical upgrades to the Auxillary Pump Station/Motor Control Circuit. The second gap occurred on October 14, 2021 from 08:00 to 08:36, for a duration of 0.6 hours, due to LFG flow meter calibration and maintenance. The third gap occurred on November 12, 2021 from 00:00 to 00:30, for a total duration of 30 minutes. Upon investigation, it appears that a lose wire likely caused the recorder interruption. The City maintains a backup system that records the flare's temperature and flow and the backup data confirmed the flare was offline during these gaps. Per District Rule 1-523.1, no District notification is required for periods of inoperation of parametric monitors of less than 24 hours. Monitoring data from the video-graphic recorder and the OPTO are available for inspection at the site.

3.2 COMPONENT LEAK QUARTERLY MONITORING

3.2.1 Third Quarter 2021 Monitoring

The Landfill GCCS components and the PGF were both tested on August 10, 2021 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 a Flame Ionization Detector (FID), 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 2021 third quarter monitoring event can be found in **Appendix B**.

3.2.2 Fourth Quarter 2021 Monitoring

The Landfill GCCS components and the PGF were both tested on October 27, 2021, 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 FID, 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 2021 fourth 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 July 30, August 30, September 30, October 28, November 29, and December 21, 2021. During the reporting period, the observations during these monthly monitoring events indicated the landfill surface was in good condition. In the event visual evidence suggested 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 no deposits made 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 Regulations (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 July 1, 2021 through December 31, 2021 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**.

SECTION III. ANNUAL TITLE V COMPLIANCE CERTIFICATION

A Title V Annual Compliance Certification has been prepared for the annual period specified in the Title V permit. The annual certification period for this report extends from January 1, 2021 to December 31, 2021.

As specified in 40 CFR Part 70, the compliance certification shall include all of the following:

- The identification of each federally-enforceable term or condition of the permit that is the basis of the certification;

- The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; and

- The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent.

The full Compliance Certification is provided as **Appendix D**.

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)

2021 Reporting Year (July 1, 2021 - December 31, 2021)

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
10/12/21			x	Connecting temporary generator power for PG&E tie-in to new facility.	07:35	08:15	0.67	239.33
10/12/21			x	LFGF back to normal power.	19:36	19:45	0.15	239.18
11/15/21			x	Connecting temporary generator power for switchgear testing.	09:51	10:17	0.43	238.75
11/17/21			x	Connecting back to normal power after testing.	13:33	13:42	0.15	238.60
						Total Time Off-Line		**1.40**

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.

Appendix A – GCCS Drawings

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

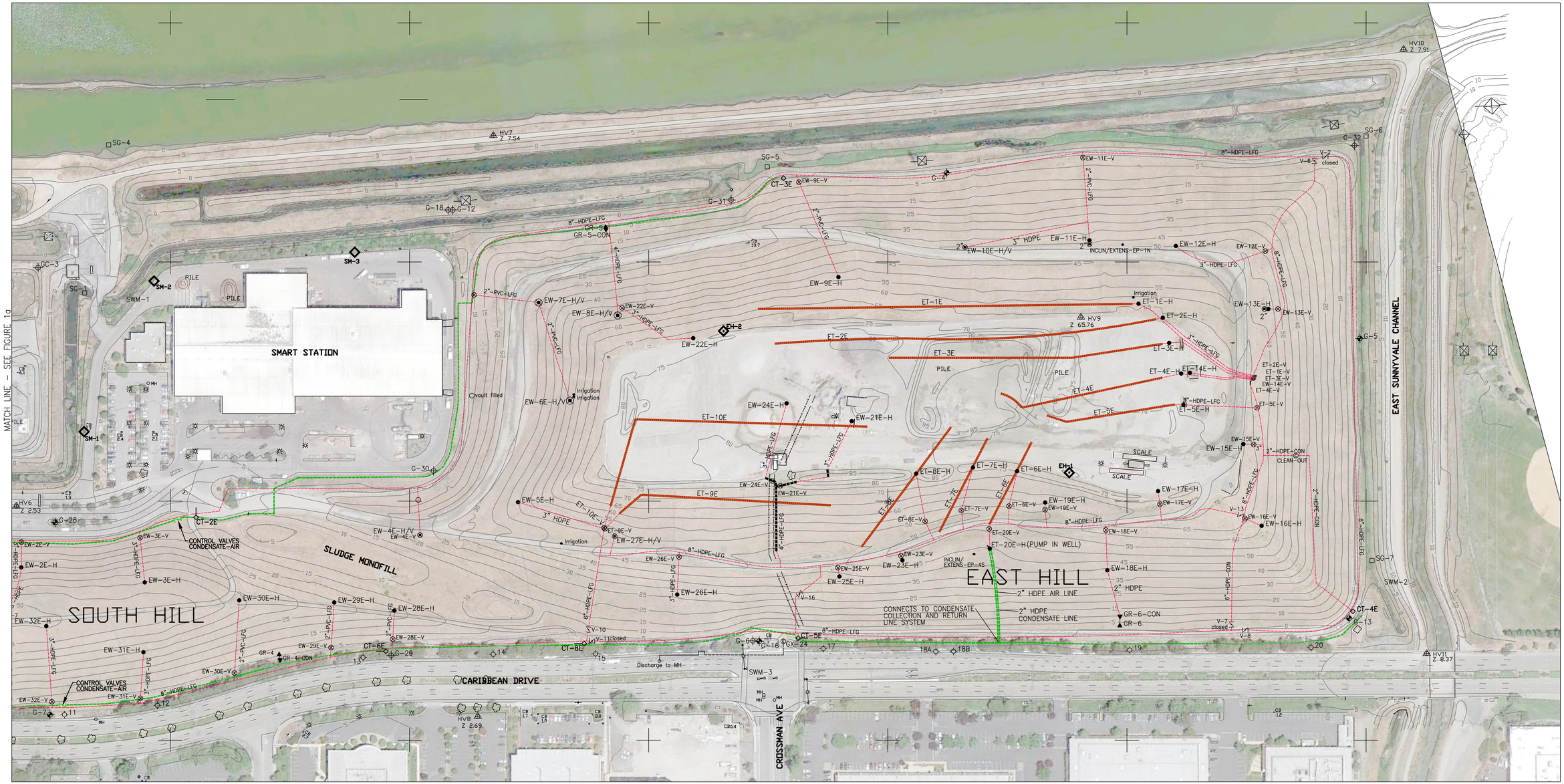
PROJECT TITLE: LANDFILL GAS
AND OTHER ENVIRONMENTAL MONITORING AND CONTROL SYSTEMS
SUNNYVALE LANDFILL

CITY OF SUNNYVALE CALIFORNIA

City of Sunnyvale
Environmental
Services Department
456 West Olive Avenue
P.O. Box 3707
Sunnyvale, California
94088-3707

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		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		CONDENSATE & AIR LINE CHECK/ CONTROL VALVE
29	PERIMETER LFG MIGRATION COMPLIANCE PROBE		
GX-24	GROUNDWATER EXTRACTION WELL		

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 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

October 5, 2021
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: Third Quarter 2021 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 third quarter of 2021 (July through September) 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 August 10, 2021, 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 fourth quarter 2021.

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 August 10, 2021, 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 August 10, 2021, 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 December 2021.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test dates 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. Please note that going forward this work and reporting will be overseen by Steve Harquail.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Arthur E Jones Jr
DSW Region Manager/VP
SCS Field Services

cc: Silviana Ruiz
Cameron Kostigen Mumper

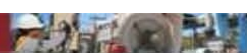
Third Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: 3 nwn
Instrument: TVA-2020
Calibration: 11-3-2020

East Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	2.0	3.0	
2E	2.0	2.0	
3E	2.0	2.0	
4E	2.0	2.0	
5E	2.0	3.0	
6E	2.5	3.0	
7E	3.0	3.0	
8E	3.0	2.0	
9E	3.0	3.0	
10E	3.0	3.0	



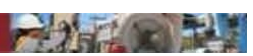
Third Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: 3 nwn
Instrument: TVA-2020
Calibration: 11-3-2020

East Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	3.0	3.0	
2E	3.0	3.0	
3E	3.0	3.0	
4E	3.0	3.0	
5E	2.0	3.0	
6E	2.0	3.0	
7E	2.0	3.0	
8E	2.0	3.0	
9E	3.0	3.0	
10E	3.0	3.0	
11E	3.0	3.0	
12E	3.0	3.0	
13E	3.0	2.0	
14E	3.0	3.0	
15E	3.0	3.0	
16E	3.0	2.2	
17E	3.0	2.0	
18E	2.0	2.0	
19E	2.0	2.0	
20E	2.0	2.0	
21E	2.0	2.0	
22E	2.0	2.0	



Third Quarter 2021
City of Sunnyale - Component Emissions Testing

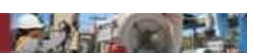
Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: 3 nwn
Instrument: TVA-2020
Calibration: 11-3-2020

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
23E	2.0	2.0	
24E	2.0	2.0	
25E	2.0	2.0	
26E	2.0	2.0	
27E	2.0	2.0	
28E	2.0	2.0	
29E	2.0	2.0	
30E	2.0	2.0	
31E	3.0	2.0	
32E	3.0	2.0	
33E	3.0	2.0	
34E	3.0	2.0	
35E	3.0	2.0	
36E	3.0	2.0	

West Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	2.3	2.2	
2W	2.2	2.1	
3W	2.3	2.2	



Third Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: 3 nwn
Instrument: TVA-2020
Calibration: 11-3-2020

West Hill Verticals

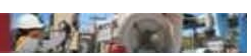
Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	2.0	2.0	
2W	3.0	2.0	
3W	3.0	2.0	
4W	3.0	2.0	
5W	3.0	2.0	
6W	3.0	2.0	
7W	3.0	2.0	
8W	3.0	2.0	
9W	3.0	2.0	
10W	2.0	2.0	
11W	2.0	2.0	
12W	2.0	2.0	
13W	2.0	2.0	
14W	2.0	2.0	
15W	2.0	2.0	
16W	2.0	2.0	
17W	2.0	2.0	
18W	2.0	2.0	
19W	2.0	2.0	
20W	2.0	2.0	
21W	3.0	2.0	

Third Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: 3 nwn
Instrument: TVA-2020
Calibration: 11-3-2020

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
22W	2.0	2.0	
23W	3.0	2.0	
24W	3.0	2.0	
25W	3.0	2.0	
26W	2.0	2.0	
27W	2.0	2.0	
28W	2.0	2.0	
29W	2.0	2.0	
30W	2.0	2.0	



October 5, 2021
File No. 07218240.00

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

Subject: Third Quarter 2021 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 third quarter 2021 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 August 10, 2021, 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 fourth quarter 2021.

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 August 10, 2021, 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 manufacture 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 August 10, 2021, 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 December 2021.

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. Please note that going forward this work and reporting will be overseen by Steve Harquail.

Sincerely,

Rebecca L. Lucero
Project Coordinator
SCS Field Services

Arthur E Jones J
DSW Region Manager/VP
SCS Field Services

cc William Theyskens
Melody Tovar
Bryan Berdeen

Third Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Don Gibson
Date: 08-10-21
Weather: Sunny
ppm = parts per million
NR = Not Required

Temperature: 70
Barometric Pressure: 29
Wind Speed/Direction: N 2
Instrument: TVA-2020
Calibration: 08-10-21

Flare Station

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Blowers	8		
Valves	4		
Piping	3		
Flanges	2		

Power Generation Facility

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

January 6, 2022
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: Fourth Quarter 2021 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 fourth quarter of 2021 (October through December) 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 October 27, 2021, 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 first quarter 2022.

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 October 27, 2021, 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 October 27, 2021, 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 March 2022.

STANDARD PROVISIONS

This report addresses conditions of the subject site on the test dates 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

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Liam McGinn/Michael Morris
Date: 10-27-21
Weather: Clear
ppm = parts per million
NR = Not Required

Temperature: 56
Barometric Pressure: 29.9
Wind Speed/Direction: 4 N
Instrument: TVA-2020
Calibration: 4-13-21

East Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	1.0	2.0	
2E	2.0	2.0	
3E	2.0	1.0	
4E	4.0	3.0	
5E	1.0	4.0	
6E	2.0	6.0	
7E	34.0	3.0	
8E	2.0	4.0	
9E	1.0	1.0	

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Liam McGinn/Michael Morris
Date: 10-27-21
Weather: Clear
ppm = parts per million
NR = Not Required

Temperature: 56
Barometric Pressure: 29.9
Wind Speed/Direction: 4 N
Instrument: TVA-2020
Calibration: 4-13-21

East Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1E	3.0	4.0	
2E	5.0	1.0	
3E	3.0	2.0	
4E	5.0	4.0	
5E	3.0	3.0	
6E	2.0	3.0	
7E	3.0	2.0	
8E	4.0	4.0	
9E	5.0	3.0	
10E	2.0	1.0	
11E	3.0	3.0	
12E	4.0	3.0	
13E	2.0	3.0	
14E	1.0	3.0	
15E	1.0	1.0	
16E	2.0	1.0	
17E	4.0	2.0	
18E	5.0	1.0	
19E	2.0	4.0	
20E	1.0	2.0	
21E	2.0	1.0	

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician:	**Liam McGinn/Michael Morris**	**Temperature:**	**56**
Date:	**10-27-21**	**Barometric Pressure:**	**29.9**
Weather:	**Clear**	**Wind Speed/Direction:**	**4 N**
ppm = parts per million		**Instrument:**	**TVA-2020**
NR = Not Required		**Calibration:**	**4-13-21**

22E	2.0	2.0	

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician:	**Liam McGinn/Michael Morris**	**Temperature:**	**56**
Date:	**10-27-21**	**Barometric Pressure:**	**29.9**
Weather:	**Clear**	**Wind Speed/Direction:**	**4 N**
ppm = parts per million		**Instrument:**	**TVA-2020**
NR = Not Required		**Calibration:**	**4-13-21**

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
23E	1.0	4.0	
24E	2.0	1.0	
25E	3.0	5.0	
26E	1.0	4.0	
27E	2.0	2.0	
28E	2.0	2.0	
29E	2.0	1.0	
30E	2.0	3.0	
31E	3.0	4.0	
32E	3.0	3.0	
33E	5.0	5.0	
34E	1.0	2.0	
35E	4.0	1.0	
36E	5.0	2.0	

West Hill Horizontals

Monitoring Location (ET's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	1.0	1.0	
2W	2.0	4.0	
3W	3.0	2.0	

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Liam McGinn/Michael Morris
Date: 10-27-21
Weather: Clear
ppm = parts per million
NR = Not Required

Temperature: 56
Barometric Pressure: 29.9
Wind Speed/Direction: 4 N
Instrument: TVA-2020
Calibration: 4-13-21

West Hill Verticals

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
1W	3.0	1.0	
2W	4.0	4.0	
3W	1.0	2.0	
4W	2.0	2.0	
5W	4.0	3.0	
6W	3.0	1.0	
7W	1.0	1.0	
8W	3.0	2.0	
9W	4.0	3.0	
10W	2.0	1.0	
11W	4.0	1.0	
12W	1.0	1.0	
13W	5.0	3.0	
14W	3.0	2.0	
15W	2.0	1.0	
16W	1.0	3.0	
17W	4.0	3.0	
18W	5.0	1.0	
19W	2.0	4.0	
20W	1.0	3.0	
21W	3.0	3.0	

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician:	**Liam McGinn/Michael Morris**	**Temperature:**	**56**
Date:	**10-27-21**	**Barometric Pressure:**	**29.9**
Weather:	**Clear**	**Wind Speed/Direction:**	**4 N**
ppm = parts per million		**Instrument:**	**TVA-2020**
NR = Not Required		**Calibration:**	**4-13-21**

Monitoring Location (EW's)	Control Valve Vault (ppm)	Wellhead Vault (ppm)	Retesting Results
22W	2.0	3.0	
23W	3.0	2.0	
24W	1.0	1.0	
25W	2.0	1.0	
26W	3.0	4.0	
27W	2.0	3.0	
28W	1.0	2.0	
29W	1.0	3.0	
30W	1.0	2.0	

January 6, 2022
File No. 07218240.00

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

Subject: Fourth Quarter 2021 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 fourth quarter 2021 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 October 27, 2021, 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 first quarter 2022.

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 October 27, 2021, 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 manufacture 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 October 27, 2021, 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 March 2022.

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

Fourth Quarter 2021
City of Sunnyale - Component Emissions Testing

Technician: Liam McGinn
Date: 10-27-21
Weather: Clear
ppm = parts per million
NR = Not Required

Temperature: 55
Barometric Pressure: 29.9
Wind Speed/Direction: 4 N
Instrument: TVA-2020
Calibration: 10-27-21

Flare Station

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Blowers	2		
Valves	1		
Piping	3		
Flanges	3		

Power Generation Facility

Monitoring Location	Testing Results (ppm)	Retesting Results (ppm)	Comments
Compressor	1		
Valves	1		
Piping	2		
Flanges	1		
Blowers	1		
Engines	2		

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 07/1/2021 through 12/31/2021*	

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

Jan 26, 2022
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
REPORTING PERIOD: *from 07/1/2021 through 12/31/2021*	

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
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*

The changes noted above have not yet been incorporated into the Title V permit. Compliance with monitoring requirements associated with the PTOs for S-10 and S-11 have been reviewed, and both sources were in compliance throughout the reporting period.

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-8 and A-9 Landfill Gas Flares	**Reporting Period:** *from 07/01/2021 through 12/31/2021*

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 1-523.2	≤ 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
Gas Flow	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 Periodic/ Daily	BAAQMD 8-34-301 and 301.1; and, BAAQMD Condition #11586, Parts 2-5	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system	Intermittent	Two unplanned shutdowns of the Gas Collection and Control System occurred on July 1, 2021 with a downtime of 50 minutes and on October 8, 2021 with a downtime of 1 hour. RCA Notification Forms were submitted by the City for this occurrence, and breakdown relief was requested. Documentation associated with these events are attached to the Compliance Certification Report included in this submittal (Appendix D).

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-8 and A-9 Landfill Gas Flares	**Reporting Period:** *from 07/01/2021 through 12/31/2021*

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-8 and A-9 Landfill Gas Flares	**Reporting Period:** *from 07/01/2021 through 12/31/2021*

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-8 and A-9 Landfill Gas Flares	**Reporting Period:** *from 07/01/2021 through 12/31/2021*

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	A-8 Shall Be Permanently Shut Down Within 90 days of Start-up of A-9	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-3 Wood Shredder and A-5 Baghouse Dust Collector	**Reporting Period:** from *07/01/2021 through 12/31/2021*

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-4 CONVEYOR AND S-5 WOOD CHIP PROCESSING HOPPERS	**Reporting Period:** from *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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	$\leq$ 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	$\leq$ 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 *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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 *07/01/2021 through 12/31/2021*

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

ATTACHMENTS

RCA Downtime Documentation

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	1444 Borregas Avenue	Source #	8
Reported by	William Theyskens	Phone #	408 921-9317
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	7/1/21,14:08	Clear Time	7/1/21, 14:58
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [ ] ▶Parametric [ ] ▶PRD [X] ▶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 [ ] ▶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:

Shutdown of the PGF Facility was performed to allow work related to the heat recovery system, so the LFG Flare was being run. At 14:08 the LFG Flare shut down and could not be re-started. Staff worked diligently to find the source of the problem, and even went out to the landfill to see if there was a problem with the gas collection and control system. They discovered that one of the gas well's flex hose had been separated from a lateral by a goat, or goats, that were brought on-site earlier today, allowing a significant amount of air to enter the lateral and then the LFG header which was located in close proximity to the LFG Flare across the street. The poor gas quality resulted in the Flare's inability to run. The goats are on-site to graze the landfill to minimize the likelihood of a fire.

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

City Hall
456 West Olive Avenue
Sunnyvale, CA 94088-3707
TDD/TYY 408-730-7501
sunnyvale.ca.gov

July 9, 2021

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

Attn: Title V Reports

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 the 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 #08A31 (Breakdown Relief) and RCA # 08A32 (Monitor Excess Emission or Excursion). The subject incident involves a short-term shutdown of the Sunnyvale Landfill (Source S-8) gas collection and control system (GCCS).

Incident Description

Overaa, a contractor for the Water Pollution Control Plant, requested securing of both Power Generation Facilities (PGFs) on 7/1/21 to tie in the heat recovery system to the heat loop. Both PGFs had to be secured so the heat loop could be drained. The LFG Flare was to be in service continuously during the period of PGF downtime. The PGF shutdown was to be started with enough time to allow the heat loop to be drained by 0500 to allow Overaa to start their work.

The LFG Flare unexpectedly shutdown at 14:08. Repeated attempts to start the LFG Flare resulted in almost immediate shutdown. Not knowing the cause of the LFG Flare shutdown, and of the repeated failure of the LFG Flare to restart, WPCP staff considered whether the issue was with the blowers, or with the LFG Flare itself. WPCP staff considered changing the thermocouple via software. Upon checking the gas quality, a recent pre-shutdown reading of 6.2% oxygen was observed.

This high oxygen reading prompted WPCP staff to do a check of the adjacent landfill gas collection and control system (GCCS).

Earlier this same morning, a herd of goats was delivered to the Recycle Hill of the landfill, along with a shepherd and equipment to set up an electric fence to contain the herd, and protect the GCCS, on the Recycle Hill. While assessing the Recycle Hill's GCCS, WPCP staff observed an as-yet unprotected GCCS well with the flex pipe completely disconnected from the GCCS' lateral. WPCP staff immediately reconnected the flex hose from the well to the lateral and tightened the clamp and contacted the WPCP staff at the WPCP to tell then to re-start the flare. The LFGF was back in service at 14:58.

As the LFG Flare downtime started at 1408 and ended at 1458, a total of only 50 minutes (0.83 hours), it is highly unlikely that the GCCS would have gone from a negative to a positive pressure in that amount of time.

Please note that the City of Sunnyvale has been using goats and/or sheep for the grazing of the landfill for close to 20 years in efforts to minimize the hazard of fire, and to simultaneously reduce air pollution, and this is the first mishap of its kind at our landfill. Our direction to the herders is to protect vulnerable wells with fencing. Unfortunately, the herder was unable to protect all the most vulnerable wells on the recently raised GCCS system on the Recycle Hill prior to the goats' release onto the Recycle Hill. Going forward, we will request that grazing be initiated on a less vulnerable area, and that the more vulnerable wells are all protected prior to the goats being herded into a new grazing area.

If you have questions regarding this report, please contact William Theyskens at (408) 921-9317, or me at (408) 730-7711.

Sincerely,

David Krueger

David Krueger
Solid Waste Programs Division Manager

cc: Joe Muehleck (BAAQMD), email

Attachments:
LFG Flare Table
Photographs

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 #	8
Reported by	William Theyskens	Phone #	408 730-7718
Indicated Excess		Fax #	
Allowable Limit		Averaging Time	
Start Time/Date	0910, 10/8/21	Clear Time	1010, 10/8/21
Monitor/device type(s)	[ ] ▶CEM [ ] ▶GLM [X] ▶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) [x] ▶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: PGF Shutdown on undervoltage/underfrequency reverse power trips at breakers at 0910. AB SCADA had no indication for LFGF equipment; checked LFGF locally - did not auto-ignite; LFGF control panel had no power; UPS alarming w/overload code. Maintenance reset UPS and restored control panel power. Tried to reset local panel but LFGF did not light, tried to run blowers in Test but they would not come on; checked PGF control room LFGF HMI and it still had all indications, so LFGF should light. Hit alarm reset button on LFGF contol panel and the LFGF started at 10:10; ran for about 30 minutes. Started #1 PGF at 1041 and secured LFGF. Both PGFs restored to normal 600 KW and secured from power shedding.

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

City Hall
456 West Olive Avenue
Sunnyvale, CA 94088-3707
TDD/TYY 408-730-7501
sunnyvale.ca.gov

October 18, 2021

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

Attn: Title V Reports

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

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 the 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 # 08C26 (Breakdown Relief) and RCA # 08C27 (Monitor Excess Emission or Excursion). The subject incident involves a short-term shutdown of the Source S-8, Sunnyvale Landfill, gas collection and control system (GCCS).

Incident Description

Preparations for significant activities were underway at the Water Pollution Control Plant (WPCP) which will also impact the Sunnyvale Landfill Gas Flare Station in significant ways. Some of these activities were related to preparations for an upcoming power shutdown for the PG&E new facility connection, and tie-in to existing 4160 Volt switchgear.

On 10/8/21 the Water Pollution Control Plant (WPCP) Power Generation Facility (PGF) containing two Gensets, was in service. At 0910, the PGF (both gensets) unexpectedly shut down. At the same time, the Landfill Gas (LFG) blowers located in the LFG Flare Station lost power and shutdown. WPCP staff tried to put the LFGF and blowers back in service but discovered there was no power to the LFGF Control Panel. Further investigation indicated that the uninterruptable Power Supply (UPS) for the Control Panel had shut down, and the UPS was alarming with the overload code. Staff hit the reset

button on the LFGF Control panel, but it did not restart. Without this source of power, the blowers and LFGF could not be activated. When staff succeeded in restoring power to the Control Panel, they hit the reset button, but it still did not start. The local Human-Machine Interface (HMI) message indicated that no software was loaded. WPCP staff checked the control room and the LFGF HMI and it still had all indications. Maintenance indicated that the LFGF should be able to light since the indications were there, so staff hit the alarm reset button on the control panel again and this time the LFGF started at 1010. Staff started the #1 Genset (PGF) at 10:41 and secured the LFGF. Both PGF were then restored to normal 600 KW and secured from power shedding.

It is believed likely that the UPS failed on an overload fault, likely from a power spike or something of that nature, and that this protected the Control Panel from significant damage. Note that this is a safety mechanism designed to prevent damage to equipment from power surges.

On 10/8/21 GCCS downtime started on 10/8/21 at 0910, and the LFGF was restored on 10/8/21 at 1010, a total of only 60 minutes (1 hour). City staff believes it is highly unlikely that the GCCS would have gone from a negative to a positive pressure in that amount of time.

With respect to the BAAQMD direction to submit a second RCA form for this same event, with box # 2 "Monitor Excess Emission or Excursion" checked, we have complied with that direction. Please note that Landfill staff were preparing to set up for monitoring of the surface of the landfill with a gas probe for emissions, but the LFGF flare was lit prior to there being time to do so.

If you have questions regarding this report, please contact William Theyskens at (408) 730-7718 or me at (408) 730-7785.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Director, Environmental Services Department

cc: Joe Muehleck (BAAQMD), email

Attachments:
Flow Charts and Logs

100821 Combined 10 and 30 Day Deviation Report Fnl

Final Audit Report 2021-10-18

Created:	2021-10-18
By:	Jody Badiei (jbadiei@sunnyvale.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA1IUF8IDtthiBDaeecBqFIYi3cK0kQH_p

"100821 Combined 10 and 30 Day Deviation Report Fnl" History

Document created by Jody Badiei (jbadiei@sunnyvale.ca.gov)
2021-10-18 - 9:09:11 PM GMT- IP address: 198.94.221.66

Document emailed to Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov) for signature
2021-10-18 - 9:09:45 PM GMT

Email viewed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
2021-10-18 - 9:13:34 PM GMT- IP address: 198.94.221.66

Document e-signed by Ramana Chinnakotla (rchinnakotla@sunnyvale.ca.gov)
Signature Date: 2021-10-18 - 9:22:11 PM GMT - Time Source: server- IP address: 198.94.221.66

Agreement completed.
2021-10-18 - 9:22:11 PM GMT

Adobe Sign

Appendix D – Title V Annual Compliance Certification

City of Sunnyvale Landfill and SMaRT Station®

TITLE V ANNUAL COMPLIANCE CERTIFICATION

SITE: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**FACILITY ID#:** A5905
REPORTING PERIOD: *from 01/1/2021 through 12/31/2021*	

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

Jan 26, 2022
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

U.S. EPA Region IX
Air – 3
75 Hawthorne Street
San Francisco, CA 94105

City of Sunnyvale Landfill and SMaRT Station®

TITLE V ANNUAL COMPLIANCE CERTIFICATION

SITE: City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department	**FACILITY ID#:** A5905
REPORTING PERIOD: *from 01/1/2021 through 12/31/2021*	

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
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*

The changes noted above have not yet been incorporated into the Title V permit. Compliance with monitoring requirements associated with the PTOs for S-10 and S-11 have been reviewed, and both sources were in compliance throughout the reporting period.

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 1	**General Provisions and Definitions (5/4/11)**			
1-301	Public Nuisance	Y	Continuous	N/A
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	Continuous	N/A
1-523.1	Parametric monitor periods of inoperation >24 hours	Y	Continuous	N/A
1-523.2	Limit on duration of inoperation	Y	Continuous	N/A
1-523.3	Reports of Violations	Y	Continuous	N/A
1-523.4	Records	Y	Continuous	N/A
1-523.5	Maintenance and calibration	Y	Continuous	N/A
SIP Regulation 1	**General Provisions and Definitions (6/28/99)**			
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	Continuous	N/A
1-523.3	Reports of Violations	Y	Continuous	N/A
BAAQMD Regulation 6 Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation (applies to flare only)	Y	Continuous	N/A
6-1-305	Visible Particles (applies to flare only)	Y	Continuous	N/A
6-1-310	Particle Weight Limitation (applies to flare only)	Y	Continuous	N/A
6-1-401	Appearance of Emissions (applies to flare only)	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation (applies to flare only)	Y	Continuous	N/A
6-305	Visible Particles (applies to flare only)	Y	Continuous	N/A
6-310	Particle Weight Limitation (applies to flare only)	Y	Continuous	N/A
6-401	Appearance of Emissions (applies to flare only)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 8, Rule 34	**Organic Compounds – Solid Waste Disposal Sites**			
8-34-113	Limited Exemption, Inspection and Maintenance	Y	Continuous	N/A
8-34-113.1	Emission Minimization Requirement	Y	Continuous	N/A
8-34-113.2	Shutdown Time Limitation	Y	Continuous	N/A
8-34-113.3	Recordkeeping Requirement	Y	Continuous	N/A
8-34-117	Limited Exemption, Gas Collection System Components	Y	Continuous	N/A
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	Y	Continuous	N/A
8-34-117.2	New Components are Described in Collection and Control System Design Plan	Y	Continuous	N/A
8-34-117.3	Meet Section 8-34-118 Requirements	Y	Continuous	N/A
8-34-117.4	Limits on Number of Wells Shutdown	Y	Continuous	N/A
8-34-117.5	Shutdown Duration Limit	Y	Continuous	N/A
8-34-117.6	Well Disconnection Records	Y	Continuous	N/A
8-34-118	Limited Exemption, Construction Activities	Y	Continuous	N/A
8-34-118.1	Construction Plan	Y	Continuous	N/A
8-34-118.2	Activity is Required to Maintain Compliance with this Rule	Y	Continuous	N/A
8-34-118.3	Required or Approved by Other Enforcement Agencies	Y	Continuous	N/A
8-34-118.4	Emission Minimization Requirement	Y	Continuous	N/A
8-34-118.5	Excavated Refuse Requirements	Y	Continuous	N/A
8-34-118.6	Covering Requirements for Exposed Refuse	Y	Continuous	N/A
8-34-118.7	Installation Time Limit	Y	Continuous	N/A
8-34-118.8	Capping Required for New Components	Y	Continuous	N/A
8-34-118.9	Construction Activity Records	Y	Continuous	N/A
8-34-119	Limited Exemption, Inactive or Closed Landfills	Y	Continuous	N/A
8-34-120	Limited Exemption, Small Design Capacity Landfills	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	Continuous	N/A
8-34-301.1	Continuous Operation	Y	Intermittent	Two unplanned shutdowns of the Gas Collection and Control System occurred on July 1, 2021 with a downtime of 50 minutes and on October 8, 2021 with a downtime of 1 hour. RCA Notification Forms were submitted by the City for this occurrence, and breakdown relief was requested. RCA Notification Forms were submitted by the City for each occurrence, and breakdown relief was requested. Documentation associated with these events can be found in Attachment D.
8-34-301.2	Collection and Control Systems Leak Limitations	Y	Continuous	N/A
8-34-301.3	Limits for Enclosed Flares (applies to flare only)	Y	Continuous	N/A
8-34-303	Landfill Surface Requirements	Y	Continuous	N/A
8-34-304	Gas Collection System Installation Requirements	Y	Continuous	N/A
8-34-304.1	Based on Waste Age For Inactive or Closed Areas	Y	Continuous	N/A
8-34-304.3	Based on Amount of Decomposable Waste Accepted	Y	Continuous	N/A
8-34-304.4	Based on NMOC Emission Rate	Y	Continuous	N/A
8-34-404	Less Than Continuous Operation Petition	Y	Continuous	N/A
8-34-405	Design Capacity Reports	Y	Continuous	N/A
8-34-408	Collection and Control System Design Plans	Y	Continuous	N/A
8-34-408.2	Sites With Existing Collection and Control Systems	Y	Continuous	N/A
8-34-411	Annual Report	Y	Continuous	N/A
8-34-415	Repair Schedule for Surface Leak Excesses	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
8-34-415.1	Records of Excesses	Y	Continuous	N/A
8-34-415.2	Corrective Action	Y	Continuous	N/A
8-34-415.3	Re-monitor Excess Location Within 10 Days	Y	Continuous	N/A
8-34-415.4	Re-monitor Excess Location Within 1 Month	Y	Continuous	N/A
8-34-415.5	If No More Excesses, No Further Re-Monitoring	Y	Continuous	N/A
8-34-415.6	Additional Corrective Action	Y	Continuous	N/A
8-34-415.7	Re-monitor Second Excess Within 10 days	Y	Continuous	N/A
8-34-415.8	Re-monitor Second Excess Within 1 Month	Y	Continuous	N/A
8-34-415.9	If No More Excesses, No Further Re-monitoring	Y	Continuous	N/A
8-34-415.10	Collection System Expansion for Third Excess in a Quarter	Y	Continuous	N/A
8-34-415.11	Operational Due Date for Expansion	Y	Continuous	N/A
8-34-416	Cover Repairs	Y	Continuous	N/A
8-34-501	Operating Records	Y	Continuous	N/A
8-34-501.1	Collection System Downtime	Y	Continuous	N/A
8-34-501.2	Emission Control System Downtime	Y	Continuous	N/A
8-34-501.3	Continuous Temperature Records for Enclosed Combustors (applies to flare only)	Y	Continuous	N/A
8-34-501.4	Testing	Y	Continuous	N/A
8-34-501.6	Leak Discovery and Repair Records	Y	Continuous	N/A
8-34-501.7	Waste Acceptance Records	Y	Continuous	N/A
8-34-501.8	Non-decomposable Waste Records	Y	Continuous	N/A
8-34-501.9	Wellhead Excesses and Repair Records	Y	Continuous	N/A
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	Continuous	N/A
8-34-501.12	Records Retention for 5 Years	Y	Continuous	N/A
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	Y	Continuous	N/A
8-34-504	Portable Hydrocarbon Detector	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
8-34-507	Continuous Temperature Monitor and Recorder (applies to flares only)	Y	Continuous	N/A
8-34-508	Gas Flow Meter	Y	Continuous	N/A
8-34-510	Cover Integrity Monitoring	Y	Continuous	N/A
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			
9-1-301	Limitations on Ground Level Concentrations (applies to flare only)	Y	Continuous	N/A
9-1-302	General Emission Limitations (applies to flare only)	Y	Continuous	N/A
BAAQMD Regulation 9, Rule 2	**Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)**			
9-2-301	Limitations on Hydrogen Sulfide	Y	Continuous	N/A
BAAQMD Condition # 11586				
Part 1	Waste disposal limitations (Regulation 2-1-301)	Y	Continuous	NA

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
Part 2	Landfill gas collection system operating requirements (Regulations 8-34-301, 8-34-303, 8-34-304)	Y	Intermittent	Two unplanned shutdowns of the Gas Collection and Control System occurred on July 1, 2021 with a downtime of 50 minutes and on October 8, 2021 with a downtime of 1 hour. RCA Notification Forms were submitted by the City for this occurrence, and breakdown relief was requested. RCA Notification Forms were submitted by the City for each occurrence, and breakdown relief was requested. Documentation associated with these events can be found in Attachment D.
Part 3	Landfill gas collection system description and alteration provisions modifications (Regulations 8-34-303, 8-34-304)	Y	Continuous	N/A
Part 4	Landfill gas control requirements (Regulations 8-34-301 and 8-34-301.1)	Y	Continuous	N/A
Part 5	Landfill gas flare operating and maintenance requirements (Regulations 8-34-301 and 8-34-301.1)	Y	Continuous	N/A
Part 6	Flow meter requirement for flares (Regulations 8-34-301.1 and 8-34-508 and Cumulative Increase)	Y	Continuous	N/A
Part 7	Alarm requirements for flares (Regulations 8-34-301)	Y	Continuous	N/A
Part 8	NOx emissions limit for A-9 Flare (RACT)	Y	Continuous	N/A
Part 9	CO emissions limit for A-9 Flare (RACT)	Y	Continuous	N/A
Part 10	NMOC emissions limit A-9 Flare (Cumulative Increase, Regulation 2-1-301.3, and 8-34-301.3)	Y	Continuous	N/A
Part 11	Flare temperature limits and monitoring requirements (Regulations 2-5-301, 8-34-301.3, 8-34-501.3, and 8-34-507)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-8 Landfill and A-8, A-9 Flares **Source Name:** City of Sunnyvale Sanitary Landfill and Flare

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
Part 12	Flare source test requirements (Cumulative Increase, RACT, and Regulations 2-5-301, 8-34-301.3, 8-34-507, and 9-1-302)	Y	Continuous	N/A
Part 13	Landfill gas characterization testing requirements (AB-2588 Air Toxic Hot Spots and Regulation 2-5-302)	Y	Continuous	N/A
Part 14	Flare replacement project shut-down and notification submitted (Cumulative Increase)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-1 Solid Waste Transfer Station **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 1	**General Provisions and Definitions (5/4/11)**			
1-301	Public Nuisance	Y	Continuous	N/A
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Condition #5367				
Part 1	Throughput limit (Cumulative Increase)	Y	Continuous	N/A
Part 2	Particulate emission control measures and visible emissions and dust fallout limitations (Regulations 1-301, 2-1-403, 6-1-301, and 6-1-305)	Y	Continuous	N/A
Part 3	Visual monitoring and corrective action requirements (Regulation 2-1-403, 6-1-301, and 6-1-305)	Y	Continuous	N/A
Part 4	Record Keeping (Cumulative Increase)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-2 Wood Waste Unloading **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 1	**General Provisions and Definitions (5/4/11)**			
1-301	Public Nuisance	Y	Continuous	N/A
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Condition # 5368				
Part 1	Waste acceptance limitation (Cumulative Increase and Regulation 2-5-110)	Y	Continuous	N/A
Part 2	Waste handling limitation (Cumulative Increase)	Y	Continuous	N/A
Part 3	Throughput limit (Cumulative Increase)	Y	Continuous	N/A
Part 4	Abatement Requirements (Cumulative Increase)	Y	Continuous	N/A
Part 5	Visual monitoring and corrective action requirements (Regulation 2-1-403, 6-1-301, and 6-1-305)	Y	Continuous	N/A
Part 6	Record Keeping (Cumulative Increase and Regulation 2-1-403)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-3 Wood Shredder and A-5 Baghouse Dust Collector **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 1	**General Provisions and Definitions (5/4/11)**			
1-301	Public Nuisance	Y	Continuous	N/A
1-523	Parametric Monitoring and Record keeping Procedures	Y	Continuous	N/A
1-523.1	Reporting requirement for periods of inoperation > 24 hours	Y	Continuous	N/A
1-523.2	Limit on duration of inoperation	Y	Continuous	N/A
1-523.3	Reporting requirement for violations of any applicable limits	Y	Continuous	N/A
1-523.4	Records of inoperation, tests, calibrations, adjustments, & maintenance	Y	Continuous	N/A
1-523.5	Maintenance and calibration	Y	Continuous	N/A
SIP Regulation 1	**General Provisions and Definitions (6/28/99)**			
1-523	Parametric Monitoring and Record keeping Procedures	Y	Continuous	N/A
1-523.3	Reports of Violations	Y	Continuous	N/A
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-310	Particulate grain loading limitation	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-3 Wood Shredder and A-5 Baghouse Dust Collector **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
6-1-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-310	Particulate grain loading limitation	Y	Continuous	N/A
6-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Condition # 5369				
Part 1	Waste processing limitation (Cumulative Increase and Regulation 2-5-110)	Y	Continuous	N/A
Part 2	Enclosure requirement (Cumulative Increase)	Y	Continuous	N/A
Part 3	Throughput limit (Cumulative Increase)	Y	Continuous	N/A
Part 4	Baghouse control requirement (Cumulative Increase)	Y	Continuous	N/A
Part 5	Baghouse pressure monitoring requirement (Regulation 2-1-403)	Y	Continuous	N/A
Part 6	Baghouse Inspection and Maintenance Records (Regulation 2-1-403)	Y	Continuous	N/A
Part 7	Wood Waste Throughput Records (Cumulative Increase and Regulation 2-1-403)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-4 Conveyor and S-5 Wood Chip Processing Hoppers **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 1	**General Provisions and Definitions (5/4/11)**			
1-301	Public Nuisance	Y	Continuous	N/A
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Condition # 5370				
Part 1	Throughput limit (Cumulative Increase)	Y	Continuous	N/A
Part 2	Record Keeping (Cumulative Increase and Regulation 2-1-403)	Y	Continuous	N/A
Part 3	Visual monitoring and corrective action requirements (Regulation 2-1-403, 6-1-301, and 6-1-305)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-6 Wood Chip Screening Operation **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-311	General Operations: emission limitation based on processing rate	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Condition # 5371				
Part 1	Throughput limit (Cumulative Increase)	Y	Continuous	N/A
Part 2	Operating requirement (Cumulative Increase)	Y	Continuous	N/A
Part 3	Visual monitoring and corrective action requirements (Regulation 2-1-403, 6-1-301, and 6-1-305)	Y	Continuous	N/A
Part 4	Record Keeping (Cumulative Increase and Regulation 2-1-403)	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (12/5/07)**			
6-1-303	Ringelmann No. 2 Limitation	Y	Continuous	N/A
6-1-303.1	Internal combustion engines below 1500 cubic inches displacement or standby engines	Y	Continuous	N/A
6-1-305	Visible Particles	Y	Continuous	N/A
6-1-310	Particulate grain loading limitation	Y	Continuous	N/A
6-1-401	Appearance of Emissions	Y	Continuous	N/A
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-1-303	Ringelmann No. 2 Limitation	Y	Continuous	N/A
6-1-303.1	Internal combustion engines below 1500 cubic inches displacement or standby engines	Y	Continuous	N/A
6-305	Visible Particles	Y	Continuous	N/A
6-310	Particulate grain loading limitation	Y	Continuous	N/A
6-401	Appearance of Emissions	Y	Continuous	N/A
BAAQMD Regulation 8, Rule 1	**Organic Compounds – General Provisions (6/15/94)**			
8-1-110.2	Exemptions – internal combustion engine	Y	Continuous	N/A
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
9-1-301	Limitations on Ground Level Concentrations	Y	Continuous	N/A
9-1-304	Liquid and Solid Fuels	Y	Continuous	N/A
BAAQMD Regulation 9, Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)**			
9-8-110	Exemptions (from emission limits only)	Y	Continuous	N/A
9-8-110.5	For Emergency Standby Engines	Y	Continuous	N/A
9-8-330	Emergency Standby Engines, Hours of Operation	Y	Continuous	N/A
9-8-330.1	For Emergency Use	Y	Continuous	N/A
9-8-330.3	For Reliability-Related Activities	Y	Continuous	N/A
9-8-502	Record keeping	Y	Continuous	N/A
9-8-502.1	For Exempt Engines	Y	Continuous	N/A
9-8-530	Emergency Standby Engines, Monitoring and Record keeping	Y	Continuous	N/A
9-8-530.1	Hours of Operation (total)	Y	Continuous	N/A
9-8-530.2	Hours of Operation (emergency)	Y	Continuous	N/A
9-8-530.3	Nature of Each Emergency Condition	Y	Continuous	N/A
SIP Regulation 9, Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)**			
9-8-110	Exemptions	Y	Continuous	N/A
9-8-110.2	For Liquid Fueled Engines	Y	Continuous	N/A
40 CFR Part 63, Subpart A	**National Emission Standards for Hazardous Air Pollutants-General Provisions (9/13/10)**			

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
63.4	Prohibited activities and circumvention	Y	Continuous	N/A
63.5	Preconstruction review and notification requirements	Y	Continuous	N/A
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	Continuous	N/A
63.6	Compliance with standards and maintenance requirements	Y	Continuous	N/A
63.8	Monitoring requirements	Y	Continuous	N/A
63.10	Record keeping and reporting requirements	Y	Continuous	N/A
63.10(b)	General record keeping requirements	Y	Continuous	N/A
63.10(c)	Additional record keeping requirements for sources with continuous monitoring systems	Y	Continuous	N/A
63.10(d)	General reporting requirements	Y	Continuous	N/A
63.10(e)	Additional reporting requirements for sources with continuous monitoring systems	Y	Continuous	N/A
40 CFR Part 63, Subpart ZZZZ	**National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) (8/20/10)**			
63.6585	Applicability	Y	Continuous	N/A
63.6585(a)	Applicable to stationary RICE	Y	Continuous	N/A
63.6585(c)	Applicable to area source of HAPs	Y	Continuous	N/A
63.6590	What parts of my plant does this subpart cover?	Y	Continuous	N/A
63.6590(a)	Affected source is any existing, new or reconstructed stationary RICE located at area source of HAP emission	Y	Continuous	N/A
63.6590(a)(1)	Existing stationary RICE is:	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
63.6590(a)(1)(iii)	Existing stationary RICE at an area source of HAP emissions	Y	Continuous	N/A
63.6595	When do I have to comply with this subpart?	Y	Continuous	N/A
63.6595(a)	Compliance Date for affected sources	Y	Continuous	N/A
63.6595(a)(1)	Compliance Date for an existing stationary RICE located at an area source of HAP emissions	Y	Continuous	N/A
63.6603	What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions? See Table 2d	Y	Continuous	N/A
63.6603(a)	Operating limitations for existing stationary RICE located at an area source of HAP emissions	Y	Continuous	N/A
63.6625	What are my monitoring, installation, collection, operation, and maintenance requirements?	Y	Continuous	N/A
63.6625(e)		Y	Continuous	N/A
63.6625(e)(3)	Operate and maintain the existing stationary RICE according to manufacturer's emission-related written instructions	Y	Continuous	N/A
63.6625(f)	Install a non-resettable hour meter for an existing emergency stationary RICE located at an area source of HAP emissions	Y	Continuous	N/A
63.6625(h)	Minimize existing stationary engine idle time, not to exceed 30 minutes	Y	Continuous	N/A
63.6640	How do I demonstrate continuous compliance with the emission limitations and operating limitations?	Y	Continuous	N/A
63.6640(f)	Requirements for emergency stationary RICE	Y	Continuous	N/A
63.6640(f)(i)	No time limit on use during emergency situations	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
63.6640(f)(ii)	Maintenance checks and readiness testing annual hour limit	Y	Continuous	N/A
63.6640(f)(iii)	Non-emergency operation annual hour limit	Y	Continuous	N/A
63.6645	What notifications must I submit and when?	Y	Continuous	N/A
63.6645(a)	Submit all notifications that apply	Y	Continuous	N/A
63.6645(a)(5)	Notification requirement do not apply for an existing stationary emergency RICE	Y	Continuous	N/A
63.6655	What Records must I keep?	Y	Continuous	N/A
63.6655(e)	Keep records of maintenance conducted	Y	Continuous	N/A
63.6655(e)(2)	Maintenance records for an existing stationary emergency RICE	Y	Continuous	N/A
63.6655(f)	Keep records of hours of operation using non-resettable fuel meter and document emergency hours and purpose of any other operation	Y	Continuous	N/A
63.6655(f)(2)	Hours of Operation for an existing emergency RICE	Y	Continuous	N/A
63.6660	In what form and how long must I keep records?	Y	Continuous	N/A
63.6665	What parts of the general provisions apply to me?	Y	Continuous	N/A
Table 2d to Part 63, Subpart ZZZZ	Requirements for Existing Stationary RICE located at Area Sources of HAP Emissions	Y	Continuous	N/A
Table 2d.4.a.	Schedule for oil and filter change	Y	Continuous	N/A
Table 2d.4.b.	Schedule for air cleaner inspection	Y	Continuous	N/A
Table 2d.4.c.	Schedule for hoses and belts inspection	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
Table 6 to Part 63, Subpart ZZZZ	Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices	Y	Continuous	N/A
Table 6.9.a.	Work or Management practices for existing emergency located at an area source of HAP emissions	Y	Continuous	N/A
CCR Title 17, Section 93115	**Airborne Toxic Control Measure for Stationary Compression Ignition Engines (10/18/07)**			
§93115.5	Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater Than (>50 bhp)	Y	Continuous	N/A
93115.5(b)	Fuel requirements, in-use emergency standby diesel CI engines	Y	Continuous	N/A
§93115.6	Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards	Y	Continuous	N/A
§93115.6(b)	For In-Use Emergency Standby Diesel Fueled CI Engines	Y	Continuous	N/A
§93115.6(b)(3)	Emission Standards and Operating Requirements	Y	Continuous	N/A
§93115.6(b)(3)(A)	Diesel PM Standards and Hours of Operation Limitations	Y	Continuous	N/A
§93115.6(b)(3)(A)(1)	General Requirements	Y	Continuous	N/A
93115.6(b)(3)(A)(1)(a)	Reliability related operating time limitation	Y	Continuous	N/A

Compliance Certification Report

Site #: A5905 **Site Name:** City of Sunnyvale Landfill and SMaRT Station®, Environmental Services Department **Reporting Period:** 1/1/2021 to 12/31/2021

Address: 301 Carl Road **City:** Sunnyvale **Zip Code:** 94089

Source #: S-7 Diesel engine for stand-by generator **Source Name:** Solid Waste Transfer Station

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
§93115.10	Record keeping, Reporting and Monitoring Requirements	Y	Continuous	N/A
§93115.10(d)	Monitoring Equipment	Y	Continuous	N/A
93115.10(d)(1)	Non-resettable totalizing hour meter	Y	Continuous	N/A
§93115.10(f)	Reporting Requirements for Emergency Standby-Engines	Y	Continuous	N/A
§93115.10(f)(1)	Records and Monthly Summary	Y	Continuous	N/A
§93115.10(f)(2)	Records Retention and Availability	Y	Continuous	N/A
BAAQMD Condition # 22820				
Part 1	Operating Time Limitation (CCR, Title 17, Section 93115.6(b)(3)(A)(1)(a))	Y	Continuous	N/A
Part 2	Other Operational Limitations (CCR, Title 17, Section 93115.6(b)(3)(A)(1)(a))	Y	Continuous	N/A
Part 3	Meter Requirements (CCR, Title 17, Section 93115.10(d)(1))	Y	Continuous	N/A
Part 4	Record Keeping Requirements (CCR, Title 17, Section 93115.10(f) or Regulation 2-6-501)	Y	Continuous	N/A