

Direction of Compliance and Enforcement Bay Area Air Quality Management District 375 Beale Street, Suite 600 San Francisco, CA 94105 Attn: Title V Reports Director of the Air Division, USEPA Region IX 75 Hawthorne Street San Francisco, CA 94105 Attn: Air-3

1. DI RECEIVED IN 02/28/2022 ENFORCEMENT: TV Tracking #: 420 (Semi-Annual) TV Tracking #: 421 (Annual)

Subject: Combined NESHAP Initial Report, 8-34 Semi-Annual Report, 40 CFR Subpart AAA Semi-Annual Report, Title V Semi-Annual Monitoring Report, and Title V Annual Compliance Certification Report Sonoma County Central Landfill, Petaluma, California (Title V Facility No. A2254)

Dear Sir or Madam:

Republic Services of Sonoma County, Inc. is pleased to submit the enclosed combined National Emission Standards for Hazardous Air Pollutants (NESHAP) Initial Report, Bay Area Air Quality Management District (BAAQMD), Regulation 8, Rule 34 (8-34) Semi-Annual Report; Semi-Annual Startup, Shutdown and Malfunction (SSM) Plan Report, Title V Semi-Annual Monitoring Report, and the Title V Annual Compliance Certification (ACC) Report to the BAAQMD and the U.S. Environmental Protection Agency (EPA) Region IX for the Sonoma County Central Landfill (Sonoma Central).

The Title V ACC Report covers the period from February 1, 2021 through January 31, 2022. The Title V Semi-Annual Monitoring Report, BAAQMD Rule 8-34 Semi-Annual Report and the SSM Plan Report cover the period from August 1, 2021 through January 31, 2022. The Initial NESHAP report covers the period of September 27, 2021 through January 31, 2022.

The Title V report meet the requirements specified in the Title V permit, BAAQMD guidance on Title V report submittals, and Regulation 2, Rule 6. The Rule 8-34 report includes the information required by BAAQMD Rule 8-34-411 and also satisfies the requirements under the New Source Performance Standards (NSPS) for municipal solid waste landfills (40 Code of Federal Regulation [CFR] Part 60, Subpart WWW), including 40 CFR 60.757(f). The Semi-Annual SSM Plan Report satisfies the requirements under the NESHAP rule for semi-annual reporting of SSM Plan implementation including 40 CFR 63.10(d)(S). The Initial NESHAP report meets the requirements under 40 CFR 63.1981(h).The Title V reports and the SSM Plan report each includes a certification by the responsible official for Sonoma Central.

Please note that as of June 21, 2021, the facility complies with the new Emission Guidelines (EG) requirements in California. The approved state plan for the EG includes compliance with Title 17 California Code of Regulations (CCR) Sections 95460 to 95476, known as AB 32 Landfill Methane Rule (LMR) and specific portions of 40 CFR Part 62 Subpart OOO. The major compliance provisions of Subpart WWW and OOO were replaced as of September 27, 2021 by the NESHAP 40 CFR 63, Subpart AAAA requirements, which essentially implement and enhance provisions of 40 CFR 60, Subparts XXX (which were updated NSPS for Municipal Solid Waste (MSW) landfills promulgated in 2016) as well as removing the SSM Plan requirements. However, because the Title V Permit references Subpart WWW and includes SSM reporting, this semi-annual report will continue to include Subpart WWW and SSM requirements. References to Subpart WWW will be removed from all reports after a new Title V Permit is issued removing references to Subpart WWW and updating applicable regulations, or we otherwise obtain approval from the BAAQMD to only comply with the new requirements

If you have any questions regarding this submittal, please do not hesitate to call me at (510) 301-9387 or email me at DCheney@republicservices.com.

Sincerely,

Derek Cheney

Environmental Manager Sonoma Central Landfill

Rob Sherman, Sonoma Central Maria Bowen, SCS Engineers Pat Sullivan, SCS Engineers CC:

NESHAP Initial/NSPS/BAAQMD Rule 8-34 Semi-Annual Report, SSM Plan Semi-Annual Report, Title V Semi-Annual Report, and Title V Annual Certification Sonoma County Central Landfill Petaluma, California (Title V Facility No. A2254)

Prepared for:



Republic Services of Sonoma County, Inc. 500 Mecham Road Petaluma, CA 94952

For Submittal to:

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



01213327.01 Task 1 | February 2022

3843 Brickway Boulevard, Suite 208 Santa Rosa, CA 95403 707-546-9461 This submittal consisting of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Initial/New Source Performance Standards (NSPS)/Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report, the Semi-Annual Startup, Shutdown, and Malfunction Plan Report, the Title V Semi-Annual Monitoring Report, and the Title V Annual Compliance Certification for the Sonoma County Central Landfill in Petaluma, California, dated February 2022, was prepared and reviewed by the following:

Anne Liu Staff Professional SCS ENGINEERS

Maria Bowen Project Manager SCS ENGINEERS

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

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## SECTION I. NESHAP INITIAL/NSPS/BAAQMD RULE 8-34 SEMI-ANNUAL REPORT

# **1.0** INTRODUCTION

On behalf of Republic Services of Sonoma County, Inc. (Republic), SCS Engineers (SCS) prepared this combined National Emission Standards for Hazardous Air Pollutants (NESHAP) Initial, New Source Performance Standard (NSPS), 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW, Bay Area Air Quality Management District (BAAQMD or District) Rule 8-34 Semi-Annual Report (SAR) pertaining to the Sonoma County Central Landfill (Sonoma Central) for the period of August 1, 2021 through January 31, 2022 to the BAAQMD and the United States Environmental Protection Agency (EPA).

As of June 21, 2021, the facility complies with the new Emission Guidelines (EG) requirements in California. The approved state plan for the EG includes compliance with Title 17 California Code of Regulations (CCR) Sections 95460 to 95476, known as AB 32 Landfill Methane Rule (LMR) and specific portions of 40 CFR Part 62 Subpart 000. The major compliance provisions of Subpart WWW and 000 were replaced as of September 27, 2021 by the NESHAP 40 CFR 63, Subpart AAAA requirements, which essentially implement and enhance provisions of 40 CFR 60, Subparts XXX (which were updated NSPS for Municipal Solid Waste (MSW) landfills promulgated in 2016) as well as removing the SSM Plan requirements. However, because the Title V Permit references Subpart WWW and SSM requirements. References to Subpart WWW and SSM will be removed from all reports after a new Title V Permit is issued removing references to Subpart WWW and updating applicable regulations, or we otherwise obtain approval from the BAAQMD to only comply with the new requirements

The Semi-Annual Report pertains to the landfill gas (LFG) collection and control system (GCCS) operated at the Sonoma County Central Landfill (Sonoma Central).

This report includes the following information, as required by BAAQMD Rule 8-34-411:

- All collection 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 LFG 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).
- Landfill surface monitoring, location of excesses, excess concentration, date discovered, actions taken to repair the excess, and re-monitored concentrations (8-34-501.6 and 506).

- 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).
- Well head monitoring including gauge pressure, LFG temperature, and LFG oxygen concentration (8-34-501.9 and 505).
- Continuous flow monitoring (8-34-501.10).

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

# **2.0** SITE BACKGROUND INFORMATION

Sonoma Central is a municipal solid waste (MSW) landfill located in Petaluma, California and is operated by Republic. The approximately 170-acre landfill began accepting waste circa 1971 and is currently in operation.

## **2.1** EXISTING AIR PERMITS

Sonoma Central maintains a BAAQMD permit to operate (PTO) (Plant No. 22987). PTO Condition No. 4044 includes requirements for the wellfield, collection system, and A-4 Flare station, as well as waste and cover material dumping (S-22) and landfill excavating, bulldozing, and compacting activities (S-23). PTO Condition No. 19933 includes requirements for the ten LFG-fired internal combustion (IC) engines (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, and S-14). The PTO also has conditions for a LFG compression plant (S-15) (Condition No. 23087) and a 195 horsepower (HP) portable propane tipper engine (S-24) (Condition No. 26171). Please note on September 21, 2021, the S-24 Tipper Engine was removed from the site and replaced with a 49 HP engine. On September 28, 2021, an application was submitted to remove the S-24 language from the PTO.

Condition No. 4044 incorporates all applicable requirements from NSPS Subpart WWW and from BAAQMD Rule 8-34, which are addressed in this report. Sonoma also maintains a Major Facility Review (MFR or Title V) Permit (Facility No. A2254), which was most recently issued on June 9, 2021, expiring on June 8, 2026.

A GCCS Design Plan was prepared for the site to review and determine the adequacy of the existing LFG system. The current design of the system was determined to be adequate to comply with both NSPS and BAAQMD Rule 8-34 requirements. The system design is based on the density of wells calculated to sufficiently extract the maximum flow of LFG generated, according to the EPA LFG emissions model (LandGEM). The GCCS is designed to control surface emissions, as well as to minimize subsurface lateral migration of LFG. Both the perimeter of the landfill and the landfill surface are monitored on a quarterly basis. Additional details regarding the GCCS are in the GCCS Design Plan that was previously submitted to the BAAQMD. A drawing showing the existing GCCS is provided in **Appendix B**.

# **2.2** EXISTING LANDFILL GAS COLLECTION AND CONTROL SYSTEM

The GCCS at Sonoma Central consists of extraction wells used to collect the LFG from within the landfill (the "wellfield") and a piping system (the "collection system") used to convey the collected

LFG to the control systems for destruction. The LFG is extracted from the landfill through a combination of vertical gas extraction wells and horizontal gas extraction trenches/pipes, as well as leachate collection system components.

The LFG is controlled by the emission control system. The emission control system consists of a LFG-to-energy (LFGTE) facility, which consists of ten IC engines (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, and S-14), and an enclosed backup flare (A-4).

The A-4 Flare was installed on December 12, 2017 and replaced the A-3 Flare. The A-4 Flare is now the backup flare to the engines at the landfill. Engine No. 10 (S-14) is on long-term standby pursuant to BAAQMD Application No. 22513.

A diagram of the GCCS displaying system component locations is shown in the site plan provided in **Appendix B**.

## **3.0** MONITORING AND RECORDS

This NSPS Semi-Annual Report for Sonoma is being submitted to the BAAQMD and U.S. EPA in compliance with 40 CFR Subpart WWW ("NSPS"), including 40 CFR 60.757(f), which describe the items to be submitted in an annual report for landfills seeking to comply with NSPS using an active collection system. In compliance with 40 CFR 63, Subpart AAAA (NESHAP for MSW Landfills), this report is submitted semi-annually.

As of June 21, 2021, the facility complies with the new EG requirements in California. The approved state plan for the EG includes compliance with Title 17 CCR Sections 95460 to 95476, known as AB 32 LMR and specific portions of 40 CFR Part 62 Subpart 000. The major compliance provisions of Subpart WWW and 000 were replaced as of September 27, 2021 by the NESHAP 40 CFR 63, Subpart AAAA requirements, which essentially implement and enhance provisions of 40 CFR 60, Subparts XXX (which were updated NSPS for MSW landfills promulgated in 2016) as well as removing the SSM Plan requirements. However, as the SSM requirements are still noted in the Title V Permit, the SSM report has not been closed out as of the submittal of this report.

This section of the report represents the Semi-Annual Monitoring Report and covers the items required to be reported in the applicable rules under 40 CFR Part 60, Subpart WWW, 40 CFR Part 62, Subpart 000, and 40 CFR Part 63, Subpart AAAA. The reporting period is from August 1, 2021 to January 31, 2022. The table below summarizes the corresponding sections for the regulatory references addressed in this report:

NSPS Subpart WWW	Updated NESHAP Subpart AAAA	Federal Subpart OOO
40 CFR 60.757(f), (g)	40 CFR 63.1981(h), (i), (j), (k), (l)	40 CFR 62.16724(h), (i), (j), (l), (q)
Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).	Number of times that applicable parameters monitored under 40 CFR 63.1958(b), (c), and (d) were exceeded and when the gas collection and control system was not operating under 40 CFR 63.1958(e), including periods of SSM.	Value and length of time for exceedance of applicable parameters monitored under 40 CFR 62.16722(a)(1), (b), (c), (d), and (g).

#### Reporting Requirements, Corresponding Regulatory References

NSPS Subpart WWW	Updated NESHAP Subpart AAAA	Federal Subpart OOO
40 CFR 60.757(f), (g)	40 CFR 63.1981(h), (i), (j), (k), (l)	40 CFR 62.16724(h), (i), (j), (l), (q)
Description and duration of all periods when the gas stream is diverted from the control device.	Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 63.1961.	Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722.
Description and duration of all periods when the control device was not operating for more than 1 hour.	Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.	Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.
All periods when the collection system was not operating in excess of 5 days.	All periods when the collection system was not operating.	All periods when the collection system was not operating.
The location of each 500 ppmv methane exceedance, and the concentration recorded at each location for which an exceedance was recorded in the previous month.	The location of each exceedance of the 500-ppm methane concentration as provided in 40 CFR 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.	The location of each exceedance of the 500 parts-per-million methane concentration as provided in 40 CFR 62.16716(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755 paragraphs (a)(3), (b), and (c)(4).	The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 63.1960(a)(3) and (4), (b), and (c)(4).	The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 62.16720(a)(3), (4), (b), and (c)(4).
Required information of the initial performance source test report pursuant to 40 CFR 60.757(g).	Required information of the initial performance source test report pursuant to 40 CFR 63.1981(i).	Required information of the initial performance source test report pursuant to 40 CFR 62.16724(i).
	For any corrective action analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i) or (a)(5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted.	For any corrective action analysis for which corrective actions are required in 40 CFR 62.16720(a)(3) or (4) and that take more than 60 days to correct the exceedance, the root cause analysis conducted.
	Each owner or operator required to conduct enhanced monitoring in 40 CFR 63.1961(a)(5) and (6) must include the results of all monitoring activities conducted during the period.	-
	Where an owner or operator subject to the provisions of subpart 40 CFR 63.1981(k) seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7	Each owner or operator that chooses to comply with the provisions in $\S63.1958$ , $63.1960$ , and $63.1961$ of this chapter, as allowed in $\S62.16716$ , $62.16720$ , and $62.16722$ , must submit the 24-hour high temperature report according to $\S$ 63.1981(k) of this chapter.

NSPS Subpart WWW	Updated NESHAP Subpart AAAA	Federal Subpart OOO
40 CFR 60.757(f), (g)	40 CFR 63.1981(h), (i), (j), (k), (l)	40 CFR 62.16724(h), (i), (j), (l), (q)
	degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, then you must report the date, time, well identifier, temperature and carbon monoxide reading via email to the Administrator within 24 hours of the measurement.	
	Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs 40 CFR 63.1981(I)(1) and (2) of this section.	Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs 40 CFR 62.16724(j) of this section.
		The owner or operator that has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit (issued through Resource Conservation and Recovery Act (RCRA), subtitle D, part 258) within the last 10 years must submit to the Administrator, annually, following the procedure specified in paragraph 40 CFR 62.16724(I).
-	Submit semi-annual CMS summary reports including required items listed in 40 CFR 63.10(e)(3)(vi)	

## **3.1** CONTINUOUSLY MONITORED PARAMETERS

According to BAAQMD Rule 8-34-301.1, the GCCS must be operated continuously. To comply with this requirement, the landfill owner/operator is required to maintain full-time operation of the LFG collection system and control system, as well as individual extraction wells. 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 review at the site.

## **3.1.1** Gas Extraction System Downtime

During the reporting period, the LFG extraction system was off-line on 24 occasions for a total of 27.13 hours. Shutdowns involved pre-programmed or manual system shutdowns for inspection, maintenance and/or repair of the GCCS, and thus meet the criteria for allowed GCCS downtime, as specified in Rule 8-34-113 and in accordance with the BAAQMD November 5, 2018 Compliance Advisory, with the exception of 5 events.

These events included Pacific Gas and Electric (PG&E) utility power outages, which resulted in shutdowns of the GCCS that occurred on September 18, 2021 from 12:06 to 12:12 and 21:34 to

21:42, and September 19, 2021 from 16:14 to 16:40, and thermocouple malfunctions, which resulted in shutdowns of the GCCS that occurred on December 17, 2021 at 22:48 to December 18, 2021 00:44 and December 19, 2021 from 04:56 to 09:24. These events were reported to the BAAQMD as reportable compliance activities (RCA) and breakdown relief was requested. Due to the short duration of these events, there is no reason to believe there were any excess LFG surface emissions during these GCCS downtimes.

On September 29, 2021, Notice of Violation (NOV) No. A59872 was issued by BAAQMD inspector Mr. Richard Murray for an alleged violation of BAAQMD Regulation 8, Rule 34, Section 301.1 (Landfill Gas Collection and Emission Control Requirements). Per the NOV, Sonoma allegedly failed to operate the GCCS continuously during the three RCA events that occurred on September 18 and 19, 2021 (IDs 08B84 and 08B85; 08B89 and 08B90; and 08B91 and 08B92). The 10-Day NOV Response letter was submitted on October 7, 2021.

A summary of the GCCS downtime for this reporting period is provided in **Table 1a**, including the date, reason for the downtime, description of the corrective measure(s) implemented to resume GCCS operation, and the total elapsed time for each event. Gas extraction system downtime records are available for review at the site. These include periods of times when the entire GCCS was offline.

#### 3.1.2 Emission Control System Downtime

#### A-4 Flare

During the reporting period, the A-4 Flare was off-line on several occasions. A summary of the A-4 Flare downtime is provided in **Table 1b**, including the date, reason for the downtime, and the total elapsed time for each event. During the reporting period, downtime for the A-4 Flare occurred over a cumulative period of approximately 172.30 hours. Emission control system downtime records are available for review at the site.

#### **LFGTE Facility**

During the reporting period, individual IC engines were offline on several occasions. In addition, there were several periods when the entire LFGTE facility was offline (all engines were offline concurrently). Note that Engine 9 (S-13) was out of service during the reporting period. In addition, Engine 10 (S-14) is on long-term standby. During the reporting period, the entire LFGTE facility was offline for a total of 547.66 hours. Downtime logs, which include individual IC engine shut downs, are included in **Appendix C**.

#### 3.1.3 Individual Well Downtime

In some instances, the entire GCCS may not go off-line, but individual extraction wells may be taken off-line for inspection, maintenance, and/or repair, as well as for other unforeseen circumstances. These are generally planned events, although such events can occur without notice. During the reporting period, several wells were temporarily taken offline or were taken offline during a previous reporting period and remained offline for a portion of the reporting period due to active filling and construction activities occurring in their vicinity.

SCV68-1A, SCV065-0, SC000H03, SCEC0019, SCV124-0, SCV52-5A, SCLEW-05, SCV122-0, SCV243-0, and SCV068-5 were abandoned during the reporting period due to poor gas production.

Pursuant to Permit Condition No. 4044, Part 4b(iv) and (v), the owner/operator must notify the District at least three days prior to initiating operation of a well or collector and no later than three working days after the disconnection of a component. These notifications were submitted to the BAAQMD for the well actions noted above, as required. In addition, pursuant to permit condition No. 4044, Part 4b(vii), if there is a net reduction (number of decommissioned components minus the number of installed components) of more than five components during a 120-day period, a comprehensive decommissioning notice must be submitted to the BAAQMD. This requirement was applicable during the reporting period, and comprehensive decommissioning notices were submitted to the BAAQMD as required.

Details of individual well shutdown and well startups occurring during the reporting period are provided in **Table 2**.

#### **3.1.4** Flow Meter and Temperature Gauge Downtime

The continuous operation of the GCCS is measured through the continuous measurement of LFG flow to each flare and flare combustion temperature. As required by Rule 8-34, the A-4 Flare at Sonoma Central is equipped with flow measuring devices and temperature gauges that provide continuous readout displays using digital chart recorders. During the reporting period, the flow meter(s) and temperature gauge(s)/recorders at the flare station did not go out of operation due to malfunction or other breakdown conditions.

Continuous monitoring and calibration information are available for review at the site.

#### **3.1.5** Flare Combustion Zone Temperature

Sonoma Central is required by permit condition No. 4044, Part 10 to operate the A-4 Flare in such a manner that the combustion zone temperature within the flare does not drop below the permitted limit of 1,599 degrees Fahrenheit (°F) (averaged over a 3-hour period), or a higher or lower temperature based on the most recent source test. During the reporting period, the minimum temperature above which the flare was required to operate was 1,602°F (based on the January 20, 2021 source test results minus 50°F), based on the source test report dated March 3, 2021. During the reporting period, the flare operated above the minimum established temperature at all times, except during periods of SSM.

Flare temperature records are available for review at the site. Excerpts from the March 3, 2021 source test report, summarizing the test results for the flares were provided in the August 2021 SAR.

## **3.2** COMPONENT LEAK QUARTERLY MONITORING

During the reporting period, quarterly testing of the GCCS components for any leaks with a methane concentration of greater than 1,000 parts per million by volume (ppmv), as required by BAAQMD Rule 8-34-503, was conducted. Testing in the wellfield and at the flare station was performed using an organic vapor analyzer (OVA), which was calibrated on the same day as the testing. Monitoring results are provided in **Appendix D** and are available for review at the site.

## 3.2.1 Third Quarter 2021 Monitoring

SCS Field Services (SCSFS) personnel conducted component leak monitoring of the flare station and the LFGTE facility on July 28, 2021. No component leaks above 1,000 ppmv were detected at the flare station, wellfield, or LFGTE facility during the third quarter 2021 monitoring event. These results are included in **Appendix D**.

#### **3.2.2** Fourth Quarter 2021 Monitoring

SCSFS personnel conducted the component leak monitoring of the flare station and the LFGTE Plant on November 1, 2021. No component leaks above 1,000 ppmv were detected at the flare station, wellfield, or LFGTE facility during fourth quarter 2021 monitoring events. These results are included in **Appendix D**.

## **3.3** CONTROL EFFICIENCY

#### Flare A-4

LFG Flare A-4 was tested on January 20, 2021 to demonstrate compliance with the control efficiency standard of 98 percent non-methane organic compound (NMOC) destruction efficiency or outlet concentration of 30 ppmv of NMOC as methane, corrected to 3% oxygen (for flares) as required by BAAQMD Rules 8-34-301.3, 8-34-412, and 8-34-501.4. The NMOC destruction efficiency for the A-4 Flare during the January 2021 source test was measured to be greater than (>) 98.85 percent by weight, and the NMOC as methane concentration in the flare outlet was less than (<) 4.9 ppmv. As such, Flare A-4 is in compliance with the aforementioned rules.

Excerpts from the January 2021 source test report dated March 3, 2021, summarizing the test results were provided in the August 2021 SAR.

#### **IC Engines**

The IC engines are required to demonstrate compliance with the control efficiency standard of 97 percent NMOC destruction efficiency or outlet concentration of 120 ppmv of NMOC as methane, corrected to 3% oxygen (for energy recovery devices) as required by BAAQMD Rules 8-34-301.4, 8-34-412, and 8-34-501.4. The most recent source testing results for these engines are summarized below. All engines met the outlet concentration limit of 120 ppmv of NMOC as methane, corrected to 3% oxygen during the most recent source tests.

Engine	Source Test Date	Results (ppm @ 3% O <sub>2</sub> )
1 (S-41)	July 28, 2021	125.6*
2 (S-5)	December 6, 2021	91.9
3 (S-6 <sup>2</sup> )	November 6, 2020	99.8
4 (S-7 <sup>2</sup> )	October 21, 2020	<32
5 (S-9)	March 12, 2021	109.3
6 (S-10)	April 29, 2021	95.7

Engine	Source Test Date	Results (ppm @ 3% O <sub>2</sub> )
7 (S-11)	April 26, 2021	74.8
8 (S-12 <sup>2</sup> )	January 12, 2021	122.8*
9 (S-13)	February 20, 2018**	40.97

<sup>1</sup> The S-4 Engine was source tested near the end of the previous reporting period, thus the source test report was not available for inclusion in the August 2021 report. As such, the S-4 source test report is included in this report.

<sup>2</sup> Per the Lead Power Plant Operator of the LFGTE facility, the S-6, S-7, and S-12 engines were not source tested this reporting period as they are currently out of service pending overhaul. Once the engines are brought back into service, they will be promptly source tested in 2022.

\*NMOC outlet concentration exceeds the limit but falls within 10% of the permitted limit and is considered in compliance per BAAQMD Resolution No. 1390.

\*\*Note 2019 and 2020 source tests for S-13 were unable to be completed due to mechanical issues. S-13 has been offline since 2019 and will be tested once repairs are completed.

Excerpts for the IC engine source test reports that were issued during the reporting period (S-4 and S-5) are included in **Appendix E**.

## **3.4** LANDFILL SURFACE EMISSIONS MONITORING

Surface emissions monitoring (SEM) was conducted at Sonoma Central on a quarterly basis during the reporting period, in accordance with BAAQMD Rule 8-34-303 and 8-34-506. The SEM events were conducted in accordance with the SEM plan in the landfill's GCCS Design Plan. Testing was performed using a Trimble SiteFID Landfill Gas Monitor Portable Flame Ionization Detector (FID), which was calibrated the same day as the testing. The results of this monitoring are summarized below. Reports for each quarterly monitoring event are provided in **Appendix D**.

#### 3.4.1 Third Quarter 2021 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 500 ppmv above background on July 26, 27, and 28, 2021. Surface emissions in excess of 500 ppmv were detected at eighteen (18) locations during the Third Quarter 2021 monitoring event. System adjustments and repair work was performed by site personnel. The subsequent 10-day remonitoring events, which were conducted on August 6 and 16, 2021, indicated that all areas with instantaneous exceedances had returned to compliance. One-month re-monitoring event was conducted, as required by NSPS, on August 27, 2021, and all locations remained in compliance.

The locations with the exceedances and associated methane concentrations are provided in the Third Quarter 2021 SEM report (**Appendix D**).

### **3.4.2** Fourth Quarter 2021 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 500 ppmv above background on November 1, 2, 4, 5, and 8, 2021. Surface emissions in excess of 500 ppmv were detected at eight (8) locations during the fourth quarter 2021 monitoring event. System adjustments and repair work was performed by site personnel. The subsequent 10-day re-monitoring, which was conducted on November 12, 2021, indicated that all areas with

instantaneous exceedances had returned to compliance. One-month re-monitoring was conducted, as required by NSPS, on November 22, 2021, and all locations remained in compliance.

The locations with the exceedances and associated methane concentrations are provided in the fourth quarter 2021 SEM report (**Appendix D**).

## **3.5** WELLHEAD MONTHLY MONITORING

Monthly wellhead monitoring for pressure, temperature, and oxygen content was conducted by SCSFS personnel during the reporting period to comply with BAAQMD Rule 8-34-305 and 9-34-414. The results of this monitoring are summarized below.

#### 3.5.1 Pressure

The majority of the operational extraction wells were under negative pressure during the monitoring events conducted during the reporting period, in accordance with BAAQMD Rule 8-34-305 and 8-34-414. For any wells that exhibited positive pressure during this reporting period, the identification number and dates on which each well was operating with positive pressure are provided in **Table 3**. The table also includes corrective action and re-monitoring results. In all instances, corrective action and re-monitoring were performed in accordance with the 5- and 15-day requirements specified in the NSPS regulations and in Rule 8-34.

Two (2) operating wells, SCEC0208 and SCEW2015, demonstrated positive pressure readings at the end of the reporting period. These wells will be returned under negative pressure by the applicable compliance date, as specified in BAAQMD Rule 8-34-414, and compliance will be documented in the next semi-annual report.

As of the end of the previous reporting period, SCV082-1 was operating under positive pressure. The well was back in compliance within the timeline specified in BAAQMD Rule 8-34-414.

#### 3.5.2 Oxygen

Sonoma Central has elected to use oxygen as its compliance standard under Rule 8-34-305, rather than nitrogen. Per Sonoma's PTO Condition No. 4044, Part 5(b)i, the oxygen Higher Operating Value (HOV) of 15% is approved for wells: V-058, V-061, V-062, and V-117; EC-9.1, EC-15, EC-19, EC-24, EC-25, EC-26, and EC-26.1. However, all of these wells have since been permanently decommissioned with the exception of EC-15 and EC-24.

The majority of the wells were operating within the regulatory limit of five (5) percent oxygen (or within 15% oxygen for EC-15 and EC-24) during the monitoring events conducted during the reporting period. The dates when wells were operating with excessive oxygen, and the well identification number, corrective actions, and re-monitoring results for these wells are provided in **Table 4**.

As of the end of the reporting period, all of the operating wells were operating with an oxygen concentration below the 5 percent limit except for wells SC000H04, SCEC0020, SCEC0022, SCHC2001, SCV117-A, SCV139-0, SCV230-0, and SCV232-0. These wells will be returned to below the 5 percent limit by the applicable compliance dates, as specified in BAAQMD Rule 8-34-414, and compliance will be documented in the next semi-annual report.

As of the end of the previous reporting period, wells SC000H03, SC000H04, SCEC0019, SCHC2001, SCLEW-05, SCV003-0, SCV065-0, SCV066-5, SCV067-A, SCV068-5, SCV079-1, SCV100-5, SCV112-0, SCV124-0, SCV137-0, SCV143-0, SCV149-A, SCV222-0, SCV52-5A, SCV68-1A were operating with an oxygen concentration above the 5 percent limit. These wells were back in compliance within the timeline specified in BAAQMD Rule 8-34-414.

#### 3.5.3 Temperature

BAAQMD Rule 8-34-305 requires the LFG temperature in each wellhead to measure less than 55 degrees Celsius (°C) or 131°F. However, Condition 4044, Part 5(b)ii in Sonoma's BAAQMD PTO allows Sonoma Central to operate wells SCV107-0, SCV109-0, SCV112-0, SCV113-0, SCV114-0, and SCV115-0, SCV108A, and SCV128A at an alternative temperature of 145°F. However, note that SCV109-0 has been permanently decommissioned.

The majority of wells were operating within their respective limits of 131°F and 145°F during the monitoring events conducted during the reporting period. The dates when wells were operating above their respective temperature limits, and the well identification number, correction actions, and re-monitoring results for each of these wells are provided in **Table 5**.

As of the end of the reporting period, all wells were operating below their respective temperature limits of 131°F and 145°F.

As of the end of the previous reporting period, all wells were operating with a temperature concentration below the 131°F limit.

### 3.5.4 Corrective Action Analysis

40 CFR 63.1981(j) and the 40 CFR 62.16724(k) require notifications for corrective action that will exceed 60 days to implement. Such corrective actions also require a "root cause analysis" (RCA) to determine the reason for the exceedance if exceedances cannot be corrected in 15 days. For corrective actions that require more than 60 days to complete, an additional "corrective action analysis" (CAA) is also required. There were no such exceedances during the reporting period and therefore no corrective actions or root cause analyses to report.

### **3.5.5** 24 Hour High Temperature

Title 40 CFR 63.1981(k) and 40 CFR 62.16724(q) require the reporting of any LFG temperature measurements greater than or equal to 170°F. During the reporting period, there were no readings greater or equal to 170°F.

## **3.6** COVER INTEGRITY MONITORING

Under BAAQMD Rule 8-34-510 and the NSPS, the landfill surface must be monitored at least monthly for evidence of cracks or other surface integrity issues, which could allow for surface emissions. During the reporting period, cover integrity monitoring was conducted by SCSFS personnel in conjunction with the wellhead monitoring on August 30, September 30, October 29, November 29, December 29, 2021, and January 27, 2022. All necessary repairs were implemented in a timely manner. Records of cover integrity monitoring are available for review upon request.

## **3.7** LIQUIDS ADDITION REPORT

40 CFR 62.16724(I) requires documentation and reporting for the addition of liquids or leachate recirculation. The landfill has not injected liquid in the last 10 years, nor injected liquids during the reporting period. Therefore, there were zero (0) volumes of liquids injected and zero (0) acres of area for liquids injection.

# **3.8** GAS GENERATION ESTIMATE AND MONTHLY LANDFILL GAS FLOW RATES

Sonoma Central 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.

## **3.9** ANNUAL WASTE ACCEPTANCE RATE AND REFUSE IN PLACE

Sonoma Central is an active landfill that continues to accept refuse for disposal. From August 1, 2021 through January 31, 2022, the site accepted 165,216.47 tons of MSW, resulting in a cumulative waste-in-place total of 17,640,793 as of January 31, 2022.

#### **3.9.1** Non-Degradable Waste Areas

No areas of non-degradable waste deposition are known to exist. There are no landfill areas that are excluded from the collection system requirements. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable.

## **3.10** REPORTING REQUIREMENTS THAT WERE PREVIOUSLY SUBMITTED

Amendments to the MSW Landfill NESHAP (40 CFR 63, Subpart AAAA) were published in the Federal Register on March 26, 2020. As noted in 40 CFR 63.1930(a) and (b), landfills must meet the requirements of the amended subpart beginning no later than September 27, 2021. 40 CFR 63.1981 notes that reports submitted previously under NSPS or EG (40 CFR 60 Subparts WWW or XXX; or a state or federal plan implementing 40 CFR 60 Subparts Cc or Cf) do not have to be resubmitted, but a statement certifying submission of these reports must be included in the first semi-annual report required under the amended NESHAP. The facility is therefore taking the opportunity to notify and certify that the following reports were submitted previously:

- Initial Design Capacity Report;
- Initial NMOC Emission Rate Report;
- Initial/Revised Gas Collection and Control System (GCCS) Design Plan (Certification submitted on September 27, 2021); and
- Initial Performance Test Report.

Note that all other reports noted above with the exception of the Revised GCCS Design Plan were submitted outside of the 5-year retention window. A certification statement is included with this report in Appendix C. This ensures the reports are recognized as previously submitted under 40 CFR 60 Subparts WWW or XXX; or a state or federal plan implementing 40 CFR 60 Subparts Cc or Cf.

## SECTION II. SSM PLAN REPORT

This Semi-Annual report also meets the requirements of the National Emissions for Hazardous Air Pollutants (NESHAP) for MSW landfills, 40 CFR 63, Subpart AAAA and complies with the requirements specified in Sonoma Central's Title V permit. This Semi-Annual report includes a certification signed by a Responsible Official which is provided in **Appendix A**. In accordance with the NESHAP for Landfills, this report is submitted semi-annually.

Beginning September 27, 2021 the new NESHAP rule went into effect, removing SSM Plan requirements. We would like to close out the SSM Plan report as of September 27, 2021, however due to the NESHAP Subpart AAAA SSM Plan condition in the Title V permit, we reported SSMs for the entire reporting period noted below.

Sonoma Central maintains a SSM Plan which describes the procedures for operating and maintaining the affected elements of the GCCS during startup, shutdown, and malfunction (SSM). The SSM events that occurred during the reporting period of August 1, 2021 through January 31, 2022 are documented below.

- During the reporting period, the GCCS had 24 SSM events. Details of these events are included in **Table 1a**.
- During the reporting period, A-4 Flare had 107 SSM events. Details of these events are included in **Table 1b**.
- During the reporting period, 203 SSM events occurred at the nine IC Engines (S-4, S-5, S-6, S-7, S-9, S- 10, S-11, and S-12). IC Engines S-13 and S-14 did not operate during the reporting period. The IC Engines were shut down and restarted during the reporting period due to the reasons noted in the downtime logs provided in **Appendix C**.
- During the reporting period, 12 Wellfield SSM events occurred. Details are included **Table 2**.
- During the reporting period, there were no SSM events associated with the LFG monitoring equipment (e.g. flow measuring/recording device, temperature measuring/recording device).
- In all events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan. There were no deviations from the SSM plan.
- Exceedances were not identified during the reporting period for any applicable emission limitation in the landfills NESHAP (§63.10(d)(5)(i)).
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).
- A copy of the SSM Plan and all revisions/addenda are kept on file at the facility for at least five (5) years and are available to appropriate regulatory agency personnel for inspection.

## SECTION III. TITLE V SEMI-ANNUAL REPORT

As specified in 40 Code of Federal Regulation (CFR) Part 70, reports of any required monitoring must be submitted at least every 6 months. All instances of deviations from permit requirements for the semi-annual reporting period, specified in the Landfill's Initial Title V Permit as August 1 through January 31 and February 1 through July 31, must be clearly identified in each report. This Title V Report covers the August 1, 2021 through January 31, 2022 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 F.** 

## SECTION IV. 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 February 1, 2021 to January 31, 2022.

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 G.

Tables

#### Table 1a. GCCS Downtime Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

GCCS Shutdown	GCCS Restarted	Downtime Hours	Reason for Downtime	Corrective Actions Taken
8/2/21 8:20	8/2/21 8:36	0.27	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
8/2/21 10:44	8/2/21 11:00	0.27	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
8/2/21 13:40	8/2/21 14:02	0.37	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
9/18/21 12:06	9/18/21 12:12	0.10	Pacific Gas and Electric (PG&E) utility power outage (RCA Submitted, IDs 08B84 and 08B85)	Flare was inspected and adjusted before being returned to service.
9/18/21 21:34	9/18/21 21:42	0.13	G&E utility power outage (RCA Submitted, IDs 08B89 and 08B90) Flare was inspected and adjusted before being returned t	
9/19/21 16:14	9/19/21 16:40	0.43	PG&E utility power outage (RCA Submitted, IDs 08B91 and 08B92)	Flare was inspected and adjusted before being returned to service.
9/20/21 8:58	9/20/21 9:24	0.43	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
9/20/21 9:36	9/20/21 9:46	0.17	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
10/14/21 5:18	10/14/21 8:58	3.67	Manuel shutdown for maintenance and troubleshooting (113)	Flare was inspected and adjusted before being returned to service.
11/15/21 7:52	11/15/21 10:16	2.40	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/13/21 7:40	12/13/21 7:52	0.20	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/14/21 13:10	12/14/21 13:42	0.53	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/17/21 15:24	12/17/21 15:46	0.37	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/17/21 16:04	12/17/21 16:20	0.27	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/17/21 22:48	12/18/21 0:44	1.93	An operations and maintenance (O&M) technician was al restart the flare upon receiving the automated notificatio and was dispatched to the flare station to manually switc operate using the middle thermocouple for operations in lowest thermocouple. Flare was inspected and adjusted b returned to service.	
12/18/21 10:46	12/18/21 10:56	0.17	Manual Shutdown for plant operations (113) Flare was inspected and adjusted before being returned	
12/18/21 11:08	12/18/21 12:06	0.97	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
12/19/21 4:56	12/19/21 9:24	4.47	Thermocouple malfunction (RCA Submitted, IDs 08E28 and 08E29)	An operations and maintenance (O&M) technician was able to manually restart the flare upon receiving the automated notification of the shutdowr and was dispatched to the flare station to manually switch the flare to operate using the middle thermocouple for operations instead of the lowest thermocouple. Flare was inspected and adjusted before being returned to service.
12/21/21 8:00	12/21/21 8:40	0.67	Manual Shutdown for plant operations (113) Flare was inspected and adjusted before being returned to	
1/3/22 12:18	1/3/22 12:28	0.17	Manual Shutdown for plant operations (113) Flare was inspected and adjusted before being returned to s	
1/5/22 9:20	1/5/22 9:50	0.50	Manual Shutdown for plant operations (113) Flare was inspected and adjusted before being returned to service	
1/6/22 6:56	1/6/22 8:54	1.97	Manual Shutdown for plant operations (113) Flare was inspected and adjusted before being returned to service.	
1/12/22 8:20	1/12/22 14:48	6.47	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
1/13/22 12:32	1/13/22 12:46	0.23	Manual Shutdown for plant operations (113)	Flare was inspected and adjusted before being returned to service.
	Total:	27.13		

Notes:

Events in bold type denotes Malfunction Events

Downtimes listed represent periods when all landfill gas combustion devices were offline concurrently (no gas flow from the collection system).

All events listed involved GCCS inspection and/or maintenance activities prior to start up (or as soon as feasible following programmed startups) in accordance with Rule 8-34-113 requirements and the BAAQMD Compliance Advisory for Municipal Solid Waste Landfills, dated November 5, 2018, with the exception of the events that occurred on September 18 and 19, December 17 and 19, 2021 which involved utility outages from the Pacific Gas and Energy (PG&E) and thermocouple malfunction. These events were considered reportable compliance activities (RCA) and breakdown relief was requested.

#### Table 1b. Flare (A-4) Downtime Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

Shutdown	Startup	Downtime	Reason for Downtime
8/2/21 8:20	8/2/21 8:36	Hours 0.27	Blower maintenance and inspection (113)
8/2/21 10:44	8/2/21 11:00	0.27	Blower maintenance and inspection (113)
8/2/21 13:40	8/2/21 14:02	0.37	Blower maintenance and inspection (113)
8/11/21 11:00	8/11/21 11:22	0.37	Blower maintenance and inspection (113)
8/16/21 9:38	8/16/21 9:48	0.17	Blower maintenance and inspection (113)
8/23/21 8:52	8/23/21 9:06	0.23	Blower maintenance and inspection (113)
8/30/21 9:20	8/30/21 9:50	0.50	Blower maintenance and inspection (113)
9/7/21 11:08	9/7/21 11:34	0.43	Manual Shutdown for plant operations (113)
9/7/21 13:52	9/7/21 14:38	0.77	Manual Shutdown for plant operations (113)
9/8/21 10:38	9/8/21 10:50	0.20	Manual Shutdown for plant operations (113)
9/14/21 8:40	9/14/21 9:58	1.30	Manual Shutdown for plant operations (113)
9/14/21 10:14	9/14/21 10:28	0.23	Manual Shutdown for plant operations (113)
9/14/21 11:52	9/14/21 12:02	0.17	Manual Shutdown for plant operations (113)
9/14/21 12:10	9/14/21 12:20	0.17	Flame Failure due to engine ramp up (113)
5/14/21 12:10	5/14/21 12:20	0.17	Pacific Gas and Electric (PG&E) utility power outage (RCA
9/18/21 12:04	9/18/21 12:12	0.13	Submitted, IDs 08B84 and 08B85)
5/10/21 12:04	5, 10, 21 12.12	0.15	
9/18/21 21:34	9/18/21 21:42	0.13	PG&E utility power outage (RCA Submitted, IDs 08B89 and 08B90)
9/19/21 16:14	9/19/21 16:40	0.43	PG&E utility power outage (RCA Submitted, IDs 08B91 and 08B92)
9/20/21 8:58	9/20/21 9:24	0.43	Manual Shutdown for plant operations (113)
9/20/21 9:36	9/20/21 9:46	0.17	Manual Shutdown for plant operations (113)
9/29/21 12:58	9/29/21 13:00	0.03	Flame Failure due to engine ramp up (113)
9/29/21 14:10	9/29/21 14:12	0.03	Flame Failure due to engine ramp up (113)
9/29/21 14:16	9/29/21 14:18	0.03	Flame Failure due to engine ramp up (113)
9/29/21 17:20	9/29/21 17:22	0.03	Flame Failure due to engine ramp up (113)
9/29/21 17:34	9/29/21 17:36	0.03	Flame Failure due to engine ramp up (113)
9/29/21 17:46	9/29/21 17:48	0.03	Flame Failure due to engine ramp up (113)
9/29/21 17:50	9/29/21 17:52	0.03	Flame Failure due to engine ramp up (113)
9/29/21 18:48	9/29/21 18:50	0.03	Flame Failure due to engine ramp up (113)
9/29/21 18:52	9/29/21 18:54	0.03	Flame Failure due to engine ramp up (113)
9/29/21 19:00	9/29/21 19:10	0.17	Flame Failure due to engine ramp up (113)
9/29/21 19:16	9/29/21 19:20	0.07	Flame Failure due to engine ramp up (113)
9/29/21 19:26	9/29/21 19:30	0.07	Flame Failure due to engine ramp up (113)
9/29/21 19:52	9/29/21 19:58	0.10	Flame Failure due to engine ramp up (113)
9/29/21 20:32	9/29/21 21:00	0.47	Flame Failure due to engine ramp up (113)
9/29/21 21:02	9/29/21 21:28	0.43	Flame Failure due to engine ramp up (113)
9/29/21 21:34	9/29/21 21:38	0.07	Flame Failure due to engine ramp up (113)
9/29/21 21:40	9/29/21 21:50	0.17	Flame Failure due to engine ramp up (113)
9/29/21 21:52	9/29/21 21:56	0.07	Flame Failure due to engine ramp up (113)
9/29/21 21:58	9/29/21 22:28	0.50	Flame Failure due to engine ramp up (113)
9/29/21 22:36	9/29/21 22:40	0.07	Flame Failure due to engine ramp up (113)
9/29/21 22:46	9/29/21 22:50	0.07	Flame Failure due to engine ramp up (113)
9/29/21 22:54	9/29/21 22:58	0.07	Flame Failure due to engine ramp up (113)
9/29/21 23:00	9/29/21 23:08	0.13	Flame Failure due to engine ramp up (113)
9/29/21 23:10	9/29/21 23:22	0.20	Flame Failure due to engine ramp up (113)
9/29/21 23:26	9/29/21 23:30	0.07	Flame Failure due to engine ramp up (113)
9/29/21 23:52	9/30/21 0:00	0.13	Flame Failure due to engine ramp up (113)
9/30/21 0:04	9/30/21 0:30	0.43	Flame Failure due to engine ramp up (113)

#### Table 1b. Flare (A-4) Downtime Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

9/30/21 0:38         9/30/21 1:00         0.37         Flame Failure due to engine ramp up (113)           9/30/21 1:02         9/30/21 1:30         0.47         Flame Failure due to engine ramp up (113)           9/30/21 2:36         9/30/21 2:30         0.27         Flame Failure due to engine ramp up (113)           9/30/21 2:40         9/30/21 2:50         0.17         Flame Failure due to engine ramp up (113)           9/30/21 2:56         9/30/21 3:30         0.07         Flame Failure due to engine ramp up (113)           9/30/21 3:26         9/30/21 3:30         0.07         Flame Failure due to engine ramp up (113)           9/30/21 3:36         9/30/21 3:34         0.03         Flame Failure due to engine ramp up (113)           9/30/21 4:12         9/30/21 4:44         0.53         Flame Failure due to engine ramp up (113)           9/30/21 4:12         9/30/21 4:48         0.13         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21 6:20         9/30/21 7:16         0.80         Flame Failure due to engine ramp up (113)           9/30/21 7:20         9/30/21 7:36         0.27         Flame Failure due to engine ramp up (113)           9/30/21 7:42         9/30/21 1:9:40         0.27         Flame Failure due t	Shutdown	Startup	Downtime Hours	Reason for Downtime
9/30/21         9/30/21         1:30         0.47         Flame Failure due to engine ramp up (113)           9/30/21         1:34         0/30/21         1:50         0.27         Flame Failure due to engine ramp up (113)           9/30/21         2:60         9/30/21         0.17         Flame Failure due to engine ramp up (113)           9/30/21         2:60         9/30/21         3:60         0.17         Flame Failure due to engine ramp up (113)           9/30/21         3:26         9/30/21         3:30         0.07         Flame Failure due to engine ramp up (113)           9/30/21         3:32         9/30/21         3:44         0.03         Flame Failure due to engine ramp up (113)           9/30/21         3:26         9/30/21         3:48         0.03         Flame Failure due to engine ramp up (113)           9/30/21         9/30/21         9/30/21         6:50         0.13         Flame Failure due to engine ramp up (113)           9/30/21         6:02         9/30/21         6:06         0.40         Flame Failure due to engine ramp up (113)           9/30/21         6:28         9/30/21         7:36         0.27         Flame Failure due to engine ramp up (113)           9/30/21         6:20         0.40         Flame Failure due to engine ramp up (113)	9/30/21 0:38	9/30/21 1:00		Flame Failure due to engine ramp up (113)
9/30/21         9/30/21         1:50         0.27         Flame Failure due to engine ramp up (113)           9/30/21         2:60         9/30/21         0.47         Flame Failure due to engine ramp up (113)           9/30/21         2:60         9/30/21         0.17         Flame Failure due to engine ramp up (113)           9/30/21         2:66         9/30/21         3:00         0.07         Flame Failure due to engine ramp up (113)           9/30/21         3:26         9/30/21         3:40         0.03         Flame Failure due to engine ramp up (113)           9/30/21         3:32         9/30/21         4:44         0.53         Flame Failure due to engine ramp up (113)           9/30/21         4:50         9/30/21         6:00         100         Flame Failure due to engine ramp up (113)           9/30/21         6:00         100         Flame Failure due to engine ramp up (113)         9/30/21           9/30/21         6:00         100         Flame Failure due to engine ramp up (113)         9/30/21           9/30/21         6:20         9/30/21         6:20         7         Flame Failure due to engine ramp up (113)           9/30/21         7:20         9/30/21         1:30         0.27         Flame Failure due to engine ramp up (113)           9/30/				
9/30/21 2:06         9/30/21 2:34         0.47         Flame Failure due to engine ramp up (113)           9/30/21 2:40         9/30/21 2:50         0.17         Flame Failure due to engine ramp up (113)           9/30/21 2:56         9/30/21 3:30         0.07         Flame Failure due to engine ramp up (113)           9/30/21 3:26         9/30/21 3:34         0.03         Flame Failure due to engine ramp up (113)           9/30/21 4:22         9/30/21 4:44         0.53         Flame Failure due to engine ramp up (113)           9/30/21 4:50         9/30/21 4:58         0.13         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 6:00         1.00         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 7:16         0.80         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 7:36         0.27         Flame Failure due to engine ramp up (113)           9/30/21 7:20         9/30/21 1:34         0.07         Manual Shutdown for plant operations (113)           9/30/21 1:42         9/30/21 1:50         3.03         Manual Shutdown for plant operations (113)           9/30/21 1:54         0.17         Flame Failure due to engine ramp up (113)           9/30/21 1:54         0.17         Flame Failure due to engine ramp up (113)           9				
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9/30/21         3:32         9/30/21         3:34         0.03         Flame Failure due to engine ramp up (113)           9/30/21         3:36         9/30/21         3:48         0.20         Flame Failure due to engine ramp up (113)           9/30/21         4:12         9/30/21         4:44         0.53         Flame Failure due to engine ramp up (113)           9/30/21         6:20         9/30/21         6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21         6:28         9/30/21         6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21         6:28         9/30/21         6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21         6:28         9/30/21         7:20         9/30/21         8:48         9/30/21           9/30/21         7:20         9/30/21         1:50         3.03         Manual Shutdown for plant operations (113)           9/30/21         1:48         9/30/21         1:26         0.60         Flame Failure due to engine ramp up (113)           9/30/21         1:31.50         9/30/21         1:9:26         0.60         Flame Failure due to engine ramp up (113)           9/30/21         1:9:40         0.17         Flame Failure d				
9/30/21         3:36         9/30/21         3:48         0.20         Flame Failure due to engine ramp up (113)           9/30/21         4:12         9/30/21         4:44         0.53         Flame Failure due to engine ramp up (113)           9/30/21         4:50         9/30/21         6:00         1.00         Flame Failure due to engine ramp up (113)           9/30/21         6:02         9/30/21         6:00         1.00         Flame Failure due to engine ramp up (113)           9/30/21         6:22         9/30/21         7:16         0.80         Flame Failure due to engine ramp up (113)           9/30/21         6:23         9/30/21         7:26         0.27         Flame Failure due to engine ramp up (113)           9/30/21         9/30/21         9/30/21         8:46         1.07         Manual Shutdown for plant operations (113)           9/30/21         18:48         9/30/21         12:40         0.17         Flame Failure due to engine ramp up (113)           9/30/21         19:54         9/30/21         19:54         0.17         Flame Failure due to engine ramp up (113)           9/30/21         19:44         9/30/21         18:44         0.27         Flame Failure due to engine ramp up (113)           10/4/21         8:50         10/12/1         8				
9/30/21 4:12         9/30/21 4:58         0.53         Flame Failure due to engine ramp up (113)           9/30/21 4:50         9/30/21 6:00         1.00         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21 6:02         9/30/21 6:26         0.40         Flame Failure due to engine ramp up (113)           9/30/21 6:28         9/30/21 7:16         0.80         Flame Failure due to engine ramp up (113)           9/30/21 7:42         9/30/21 8:46         1.07         Manual Shutdown for plant operations (113)           9/30/21 7:42         9/30/21 11:50         3.03         Manual Shutdown for plant operations (113)           9/30/21 11:54         9/30/21 12:04         0.17         Flame Failure due to engine ramp up (113)           9/30/21 19:54         0.17         Flame Failure due to engine ramp up (113)           9/30/21 19:54         0.17         Flame Failure due to engine ramp up (113)           9/30/21 19:54         0.17         Flame Failure due to engine ramp up (113)           9/30/21 19:54         0.17         Flame Failure due to engine ramp up (113)           10/4/21 8:28         10/4/21 8:24         0.27         Flame Failure due to engine ramp up (113)           10/4/21 8:30         10/12/21 9:04				
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12/17/21 16:04 12/17/21 16:20 0.27 Manual Shutdown for plant operations (113)				
	12/17/21 10:04	12/17/21 10:20	0.27	
12/17/21 22:48 12/18/21 0:44 1.93 Thermocouple malfunction (RCA Submitted, IDs 08E23 and 08	12/17/21 22:48	12/18/21 0.44	1.93	Thermocouple malfunction (RCA Submitted, IDs 08E23 and 08E24)
12/18/21 10:46 12/18/21 10:56 0.17 Manual Shutdown for plant operations (113)				Manual Shutdown for plant operations (113)
12/18/21 11:08         12/18/21 12:06         0.97         Manual Shutdown for plant operations (113)				
	12/ 10/ 21 11:00	-2/ 10/21 12:00	0.57	
12/19/21 4:56 12/19/21 9:24 4.47 Thermocouple malfunction (RCA Submitted, IDs 08E28 and 08	12/19/21 4:56	12/19/21 9:24	4.47	Thermocouple malfunction (RCA Submitted, IDs 08E28 and 08E29)
12/21/21 8:00 12/21/21 8:40 0.67 Manual Shutdown for plant operations (113)				Manual Shutdown for plant operations (113)
12/29/21 7:12         12/29/21 8:12         1.00         Manual Shutdown for plant operations (113)				

#### Table 1b. Flare (A-4) Downtime Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

Shutdown Startup		Downtime Hours	Reason for Downtime
12/29/21 12:38	12/29/21 14:54	2.27	Manual Shutdown for plant operations (113)
12/29/21 18:54	12/30/21 6:14	11.33	Manual Shutdown for plant operations (113)
12/30/21 6:34	12/30/21 6:44	0.17	Manual Shutdown for plant operations (113)
12/30/21 10:02	12/30/21 10:16	0.23	Manual Shutdown for plant operations (113)
1/2/22 3:34	1/2/22 11:04	7.50	Manual Shutdown for plant operations (113)
1/3/22 12:18	1/3/22 12:28	0.17	Manual Shutdown for plant operations (113)
1/5/22 9:20	1/5/22 9:50	0.50	Manual Shutdown for plant operations (113)
1/6/22 6:56	1/6/22 8:54	1.97	Manual Shutdown for plant operations (113)
1/12/22 8:20	1/12/22 14:48	6.47	Manual Shutdown for plant operations (113)
1/13/22 12:32	1/13/22 12:46	0.23	Manual Shutdown for plant operations (113)
1/19/22 9:26	1/19/22 9:38	0.20	Manual Shutdown for plant operations (113)
1/26/22 8:36	1/26/22 8:54	0.30	Manual Shutdown for plant operations (113)
1/28/22 8:20	1/28/22 8:34	0.23	Manual Shutdown for plant operations (113)
1/31/22 9:42	1/31/22 9:58	0.27	Manual Shutdown for plant operations (113)
Total		172.30	

#### Notes:

#### **Events in bold type denotes Malfunction Events**

All events listed involved GCCS inspection and/or maintenance activities prior to start up (or as soon as feasible following programmed startups) in accordance with Rule 8-34-113 requirements and the BAAQMD Compliance Advisory for Municipal Solid Waste Landfills, dated November 5, 2018, with the exception of the events that occurred on September 18 and 19, December 17 and 19, 2021 which involved utility outages from the Pacific Gas and Energy (PG&E) and thermocouple malfunction. These events were considered reportable compliance activities (RCA) and breakdown relief was requested.

# Table 2. Individual Well Startups, Shutdowns and DecommissionsSonoma County Central Landfill, Petaluma, California(August 1, 2021 through January 31, 2022)

Well ID	Shutdown	Start-up	Days Offline	Reason for Shutdown/Startup
SCV68-1A	9/8/21	N/A	N/A	Vertical Well Decommissioning
SCV065-0	9/24/21	N/A	N/A	Vertical Well Decommissioning
SC000H03	10/8/21	N/A	N/A	Horizontal Collector Decommissioning
SCEC0019	10/15/21	N/A	N/A	Horizontal Collector Decommissioning
SCV124-0	10/26/21	N/A	N/A	Vertical Well Decommissioning
SCV52-5A	10/29/21	N/A	N/A	Vertical Well Decommissioning
SCLEW-05	11/17/21	N/A	N/A	Vertical Well Decommissioning
SCV122-0	12/1/21	N/A	N/A	Vertical Well Decommissioning
SCHC2001	10/28/21 0:00	1/11/22 9:40	75.40	Inactive Horizontal Well
SCV243-0	12/10/21	N/A	N/A	Vertical Well Decommissioning
SCV068-5	1/14/22	N/A	N/A	Vertical Well Decommissioning

Note: All well downtime events listed are consistent with applicable Rule 8-34 provisions and BAAQMD permit conditions.

# Table 2. Individual Well Startups, Shutdowns and DecommissionsSonoma County Central Landfill, Petaluma, California(August 1, 2021 through January 31, 2022)

Well ID	Shutdown	Start-up	Days Offline	Reason for Shutdown/Startup
SCV68-1A	9/8/21	N/A	N/A	Vertical Well Decommissioning
SCV065-0	9/24/21	N/A	N/A	Vertical Well Decommissioning
SC000H03	10/8/21	N/A	N/A	Horizontal Collector Decommissioning
SCEC0019	10/15/21	N/A	N/A	Horizontal Collector Decommissioning
SCV124-0	10/26/21	N/A	N/A	Vertical Well Decommissioning
SCV52-5A	10/29/21	N/A	N/A	Vertical Well Decommissioning
SCLEW-05	11/17/21	N/A	N/A	Vertical Well Decommissioning
SCV122-0	12/1/21	N/A	N/A	Vertical Well Decommissioning
SCHC2001	10/28/21 0:00	1/11/22 9:40	75.40	Inactive Horizontal Well
SCV243-0	12/10/21	N/A	N/A	Vertical Well Decommissioning
SCV068-5	1/14/22	N/A	N/A	Vertical Well Decommissioning

Note: All well downtime events listed are consistent with applicable Rule 8-34 provisions and BAAQMD permit conditions.

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SC000H04	9/8/2021 9:01	0.04	-0.55	Adjusted Valve, In Compliance
SC000H04	11/16/2021 7:42	0.59	-0.09	Adjusted Valve, In Compliance
SC000H04	12/14/2021 8:41	0.72	-0.74	Adjusted Valve, In Compliance
SC000H04	1/28/2022 10:01	0.31	-0.37	Adjusted Valve, In Compliance
SC0V106A	12/20/2021 13:21	0.07	-0.02	Adjusted Valve, In Compliance
SC0V106A	1/13/2022 8:39	0.34	-0.02	Adjusted Valve, In Compliance
SC0V108A	8/2/2021 12:58	0.35	-0.1	Adjusted Valve, In Compliance
SC0V108A	9/16/2021 13:27	0.8	-0.06	Adjusted Valve, In Compliance
SCEC0006	8/12/2021 10:46	0.5	-0.1	Adjusted Valve, In Compliance
SCEC0006	12/21/2021 13:32	0.07	-0.01	Adjusted Valve, In Compliance
SCEC0019	10/15/2021 7:17	0.03	-0.77	Adjusted Valve, In Compliance
SCEC0207	8/12/2021 9:21	0.8	-0.06	Adjusted Valve, In Compliance
SCEC0207	12/21/2021 11:47	0.26	-0.02	Adjusted Valve, In Compliance
SCEC0208	8/12/2021 9:37	0.8	-0.26	Adjusted Valve, In Compliance
SCEC0208	1/21/2022 8:27	0.05	0.06	Adjusted Valve
SCEC0208	1/21/2022 8:29	0.09	0.09	Second Reading
SCEW2001	8/16/2021 11:31	0.82	-0.07	Adjusted Valve, In Compliance
SCEW2001	12/28/2021 12:24	0.1	-0.03	Adjusted Valve, In Compliance
SCEW2002	8/16/2021 10:58	0.74	-0.04	Adjusted Valve, In Compliance
SCEW2002	12/28/2021 12:53	0.04	-0.06	Adjusted Valve, In Compliance
SCEW2003	8/16/2021 15:10	0.73	-0.05	Adjusted Valve, In Compliance
SCEW2003	12/28/2021 13:16	0.08	-0.06	Adjusted Valve, In Compliance
SCEW2004	8/16/2021 14:21	0.8	-0.05	Adjusted Valve, In Compliance
SCEW2005	8/16/2021 14:32	0.62	-0.04	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCEW2009	8/16/2021 10:38	0.82	-0.06	Adjusted Valve, In Compliance
SCEW2009	9/9/2021 9:41	0.01	-0.06	Adjusted Valve, In Compliance
SCEW2009	12/28/2021 13:30	0.28	-0.04	Adjusted Valve, In Compliance
SCEW2010	8/16/2021 16:21	0.61	-0.02	Adjusted Valve, In Compliance
SCEW2010	12/28/2021 12:35	0.06	-0.02	Adjusted Valve, In Compliance
SCEW2011	8/16/2021 16:47	0.58	-0.06	Adjusted Valve, In Compliance
SCEW2011	9/9/2021 10:30	0.05	-0.04	Adjusted Valve, In Compliance
SCEW2012	8/16/2021 16:37	0.75	-0.05	Adjusted Valve, In Compliance
SCEW2014	8/11/2021 12:24	0.46	-0.19	Adjusted Valve, In Compliance
SCEW2015	8/11/2021 13:02	1.08	-0.13	Adjusted Valve, In Compliance
SCEW2015	1/13/2022 9:59	0.05	-0.03	Adjusted Valve, In Compliance
SCEW2015	1/26/2022 9:51	0.07	-0.02	Adjusted Valve, In Compliance
SCEW2015	1/26/2022 9:53	-0.08	0.12	Adjusted Valve
SCEW2017	8/11/2021 12:14	0.1	-0.17	Adjusted Valve, In Compliance
SCEW2017 SCEW2017	1/26/2022 9:36 1/26/2022 9:38	-0.04 -0.32	0.08 -0.31	Adjusted Valve In Compliance
SCEW2102	8/16/2021 10:26	0.85	-0.09	Adjusted Valve, In Compliance
SCEW2103	8/16/2021 15:00	0.95	-0.05	Adjusted Valve, In Compliance
SCEW2103	12/28/2021 13:53	0.13	-0.03	Adjusted Valve, In Compliance
SCEW2104	8/11/2021 13:38	0.74	-0.06	Adjusted Valve, In Compliance
SCEW2104	12/7/2021 13:44	-0.28	0.2	Adjusted Valve
SCEW2104	12/9/2021 9:34	-0.5	-0.46	In Compliance
SCEW2104	12/29/2021 9:17	0.02	-0.03	Adjusted Valve, In Compliance
SCEW2105	8/11/2021 13:16	0.93	-0.13	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCEW2106	11/9/2021 12:05	0.01	-0.04	Adjusted Valve, In Compliance
SCEW2107	8/11/2021 12:51	1.08	-0.17	Adjusted Valve, In Compliance
SCEW2108	8/17/2021 7:15	0.47	-0.03	Adjusted Valve, In Compliance
SCEW2109	8/16/2021 11:13	0.85	-0.03	Adjusted Valve, In Compliance
SCEW2109	12/28/2021 12:46	0.38	-0.1	Adjusted Valve, In Compliance
SCEW2110	9/9/2021 8:50	0.13	-0.03	Adjusted Valve, In Compliance
SCEW2112	9/23/2021 12:48	12.11	-0.38	Adjusted Valve, In Compliance
SCEW2115	8/18/2021 9:00	0.27	-0.18	Adjusted Valve, In Compliance
SCEW2116	8/17/2021 13:24	0.19	-0.19	Adjusted Valve, In Compliance
SCEW2117	8/17/2021 13:16	0.67	-0.14	Adjusted Valve, In Compliance
SCEW2118	8/17/2021 13:07	0.98	-0.07	Adjusted Valve, In Compliance
SCEW2119	8/17/2021 12:57	0.7	-0.13	Adjusted Valve, In Compliance
SCEW2120	8/18/2021 7:31	0.99	-0.06	Adjusted Valve, In Compliance
SCEW2120	1/10/2022 11:50	0.24	-0.02	Adjusted Valve, In Compliance
SCEW2121	10/11/2021 13:28	0.04	-0.03	Adjusted Valve, In Compliance
SCEW2122	10/11/2021 13:40	0.03	-0.03	Adjusted Valve, In Compliance
SCEW2123	10/11/2021 13:53	0.13	-0.06	Adjusted Valve, In Compliance
SCEW2124	8/18/2021 8:21	0.89	-0.08	Adjusted Valve, In Compliance
SCEW2124	9/13/2021 12:24	0.24	-0.04	Adjusted Valve, In Compliance
SCEW2126	11/8/2021 12:17	0.01	-0.22	Adjusted Valve, In Compliance
SCHC2001 SCHC2001	1/11/2022 9:36 1/11/2022 9:40	0.24 -0.02	0.24 -0.03	Adjusted Valve In Compliance
SCLEW-07	9/23/2021 10:56	0.12	-2	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV003-0	9/9/2021 8:24	7.21	-0.28	Adjusted Valve, In Compliance
SCV003-0	10/28/2021 10:02	1.02	-0.24	Adjusted Valve, In Compliance
SCV003-0	11/5/2021 10:50	1	-0.04	Adjusted Valve, In Compliance
SCV044-A	8/26/2021 9:25	1.4	-0.09	Adjusted Valve, In Compliance
SCV045-A	12/14/2021 10:44	0.01	-0.06	Adjusted Valve, In Compliance
SCV045-A	12/22/2021 13:02	0.51	-0.31	Adjusted Valve, In Compliance
SCV048-A	12/13/2021 11:52	0.68	-0.07	Adjusted Valve, In Compliance
SCV052-A	10/6/2021 11:12	0.91	-0.05	Adjusted Valve, In Compliance
SCV052-A	12/22/2021 12:38	0.72	-0.04	Adjusted Valve, In Compliance
SCV057-0	9/10/2021 9:35	0.45	-1.65	Adjusted Valve, In Compliance
SCV057-0	10/6/2021 8:07	0.75	-0.47	Adjusted Valve, In Compliance
SCV064-0	9/17/2021 9:25	0.1	-0.61	Adjusted Valve, In Compliance
SCV065-0	9/7/2021 10:01	20.94	-0.13	Adjusted Valve, In Compliance
SCV066-5	8/3/2021 8:17	1.91	-0.5	Adjusted Valve, In Compliance
SCV066-5	12/22/2021 10:10	4.33	-0.4	Adjusted Valve, In Compliance
SCV067-5	12/22/2021 9:40	0.04	-0.01	Adjusted Valve, In Compliance
SCV074-A	12/14/2021 12:52	0.06	-0.06	Adjusted Valve, In Compliance
SCV075-A	11/16/2021 12:07	0.05	-0.09	Adjusted Valve, In Compliance
SCV076-1	9/21/2021 12:44	0.88	-0.47	Adjusted Valve, In Compliance
SCV076-1	10/8/2021 15:08	1.83	-0.27	Adjusted Valve, In Compliance
SCV076-1	11/4/2021 10:59	1.77	-0.12	Adjusted Valve, In Compliance
SCV077-1	9/14/2021 8:06	0.97	-0.12	Adjusted Valve, In Compliance
SCV077-1	9/21/2021 12:34	0.73	-0.09	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV077-1	10/7/2021 9:39	2.97	-0.59	Adjusted Valve, In Compliance
SCV077-1	10/8/2021 14:57	0.72	-0.45	Adjusted Valve, In Compliance
SCV077-1	12/13/2021 11:27	3.22	-0.55	Adjusted Valve, In Compliance
SCV078-1	10/1/2021 12:33	0.91	-0.04	Adjusted Valve, In Compliance
SCV078-1	11/1/2021 13:49	21.95	-0.51	Adjusted Valve, In Compliance
SCV079-1	8/13/2021 12:56	2.8	-1.26	Adjusted Valve, In Compliance
SCV079-1	8/27/2021 10:57	0.24	-0.12	Adjusted Valve, In Compliance
SCV079-1	9/14/2021 7:47	3.03	-0.61	Adjusted Valve, In Compliance
SCV079-1	9/21/2021 12:08	2.31	-1.54	Adjusted Valve, In Compliance
SCV079-1	10/8/2021 14:29	13.79	-0.14	Adjusted Valve, In Compliance
SCV079-1	11/29/2021 14:11	10.85	-0.8	Adjusted Valve, In Compliance
SCV080-0	8/23/2021 11:03	3.49	-0.15	Adjusted Valve, In Compliance
SCV080-0	8/23/2021 11:03	3.49	-0.15	Adjusted Valve, In Compliance
SCV080-0	10/8/2021 14:19	3.4	-0.28	Adjusted Valve, In Compliance
SCV080-0	11/19/2021 9:29	1.76	-0.59	Adjusted Valve, In Compliance
SCV080-0	12/13/2021 10:51	4.64	-0.19	Adjusted Valve, In Compliance
SCV081-1	9/14/2021 7:25	0.84	-0.14	Adjusted Valve, In Compliance
SCV081-1	10/8/2021 11:01	5.2	-0.49	Adjusted Valve, In Compliance
SCV081-1	11/30/2021 7:57	2.41	-0.13	Adjusted Valve, In Compliance
SCV082-1	8/4/2021 8:11	3.99	-0.79	(Initial Exceedance was on 7/22) Adjusted Valve, In Compliance
SCV082-1	9/21/2021 11:18	1.26	-0.55	Adjusted Valve, In Compliance
SCV091-B	9/16/2021 13:04	1.04	-4.01	Adjusted Valve, In Compliance
SCV092-A	11/17/2021 12:39	0.13	-0.17	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV093-A	11/17/2021 12:26	8.95	-0.53	Adjusted Valve, In Compliance
SCV098-0	9/3/2021 13:57	3.93	-0.42	Adjusted Valve, In Compliance
SCV098-0	9/23/2021 7:50	5.02	-0.23	Adjusted Valve, In Compliance
SCV098-0	10/19/2021 10:08	3.68	-0.13	Adjusted Valve, In Compliance
SCV098-0	11/16/2021 12:21	4.76	-0.83	Adjusted Valve, In Compliance
SCV100-3	9/14/2021 9:19	0.08	-0.03	Adjusted Valve, In Compliance
SCV100-3	9/16/2021 11:04	1.08	-0.04	Adjusted Valve, In Compliance
SCV100-5	9/16/2021 12:56	1.88	-5.25	Adjusted Valve, In Compliance
SCV101-0	8/6/2021 11:38	1.06	-1.51	Adjusted Valve, In Compliance
SCV101-0	10/19/2021 8:34	1.08	-0.32	Adjusted Valve, In Compliance
SCV102-A	12/20/2021 11:15	0.74	-0.02	Adjusted Valve, In Compliance
SCV107-0	8/2/2021 12:46	0.73	-0.64	Adjusted Valve, In Compliance
SCV107-0	9/16/2021 13:17	0.3	-0.36	Adjusted Valve, In Compliance
SCV107-0	10/19/2021 12:23	0.45	-0.91	Adjusted Valve, In Compliance
SCV107-0	11/16/2021 13:50	0.85	-0.63	Adjusted Valve, In Compliance
SCV112-0	12/20/2021 13:43	0.86	-0.06	Adjusted Valve, In Compliance
SCV113-0	11/10/2021 9:23	0.25	-0.7	Adjusted Valve, In Compliance
SCV113-0	12/20/2021 13:28	2.22	-0.14	Adjusted Valve, In Compliance
SCV113-0	1/13/2022 8:47	6.34	-0.84	Adjusted Valve, In Compliance
SCV114-0	12/20/2021 13:11	1.6	-0.41	Adjusted Valve, In Compliance
SCV114-0	1/13/2022 8:27	6.47	-0.48	Adjusted Valve, In Compliance
SCV115-0	8/5/2021 8:21	1.61	-0.17	Adjusted Valve, In Compliance
SCV115-0	12/20/2021 13:01	4.92	-0.35	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV116-A	9/16/2021 12:39	1.17	-0.07	Adjusted Valve, In Compliance
SCV124-0	9/23/2021 7:22	1.61	-7.45	Adjusted Valve, In Compliance
SCV125A0	9/16/2021 13:36	0.05	-0.07	Adjusted Valve, In Compliance
SCV125A0	12/2/2021 12:43	0.63	-0.15	Adjusted Valve, In Compliance
SCV126A0	9/16/2021 13:45	0.85	-0.03	Adjusted Valve, In Compliance
SCV126A0	12/1/2021 10:42	0.22	-0.04	Adjusted Valve, In Compliance
SCV128-A	9/9/2021 7:54	1.66	-0.06	Adjusted Valve, In Compliance
SCV128-A	12/7/2021 12:24	1.07	-0.18	Adjusted Valve, In Compliance
SCV132-0	12/20/2021 13:54	0.29	-0.02	Adjusted Valve, In Compliance
SCV133-0 SCV133-0	9/16/2021 14:04 9/17/2021 7:23	N/A -2.67	72.35 -2.67	Adjusted Valve In Compliance
SCV135-0	8/16/2021 13:15	1.05	-0.14	Adjusted Valve, In Compliance
SCV136-0	9/20/2021 11:52	1.84	-1.12	Adjusted Valve, In Compliance
SCV136-0	12/13/2021 14:00	0.32	-0.81	Adjusted Valve, In Compliance
SCV137-0	10/22/2021 11:11	0.02	-0.07	Adjusted Valve, In Compliance
SCV137-0	12/13/2021 13:48	0.14	-0.03	Adjusted Valve, In Compliance
SCV138-0	9/20/2021 12:13	2.87	-0.38	Adjusted Valve, In Compliance
SCV138-0	12/13/2021 13:38	1.94	-0.08	Adjusted Valve, In Compliance
SCV139-0	9/20/2021 12:25	6.06	-0.1	Adjusted Valve, In Compliance
SCV139-0	10/22/2021 10:20	0.3	-0.03	Adjusted Valve, In Compliance
SCV139-0	11/30/2021 9:02	7.93	-0.21	Adjusted Valve, In Compliance
SCV140-0	9/20/2021 12:38	0.1	-0.04	Adjusted Valve, In Compliance
SCV143-0	8/26/2021 8:28	0.02	-0.06	Adjusted Valve, In Compliance

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV143-0	11/2/2021 13:34	0.4	-0.18	Adjusted Valve, In Compliance
SCV144-0	12/14/2021 10:15	0.81	-0.02	Adjusted Valve, In Compliance
SCV147-0	9/23/2021 13:02	10.51	-0.77	Adjusted Valve, In Compliance
SCV147-0	11/1/2021 12:02	1.38	-0.04	Adjusted Valve, In Compliance
SCV147-0	12/22/2021 12:17	1.52	-0.07	Adjusted Valve, In Compliance
SCV149-A	9/16/2021 10:46	0.06	-4.76	Adjusted Valve, In Compliance
SCV149-A	11/3/2021 13:27	0.24	-1.25	Adjusted Valve, In Compliance
SCV149-A	11/16/2021 12:45	0.04	-0.27	Adjusted Valve, In Compliance
SCV149-A	12/2/2021 9:39	0.09	-1.87	Adjusted Valve, In Compliance
SCV213-0	8/12/2021 12:44	0.8	-0.07	Adjusted Valve, In Compliance
SCV213-0	10/7/2021 13:17	0.06	-0.04	Adjusted Valve, In Compliance
SCV215-0	9/8/2021 9:37	0.24	-0.12	Adjusted Valve, In Compliance
SCV216-0	9/8/2021 9:45	0.09	-0.21	Adjusted Valve, In Compliance
SCV223-0	8/13/2021 10:05	0.76	-0.59	Adjusted Valve, In Compliance
SCV223-0	9/17/2021 13:02	0.11	-0.11	Adjusted Valve, In Compliance
SCV225-0	8/13/2021 10:29	0.34	-0.25	Adjusted Valve, In Compliance
SCV225-0	9/17/2021 12:04	0.79	-1.09	Adjusted Valve, In Compliance
SCV225-0	9/23/2021 11:13	13.66	-0.2	Adjusted Valve, In Compliance
SCV225-0	10/27/2021 12:12	2.08	-0.16	Adjusted Valve, In Compliance
SCV225-0	11/23/2021 13:18	2.01	-0.44	Adjusted Valve, In Compliance
SCV225-0	11/24/2021 12:49	2.48	-0.51	Adjusted Valve, In Compliance
SCV225-0	12/6/2021 13:15	5.92	-0.24	Adjusted Valve, In Compliance
SCV225-0	12/20/2021 10:06	6.03	-0.05	Adjusted Valve, In Compliance

#### Table 3. Wells with Positive Pressure Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Static Pressure ("H <sub>2</sub> O)	Adjusted Static Pressure ("H <sub>2</sub> O)	Comments
SCV226-0	8/13/2021 11:20	0.27	-0.1	Adjusted Valve, In Compliance
SCV228-0	11/8/2021 12:25	0.12	-0.09	Adjusted Valve, In Compliance
SCV234-0	8/12/2021 11:27	0.88	-0.09	Adjusted Valve, In Compliance
SCV234-0	11/8/2021 11:19	0.1	-0.06	Adjusted Valve, In Compliance
SCV235-0	8/6/2021 12:04	0.55	-0.07	Adjusted Valve, In Compliance
SCV235-0	12/21/2021 10:46	0.04	-0.02	Adjusted Valve, In Compliance
SCV49-1A	12/9/2021 11:20	1.09	-1.56	Adjusted Valve, In Compliance
SCV51-5A	9/16/2021 9:16	0.01	-0.5	Adjusted Valve, In Compliance
SCV52-5A	10/28/2021 14:09	5.93	-17.41	Adjusted Valve, In Compliance
SCV88-5A	11/3/2021 13:10	0.08	-0.19	Adjusted Valve, In Compliance
SCV89-5A	9/16/2021 12:18	1.38	-0.04	Adjusted Valve, In Compliance
SV101-5A	12/20/2021 11:28	1.68	-0.04	Adjusted Valve, In Compliance

Note: All required corrective action and remonitoring was completed in accordance with Rule 8-34 and NSPS timelines. All pressure exceedance were corrected within 15 days.

Well ID	Date and Time	Oxygen (%)	Comments
SC000H03	8/3/2021 11:16	14	(Initial Exceedance was on 6/11) Adjusted Valve
SC000H03	8/3/2021 11:18	13.7	Second Reading
SC000H03	8/17/2021 7:49	15.7	Adjusted Valve
SC000H03	8/17/2021 7:51	12.5	Second Reading
SC000H03	8/25/2021 12:02	13.7	Adjusted Valve
SC000H03	8/25/2021 12:05	11.5	Second Reading
SC000H03	9/7/2021 9:38	19.8	Adjusted Valve
SC000H03	9/7/2021 9:40	20	Second Reading
SC000H03	9/16/2021 9:41	20.5	Adjusted Valve
SC000H03	9/16/2021 9:42	20.7	Second Reading
SC000H03	9/23/2021 7:09	21.2	Adjusted Valve
SC000H03	9/23/2021 7:11	21.2	Second Reading
SC000H03	10/1/2021 10:39	19.8	Adjusted Valve
SC000H03	10/4/2021 13:36	20	Adjusted Valve
SC000H03	10/4/2021 13:38	19.9	Well Permanently Decommissioned Due to Poor Gas Quality
SC000H04	8/3/2021 11:28	2.7	(Initial Exceedance was on 7/27) In Compliance
SC000H04	8/25/2021 11:52	11.4	Adjusted Valve
SC000H04	8/25/2021 11:55	10.1	Second Reading
SC000H04	9/3/2021 15:05	8.1	Adjusted Valve
SC000H04	9/3/2021 15:07	9.3	Second Reading
SC000H04	9/7/2021 9:28	1.7	In Compliance
SC000H04	9/7/2021 9:31	11.5	Adjusted Valve
SC000H04	9/8/2021 9:01	0.8	In Compliance
SC000H04	9/8/2021 9:05	6.7	Adjusted Valve
SC000H04	9/16/2021 9:33	1.8	In Compliance
SC000H04	11/2/2021 12:10	9.2	Adjusted Valve
SC000H04	11/2/2021 12:12	11.5	Second Reading
SC000H04	11/16/2021 7:42	0.5	In Compliance
SC000H04	1/28/2022 10:02	16.7	Adjusted Valve
SC0V108A	9/23/2021 8:43	5.7	Adjusted Valve
SC0V108A	9/23/2021 8:43	4	In Compliance
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SC0V110A	8/11/2021 11:54	11.2	Adjusted Valve
SC0V110A	8/11/2021 11:56	2.7	In Compliance

Well ID	Date and Time	Oxygen (%)	Comments
SC0V110A	9/10/2021 8:53	5.6	Adjusted Valve
SCOV110A	9/10/2021 8:55	3.7	In Compliance
500110/	5/10/2021 0.55	5.7	
SCEC0010	8/17/2021 12:08	15.4	Adjusted Valve
SCEC0010	8/23/2021 11:23	3.1	In Compliance
SCEC0019	8/6/2021 13:06	18.9	(Initial Exceedance was on 6/18) Adjusted Valve
SCEC0019	8/6/2021 13:08	19.1	Second Reading
SCEC0019	8/17/2021 10:26	19.2	Adjusted Valve
SCEC0019	8/17/2021 10:27	19.5	Second Reading
SCEC0019	8/27/2021 8:20	20	Adjusted Valve
SCEC0019	8/27/2021 8:22	20.2	Second Reading
SCEC0019	9/3/2021 10:10	19.7	Adjusted Valve
SCEC0019	9/3/2021 10:12	20.4	Second Reading
SCEC0019	9/13/2021 10:22	20.6	Adjusted Valve
SCEC0019	9/13/2021 10:24	20.5	Second Reading
SCEC0019	9/22/2021 7:25	21	Adjusted Valve
SCEC0019	9/22/2021 7:31	21.3	Second Reading
SCEC0019	10/6/2021 7:53	21	Adjusted Valve
SCEC0019	10/6/2021 7:55	21.1	Second Reading
SCEC0019	10/13/2021 13:55	19.1	Adjusted Valve
SCEC0019	10/13/2021 13:57	19.3	Second Reading
SCEC0019	10/15/2021 7:17	20.5	Adjusted Valve
SCEC0019	10/15/2021 7:19	21.4	Second Reading
SCEC0019	10/15/2021 8:37	20.8	Third Reading
SCEC0019	10/15/2021 8:38	21	Well Permanently Decommissioned Due to Poor Gas Quality
SCEC0020	11/12/2021 9:20	12.6	Adjusted Valve
SCEC0020	11/12/2021 9:23	13.2	Second Reading
SCEC0020	11/23/2021 10:25	12.6	Adjusted Valve
SCEC0020	11/23/2021 10:27	13.9	Second Reading
SCEC0020	12/7/2021 9:57	12.1	Adjusted Valve
SCEC0020	12/7/2021 9:59	13.2	Second Reading
SCEC0020	12/20/2021 8:14	10.5	Adjusted Valve
SCEC0020	12/20/2021 8:18	5	In Compliance
SCEC0020	12/30/2021 11:08	15.6	Adjusted Valve
SCEC0020	12/30/2021 11:09	14.5	Second Reading
SCEC0020	1/4/2022 12:48	11.3	Adjusted Valve
SCEC0020	1/5/2022 7:49	9.8	Adjusted Valve
SCEC0020	1/5/2022 7:50	14.7	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCEC0020	1/17/2022 13:21	11.7	Adjusted Valve
SCEC0020	1/17/2022 13:22	13.7	Second Reading
SCEC0020	1/28/2022 9:07	13.7	Adjusted Valve
SCEC0020	1/28/2022 9:09	11.7	Second Reading
SCEC0022	12/21/2021 11:12	10.6	Adjusted Valve
SCEC0022	12/21/2021 11:14	8.4	Second Reading
SCEC0022	12/30/2021 11:03	6.3	Adjusted Valve
SCEC0022	12/30/2021 11:05	13.2	Second Reading
SCEC0022	1/4/2022 12:39	11.3	Adjusted Valve
SCEC0022	1/4/2022 12:41	9.5	Second Reading
SCEC0022	1/17/2022 12:59	9.6	Adjusted Valve
SCEC0022	1/17/2022 13:01	9	Second Reading
SCEC0022	1/28/2022 9:01	11.5	Adjusted Valve
SCEC0022	1/28/2022 9:03	18	Second Reading
SCEC0207	10/28/2021 13:30	19	Adjusted Valve
SCEC0207	10/28/2021 13:32	19.1	Second Reading
SCEC0207	11/10/2021 10:43	2.5	In Compliance
SCEW2001	8/16/2021 12:13	8.6	Adjusted Valve
SCEW2001	8/17/2021 7:29	0	In Compliance
SCEW2007	8/20/2021 10:45	6.5	Adjusted Valve
SCEW2007	8/23/2021 10:42	3.8	In Compliance
SCEW2103	8/20/2021 9:58	7.1	Adjusted Valve
SCEW2103	8/20/2021 10:01	8.5	Second Reading
SCEW2103	9/3/2021 14:26	1.5	In Compliance
SCHC2001	8/6/2021 8:06	10.6	(Initial Exceedance was on 6/21) Adjusted Valve
SCHC2001	8/6/2021 8:08	10.7	Second Reading
SCHC2001	8/18/2021 10:54	10.5	Adjusted Valve
SCHC2001	8/18/2021 10:56	11.8	Second Reading
SCHC2001	8/24/2021 12:30	14.3	Adjusted Valve
SCHC2001	8/24/2021 12:32	14.1	Second Reading
SCHC2001	9/7/2021 10:50	14.8	Adjusted Valve
SCHC2001	9/7/2021 10:51	15.2	Second Reading
SCHC2001	9/17/2021 10:24	14.7	Adjusted Valve
SCHC2001	9/17/2021 10:27	15.2	Second Reading
SCHC2001	9/23/2021 8:59	14.9	Adjusted Valve
SCHC2001	9/23/2021 9:01	15	Second Reading
SCHC2001	10/1/2021 13:57	13.3	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCHC2001	10/1/2021 13:59	13.6	Second Reading
SCHC2001	10/5/2021 12:26	13.8	Adjusted Valve
SCHC2001	10/5/2021 12:28	13.4	Second Reading
SCHC2001	10/18/2021 10:37	12.4	Adjusted Valve
SCHC2001	10/18/2021 10:40	13.2	Well was temporarily taken offline pursuant to PTO Condition 4044 Part 5c
SCHC2001	1/11/2022 9:36	9.1	Adjusted Valve
SCHC2001	1/11/2022 9:40	9	Second Reading
SCHC2001	1/27/2022 13:44	14.9	Adjusted Valve
SCHC2001	1/27/2022 13:46	13.5	Second Reading
SCLEW-05	8/5/2021 10:06	15.5	(Initial Exceedance was on 7/20) Adjusted Valve
SCLEW-05	8/5/2021 10:10	20.7	Second Reading
SCLEW-05	8/18/2021 10:03	19.9	Adjusted Valve
SCLEW-05	8/18/2021 10:06	18.9	Second Reading
SCLEW-05	8/31/2021 7:03	20.5	Adjusted Valve
SCLEW-05	8/31/2021 7:05	20.6	Second Reading
SCLEW-05	9/10/2021 10:26	20.5	Adjusted Valve
SCLEW-05	9/10/2021 10:28	20.5	Second Reading
SCLEW-05	9/21/2021 8:19	20.1	Adjusted Valve
SCLEW-05	9/21/2021 8:21	20.4	Second Reading
SCLEW-05	10/1/2021 11:13	19.1	Adjusted Valve
SCLEW-05	10/1/2021 11:15	19.6	Second Reading
SCLEW-05	10/14/2021 12:13	20.6	Adjusted Valve
SCLEW-05	10/14/2021 12:15	20.6	Second Reading
SCLEW-05	10/26/2021 13:41	19.9	Adjusted Valve
SCLEW-05	10/26/2021 13:43	20.7	Second Reading
SCLEW-05	11/2/2021 12:45	20.2	Adjusted Valve
SCLEW-05	11/2/2021 12:48	20.4	Second Reading
SCLEW-05	11/16/2021 8:19	19.8	Adjusted Valve
SCLEW-05	11/16/2021 8:20	20.7	Well Permanently Decommissioned Due to Poor Gas Quality
	0/10/2021 0.50	5.4	Adjusted Value
SCLEW-06	9/10/2021 9:59		Adjusted Valve
SCLEW-06	9/10/2021 10:01	5.9	Second Reading
SCLEW-06	9/21/2021 7:55	11.3	Adjusted Valve
SCLEW-06	9/21/2021 7:57	7.7	Second Reading
SCLEW-06	9/30/2021 9:23	6.3	Adjusted Valve
SCLEW-06	9/30/2021 9:25	8.8	Second Reading
SCLEW-06	10/6/2021 8:28	4.6	In Compliance
SCLEW-07	8/3/2021 10:14	5.4	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCLEW-07	8/3/2021 10:19	2.9	In Compliance
SCLEW-07	8/25/2021 10:20	11.4	Adjusted Valve
SCLEW-07	8/25/2021 10:22	9.1	Second Reading
SCLEW-07	9/7/2021 10:11	16.1	Adjusted Valve
SCLEW-07	9/7/2021 10:13	13.9	Second Reading
SCLEW-07	9/7/2021 10:32	2.4	In Compliance
SCLEW-07	9/17/2021 8:42	11	Adjusted Valve
SCLEW-07	9/17/2021 8:44	13.8	Second Reading
SCLEW-07	9/23/2021 10:56	20.4	Adjusted Valve
SCLEW-07	9/23/2021 10:58	20.4	Second Reading
SCLEW-07	10/1/2021 9:25	16.9	Adjusted Valve
SCLEW-07	10/1/2021 9:27	20.2	Second Reading
SCLEW-07	10/14/2021 11:06	20.3	Adjusted Valve
SCLEW-07	10/14/2021 11:07	20.3	Second Reading
SCLEW-07	10/21/2021 12:01	0.6	In Compliance
SCLEW-07	11/4/2021 8:41	20.1	Adjusted Valve
SCLEW-07	11/4/2021 8:42	18.5	Second Reading
SCLEW-07	11/19/2021 8:28	20.8	Adjusted Valve
SCLEW-07	11/19/2021 8:29	20.7	Second Reading
SCLEW-07	12/7/2021 9:00	2.1	In Compliance
SCV003-0	8/2/2021 11:46	8.2	(Initial Exceedance was on 7/19) Adjusted Valve
SCV003-0	8/2/2021 11:48	5.7	Second Reading
SCV003-0	8/13/2021 7:25	20.9	Adjusted Valve
SCV003-0	8/13/2021 7:27	20.9	Second Reading
SCV003-0	8/24/2021 11:10	11.2	Adjusted Valve
SCV003-0	8/24/2021 11:12	4.9	In Compliance
SCV003-0	9/30/2021 16:49	19.1	Adjusted Valve
SCV003-0	9/30/2021 16:51	20.1	Second Reading
SCV003-0	10/14/2021 12:37	20.3	Adjusted Valve
SCV003-0	10/14/2021 12:41	18	Second Reading
SCV003-0	10/14/2021 12:42	20.3	Third Reading
SCV003-0	10/14/2021 12:44	20.4	Fourth Reading
SCV003-0	10/22/2021 12:19	20.2	Adjusted Valve
SCV003-0	10/22/2021 12:21	14.1	Second Reading
SCV003-0	10/28/2021 10:02	0.5	In Compliance
SCV003-0	11/29/2021 9:56	19.7	Adjusted Valve
SCV003-0	11/29/2021 9:57	19.8	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV003-0	12/8/2021 9:06	6.4	Adjusted Valve
SCV003-0	12/8/2021 9:09	1.7	In Compliance
SCV04-2A	9/30/2021 16:55	6.3	Adjusted Valve
SCV04-2A	9/30/2021 16:58	3.3	In Compliance
SCV049-A	11/3/2021 9:35	5.8	Adjusted Valve
SCV049-A	11/3/2021 9:38	4.6	In Compliance
	44/24/2024 40 44	0.2	
SCV049-A	11/24/2021 10:41	9.2	Adjusted Valve
SCV049-A	11/24/2021 10:44	4.3	In Compliance
SCV052-A	9/15/2021 12:03	8.2	Adjusted Valve
SCV052-A	9/15/2021 12:08	4.9	In Compliance
3CV032-A	5/15/2021 12.00	4.5	
SCV052-A	10/6/2021 11:12	8.3	Adjusted Valve
SCV052-A	10/7/2021 9:14	5	In Compliance
SCV052-A	10/20/2021 9:13	5.5	Adjusted Valve
SCV052-A	10/20/2021 9:16	5.5	Second Reading
SCV052-A	10/20/2021 9:30	6.5	Adjusted Valve
SCV052-A	11/3/2021 8:56	0.9	In Compliance
SCV057-0	8/5/2021 9:03	12.6	Adjusted Valve
SCV057-0	8/5/2021 9:06	12.2	Second Reading
SCV057-0	8/18/2021 9:30	17.4	Adjusted Valve
SCV057-0	8/18/2021 9:34	20.3	Second Reading
SCV057-0	8/25/2021 12:23	5.8	Adjusted Valve
SCV057-0	8/25/2021 12:25	3.5	In Compliance
SCV057-0	9/10/2021 9:37	6	Adjusted Valve
SCV057-0	9/21/2021 7:46	1.4	In Compliance
SCV057-0	10/6/2021 8:09	6.4	Adjusted Value
SCV057-0	10/18/2021 12:05	4.7	Adjusted Valve In Compliance
30057-0	10/18/2021 12.05	4.7	
SCV057-0	11/2/2021 11:52	7.1	Adjusted Valve
SCV057-0	11/2/2021 11:52	4.1	In Compliance
	11, 2, 2021 11.0 F		
SCV064-0	9/15/2021 9:10	20.6	Adjusted Valve
SCV064-0	9/15/2021 9:12	19	Second Reading
SCV064-0	9/17/2021 9:25	0.1	In Compliance
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SCV064-0	10/1/2021 10:26	18.8	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV064-0	10/1/2021 10:28	18.8	Second Reading
SCV064-0	10/14/2021 11:28	13.2	Adjusted Valve
SCV064-0	10/14/2021 11:30	15.8	Second Reading
SCV064-0	10/22/2021 8:59	8.1	Adjusted Valve
SCV064-0	10/22/2021 9:03	2	In Compliance
SCV064-0	11/4/2021 9:26	18.2	Adjusted Valve
SCV064-0	11/4/2021 9:28	15.1	Second Reading
SCV064-0	11/19/2021 8:56	18.3	Adjusted Valve
SCV064-0	11/19/2021 8:58	13.1	Second Reading
SCV064-0	12/7/2021 8:41	8.6	Adjusted Valve
SCV064-0	12/7/2021 8:43	10.4	Second Reading
SCV064-0	12/22/2021 8:32	0.1	In Compliance
SCV064-5	9/15/2021 8:58	7.2	Adjusted Valve
SCV064-5	9/15/2021 9:03	1.8	In Compliance
-			
SCV064-5	9/17/2021 8:58	14.6	Adjusted Valve
SCV064-5	9/17/2021 9:00	10.9	Second Reading
SCV064-5	10/1/2021 9:37	20.2	Adjusted Valve
SCV064-5	10/1/2021 9:38	14.1	Second Reading
SCV064-5	10/14/2021 11:15	20.1	Adjusted Valve
SCV064-5	10/14/2021 11:20	16.8	Second Reading
SCV064-5	10/21/2021 12:09	1.5	In Compliance
SCV064-5	11/4/2021 8:48	13.6	Adjusted Valve
SCV064-5	11/4/2021 8:51	16.5	Second Reading
SCV064-5	11/23/2021 8:22	13.7	Adjusted Valve
SCV064-5	11/23/2021 8:25	20.7	Second Reading
SCV064-5	12/6/2021 11:35	8.6	Adjusted Valve
SCV064-5	12/6/2021 11:37	6.4	Second Reading
SCV064-5	12/22/2021 8:57	0.3	In Compliance
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SCV065-0	8/3/2021 10:27	20	(Initial Exceedance was on 5/28) Adjusted Valve
SCV065-0	8/3/2021 10:30	20.1	Second Reading
SCV065-0	8/18/2021 11:31	19.9	Adjusted Valve
SCV065-0	8/18/2021 11:37	19.8	Second Reading
SCV065-0	8/25/2021 10:29	19.1	Adjusted Valve
SCV065-0	8/25/2021 10:32	19.2	Second Reading
SCV065-0	9/7/2021 10:01	20.3	Adjusted Valve
SCV065-0	9/7/2021 10:04	19.9	Second Reading
SCV065-0	9/17/2021 8:51	20.7	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV065-0	9/17/2021 8:53	20.9	Well Permanently Decommissioned Due to Poor Gas Quality
SCV066-5	8/3/2021 8:17	0	(Initial Exceedance was on 7/20) In Compliance
SCV066-5	8/25/2021 0:06	7.1	Adjusted Value
SCV066-5	8/25/2021 9:06 8/25/2021 9:08	7.1	Adjusted Valve Second Reading
SCV066-5	9/8/2021 8:41	8.9	Adjusted Valve
SCV066-5	9/8/2021 8:42	8.5	Second Reading
SCV066-5	9/17/2021 8:20	6.5	Adjusted Valve
SCV066-5	9/17/2021 8:22	8.2	Second Reading
SCV066-5	10/1/2021 9:05	7.5	Adjusted Valve
SCV066-5	10/1/2021 9:05	7.5	Second Reading
SCV066-5	10/14/2021 10:30	4.4	In Compliance
30000-3	10/14/2021 10:30	4.4	
SCV066-5	11/24/2021 13:37	13.1	Adjusted Valve
SCV066-5	11/24/2021 13:39	15.3	Second Reading
SCV066-5	12/6/2021 11:28	4	In Compliance
SCV067-A	8/3/2021 8:06	0.8	(Initial Exceedance was on 7/20) In Compliance
SCV067-A	8/25/2021 8:58	20.5	Adjusted Valve
SCV067-A	8/25/2021 9:00	20.8	Second Reading
SCV067-A	9/7/2021 11:53	19.9	Adjusted Valve
SCV067-A	9/7/2021 11:55	19.9	Second Reading
SCV067-A	9/17/2021 8:13	20.3	Adjusted Valve
SCV067-A	9/17/2021 8:15	20.9	Second Reading
SCV067-A	9/23/2021 6:57	19.3	Adjusted Valve
SCV067-A	9/23/2021 6:59	20.5	Second Reading
SCV067-A	10/1/2021 9:00	20.1	Adjusted Valve
SCV067-A	10/1/2021 9:01	20.2	Second Reading
SCV067-A	10/14/2021 10:43	20.2	Adjusted Valve
SCV067-A	10/14/2021 10:46	20.2	Second Reading
SCV067-A	10/21/2021 11:29	20.4	Adjusted Valve
SCV067-A	10/22/2021 8:33	20	Adjusted Valve
SCV067-A	10/22/2021 8:35	18.4	Second Reading
SCV067-A	11/4/2021 8:10	18.2	Adjusted Valve
SCV067-A	11/4/2021 8:12	20.6	Second Reading
SCV067-A	11/19/2021 9:12	20.9	Adjusted Valve
SCV067-A	11/19/2021 9:23	20.8	Second Reading
SCV067-A	11/24/2021 13:31	19.8	Adjusted Valve
SCV067-A	11/24/2021 13:32	20.1	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV067-A	12/6/2021 11:14	21.2	Adjusted Valve
SCV067-A	12/6/2021 11:15	21.4	Second Reading
SCV067-A	12/8/2021 8:31	13.5	Adjusted Valve
SCV067-A	12/8/2021 8:34	17	Second Reading
SCV067-A	12/22/2021 10:01	0	In Compliance
SCV068-5	8/3/2021 7:29	21	(Initial Exceedance was on 7/13) Adjusted Valve
SCV068-5	8/3/2021 7:31	21	Second Reading
SCV068-5	8/17/2021 8:56	20.6	Adjusted Valve
SCV068-5	8/17/2021 8:58	20.6	Second Reading
SCV068-5	8/25/2021 8:29	20.6	Adjusted Valve
SCV068-5	8/25/2021 8:33	20.9	Second Reading
SCV068-5	9/8/2021 8:30	11.8	Adjusted Valve
SCV068-5	9/8/2021 8:32	3.2	In Compliance
SCV068-5	9/17/2021 7:42	20.5	Adjusted Valve
SCV068-5	9/17/2021 7:58	20.5	Second Reading
SCV068-5	10/1/2021 8:32	19.9	Adjusted Valve
SCV068-5	10/1/2021 8:34	20.2	Second Reading
SCV068-5	10/18/2021 13:41	20.6	Adjusted Valve
SCV068-5	10/18/2021 13:45	20.8	Second Reading
SCV068-5	11/1/2021 12:18	20.9	Adjusted Valve
SCV068-5	11/1/2021 12:20	20.9	Second Reading
SCV068-5	11/15/2021 14:09	20	Adjusted Valve
SCV068-5	11/15/2021 14:11	20.4	Second Reading
SCV068-5	11/24/2021 13:16	19.8	Adjusted Valve
SCV068-5	11/24/2021 13:18	19.9	Second Reading
SCV068-5	12/8/2021 8:10	20.5	Adjusted Valve
SCV068-5	12/8/2021 8:12	20.9	Second Reading
SCV068-5	12/22/2021 9:29	20.9	Adjusted Valve
SCV068-5	12/22/2021 9:32	21	Second Reading
SCV068-5	12/30/2021 12:25	20.9	Adjusted Valve
SCV068-5	12/30/2021 12:26	21	Second Reading
SCV068-5	1/4/2022 10:57	15	Adjusted Valve
SCV068-5	1/4/2022 10:59	21.2	Second Reading
SCV068-5	1/14/2022 8:08	20.1	Adjusted Valve
SCV068-5	1/14/2022 8:10	20.5	Well Permanently Decommissioned Due to Poo Gas Quality
SCV069-0	11/24/2021 13:10	6.7	Adjusted Valve
SCV069-0	11/24/2021 13:10	10.1	Second Reading
SCV069-0	12/8/2021 8:01	2.7	In Compliance

Well ID	Date and Time	Oxygen (%)	Comments
SCV074-A	9/10/2021 11:40	8.5	Adjusted Valve
SCV074-A	9/10/2021 11:43	4.9	In Compliance
SCV075-A	8/16/2021 13:33	9.2	Adjusted Valve
SCV075-A	8/16/2021 13:35	8.2	Second Reading
SCV075-A	8/31/2021 7:33	6.4	Adjusted Valve
SCV075-A	8/31/2021 7:35	9.4	Second Reading
SCV075-A	9/10/2021 11:32	9.6	Adjusted Valve
SCV075-A	9/10/2021 11:34	10.3	Second Reading
SCV075-A	9/20/2021 11:16	12.9	Adjusted Valve
SCV075-A	9/20/2021 11:18	8	Second Reading
SCV075-A	9/30/2021 9:38	2	In Compliance
SCV075-A	11/2/2021 9:56	15	Adjusted Valve
SCV075-A	11/2/2021 9:58	12.1	Second Reading
SCV075-A	11/16/2021 10:39	0.7	In Compliance
SCV075-A	11/17/2021 7:40	9.9	Adjusted Valve
SCV075-A	11/17/2021 7:43	18.5	Second Reading
SCV075-A	12/1/2021 11:27	18.7	Adjusted Valve
SCV075-A	12/1/2021 11:29	19.8	Second Reading
SCV075-A	12/15/2021 12:25	0.3	In Compliance
SCV076-1	8/13/2021 13:31	13.3	Adjusted Valve
SCV076-1	8/13/2021 13:33	13.3	Second Reading
SCV076-1	8/27/2021 10:02	3.9	In Compliance
SCV076-1	10/20/2021 11:14	11.6	Adjusted Valve
SCV076-1	10/20/2021 11:16	4.5	In Compliance
SCV076-1	11/20/2021 12:42	15.2	A divisted Value
SCV076-1 SCV076-1	<u>11/29/2021 13:43</u> <u>11/29/2021 13:45</u>	12.2	Adjusted Valve Second Reading
SCV076-1 SCV076-1	12/13/2021 11:37	0	In Compliance
30070-1	12/13/2021 11.37	0	
SCV077-1	8/13/2021 13:20	7.7	Adjusted Valve
SCV077-1 SCV077-1	8/13/2021 13:20	4.7	In Compliance
300077-1	0/13/2021 13.22	4.7	
SCV077-1	9/21/2021 12:37	6.9	Adjusted Valve
SCV077-1	10/7/2021 9:39	0.5	In Compliance
	10, , / 2021 3.33	l	
SCV077-1	10/20/2021 11:04	17.9	Adjusted Valve
SCV077-1	10/20/2021 11:04	4.9	In Compliance
	10,20,2021 11.07		
SCV077-1	11/29/2021 13:53	6.5	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV077-1	11/29/2021 13:55	1.5	In Compliance
SCV078-1	8/13/2021 13:08	11.1	Adjusted Valve
SCV078-1	8/13/2021 13:12	4.9	In Compliance
SCV078-1	9/14/2021 7:58	20.3	Adjusted Valve
SCV078-1	9/14/2021 8:00	20.6	Second Reading
SCV078-1	9/21/2021 12:24	19	Adjusted Valve
SCV078-1	9/21/2021 12:27	5.8	Second Reading
SCV078-1	10/1/2021 12:33	19.1	Adjusted Valve
SCV078-1	10/1/2021 12:35	1.9	In Compliance
SCV078-1	10/8/2021 14:40	20.3	Adjusted Valve
SCV078-1	10/8/2021 14:42	16.4	Second Reading
SCV078-1	10/8/2021 14:42	16.4	Third Reading
SCV078-1	10/8/2021 14:43	16.6	Fourth Reading
SCV078-1	10/8/2021 14:47	3.9	In Compliance
SCV078-1	10/20/2021 10:55	13.8	Adjusted Valve
SCV078-1	10/20/2021 10:57	9	Second Reading
SCV078-1	11/1/2021 13:49	0	In Compliance
SCV078-1	11/4/2021 10:39	20.1	Adjusted Valve
SCV078-1	11/4/2021 10:42	2.7	In Compliance
SCV079-1	8/4/2021 8:26	20.7	(Initial Exceedance was on 7/22) Adjusted Valve
SCV079-1	8/4/2021 8:28	15.5	Second Reading
SCV079-1	8/4/2021 9:02	0.5	In Compliance
SCV079-1	8/4/2021 9:29	16.2	Adjusted Valve
SCV079-1	8/4/2021 9:31	12.5	Second Reading
SCV079-1	8/13/2021 12:56	0	In Compliance
SCV079-1	9/14/2021 7:51	11.4	Adjusted Valve
SCV079-1	9/21/2021 12:08	0	In Compliance
SCV080-0	8/13/2021 12:45	7.9	Adjusted Valve
SCV080-0	8/23/2021 11:03	0	In Compliance
SCV080-0	9/14/2021 7:34	9.3	Adjusted Valve
SCV080-0	9/14/2021 7:36	11.7	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV080-0	9/21/2021 11:45	18.5	Adjusted Valve
SCV080-0	9/21/2021 11:47	13.8	Second Reading
SCV080-0	10/8/2021 14:19	0.2	In Compliance
	10/10/2021 0 15		
SCV080-0	10/19/2021 9:45	5.7	Adjusted Valve
SCV080-0	10/20/2021 10:39	3.1	In Compliance
SCV080-0	11/4/2021 10:14	13.9	Adjusted Valve
SCV080-0	11/4/2021 10:17	10	Second Reading
SCV080-0	11/19/2021 9:29	0.8	In Compliance
SCV080-0	11/29/2021 14:21	8.9	Adjusted Valve
SCV080-0	11/29/2021 14:24	4.9	In Compliance
SCV081-1	8/13/2021 12:30	8.3	Adjusted Valve
SCV081-1	8/13/2021 12:33	4.1	In Compliance
5000011	0/13/2021 12:33	<b>T.1</b>	
SCV081-1	8/27/2021 11:33	5.7	Adjusted Valve
SCV081-1	8/27/2021 11:37	0.2	In Compliance
SCV081-1	9/21/2021 12:01	10.6	Adjusted Value
SCV081-1 SCV081-1	9/21/2021 12:03	3.2	Adjusted Valve In Compliance
300081-1	9/21/2021 12.03	5.2	
SCV082-1	8/13/2021 12:04	6.2	Adjusted Valve
SCV082-1	8/13/2021 12:07	4.8	In Compliance
SCV082-1	9/21/2021 11:24	18	Adjusted Valve
SCV082-1	9/21/2021 11:31	18.2	Second Reading
SCV082-1	10/8/2021 10:37	7.6	Adjusted Valve
SCV082-1	10/8/2021 10:39	5.7	Second Reading
SCV082-1	10/19/2021 9:50	9.8	Adjusted Valve
SCV082-1	10/19/2021 9:52	6.1	Second Reading
SCV082-1	11/1/2021 13:33	0.6	In Compliance
SCV082-1	11/30/2021 8:11	6.7	Adjusted Valve
SCV082-1 SCV082-1	11/30/2021 8:11	9.4	Second Reading
SCV082-1 SCV082-1	12/13/2021 10:32	9.4	In Compliance
22.002 1	12, 10, 2021 10.02		
SCV083-A	8/13/2021 11:50	5.2	Adjusted Valve
SCV083-A	8/13/2021 11:52	3.1	In Compliance
	0/44/2024 42.24		
SCV092-A	9/14/2021 12:04	6.5	Adjusted Valve
SCV092-A	9/14/2021 12:06	4	In Compliance

Well ID	Date and Time	Oxygen (%)	Comments
SCV092-A	9/17/2021 10:05	5.3	Adjusted Valve
SCV092-A	9/17/2021 10:03	1.9	In Compliance
3CV092-A	9/17/2021 10.08	1.9	
SCV092-A	12/2/2021 11:10	6.1	Adjusted Valve
SCV092-A	12/6/2021 14:10	4.9	In Compliance
3CV092-A	12/0/2021 14.10	4.9	
SCV092-A	1/11/2022 9:14	6.9	Adjusted Valve
SCV092-A	1/11/2022 9:16	0.2	In Compliance
SCV093-A	11/3/2021 11:38	20.3	Adjusted Valve
SCV093-A	11/3/2021 11:40	18.8	Second Reading
SCV093-A	11/17/2021 12:26	0	In Compliance
SCV093-A	12/2/2021 11:23	10.2	Adjusted Valve
SCV093-A	12/2/2021 11:27	10.3	Second Reading
SCV093-A	12/15/2021 11:57	0.1	In Compliance
SCV098-0	8/23/2021 11:45	14.6	Adjusted Valve
SCV098-0	8/23/2021 11:47	12.9	Second Reading
SCV098-0	9/3/2021 13:57	0	In Compliance
SCV098-0	9/16/2021 10:07	19.7	Adjusted Valve
SCV098-0	9/16/2021 10:09	19.7	Second Reading
SCV098-0	9/23/2021 7:50	1.2	In Compliance
SCV098-0	10/6/2021 13:18	20.2	Adjusted Valve
SCV098-0	10/6/2021 13:20	20.4	Second Reading
SCV098-0	10/19/2021 10:08	0	In Compliance
SCV098-0	11/3/2021 12:56	19.8	Adjusted Valve
SCV098-0	11/3/2021 12:58	15.7	Second Reading
SCV098-0	11/16/2021 12:21	0	In Compliance
SCV098-0	12/2/2021 9:09	16.8	Adjusted Valve
SCV098-0	12/6/2021 11:20	1.1	In Compliance
SCV100-3	10/6/2021 14:01	5.9	Adjusted Valve
SCV100-3	10/7/2021 9:54	3	In Compliance
SCV100-5	8/23/2021 13:11	18.4	(Initial Exceedance was on 6/16)
SCV100-5	8/23/2021 13:13	10.1	Second Reading
SCV100-5	9/3/2021 13:35	16.8	Adjusted Valve
SCV100-5	9/3/2021 13:38	12.7	Second Reading
SCV100-5	9/13/2021 10:45	14.8	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV100-5	9/13/2021 10:46	15.1	Second Reading
SCV100-5	9/14/2021 9:54	5.5	Adjusted Valve
SCV100-5	9/14/2021 9:56	4.8	In Compliance
SCV100-5	9/16/2021 12:58	16.8	Adjusted Valve
SCV100-5	9/23/2021 8:25	13.8	Adjusted Valve
SCV100-5	9/23/2021 8:28	9.2	Second Reading
SCV100-5	10/8/2021 8:07	2	In Compliance
SCV100-5	11/10/2021 13:19	20.2	Adjusted Valve
SCV100-5	11/10/2021 13:21	20.2	Second Reading
SCV100-5	11/16/2021 13:36	19.7	Adjusted Valve
SCV100-5	11/16/2021 13:38	20.3	Second Reading
SCV100-5	12/1/2021 10:54	15.1	Adjusted Valve
SCV100-5	12/1/2021 10:58	5.6	Second Reading
SCV100-5	12/15/2021 8:58	2	In Compliance
SCV101-0	8/6/2021 11:14	5.3	Adjusted Valve
SCV101-0	8/6/2021 11:14	3.6	In Compliance
30101-0	8/0/2021 11.10	5.0	
SCV101-0	9/15/2021 12:34	11	Adjusted Valve
SCV101-0	9/15/2021 12:37	5.9	Second Reading
SCV101-0	9/15/2021 12:39	7.4	Adjusted Valve
SCV101-0	9/21/2021 9:03	4.8	In Compliance
SCV101-0	10/6/2021 10:30	5.4	Adjusted Valve
SCV101-0	10/6/2021 10:32	7.2	Second Reading
SCV101-0	10/19/2021 8:34	0.3	In Compliance
501101.0	10/10/2021 0.34	0.5	
SCV101-0	11/3/2021 8:25	7.7	Adjusted Valve
SCV101-0	11/3/2021 8:27	9.7	Second Reading
SCV101-0	11/16/2021 9:01	0	In Compliance
SCV10-1A	9/14/2021 13:33	12.2	Adjusted Valve
SCV10-1A	9/14/2021 13:35	5.6	Second Reading
SCV10-1A	9/21/2021 7:09	14.5	Adjusted Valve
SCV10-1A	9/21/2021 7:11	15.7	Second Reading
SCV10-1A	10/1/2021 11:46	1	In Compliance
SCV10-1A	11/5/2021 13:54	10	Adjusted Valve
SCV10-1A	11/5/2021 13:56	2.7	In Compliance
	12/1/2024 40.25	20.2	
SCV10-1A	12/1/2021 10:25	20.3	Adjusted Valve
SCV10-1A	12/1/2021 10:27	20.4	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV10-1A	12/15/2021 8:31	3.9	In Compliance
SCV10-1A	12/17/2021 13:52	6.7	Adjusted Valve
SCV10-1A	12/20/2021 9:32	9.3	Adjusted Valve
SCV10-1A	12/20/2021 9:34	13.6	Second Reading
SCV10-1A	12/29/2021 8:43	10	Adjusted Valve
SCV10-1A	12/29/2021 8:45	12.7	Second Reading
SCV10-1A	1/11/2022 12:11	4.6	In Compliance
SCV10-1A	1/17/2022 14:57	7.5	Adjusted Valve
SCV10-1A	1/17/2022 14:59	4.9	In Compliance
SCV107-0	8/24/2021 9:22	16.4	Adjusted Valve
SCV107-0	8/24/2021 9:24	14.1	Second Reading
SCV107-0	9/3/2021 14:12	8.2	Adjusted Valve
SCV107-0	9/3/2021 14:15	12.7	Second Reading
SCV107-0	9/13/2021 10:51	5.3	Adjusted Valve
SCV107-0	9/13/2021 10:53	1	In Compliance
SCV107-0	9/16/2021 13:19	8.4	Adjusted Valve
SCV107-0	9/23/2021 8:34	20.3	Adjusted Valve
SCV107-0	9/23/2021 8:36	13.6	Second Reading
SCV107-0	10/8/2021 8:25	7.6	Adjusted Valve
SCV107-0	10/8/2021 8:27	2.9	In Compliance
001407.0			
SCV107-0	12/2/2021 12:24	7.8	Adjusted Valve
SCV107-0	12/2/2021 12:25	10.5	Second Reading
SCV107-0	12/15/2021 11:43	0.5	In Compliance
CC) (100 A	12/2/2021 0.04	6	
SCV109-A	12/2/2021 9:04	6	Adjusted Valve
SCV109-A	12/2/2021 9:06	3.8	In Compliance
SCV112-0	8/5/2021 7:55	3.6	(Initial Exceedance was on 7/22) In Compliance
SCV112-0	8/24/2021 13:23	8.2	Adjusted Valve
SCV112-0	8/24/2021 13:25	10.2	Second Reading
SCV112-0	9/3/2021 14:39	9.5	Adjusted Valve
SCV112-0	9/3/2021 14:41	8.3	Second Reading
SCV112-0	9/13/2021 11:03	8.8	Adjusted Valve
SCV112-0	9/13/2021 11:05	11	Second Reading
SCV112-0	9/20/2021 13:42	5.3	Adjusted Valve
30112 0			

Well ID	Date and Time	Oxygen (%)	Comments
SCV112-0	10/1/2021 13:00	5.7	Adjusted Valve
SCV112-0	10/1/2021 13:02	4.1	In Compliance
SCV113-0	8/25/2021 7:22	7.6	Adjusted Valve
SCV113-0	8/25/2021 7:26	7.1	Second Reading
SCV113-0	9/7/2021 13:36	9.3	Adjusted Valve
SCV113-0	9/7/2021 13:38	7	Second Reading
SCV113-0	9/20/2021 11:00	5.2	Adjusted Valve
SCV113-0	9/20/2021 11:03	5.2	Second Reading
SCV113-0	10/1/2021 13:18	4.2	In Compliance
SCV114-0	9/14/2021 11:11	5.9	Adjusted Valve
SCV114-0	9/14/2021 11:13	1.6	In Compliance
SCV115-0	10/8/2021 10:04	6.1	Adjusted Valve
SCV115-0	10/8/2021 10:06	4.7	In Compliance
CC) /11 F O	10/12/2021 11.50	0.2	A disector d Marker
SCV115-0	10/13/2021 11:58	9.3	Adjusted Valve
SCV115-0	10/13/2021 12:01	0	In Compliance
SCV115-0	11/29/2021 12:53	5.1	Adjusted Valve
SCV115-0	12/1/2021 11:07	3.4	In Compliance
	12/1/2021 11:07	5.1	
SCV117-A	8/20/2021 8:18	10.6	Adjusted Valve
SCV117-A	8/20/2021 8:21	4.9	In Compliance
SCV117-A	9/14/2021 13:18	7.8	Adjusted Valve
SCV117-A	9/14/2021 13:20	10.6	Second Reading
SCV117-A	9/21/2021 6:58	6.7	Adjusted Valve
SCV117-A	9/21/2021 7:01	5.2	Second Reading
SCV117-A	10/1/2021 11:53	6.5	Adjusted Valve
SCV117-A	10/1/2021 11:55	4.6	In Compliance
SCV117-A	11/5/2021 13:40	12.4	Adjusted Valve
SCV117-A	11/5/2021 13:43	10.4	Second Reading
SCV117-A	11/19/2021 9:59	17.3	Adjusted Valve
SCV117-A	11/19/2021 10:03	20.8	Second Reading
SCV117-A	12/1/2021 10:15	1.1	In Compliance
SCV117-A	12/1/2021 10:19	6.3	Adjusted Valve
SCV117-A	12/9/2021 9:45	0.1	In Compliance
SCV117-A	1/11/2022 12:20	14.9	Adjusted Valve
SCV117-A	1/11/2022 12:21	16.8	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV117-A	1/21/2022 10:09	17.4	Adjusted Valve
SCV117-A	1/21/2022 10:10	17.6	Second Reading
SCV120-0	9/15/2021 10:15	17.1	Adjusted Valve
SCV120-0	9/16/2021 8:22	2.6	In Compliance
SCV120-0	10/6/2021 9:16	11.5	Adjusted Valve
SCV120-0	10/6/2021 9:18	15.6	Second Reading
SCV120-0	10/18/2021 12:19	11.4	Adjusted Valve
SCV120-0	10/18/2021 12:23	11	Second Reading
SCV120-0	11/1/2021 12:47	7.6	Adjusted Valve
SCV120-0	11/1/2021 12:49	18.8	Second Reading
SCV120-0	11/15/2021 13:55	14	Adjusted Valve
SCV120-0	11/15/2021 13:57	15.1	Second Reading
SCV120-0	11/17/2021 8:03	6.1	Adjusted Valve
SCV120-0	11/17/2021 8:05	17	Second Reading
SCV120-0	12/1/2021 13:06	20.4	Adjusted Valve
SCV120-0	12/1/2021 13:08	20.4	Second Reading
SCV120-0	12/9/2021 13:08	4.8	In Compliance
SCV122-0	8/3/2021 11:40	19.6	Adjusted Valve
SCV122-0	8/3/2021 11:43	19.6	Second Reading
SCV122-0	8/17/2021 8:27	20.7	Adjusted Valve
SCV122-0	8/17/2021 8:28	20.7	Second Reading
SCV122-0	8/25/2021 11:30	14.1	Adjusted Valve
SCV122-0	8/25/2021 11:32	12.3	Second Reading
SCV122-0	9/7/2021 12:20	19.5	Adjusted Valve
SCV122-0	9/7/2021 12:22	19.5	Second Reading
SCV122-0	9/17/2021 9:42	20.9	Adjusted Valve
SCV122-0	9/17/2021 9:44	20.9	Second Reading
SCV122-0	9/23/2021 7:30	21	Adjusted Valve
SCV122-0	9/23/2021 7:32	21.2	Second Reading
SCV122-0	10/1/2021 10:08	19.8	Adjusted Valve
SCV122-0	10/1/2021 10:10	20	Second Reading
SCV122-0	10/14/2021 11:47	20.3	Adjusted Valve
SCV122-0	10/14/2021 11:49	20.3	Second Reading
SCV122-0	10/21/2021 12:43	19	Adjusted Valve
SCV122-0	10/22/2021 8:47	15	Adjusted Valve
SCV122-0	10/22/2021 8:49	19.5	Second Reading
SCV122-0	11/4/2021 9:07	20.8	Adjusted Valve
SCV122-0	11/4/2021 9:09	20.8	Second Reading
SCV122-0	11/19/2021 8:47	21	Adjusted Valve
SCV122-0	11/19/2021 8:49	21	Second Reading
SCV122-0	11/24/2021 11:46	19.8	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV122-0	11/24/2021 11:49	20.3	Well Permanently Decommissioned Due to Poor Gas Quality
SCV124-0	8/3/2021 11:54	19.8	(Initial Exceedance was on 6/29) Adjusted Valve
SCV124-0	8/3/2021 12:01	19.8	Second Reading
SCV124-0	8/17/2021 8:19	17.1	Adjusted Valve
SCV124-0	8/17/2021 8:22	20.7	Second Reading
SCV124-0	8/25/2021 11:15	17	Adjusted Valve
SCV124-0	8/25/2021 11:20	20	Second Reading
SCV124-0	9/7/2021 12:26	19.5	Adjusted Valve
SCV124-0	9/7/2021 12:29	19.6	Second Reading
SCV124-0	9/17/2021 9:32	20.5	Adjusted Valve
SCV124-0	9/17/2021 9:34	20.8	Second Reading
SCV124-0	9/23/2021 7:22	0	In Compliance
SCV124-0	9/23/2021 7:24	19.6	Adjusted Valve
SCV124-0	10/1/2021 10:17	20	Adjusted Valve
SCV124-0	10/1/2021 10:20	20	Second Reading
SCV124-0	10/14/2021 11:38	18.2	Adjusted Valve
SCV124-0	10/14/2021 11:40	20.4	Second Reading
SCV124-0	10/21/2021 12:49	9.8	Adjusted Valve
SCV124-0	10/22/2021 8:53	11.4	Adjusted Valve
SCV124-0	10/22/2021 8:54	15	Second Reading
SCV124-0	10/26/2021 12:48	21	Adjusted Valve
SCV124-0	10/26/2021 12:49	21	Well Permanently Decommissioned Due to Poor Gas Quality
SCV125A0	8/24/2021 9:44	9.5	Adjusted Valve
SCV125A0	8/24/2021 9:47	6.4	Second Reading
SCV125A0	9/3/2021 13:25	4.8	In Compliance
SCV125A0	10/8/2021 8:39	7	Adjusted Valve
SCV125A0	10/8/2021 8:42	4.9	In Compliance
SCV125A0	11/17/2021 9:21	8.3	Adjusted Valve
SCV125A0	11/17/2021 9:25	4.8	In Compliance
SCV126A0	10/8/2021 8:46	7.1	Adjusted Valve
SCV126A0	10/8/2021 8:49	4.7	In Compliance
SCV126A0	11/17/2021 9:30	6.1	Adjusted Valve
SCV126A0 SCV126A0	11/17/2021 9:30	5	In Compliance
JUVIZUAU	11/1/2021 9.34		

Well ID	Date and Time	Oxygen (%)	Comments
SCV127A0	9/10/2021 8:46	5.3	Adjusted Valve
SCV127A0	9/10/2021 8:48	4.1	In Compliance
SCV128-A	8/3/2021 13:03	10.6	Adjusted Valve
SCV128-A	8/3/2021 13:06	7.2	Second Reading
SCV128-A	8/16/2021 12:18	8.3	Adjusted Valve
SCV128-A	8/16/2021 12:20	2.7	In Compliance
SCV133-0	9/16/2021 14:04	11	Adjusted Valve
SCV133-0	9/17/2021 7:23	4	In Compliance
SCV133-0	11/17/2021 9:38	6.1	Adjusted Valve
SCV133-0	11/17/2021 9:41	3.4	In Compliance
SCV133-0	12/2/2021 12:52	6.3	Adjusted Valve
SCV133-0	12/2/2021 12:54	2.8	In Compliance
SCV135-0	9/10/2021 11:59	5.6	Adjusted Valve
SCV135-0	9/10/2021 12:01	3.5	In Compliance
SCV136-0	11/30/2021 9:24	9.6	Adjusted Valve
SCV136-0	11/30/2021 9:26	10.5	Second Reading
SCV136-0	12/13/2021 14:00	0	In Compliance
SCV137-0	8/4/2021 9:49	11.2	(Initial Exceedance was on 7/22)
SCV137-0	8/4/2021 9:52	11.2	Second Reading
SCV137-0	8/16/2021 13:03	8.1	Adjusted Valve
SCV137-0	8/16/2021 13:05	13.6	Second Reading
SCV137-0	8/27/2021 9:20	15.1	Adjusted Valve
SCV137-0	8/27/2021 9:23	15.1	Second Reading
SCV137-0	9/7/2021 12:41	15.5	Adjusted Valve
SCV137-0	9/7/2021 12:43	15.1	Second Reading
SCV137-0	9/10/2021 12:18	9	Adjusted Valve
SCV137-0	9/10/2021 12:20	11.7	Second Reading
SCV137-0	9/20/2021 12:03	8.8	Adjusted Valve
SCV137-0	9/20/2021 12:05	4.5	In Compliance
60/427.0	10/20/2024 42 22	7.2	A -11
SCV137-0	10/26/2021 12:22	7.2	Adjusted Valve
SCV137-0	10/26/2021 12:24	12.2	Second Reading
SCV137-0	11/2/2021 11:01	10.2	Adjusted Valve
SCV137-0	11/2/2021 11:03	10.4	Second Reading
SCV137-0	11/2/2021 11:49	1.7	In Compliance
501127.0	11/20/2021 0.20	70	Adjusted Value
SCV137-0	11/30/2021 9:20	7.3	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV137-0	12/1/2021 11:35	19.8	Adjusted Valve
SCV137-0	12/1/2021 11:37	5.9	Second Reading
SCV137-0	12/13/2021 13:48	1.3	In Compliance
SCV137-0	1/5/2022 13:28	7.4	Adjusted Valve
SCV137-0	1/5/2022 13:33	2.3	In Compliance
SCV138-0	9/10/2021 12:28	7.8	Adjusted Valve
SCV138-0	9/10/2021 12:31	5.9	Second Reading
SCV138-0	9/20/2021 12:13	0	In Compliance
SCV138-0	10/15/2021 14:50	12.4	Adjusted Valve
SCV138-0	10/15/2021 14:52	14.2	Second Reading
SCV138-0	10/22/2021 10:43	0.3	In Compliance
SCV138-0	11/2/2021 10:53	7.5	Adjusted Valve
SCV138-0	11/2/2021 10:56	6.1	Second Reading
SCV138-0	11/16/2021 10:23	2.2	In Compliance
SCV138-0	11/30/2021 9:11	7.4	Adjusted Valve
SCV138-0	11/30/2021 9:14	5.6	Second Reading
SCV138-0	12/13/2021 13:38	1.5	In Compliance
SCV138-0	1/19/2022 12:43	6.4	Adjusted Valve
SCV138-0	1/19/2022 12:45	7.2	Second Reading
SCV139-0	8/16/2021 12:47	1.3	In Compliance
SCV139-0	9/10/2021 12:39	20.2	Adjusted Valve
SCV139-0	9/10/2021 12:43	10.3	Second Reading
SCV139-0	9/20/2021 12:25	0	In Compliance
SCV139-0	10/15/2021 14:58	11.5	Adjusted Valve
SCV139-0	10/15/2021 15:00	13.6	Second Reading
SCV139-0	10/22/2021 10:20	0	In Compliance
SCV139-0	11/30/2021 9:02	15.2	Adjusted Valve
SCV139-0	11/30/2021 9:05	7.8	Second Reading
SCV139-0	12/13/2021 13:25	8.9	Adjusted Valve
SCV139-0	12/13/2021 13:27	9.5	Second Reading
SCV139-0	12/27/2021 9:54	13.4	Adjusted Valve
SCV139-0	12/27/2021 9:56	12.4	Second Reading
SCV139-0	1/5/2022 13:02	10.6	Adjusted Valve
SCV139-0	1/5/2022 13:03	11.1	Second Reading
SCV139-0	1/19/2022 12:35	11.7	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV139-0	1/19/2022 12:37	13.2	Second Reading
SCV140-0	9/10/2021 12:50	5.4	Adjusted Valve
SCV140-0	9/10/2021 12:53	2.6	In Compliance
SCV140-0	10/15/2021 15:06	6.2	Adjusted Valve
SCV140-0	10/15/2021 15:08	4.5	In Compliance
SCV141-0	9/10/2021 9:52	5.2	Adjusted Valve
SCV141-0	9/13/2021 11:18	3.8	In Compliance
SCV142-0	8/5/2021 9:43	6.1	Adjusted Valve
SCV142-0	8/5/2021 9:44	4	In Compliance
SCV142-0	9/10/2021 10:07	5.5	Adjusted Valve
SCV142-0	9/10/2021 10:09	4.6	In Compliance
SCV143-0	8/4/2021 7:37	1.9	(Initial Exceedance was on 7/20) In Compliance
	, ,		
SCV143-0	8/26/2021 8:28	7.1	Adjusted Valve
SCV143-0	8/26/2021 8:30	7.2	Second Reading
SCV143-0	9/7/2021 13:10	20.7	Adjusted Valve
SCV143-0	9/7/2021 13:13	10.3	Second Reading
SCV143-0	9/15/2021 10:39	3.6	In Compliance
SCV143-0	9/16/2021 8:56	9.2	Adjusted Valve
SCV143-0	9/16/2021 9:06	21	Second Reading
SCV143-0	9/17/2021 11:51	19.9	Adjusted Valve
SCV143-0	9/17/2021 11:51	19.2	Second Reading
SCV143-0	9/23/2021 11:51	20.1	Adjusted Valve
SCV143-0	9/23/2021 11:54	20.1	Second Reading
SCV143-0	10/6/2021 9:48	20.5	Adjusted Valve
SCV143-0	10/6/2021 9:51	20.7	Second Reading
SCV143-0	10/18/2021 12:54	4.9	In Compliance
SCV143-0	10/18/2021 13:05	15.4	Adjusted Valve
SCV143-0	10/20/2021 9:34	4	In Compliance
		Ī	
SCV143-0	11/2/2021 13:41	9	Adjusted Valve
SCV143-0	11/2/2021 13:42	8.2	Second Reading
SCV143-0	11/17/2021 8:29	4.6	In Compliance
SCV143-0	12/1/2021 13:42	9.1	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV143-0	12/1/2021 13:45	8.6	Second Reading
SCV143-0	12/9/2021 13:43	0	In Compliance
SCV144-0	8/5/2021 10:20	6.1	Adjusted Valve
SCV144-0	8/5/2021 10:23	6.2	Second Reading
SCV144-0	8/18/2021 9:48	3.8	In Compliance
SCV144-0	9/10/2021 10:34	5.3	Adjusted Valve
SCV144-0	9/10/2021 10:34	5.3	Second Reading
	· · ·	1.4	
SCV144-0	9/20/2021 10:44	1.4	In Compliance
SCV144-0	10/6/2021 8:50	9.3	Adjusted Valve
SCV144-0	10/6/2021 8:53	9.4	Second Reading
SCV144-0	10/20/2021 9:03	1.4	In Compliance
SCV145-0	8/5/2021 9:55	5.4	Adjusted Valve
SCV145-0	8/5/2021 9:59	2.4	In Compliance
	0/21/2021 0:12	<u> </u>	
SCV145-0	9/21/2021 8:12	6.4	Adjusted Valve
SCV145-0	9/21/2021 8:14	7.6	Second Reading
SCV145-0	10/1/2021 11:05	8.1	Adjusted Valve
SCV145-0	10/1/2021 11:07	1.9	In Compliance
SCV147-0	8/4/2021 9:18	16.7	Adjusted Valve
SCV147-0	8/4/2021 9:20	10.2	Second Reading
SCV147-0	8/17/2021 8:02	3.6	In Compliance
SCV147-0	9/23/2021 13:02	12.1	Adjusted Valve
SCV147-0	9/23/2021 13:05	19.3	Second Reading
SCV147-0	10/6/2021 11:47	19.9	Adjusted Valve
SCV147-0	10/6/2021 11:49	20.2	Second Reading
SCV147-0	10/19/2021 8:00	21.4	Adjusted Valve
SCV147-0	10/19/2021 8:02	17.1	Second Reading
SCV147-0	11/1/2021 12:02	0.5	In Compliance
SCV147-0	11/30/2021 8:44	19.5	Adjusted Valve
SCV147-0	11/30/2021 8:46	19.5	Second Reading
SCV147-0	12/8/2021 13:54	2.7	In Compliance
SCV149-A	8/2/2021 9:50	18.6	(Initial Exceedance was on 7/23) Adjusted Valve
SCV149-A	8/2/2021 9:53	10.3	Second Reading
SCV149-A	8/13/2021 7:38	20.9	Adjusted Valve
SCV149-A	8/13/2021 7:40	14.2	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV149-A	8/23/2021 12:16	3.8	In Compliance
SCV149-A	9/15/2021 14:06	8.7	Adjusted Valve
SCV149-A	9/15/2021 14:08	7.7	Second Reading
SCV149-A	9/16/2021 10:46	0	In Compliance
SCV202-0	10/20/2021 7:48	5.6	Adjusted Valve
SCV202-0	10/20/2021 8:26	0	In Compliance
SCV217-0	10/7/2021 12:51	5.9	Adjusted Valve
SCV217-0	10/7/2021 12:53	3.3	In Compliance
SCV219-0	8/13/2021 9:15	10.5	Adjusted Valve
SCV219-0	8/13/2021 9:17	6.2	Second Reading
SCV219-0	8/18/2021 12:39	10.8	Adjusted Valve
SCV219-0	8/27/2021 8:34	10.7	Adjusted Valve
SCV219-0	8/27/2021 8:37	4.2	In Compliance
SCV222-0	8/4/2021 7:10	3.5	(Initial Exceedance was on 5/14) In Compliance
SCV225-0	9/17/2021 12:08	8.4	Adjusted Valve
SCV225-0	9/23/2021 11:13	8.4	Adjusted Valve
SCV225-0	9/23/2021 11:16	7	Second Reading
SCV225-0	10/7/2021 10:50	5.7	Adjusted Valve
SCV225-0	10/7/2021 10:54	5.9	Second Reading
SCV225-0	10/19/2021 9:02	8.3	Adjusted Valve
SCV225-0	10/19/2021 9:05	8.1	Second Reading
SCV225-0	10/27/2021 12:12	14.7	Adjusted Valve
SCV225-0	10/27/2021 12:16	15.6	Second Reading
SCV225-0	11/8/2021 12:40	3.3	In Compliance
SCV225-0	11/23/2021 13:18	11.6	Adjusted Valve
SCV225-0	11/24/2021 12:49	16.9	Adjusted Valve
SCV225-0	11/24/2021 12:51	17.3	Second Reading
SCV225-0	12/6/2021 13:15	17.8	Adjusted Valve
SCV225-0	12/6/2021 13:24	18.5	Second Reading
SCV225-0	12/20/2021 10:06	17.5	Adjusted Valve
SCV225-0	12/20/2021 10:08	18.3	Second Reading
SCV225-0	12/27/2021 9:14	14	Adjusted Valve
SCV225-0	12/27/2021 9:16	15.4	Second Reading
SCV225-0	1/7/2022 10:48	2	In Compliance
SCV225-0	1/20/2022 10:24	18.5	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV225-0	1/20/2022 10:26	18.4	Second Reading
SCV226-0	8/13/2021 10:39	7.3	Adjusted Valve
SCV226-0	8/13/2021 11:20	2	In Compliance
<u> </u>	0/24/2024 7:22	6.5	
SCV226-0	8/24/2021 7:32	6.5	Adjusted Valve
SCV226-0	8/24/2021 7:34	6.7	Second Reading
SCV226-0	8/27/2021 8:56	5.8	Adjusted Valve
SCV226-0	8/27/2021 8:58	5.9	Second Reading
SCV226-0	9/8/2021 11:53	6.6	Adjusted Valve
SCV226-0	9/8/2021 11:55	8.6	Second Reading
SCV226-0	9/17/2021 12:14	8	Adjusted Valve
SCV226-0	9/20/2021 10:29	0.4	In Compliance
SCV226-0	10/7/2021 10:41	18.5	Adjusted Valve
SCV226-0	10/7/2021 10:43	18.9	Second Reading
SCV226-0	10/19/2021 8:53	18.8	Adjusted Valve
SCV226-0	10/19/2021 8:55	19.9	Second Reading
SCV226-0	10/27/2021 12:22	16	Adjusted Valve
SCV226-0	10/27/2021 12:25	17.9	Second Reading
SCV226-0	11/8/2021 12:32	14.5	Adjusted Valve
SCV226-0	11/8/2021 12:32	14.9	Second Reading
SCV226-0	11/23/2021 13:08	19.3	Adjusted Valve
SCV226-0	11/23/2021 13:00	20.1	Second Reading
SCV226-0	12/6/2021 13:01	20.1	Adjusted Valve
SCV226-0	12/6/2021 13:03	20.4	Second Reading
SCV226-0	12/14/2021 11:57	0	In Compliance
307220-0	12/14/2021 11.37	0	
SCV226-0	12/27/2021 9:22	18.3	Adjusted Valve
SCV226-0	12/27/2021 9:23	19.5	Second Reading
SCV226-0	1/7/2022 10:19	7.3	Adjusted Valve
SCV226-0	1/7/2022 10:21	6.9	Second Reading
SCV226-0	1/20/2022 10:13	20	Adjusted Valve
SCV226-0	1/20/2022 10:14	20.3	Second Reading
SCV228-0	8/4/2021 13:17	0	In Compliance
501220 0	10/27/2021 12:20	11	Adjusted Value
SCV228-0	10/27/2021 12:29	11	Adjusted Valve
SCV228-0	10/27/2021 12:31	4.9	In Compliance
SCV230-0	12/14/2021 12:08	15.3	Adjusted Valve
SCV230-0	12/14/2021 12:10	15.7	Second Reading
SCV230-0	12/27/2021 8:24	19.5	Adjusted Valve
SCV230-0	12/27/2021 8:25	21.8	Second Reading
SCV230-0	1/7/2022 9:16	1.2	In Compliance

Well ID	Date and Time	Oxygen (%)	Comments
SCV230-0	1/20/2022 13:39	20	Adjusted Valve
SCV230-0	1/20/2022 13:41	15.9	Second Reading
SCV232-0	12/10/2021 13:52	10	Adjusted Valve
SCV232-0	12/10/2021 13:54	10.2	Second Reading
SCV232-0	12/23/2021 14:29	11.6	Adjusted Valve
SCV232-0	12/23/2021 14:30	11.1	Second Reading
SCV232-0	1/7/2022 8:51	17.7	Adjusted Valve
SCV232-0	1/7/2022 8:53	19.1	Second Reading
SCV232-0	1/20/2022 13:26	8.5	Adjusted Valve
SCV232-0	1/20/2022 13:28	7.3	Second Reading
SCV234-0	8/24/2021 8:24	8.4	Adjusted Valve
SCV234-0	8/24/2021 8:27	8.1	Second Reading
SCV234-0	8/31/2021 8:13	3	In Compliance
SCV235-0	8/6/2021 12:09	8.6	Adjusted Valve
SCV235-0	8/17/2021 9:32	4.3	In Compliance
SCV235-0	9/1/2021 7:50	5.6	Adjusted Valve
SCV235-0	9/1/2021 7:53	4.4	In Compliance
SCV236-0	11/19/2021 12:18	20.6	Adjusted Valve
SCV236-0	11/23/2021 10:05	0.5	In Compliance
SCV242-0	11/4/2021 13:43	7.5	Adjusted Valve
SCV242-0	11/4/2021 13:46	4.5	In Compliance
SCV242-0	11/8/2021 13:15	5.5	Adjusted Valve
SCV242-0	11/8/2021 13:17	3.5	In Compliance
SCV243-0	8/13/2021 10:15	11.5	Adjusted Valve
SCV243-0	8/13/2021 10:17	11.3	Second Reading
SCV243-0	8/24/2021 7:11	16.7	Adjusted Valve
SCV243-0	8/24/2021 7:13	16.5	Second Reading
SCV243-0	9/7/2021 12:56	20.2	Adjusted Valve
SCV243-0	9/7/2021 12:57	20.2	Second Reading
SCV243-0	9/21/2021 10:23	20.1	Adjusted Valve
SCV243-0	9/21/2021 10:25	20.1	Second Reading
SCV243-0	10/7/2021 11:03	20.3	Adjusted Valve
SCV243-0	10/7/2021 11:07	20.7	Second Reading
SCV243-0	10/7/2021 11:09	20.6	Third Reading
SCV243-0	10/19/2021 9:12	12	Adjusted Valve
SCV243-0	10/19/2021 9:13	19.7	Second Reading

Well ID	Date and Time	Oxygen (%)	Comments
SCV243-0	10/27/2021 12:04	18	Adjusted Valve
SCV243-0	10/27/2021 12:06	19.4	Second Reading
SCV243-0	11/8/2021 12:49	20.3	Adjusted Valve
SCV243-0	11/8/2021 12:51	20.9	Second Reading
SCV243-0	11/23/2021 13:23	20.3	Adjusted Valve
SCV243-0	11/23/2021 13:23	20.3	Second Reading
SCV243-0	11/23/2021 13:25	20.5	Third Reading
SCV243-0	12/6/2021 12:53	20.9	Adjusted Valve
			Well Permanently Decommissioned Due to Poor
SCV243-0	12/6/2021 12:56	20.9	Gas Quality
SCV49-1A	9/15/2021 13:08	5.1	Adjusted Valve
SCV49-1A	9/15/2021 13:10	1.4	In Compliance
SCV49-1A	10/27/2021 8:16	17.2	Adjusted Valve
SCV49-1A	10/27/2021 8:19	4	In Compliance
SCV49-1A	11/3/2021 9:48	6.3	Adjusted Valve
SCV49-1A	11/3/2021 9:51	3.1	In Compliance
SCV49-5A	8/5/2021 11:17	5.5	Adjusted Valve
SCV49-5A	8/5/2021 11:20	5.3	Second Reading
SCV49-5A	8/5/2021 11:22	7.9	Adjusted Valve
SCV49-5A	8/19/2021 12:26	2.7	In Compliance
SCV49-5A	11/17/2021 8:12	5.4	Adjusted Valve
SCV49-5A	11/17/2021 8:13	4.4	In Compliance
SCV49-5A	1/11/2022 8:14	6.3	Adjusted Valve
SCV49-5A	1/11/2022 8:16	6.5	Second Reading
SCV49-5A	1/21/2022 12:38	0	In Compliance
SCV51-5A	8/5/2021 11:54	5.1	Adjusted Valve
SCV51-5A	8/5/2021 11:56	4.9	In Compliance
SCV51-5A	9/15/2021 10:46	8.8	Adjusted Valve
SCV51-5A	9/15/2021 10:48	8.7	Second Reading
SCV51-5A	9/16/2021 9:16	2.4	In Compliance
	10/0/2024 0 50	0.5	A -11
SCV51-5A	10/6/2021 9:59	8.5	Adjusted Valve
SCV51-5A	10/6/2021 10:03	8.2	Second Reading
SCV51-5A	10/18/2021 13:13	4	In Compliance
	11/17/2021 0:42	7 -	A di
SCV51-5A	11/17/2021 8:42	7.5	Adjusted Valve

Well ID	Date and Time	Oxygen (%)	Comments
SCV51-5A	11/17/2021 8:44	4.9	In Compliance
SCV51-5A	12/1/2021 13:51	9.2	Adjusted Valve
SCV51-5A	12/1/2021 13:53	10.9	Second Reading
SCV51-5A	12/9/2021 13:51	1	In Compliance
SCV52-5A	8/6/2021 8:52	20	(Initial Exceedance was on 7/1) Adjusted Valve
SCV52-5A	8/6/2021 8:54	19.2	Second Reading
SCV52-5A	8/18/2021 11:05	6.8	Adjusted Valve
SCV52-5A	8/18/2021 11:08	5.6	Second Reading
SCV52-5A	8/26/2021 10:36	20	Adjusted Valve
SCV52-5A	8/26/2021 10:38	20.1	Second Reading
SCV52-5A	9/7/2021 13:27	20.4	Adjusted Valve
SCV52-5A	9/7/2021 13:29	20.5	Second Reading
SCV52-5A	9/17/2021 10:58	19.8	Adjusted Valve
SCV52-5A	9/17/2021 11:00	20.3	Second Reading
SCV52-5A	9/23/2021 9:26	20.1	Adjusted Valve
SCV52-5A	9/23/2021 9:28	20.8	Second Reading
SCV52-5A	10/5/2021 14:02	20.2	Adjusted Valve
SCV52-5A	10/5/2021 14:04	20.4	Second Reading
SCV52-5A	10/19/2021 9:33	21	Adjusted Valve
SCV52-5A	10/19/2021 9:35	21	Second Reading
SCV52-5A	10/26/2021 12:34	20.2	Adjusted Valve
SCV52-5A	10/26/2021 12:35	20.6	Second Reading
SCV52-5A	10/28/2021 14:09	2.1	In Compliance
		10.1	
SCV52-5A	10/28/2021 14:12	19.1	Adjusted Valve
SCV52-5A	10/29/2021 12:58	20.1	Adjusted Valve
SCV52-5A	10/29/2021 13:08	19.9	Second Reading
SCV52-5A	10/29/2021 13:10	19.9	Well Permanently Decommissioned Due to Poo Gas Quality
SCV68-1A	8/3/2021 7:41	18.7	(Initial Exceedance was on 5/11) Adjusted Valve
SCV68-1A	8/3/2021 7:46	20.2	Second Reading
SCV68-1A	8/17/2021 8:49	20.1	Adjusted Valve
SCV68-1A	8/17/2021 8:50	20	Second Reading
SCV68-1A	8/25/2021 8:41	20.2	Adjusted Valve
SCV68-1A	8/25/2021 8:43	20.1	Second Reading
SCV68-1A	9/7/2021 15:28	20	Second Reading
SCV68-1A	9/7/2021 15:29	20.3	Well Permanently Decommissioned Due to Poo Gas Quality

Well ID	Date and Time	Oxygen (%)	Comments
SCV87-5B	1/10/2022 10:20	5.8	Adjusted Valve
SCV87-5B	1/10/2022 10:23	0.4	In Compliance
SCV88-5A	8/23/2021 12:00	5.8	Adjusted Valve
SCV88-5A	8/23/2021 12:02	5.7	Second Reading
SCV88-5A	9/3/2021 13:47	3	In Compliance
SCV89-5A	8/23/2021 12:41	9	Adjusted Valve
SCV89-5A	8/23/2021 12:45	9	Second Reading
SCV89-5A	9/3/2021 14:54	0.8	In Compliance
SCV89-5A	9/16/2021 12:18	8.5	Adjusted Valve
SCV89-5A	9/16/2021 12:21	6.6	Second Reading
SCV89-5A	9/23/2021 8:14	6.1	Adjusted Valve
SCV89-5A	9/23/2021 8:16	5.7	Second Reading
SCV89-5A	10/6/2021 14:12	5	In Compliance
SCV89-5A	12/2/2021 10:06	5.4	Adjusted Valve
SCV89-5A	12/2/2021 10:10	5.6	Second Reading
SCV89-5A	12/15/2021 8:50	2.6	In Compliance
SCV89-5A	1/10/2022 8:24	5.7	Adjusted Valve
SCV89-5A	1/10/2022 8:26	6.2	Second Reading
SCV89-5A	1/18/2022 12:18	4.8	In Compliance
SCV89-5A	1/18/2022 12:21	5.6	Adjusted Valve
SCV89-5A	1/18/2022 12:24	6	Second Reading
SCV89-5A	1/31/2022 10:09	4.2	In Compliance
SV101-5A	9/15/2021 13:28	5.1	Adjusted Valve
SV101-5A	9/15/2021 13:30	5.4	Second Reading
SV101-5A	9/23/2021 10:12	6.2	Adjusted Valve
SV101-5A	9/23/2021 10:15	5	In Compliance

Note: All required corrective action and monitoring was completed in accordance with Rule 8-34 and NSPS timelines

Well ID	Date and Time	Initial Temp [°F]	Adjusted Temp [°F]	Comments
SC0V110A	9/20/2021 13:14	130.9	131	Adjusted Valve
SC0V110A	9/21/2021 7:26	126.9	127.1	In Compliance
SCLEW-07	9/7/2021 10:32	133.9	134	Adjusted Valve
SCLEW-07	9/17/2021 8:42	59.1	59	In Compliance
SCV125A0	12/2/2021 12:43	131	135.8	Adjusted Valve
SCV125A0	12/2/2021 12:45	135.6	135.6	Second Reading
SCV125A0	12/15/2021 9:59	127.4	127.4	In Compliance
SCV234-0	8/12/2021 11:27	119.7	136.9	Adjusted Valve
SCV234-0	8/12/2021 11:29	138.5	138.6	Second Reading
SCV234-0	8/24/2021 8:24	135.2	131.5	Adjusted Valve
SCV234-0	8/24/2021 8:27	128.4	128.2	In Compliance

Note: All required corrective action and remonitoring was completed in accordance with Rule 8-34 and NSPS timelines. All temperature exceedance were corrected within 15 days.

Appendix A – Responsible Official Certification Form

Certification of Truth and Accuracy and Completeness:

I certify the following:

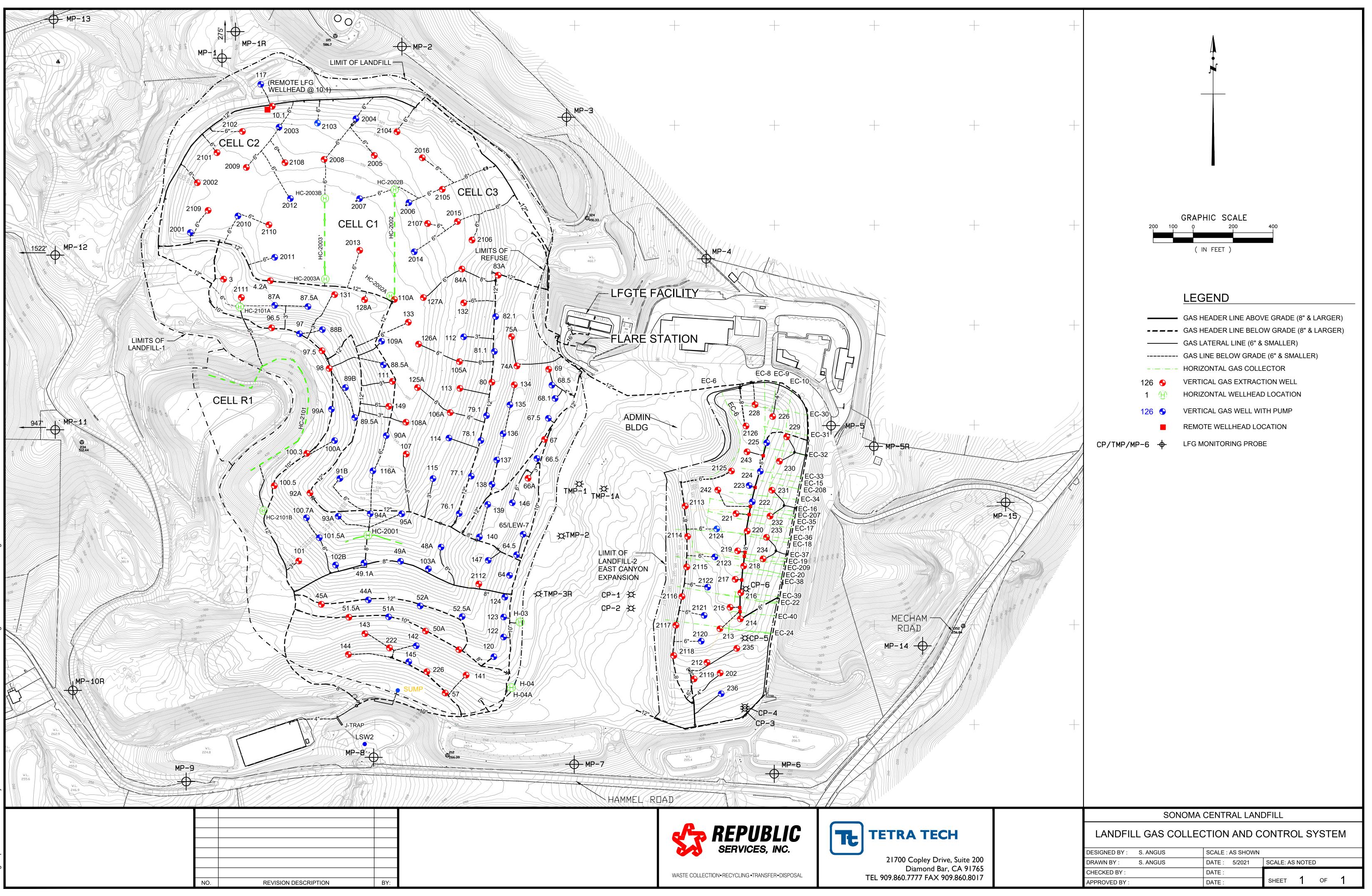
Based on the information and belief formed after reasonable inquiry, the information in this document are true, accurate, and complete:

Signature of Responsible Official

25-22

Date

Rob Sherman Name of Responsible Official Appendix B – Existing GCCS Layout



Appendix C – LFGTE Facility Downtime Logs

#### Appendix C. LFGTE Facility Downtime Logs Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

Shutdown Date/Time	Startup Date/Time	Duration (Hours)	Engine(s)	Reason for Downtime
8/2/2021 8:20	8/5/2021 9:54	73.57	1 (S-4)	PG&E outage
8/1/2021 0:00	9/1/2021 0:00	744.00	2 (S-5)	Out of service pending overhaul
8/1/2021 0:00	8/5/2021 9:46	105.77	3 (S-6)	PG&E outage
8/17/2021 11:00	8/17/2021 11:18	0.30	3 (S-6)	Troubleshooting control voltage
8/17/2021 11:56	8/17/2021 14:00	2.07	3 (S-6)	Troubleshooting control voltage
8/18/2021 5:44	8/19/2021 11:22	29.63	3 (S-6)	Service
8/19/2021 11:42	8/19/2021 11:50	0.13	3 (S-6)	detonation
8/28/2021 13:24	8/30/2021 7:36	42.20	3 (S-6)	Troubleshooting control voltage
8/31/2021 11:20	8/31/2021 11:34	0.23	3 (S-6)	Detonation
8/31/2021 11:44	8/31/2021 11:56	0.20	3 (S-6)	Voltage trip
8/31/2021 12:26	8/31/2021 12:40	0.23	3 (S-6)	Voltage trip
8/31/2021 13:10	8/31/2021 13:30	0.33	3 (S-6)	Voltage trip
8/2/2021 8:20	8/5/2021 9:44	73.40	4 (S-7)	PG&E Outage and service
8/31/2021 13:32	8/31/2021 13:38	0.10	4 (S-7)	Detonation
8/2/2021 7:24	8/4/2021 9:04	49.67	5 (S-9)	PG&E Outage and service
8/18/2021 7:40	8/18/2021 7:52	0.20	5 (S-9)	Tuning
8/18/2021 8:00	8/18/2021 8:06	0.10	5 (S-9)	Tuning
8/2/2021 8:14	8/2/2021 14:28	6.23	6 (S-10)	PG&E outage
8/13/2021 4:10	8/13/2021 10:50	6.67	6 (S-10)	Low water shutdown
8/16/2021 6:32	9/1/2021 0:00	377.47	6 (S-10)	Cracked exhaust manifold
8/2/2021 8:14	8/2/2021 14:36	6.37	7 (S-11)	PG&E outage
8/2/2021 8:14	8/2/2021 14:34	6.33	8 (S-12)	PG&E outage
8/4/2021 5:08	8/4/2021 9:58	4.83	8 (S-12)	Detonation
8/16/2021 6:18	8/16/2021 6:22	0.07	8 (S-12)	Detonation
8/16/2021 9:44	8/16/2021 9:54	0.17	8 (S-12)	Detonation
8/17/2021 6:54	8/17/2021 7:00	0.10	8 (S-12)	Detonation
8/17/2021 22:06	8/18/2021 6:46	8.67	8 (S-12)	Detonation
8/18/2021 11:04	8/18/2021 11:14	0.17	8 (S-12)	Tuning
8/18/2021 11:20	8/18/2021 11:24	0.07	8 (S-12)	Tuning
8/18/2021 20:54	8/19/2021 7:06	10.20	8 (S-12)	Detonation
8/19/2021 8:08	8/19/2021 8:38	0.50	8 (S-12)	Tuning
8/29/2021 2:12	8/30/2021 10:14	32.03	8 (S-12)	Detonation and service
8/31/2021 9:44	8/31/2021 9:52	0.13	8 (S-12)	Detonation
8/1/2021 0:00	9/1/2021 0:00	744.00	9 (S-13)	Out of service pending overhaul
8/1/2021 0:00	9/1/2021 0:00	744.00	10 (S-14)	Long-Term Standby
9/18/2021 12:06	9/20/2021 11:48	47.70	1 (S-4)	PG&E outage and service
9/24/2021 17:36	9/28/2021 9:44	88.13	1 (S-4)	Switchgear failure
9/1/2021 0:00	10/1/2021 0:00	720.00	2 (S-5)	Out of service pending overhaul
9/1/2021 13:46	9/1/2021 13:58	0.20	3 (S-6)	Detonation
9/1/2021 13:40	9/1/2021 13:38	0.20	3 (S-6)	Detonation
9/1/2021 14:10	9/2/2021 10:38	19.53	3 (S-6)	Relay issue
9/2/2021 11:00	9/2/2021 10:38	0.07	3 (S-6)	Detonation
9/4/2021 11:12	9/7/2021 11:52	72.67	3 (S-6)	Troubleshooting
9/18/2021 12:06	9/20/2021 11:26	47.33	3 (S-6)	PG&E outage
9/22/2021 8:54	9/22/2021 11:20	3.13	3 (S-6)	High temp shutdown
9/22/2021 12:26	9/22/2021 12:02	0.60	3 (S-6)	Detonation
9/24/2021 17:36	9/28/2021 9:24	87.80	3 (S-6)	Switchgear failure
9/18/2021 12:06	9/20/2021 9.24	47.33	4 (S-7)	PG&E outage
9/21/2021 14:26	9/21/2021 11:26	0.17	4 (S-7) 4 (S-7)	Detonation
9/23/2021 13:00	9/23/2021 15:06	2.10	4 (S-7)	tuning
9/24/2021 6:38	9/24/2021 12:42	6.07	4 (S-7)	Service
9/24/2021 13:18	9/24/2021 13:32	0.23	4 (S-7)	Detonation

#### Appendix C. LFGTE Facility Downtime Logs Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

9/24/2021 17:36         9/28/2021 19:48         88.20         4 (5-7)         Switchgear failure           9/28/2021 10:08         9/28/2021 10:14         0.10         4 (5-7)         Detonation           9/30/2021 23:22         10/1/2021 10:00         1.47         4 (5-7)         Detonation           9/14/2021 9:48         9/14/2021 9:56         0.13         5 (5-9)         High temp shutdown           9/14/2021 9:36         9/14/2021 12:42         0.20         5 (5-9)         Detonation           9/18/2021 12:36         9/14/2021 12:42         0.20         5 (5-9)         PG&E outage and service           9/18/2021 12:36         9/20/2021 10:46         37.17         5 (5-9)         PG&E outage and service           9/18/2021 12:36         9/22/2021 14:52         5 42.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:36         9/20/2021 14:52         5 42.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:36         9/20/2021 14:52         5 42.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:36         9/20/2021 14:52         5 42.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:36         9/20/2021 10:26         36.83         7 (5-11)	Shutdown Date/Time	Startup Date/Time	Duration (Hours)	Engine(s)	Reason for Downtime
9/30/2021 22:32         10/1/2021 0:00         1.47         4 (5-7)         Detonation           9/7/2021 14:40         9/7/2021 14:48         0.13         5 (5-9)         High temp shutdown           9/14/2021 12:30         9/14/2021 12:42         0.20         5 (5-9)         Detonation           9/18/2021 12:36         9/20/2021 10:46         37.17         5 (5-9)         PG&E outage and service           9/18/2021 11:36         9/20/2021 10:46         37.17         5 (5-9)         PG&E outage and service           9/18/2021 11:36         9/20/2021 14:32         542.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 11:36         9/21/2021 14:36         2.50         7 (5-11)         PG&E outage and service           9/18/2021 12:36         9/21/2021 10:26         36.83         7 (5-11)         Reverse power shutdown           9/41/2021 19:26         9/21/2021 10:24         0.13         8 (5-12)         Service           9/11/2021 10:36         9/21/2021 10:34         0.13         8 (5-12)         Detonation           9/41/2021 10:36         9/21/2021 10:34         0.13         8 (5-12)         PG&E outage           9/11/2021 10:36         9/21/2021 10:34         36.47         8 (5-12)         Tuning           9/21/2021 11:48<	9/24/2021 17:36	9/28/2021 9:48	88.20	4 (S-7)	Switchgear failure
9/7/2021 14:40         9/7/2021 14:48         0.13         5 (5-9)         High temp shutdown           9/14/2021 9:48         9/14/2021 9:56         0.13         5 (5-9)         Detonation           9/14/2021 12:30         9/14/2021 12:42         0.20         5 (5-9)         Detonation           9/18/2021 12:36         9/20/2021 10:46         37.17         5 (5-9)         PG&E outage           9/18/2021 12:36         9/23/2021 12:44         1.13         5 (5-9)         Tuning           9/12/201 0:00         9/23/2021 14:36         2.50         7 (5-11)         PG&E outage           9/18/2021 12:36         9/20/2021 10:26         36.83         7 (5-11)         PG&E outage           9/18/2021 10:26         9/22/2021 10:26         36.83         7 (5-11)         PG&E outage           9/18/2021 10:26         9/22/2021 10:26         36.83         7 (5-11)         Reverse power shutdown           9/12/2021 10:04         9/10/2021 10:54         0.13         8 (5-12)         Service           9/10/2021 10:04         9/10/2021 10:54         0.13         8 (5-12)         Detonation           9/18/2021 12:36         9/20/2021 10:54         0.10         8 (5-12)         Tuning           9/12/2021 10:00         10/21/2021 0:00         720.00	9/28/2021 10:08	9/28/2021 10:14	0.10	4 (S-7)	Detonation
9/14/2021 9:48         9/14/2021 9:56         0.13         5 (S-9)         High temp shutdown           9/14/2021 12:30         9/14/2021 12:42         0.20         5 (S-9)         Detonation           9/18/2021 12:36         9/20/2021 10:46         37.17         5 (S-9)         PG&E outage           9/18/2021 21:36         9/20/2021 10:46         37.17         5 (S-9)         PG&E outage and service           9/23/2021 11:36         9/23/2021 12:44         1.13         5 (S-9)         Tuning           9/18/2021 21:36         9/23/2021 14:52         542.87         6 (S-10)         Out of service exhaust replacement           9/18/2021 12:06         9/18/2021 10:26         36.83         7 (S-11)         PG&E outage and service           9/21/2021 12:06         9/12/2021 10:26         36.83         7 (S-11)         Reverse power shutdown           9/4/2021 10:00         9/5/2021 9:04         23.07         8 (S-12)         Detonation           9/10/2021 10:46         9/10/2021 10:54         0.13         8 (S-12)         PG&E Outage           9/18/2021 21:36         9/20/2021 10:54         0.13         8 (S-12)         Tuning           9/12/2021 10:46         9/2/2/2021 10:54         0.13         8 (S-12)         Tuning           9/12/2021 10:46	9/30/2021 22:32	10/1/2021 0:00	1.47	4 (S-7)	Detonation
9/14/2021 12:30         9/14/2021 12:42         0.20         5 (S-9)         Detonation           9/18/2021 12:36         9/18/2021 12:43         2.53         5 (S-9)         PG&E outage           9/18/2021 21:36         9/20/2021 10:46         37.17         5 (S-9)         PG&E outage and service           9/18/2021 11:36         9/23/2021 11:35         5/23/2021 12:44         1.13         5 (S-9)         Tuning           9/18/2021 11:36         9/23/2021 14:52         542.87         6 (S-10)         Out of service exhaust replacement           9/18/2021 11:36         9/22/2021 10:26         36.83         7 (S-11)         PG&E outage           9/11/2021 11:26         9/22/2021 10:26         36.83         7 (S-11)         Reverse power shutdown           9/21/2021 10:26         36.83         7 (S-11)         Reverse power shutdown         9/22/2021 10:26         31.8         8 (S-12)         Service           9/11/2021 10:26         9/18/2021 10:24         0.13         8 (S-12)         Detonation         9/18/2021 10:26         9/18/2021 10:26         0.13         8 (S-12)         Tuning           9/12/2021 10:24         9/20/2021 10:04         8 (S-12)         Tuning         9/20/2021 10:04         8 (S-12)         Tuning           9/12/2021 10:04         9/21/2021 10:00 <td>9/7/2021 14:40</td> <td>9/7/2021 14:48</td> <td>0.13</td> <td>5 (S-9)</td> <td>High temp shutdown</td>	9/7/2021 14:40	9/7/2021 14:48	0.13	5 (S-9)	High temp shutdown
9/18/2021 12:06         9/18/2021 14:38         2.53         5 (5-9)         PG&E outage           9/18/2021 21:36         9/22/2021 10:46         37.17         5 (5-9)         Tuning           9/18/2021 12:36         9/23/2021 14:35         2542.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:06         9/18/2021 14:36         2.50         7 (5-11)         PG&E outage           9/18/2021 12:06         9/23/2021 10:26         36.83         7 (5-11)         PG&E outage and service           9/18/2021 12:06         9/22/2021 10:26         36.83         7 (5-11)         Reverse power shutdown           9/4/2021 10:00         9/5/2021 9:04         23.07         8 (5-12)         Detonation           9/10/2021 10:04         9/10/2021 10:54         0.13         8 (5-12)         Detonation           9/18/2021 12:06         9/18/2021 10:04         36.47         8 (5-12)         Tuning           9/24/2021 11:36         0.10         8 (5-12)         Tuning           9/27/2021 11:48         9/27/2021 11:55         0.13         8 (5-12)         Tuning           9/12/2021 0:00         10/1/2021 0:00         720.00         9 (5-13)         Out of service pending overhaul           9/1/2021 0:00         10/1/2021 0:00         72	9/14/2021 9:48	9/14/2021 9:56	0.13	5 (S-9)	High temp shutdown
9/18/2021 21:36         9/20/2021 10:46         37.17         5 (5-9)         PG&E outage and service           9/23/2021 11:36         9/23/2021 12:44         1.13         5 (5-9)         Tuning           9/12/2021 0:00         9/23/2021 14:52         542.87         6 (5-10)         Out of service exhaust replacement           9/18/2021 12:06         9/18/2021 12:36         9/18/2021 12:36         9/20/2021 10:26         36.83         7 (5-11)         PG&E outage           9/12/2021 10:00         9/25/2021 7:08         11.70         7 (5-11)         Reverse power shutdown           9/12/2021 10:04         9/22/2021 7:08         11.70         7 (5-11)         Reverse power shutdown           9/12/2021 10:04         9/22/2021 7:08         11.70         7 (5-11)         Reverse power shutdown           9/12/2021 10:04         9/22/2021 8:04         9/22/2021 8:04         Si (5-12)         Detonation           9/18/2021 12:06         9/18/2021 14:20         2.23         8 (5-12)         Tuning           9/27/2021 11:48         9/27/2021 11:56         0.13         8 (5-12)         Tuning           9/12/2021 8:30         9/20/2021 8:50         0.20         8 (5-12)         Tuning           9/12/2021 0:00         10/1/2021 0:00         720.00         9 (5-13)         Out o	9/14/2021 12:30	9/14/2021 12:42	0.20	5 (S-9)	Detonation
9/18/2021 21:36         9/20/2021 10:46         37.17         5 (S-9)         PG&E outage and service           9/23/2021 11:36         9/23/2021 14:52         542.87         6 (S-10)         Out of service exhaust replacement           9/18/2021 12:06         9/18/2021 14:36         2.50         7 (S-11)         PG&E outage           9/18/2021 12:06         9/18/2021 14:36         2.50         7 (S-11)         Reverse power shutdown           9/12/2021 10:00         9/25/2021 7:08         11.70         7 (S-11)         Reverse power shutdown           9/12/2021 10:00         9/25/2021 9:04         23.07         8 (S-12)         Detonation           9/10/2021 10:04         9/10/2021 10:54         0.13         8 (S-12)         Detonation           9/18/2021 12:06         9/18/2021 14:20         2.23         8 (S-12)         Tuning           9/18/2021 12:06         9/12/2021 10:04         36.47         8 (S-12)         Tuning           9/21/2021 11:48         9/21/2021 11:48         0.10         8 (S-12)         Tuning           9/12/2021 11:48         9/21/2021 11:56         0.13         8 (S-12)         Tuning           9/12/2021 0:00         10/1/2021 0:00         720.00         9 (S-13)         Out of service pending overhaul           9/1/2/2021 0:00	9/18/2021 12:06	9/18/2021 14:38	2.53	5 (S-9)	PG&E outage
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9/18/2021 21:36         9/20/2021 10:26         36.83         7 (S-11)         PG&E outage and service           9/21/2021 19:26         9/22/2021 7:08         11.70         7 (S-11)         Reverse power shutdown           9/4/2021 10:00         9/5/2021 9:04         23.07         8 (S-12)         Service           9/10/2021 10:64         9/10/2021 10:54         0.13         8 (S-12)         Detonation           9/18/2021 12:06         9/18/2021 14:20         2.23         8 (S-12)         PG&E Outage           9/18/2021 21:36         9/20/2021 10:04         36.47         8 (S-12)         PG&E Outage           9/18/2021 21:36         9/20/2021 10:04         36.47         8 (S-12)         Tuning           9/21/2021 8:04         9/21/2021 10:04         36.47         8 (S-12)         Tuning           9/21/2021 11:48         9/27/2021 11:56         0.13         8 (S-12)         Tuning           9/30/2021 8:38         9/30/2021 8:50         0.20         8 (S-12)         Tuning           9/12/201 0:00         10/1/2021 0:00         720.00         9 (S-13)         Out of service pending overhaul           9/1/2021 0:00         10/1/2021 0:00         720.00         10 (S-14)         Long-Term Standby           10/1/2021 1:0:0         10/21/2021 16:58	9/1/2021 0:00	9/23/2021 14:52	542.87	6 (S-10)	Out of service exhaust replacement
9/21/2021 19:26         9/22/2021 7:08         11.70         7 (S-11)         Reverse power shutdown           9/4/2021 10:00         9/5/2021 9:04         23.07         8 (S-12)         Service           9/10/2021 10:46         9/10/2021 10:54         0.13         8 (S-12)         Detonation           9/18/2021 12:06         9/18/2021 14:20         2.23         8 (S-12)         PG&E Outage           9/18/2021 12:36         9/20/2021 10:04         36.47         8 (S-12)         Tuning           9/21/2021 8:04         9/24/2021 8:10         0.10         8 (S-12)         Tuning           9/27/2021 11:48         9/27/2021 11:56         0.13         8 (S-12)         Tuning           9/1/2021 0:00         10/1/2021 0:00         720.00         9 (S-13)         Out of service pending overhaul           9/1/2021 0:00         10/1/2021 0:00         720.00         10 (S-14)         Long-Term Standby           10/1/2021 0:00         10/1/2021 0:00         725.27         1 (S-4)         Tuning           10/27/2021 15:28         10/27/2021 16:58         1.50         1 (S-4)         Tuning           10/25/2021 10:50         586.83         2 (S-5)         Out of service pending overhaul           10/25/2021 10:50         1660         2 (S-5)         Startu	9/18/2021 12:06	9/18/2021 14:36	2.50	7 (S-11)	PG&E outage
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10/26/2021 11:44         10/26/2021 11:58         0.23         2 (S-5)         Test and Tune           10/26/2021 12:06         10/26/2021 13:28         1.37         2 (S-5)         Test and Tune           10/26/2021 12:06         10/26/2021 13:28         1.37         2 (S-5)         Test and Tune           10/26/2021 13:40         10/26/2021 13:58         0.30         2 (S-5)         Test and Tune           10/26/2021 14:36         10/27/2021 8:38         18.03         2 (S-5)         Test and Tune           10/26/2021 14:36         10/27/2021 9:16         0.23         2 (S-5)         Test and Tune           10/27/2021 9:02         10/27/2021 9:16         0.23         2 (S-5)         Test and Tune           10/27/2021 11:30         10/27/2021 11:52         0.37         2 (S-5)         Test and tune           10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation			21.93		
10/26/2021 12:0610/26/2021 13:281.372 (S-5)Test and Tune10/26/2021 13:4010/26/2021 13:580.302 (S-5)Test and Tune10/26/2021 14:3610/27/2021 8:3818.032 (S-5)Test and Tune10/27/2021 9:0210/27/2021 9:160.232 (S-5)Test and Tune10/27/2021 11:3010/27/2021 11:520.372 (S-5)Test and tune10/13/2021 9:3211/1/2021 0:00446.473 (S-6)Out of service pending overhaul10/1/2021 0:0010/1/2021 8:008.004 (S-7)Detonation			0.23		
10/26/2021 13:40         10/26/2021 13:58         0.30         2 (S-5)         Test and Tune           10/26/2021 14:36         10/27/2021 8:38         18.03         2 (S-5)         Test and Tune           10/27/2021 9:02         10/27/2021 9:16         0.23         2 (S-5)         Test and Tune           10/27/2021 11:30         10/27/2021 11:52         0.37         2 (S-5)         Test and tune           10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation			1.37		Test and Tune
10/26/2021 14:36         10/27/2021 8:38         18.03         2 (S-5)         Test and Tune           10/27/2021 9:02         10/27/2021 9:16         0.23         2 (S-5)         Test and Tune           10/27/2021 11:30         10/27/2021 11:52         0.37         2 (S-5)         Test and tune           10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation	10/26/2021 13:40	10/26/2021 13:58	0.30		Test and Tune
10/27/2021 9:02         10/27/2021 9:16         0.23         2 (S-5)         Test and Tune           10/27/2021 11:30         10/27/2021 11:52         0.37         2 (S-5)         Test and tune           10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation	10/26/2021 14:36		18.03		
10/27/2021 11:30         10/27/2021 11:52         0.37         2 (S-5)         Test and tune           10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation					Test and Tune
10/13/2021 9:32         11/1/2021 0:00         446.47         3 (S-6)         Out of service pending overhaul           10/1/2021 0:00         10/1/2021 8:00         8.00         4 (S-7)         Detonation					
10/1/2021 0:00 10/1/2021 8:00 8.00 4 (S-7) Detonation					
1 10/1/2021 0.20 1 10/1/2021 0.42 1 0.27 1 4(5-7) 1 IUNING	10/1/2021 8:26	10/1/2021 8:42	0.27	4 (S-7)	Tuning
10/1/2021 12:30 10/1/2021 12:42 0.20 4 (S-7) Tuning					
10/9/2021 11:20 10/11/2021 7:56 44.60 4 (S-7) Tuning adjustment repairs					
10/11/2021 8:04 10/11/2021 8:22 0.30 4 (S-7) Tuning					
10/11/2021 13:30 10/11/2021 13:52 0.37 4 (S-7) Tuning					
10/14/2021 4:22 10/14/2021 9:08 4.77 4 (S-7) Outage to install switchgear				. ,	
10/14/2021 9:12 10/14/2021 9:38 0.43 4 (S-7) Tuning				. ,	
10/14/2021 11:50 10/14/2021 11:56 0.10 4 (S-7) Tuning					
10/14/2021 12:04 10/14/2021 12:30 0.43 4 (S-7) Tuning					
10/20/2021 14:56 11/1/2021 0:00 273.07 4 (S-7) Down for top end repairs					
10/9/2021 15:24         10/11/2021 7:30         40.10         5 (S-9)         Radiator repairs					· · ·
10/11/2021 12:06 10/11/2021 12:18 0.20 5 (S-9) Tuning					· · · · · · · · · · · · · · · · · · ·
10/11/2021 12:50 10/11/2021 12:58 0.13 5 (S-9) Tuning					
10/14/2021 5:18         10/14/2021 9:46         4.47         5 (S-9)         Outage to install switchgear					-
10/14/2021 0:10         10/14/2021 10:16         0.10         5 (5 5)         Outge to instan switchgean           10/14/2021 10:10         10/14/2021 10:16         0.10         5 (S-9)         Tuning					

#### Appendix C. LFGTE Facility Downtime Logs Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

10/24/2021 4:36         10           10/27/2021 14:30         10,           10/14/2021 5:18         10           10/15/2021 19:56         10,           10/14/2021 5:18         10           10/14/2021 5:18         10           10/14/2021 5:18         10           10/14/2021 9:34         10           10/15/2021 19:56         10,           10/15/2021 19:56         10,           10/28/2021 6:46         10	0/18/2021 10:20         0/25/2021 7:58         0/28/2021 13:40         0/14/2021 9:46         0/18/2021 10:20         0/14/2021 9:26	62.40 27.37 23.17 4.47 62.40	5 (S-9) 5 (S-9) 5 (S-9)	Variable frequency drive (VFD) issues Detonation and tuning
10/27/2021 14:30         10,           10/14/2021 5:18         10,           10/15/2021 19:56         10,           10/14/2021 5:18         10,           10/14/2021 5:18         10,           10/14/2021 9:34         10,           10/15/2021 19:56         10,           10/15/2021 19:56         10,           10/28/2021 6:46         10,	0/28/2021 13:40         0/14/2021 9:46         0/18/2021 10:20         0/14/2021 9:26	23.17 4.47		Detonation and tuning
10/14/2021 5:18         10           10/15/2021 19:56         10,           10/14/2021 5:18         10           10/14/2021 5:18         10           10/14/2021 9:34         10           10/15/2021 19:56         10,           10/15/2021 19:56         10,           10/28/2021 6:46         10	0/14/2021 9:46 0/18/2021 10:20 0/14/2021 9:26	4.47	5 (S-9)	
10/15/2021 19:56         10,           10/14/2021 5:18         10           10/14/2021 9:34         10           10/15/2021 19:56         10,           10/28/2021 6:46         10	0/18/2021 10:20 0/14/2021 9:26			Tuning
10/14/2021 5:18         10           10/14/2021 9:34         10           10/15/2021 19:56         10,           10/28/2021 6:46         10	0/14/2021 9:26	62 10	6 (S-10)	Outage to install switchgear
10/14/2021 9:34         10           10/15/2021 19:56         10           10/28/2021 6:46         10		02.40	6 (S-10)	VFD issues and service
10/15/2021 19:56         10,           10/28/2021 6:46         10		4.13	7 (S-11)	Outage to install switchgear
10/28/2021 6:46 10	0/14/2021 9:46	0.20	7 (S-11)	Tuning
	)/18/2021 10:22	62.43	7 (S-11)	VFD issues
10/3/2021 11:42	0/28/2021 7:00	0.23	7 (S-11)	Tuning
	0/4/2021 6:52	19.17	8 (S-12)	Turbo repairs
10/14/2021 5:18 10	0/14/2021 9:22	4.07	8 (S-12)	Outage to install switchgear
10/14/2021 9:34 10	0/14/2021 9:54	0.33	8 (S-12)	Tuning
10/15/2021 19:56 10	)/18/2021 10:32	62.60	8 (S-12)	VFD issues and service
10/1/2021 0:00 1:	1/1/2021 0:00	744.00	9 (S-13)	Out of service pending overhaul
10/1/2021 0:00 1:	1/1/2021 0:00	744.00	10 (S-14)	Long-Term Standby
11/1/2021 0:00 11	1/1/2021 11:32	11.53	1 (S-4)	Detonation
	/15/2021 13:26	5.60	1 (S-4)	Switchgear outage and service
	1/24/2021 6:54	11.03	1 (S-4)	Detonation
	/15/2021 13:26	5.63	2 (S-5)	Switchgear outage
	2/1/2021 0:00	721.00	3 (S-6)	Out of service pending overhaul
	2/1/2021 0:00	721.00	4 (S-7)	Out of service pending topend
	1/3/2021 9:42	0.80	5 (S-9)	Tuning
	1/3/2021 11:56	0.60	5 (S-9)	Tuning
	1/3/2021 12:16	0.23	5 (S-9)	Tuning
	1/3/2021 14:34	0.30	5 (S-9)	Tuning
	1/4/2021 10:08	1.17	5 (S-9)	Service
	/15/2021 13:30	5.80	5 (S-9)	Switchgear outage
	/15/2021 14:14	0.53	5 (S-9)	Tuning
	/18/2021 12:48	0.37	5 (S-9)	Tuning
	/19/2021 10:36	0.07	5 (S-9)	Detonation
	1/20/2021 8:28	15.47	5 (S-9)	Detonation
	/24/2021 11:28	4.57	5 (S-9)	Service
	1/9/2021 10:08	2.40	6 (S-10)	Service
	/15/2021 13:32	5.80	6 (S-10)	Switchgear outage
	/15/2021 14:10	0.47	6 (S-10)	Tuning
	/18/2021 12:48	0.40	6 (S-10)	Tuning
	/10/2021 10:26	0.53	7 (S-11)	Tuning
	/15/2021 14:16	6.53	7 (S-11)	Switchgear outage
	/18/2021 13:10	0.73	7 (S-11)	Tuning
	/18/2021 13:20	0.10	7 (S-11)	Detonation
	1/20/2021 9:00	17.50	7 (S-11)	Detonation
	1/24/2021 7:42	0.57	7 (S-11)	Tuning
	/24/2021 10:28	2.17	7 (S-11)	Service
	/18/2021 12:46	103.73	8 (S-12)	Service
	/18/2021 12:58	0.03	8 (S-12)	Detonation
	/18/2021 13:30	0.47	8 (S-12)	Tuning
	1/30/2021 7:40	6.27	8 (S-12)	Detonation
	2/1/2021 0:00	720.00	9 (S-13)	Out of service pending overhaul
	2/1/2021 0:00	720.00	10 (S-14)	Long-Term Standby
	2/3/2021 10:22	14.17	10 (S-4)	Detonation
	2/6/2021 12:00	0.23	1 (S-4)	Tuning
	2/6/2021 12:46	0.23	1 (S-4)	Tuning

#### Appendix C. LFGTE Facility Downtime Logs Sonoma County Central Landfill, Petaluma, California (August 1, 2021 through January 31, 2022)

Shutdown Date/Time	Startup Date/Time	Duration (Hours)	Engine(s)	Reason for Downtime
12/7/2021 5:10	12/7/2021 13:24	8.23	1 (S-4)	Detonation
12/7/2021 22:06	12/8/2021 8:56	10.83	1 (S-4)	Detonation
12/8/2021 10:44	12/8/2021 11:30	0.77	1 (S-4)	Tuning
12/12/2021 22:38	12/27/2021 11:28	348.83	1 (S-4)	Relay Outage
12/27/2021 11:52	12/27/2021 12:52	1.00	1 (S-4)	Tuning
12/28/2021 0:46	12/28/2021 6:46	6.00	1 (S-4)	Detonation
12/2/2021 7:22	12/2/2021 11:42	4.33	2 (S-5)	Tuning
12/2/2021 13:32	12/3/2021 10:22	20.83	2 (S-5)	Detonation
12/7/2021 5:10	12/7/2021 13:26	8.27	2 (S-5)	Detonation
12/10/2021 8:04	12/10/2021 8:08	0.07	2 (S-5)	Tuning
12/13/2021 7:14	12/27/2021 11:30	340.27	2 (S-5)	Relay outage and service
12/1/2021 0:00	1/1/2022 0:00	744.00	3 (S-6)	Out of service pending overhaul
12/1/2021 0:00	1/1/2022 0:00	744.00	4 (S-7)	Down for top end repairs
12/7/2021 4:48	12/8/2021 9:06	28.30	5 (S-9)	Detonation
12/13/2021 7:40	12/22/2021 11:54	220.23	5 (S-9)	Relay outage
12/2/2021 10:14	12/2/2021 10:26	0.20	6 (S-10)	Tuning
12/7/2021 4:50	12/8/2021 9:02	28.20	6 (S-10)	Detonation
12/13/2021 7:40	12/22/2021 11:28	219.80	6 (S-10)	Relay outage
12/7/2021 4:50	12/8/2021 9:08	28.30	7 (S-11)	Detonation
12/12/2021 19:24	1/1/2022 0:00	460.60	7 (S-11)	Troubleshooting
12/6/2021 10:44	12/6/2021 10:52	0.13	8 (S-12)	Tuning
12/6/2021 12:00	12/6/2021 14:20	2.33	8 (S-12)	Tuning
12/6/2021 14:24	12/6/2021 14:40	0.27	8 (S-12)	Tuning
12/6/2021 15:20	12/8/2021 10:18	42.97	8 (S-12)	Detonation
12/13/2021 7:40	12/22/2021 11:24	219.73	8 (S-12)	Relay outage
12/25/2021 14:36	12/27/2021 9:24	42.80	8 (S-12)	Detonation
12/1/2021 0:00	1/1/2022 0:00	744.00	9 (S-13)	Out of service pending overhaul
12/1/2021 0:00	1/1/2022 0:00	744.00	10 (S-14)	Long-Term Standby
1/1/2022 1:56	1/14/2022 9:10	319.23	1 (S-4)	Schweitzer relay repairs
1/17/2022 6:50	1/17/2022 10:50	4.00	1 (S-4)	Tuning
1/27/2022 8:06	1/27/2022 9:32	1.43	1 (S-4)	Service
1/1/2022 12:48	1/14/2022 9:12	308.40	2 (S-5)	Schweitzer relay repairs
1/17/2022 6:48	1/17/2022 10:50	4.03	2 (S-5)	Tuning
1/1/2022 0:48	2/1/2022 0:00	744.00	3 (S-6)	Out of service for overhaul
1/1/2022 0:00	2/1/2022 0:00	744.00	4 (S-7)	Out of service
1/3/2022 8:26	1/3/2022 9:16	0.83	5 (S-9)	Detonation
1/3/2022 9:44	1/3/2022 9:52	0.83	5 (S-9)	Detonation
1/3/2022 11:58	1/17/2022 13:40	337.70	5 (S-9)	Schweitzer relay repairs
1/29/2022 18:58	2/1/2022 0:00	53.03	5 (S-9)	Blown water line
1/3/2022 11:58	1/17/2022 13:40	337.70	6 (S-10)	Schweitzer relay repairs and service
1/1/2022 0:00	2/1/2022 0:00	744.00	7 (S-11)	Troubleshooting
1/3/2022 11:58	1/18/2022 9:30	357.53	8 (S-12)	Schweitzer relay repairs
1/18/2022 13:22	1/18/2022 9:30	0.30	8 (S-12) 8 (S-12)	Tuning
1/18/2022 13:22	1/18/2022 13:40	26.77	8 (S-12) 8 (S-12)	detonation and Service
1/24/2022 12:22	1/24/2022 12:24	0.03	8 (S-12)	Tuning
1/1/2022 0:00	2/1/2022 0:00	744.00	9 (S-13)	Out of service pending overhaul
1/1/2022 0:00	2/1/2022 0:00	744.00	10 (S-14)	Long-Term Standby

<sup>1</sup>Downtime is calculated when all engines (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10) are offline concurrently.

### Appendix D – Surface Emission and GCCS Component Leak Monitoring Results

## SCS FIELD SERVICES

October 29, 2021 File No. 07221077.00

Mr. Derek Cheney Republic Services – Sonoma Central Landfill 500 Mecham Road Petaluma, California 95492

Subject: Sonoma Central Landfill - Petaluma, California

Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring for Third Quarter 2021.

Dear Mr. Cheney:

SCS Field Services (SCS) is pleased to provide the Republic Services, with the enclosed report summarizing the surface emissions monitoring services provided at the Sonoma Central Landfill (Site) during the Third Quarter 2021. This report includes the results of surface scan, component emissions and blower/flare station emissions monitoring for the Site for this monitoring period.

SCS appreciates the opportunity to be of assistance to Republic Services on this project. As you review the enclosed information, please contact Michael Flanagan at (510) 363-7796 or Whitney Stackhouse at (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney Stackhouse Project Manager SCS Field Services

Att Mun

Michael Flanagan Project Manager SCS Field Services

Encl.

Sean Bass, SCS Field Services Art Jones, SCS Field Services



## Sonoma Central Landfill

## Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring

Third Quarter 2021

Presented to:



Mr. Derek Cheney Republic Services – Sonoma Central 500 Mecham Road Petaluma, California 94952

## SCS FIELD SERVICES

File No. 07221078.00 Task 01 | October 29, 2021

SCS FIELD SERVICES 4730 Enterprise Way Suite A Modesto, CA 95356

### Sonoma Central Landfill

## Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring Third Quarter 2021

#### INTRODUCTION

This letter provides results of the July 26, 27, 28 and August 6, 16 and 27, 2021, LMR and NSPS landfill surface emissions monitoring (SEM) performed by SCS Field Services (SCS) at the subject site. All work was performed in accordance with our approved Work Scope dated December 23, 2020, and the LMR requirements.

The Sonoma Central Landfill is an active 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 gas, 40 to 50 percent carbon dioxide, and trace amount of various other gases, some of which are odorous. The Sonoma Central property contains a system to control the combustible gases generated in the landfill.

#### SUMMARY AND CONCLUSIONS

As stipulated in LMR, if uncorrectable exceedances within the 10-day limitation are detected or emissions are discovered during an inspection by Regulatory Agencies, the landfill must perform monitoring on a 25-foot pathway on a quarterly basis for active disposal sites. Upon completion of four consecutive SEM events without an uncorrectable exceedance of the 25 ppmv or 500 ppmv standards, other than non-repeatable momentary readings, the landfill may perform the monitoring on a 100-foot spacing on an annual basis for closed landfills or quarterly for active disposal sites. Therefore, based on the previous monitoring events, in which exceedances were observed, the monitoring at the Sonoma Central Landfill was performed on 25-foot pathways in accordance with the LMR.

On July 26, 27, 28 and August 6, 16 and 27, 2021, SCS performed third quarter 2021 SEM as required by the Bay Area Air Quality Management District (BAAQMD). Instantaneous surface emissions monitoring results indicated that eighteen (18) locations exceeded the 500 ppmv maximum concentration during the initial monitoring event (Table 1 in Attachment 3). The required 10 and 20-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring indicated that all areas had returned to below regulatory compliance limits following system adjustments and remediation (well field adjustments and installation of new bentonite plugs) by SCS personnel. Based on these monitoring results no additional follow up testing was required.

Also, during the instantaneous monitoring event, SCS performed concurrent integrated monitoring of the landfill surface. As required by the LMR, the landfill was divided into 50,000 square foot areas. The Sonoma Central Landfill surface area was therefore divided into 163 grids, as shown on Figure 1 in Attachment 1. During this monitoring event, several grids were not monitored, in accordance with

the regulations, due to ongoing active landfilling activities, unsafe conditions, or there was no waste in place prior to the monitoring event.

During the monitoring event, there were one grid areas observed to exceed the 25 ppmv LMR integrated average threshold (Table 2 in Attachment 4). The required 10-day (LMR) follow-up monitoring indicated that the area had returned to below regulatory compliance limits following system adjustments and remediation (well field adjustments) by SCS personnel. Based on these monitoring results, no additional follow up monitoring is required at this time. These results are discussed in a subsequent section of this report.

In addition, quarterly monitoring of the pressurized piping or components of the Gas Collection and Control System (GCCS) that are under positive pressure must be performed. Results of the testing of the landfill gas (LFG) Blower Flare Station (BFS) pressurized piping and components indicated that all test locations were in compliance with the 500 ppmv requirement.

Further, as required under the LMR, any location on the landfill that has an observed instantaneous methane concentration above 200 ppmv, must be stake-marked and Global Positioning System (GPS) located on a site figure. During this reporting period, three (3) location were observed to exceed the 200 ppmv, reporting threshold. When these readings are observed, the locations are reported to site personnel for tracking and/or remediation and will be reported in the next submittal of the annual LMR report. Please see the figure in Attachment 3 for location details.

Finally, to help prevent potential future exceedances, SCS recommends that the landfill surface be routinely inspected and any observed surface erosion be routinely repaired.

#### SURFACE EMISSIONS MONITORING

On July 26, 27, 28 and August 6, 16 and 27, 2021, the instantaneous and integrated SEM was performed over the surface of the subject site. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring in the 50,000 square foot grids as required under the LMR. During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rules as required.

#### EMISSIONS TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the landfill surface emission 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 TVA 2020 meets the State of California Air Resources Board (CARB) requirements for combined instantaneous and integrated monitoring and was calibrated in accordance with United States Environmental Protection Agency (US EPA) Method 21.
- Weather Anemometer with continuous recorder for meteorological conditions in accordance with the LMR.

Instrument calibration logs and weather information are shown in Attachments 5 and 6.

#### SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the LMR and NSPS requirements. Monitoring was performed with the FID inlet held within 3-inches of the landfill surface while a technician walked a grid in parallel paths not more than 25 -feet apart over the surface of the landfill. Cracks, holes and other cover penetrations in the surface were also tested. Surface emissions readings were monitored continuously and recorded every 5 seconds. Any areas in exceedance of the 200 or 500 ppmv standards (reporting and compliance levels, respectively) would be GPS tagged and stake-marked for on-site personnel to perform remediation or repairs.

The integrated average is based on the readings stored on the instrument, which are recorded every 5 seconds. The readings are then downloaded and the averages are calculated for each grid using SCS eTools®. All readings are maintained in this secure SCS Database. The readings are not provided in the report due to the volume of readings, but can be furnished upon request.

Recorded wind speed results are shown in Attachment 6. Wind speed averages were observed to remain below the alternative threshold of 10 miles per hour, and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within 72 hours of the monitoring events. Therefore, site meteorological conditions were within the alternatives of the LMR requirements on the above mentioned dates.

#### **TESTING RESULTS**

During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rule as required under the LMR and NSPS. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR or NSPS threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring (LMR).

On July 26, 27, and 28, 2021, SCS performed third quarter 2021 instantaneous emissions monitoring testing as required by the BAAQMD. During this monitoring, surface emissions results indicated that eighteen (18) locations exceeded the 500 ppmv maximum concentration. The required 10 and 20-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring performed on August 6, 16 and 27, 2021, respectively, indicated that all areas had returned to compliance following system adjustments and remediation (wellfield adjustment and borehole repairs using bentonite and soil) performed by SCS personnel. Based on these monitoring results no additional follow up testing was required. Results of the monitoring are shown in Attachments 2 and 3 (Table 1).

Additionally, calculated integrated grid monitoring indicated one (1) area exceeded the 25-ppmv requirement during this monitoring event. The required 10-day (LMR) follow-up monitoring performed on August 6, 2021, indicated that the area had returned to compliance following system adjustments and remediation (wellfield adjustment) performed by SCS personnel. Based on these monitoring results no additional follow up testing was required. Results of the monitoring are shown in Attachment 4 (Table 2). Calibration logs for the monitoring equipment are provided in Attachment 5.

During this monitoring event, several grids were not monitored, in accordance with the LMR, due to active landfilling activities, unsafe conditions or no waste in place. SCS will continue to monitor all accessible locations during the fourth quarter 2021.

#### PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On July 28, 2021, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS and PGF Facility. Monitoring was performed with the detector inlet held one-half of an inch from pressurized pipe and associated components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 51.5 ppmv, was well below the maximum threshold (see Table 1 for component results). Therefore, all pressurized piping and components located at the LFG BFS and PGF were in compliance at the time of our testing.

#### PROJECT SCHEDULE

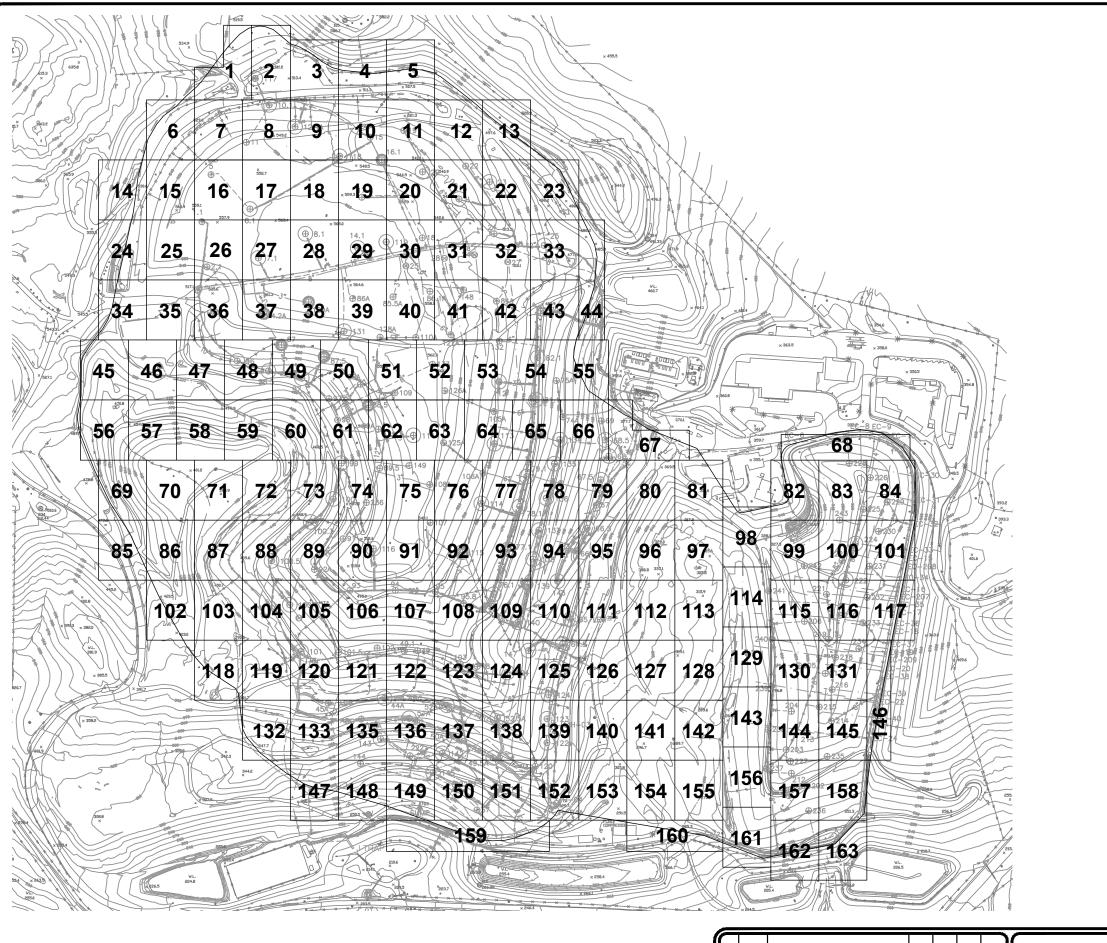
According to the LMR and NSPS, surface emissions monitoring at active landfills is required to be performed on a quarterly basis. Therefore, in accordance with our approved Work Scope, the fourth quarter 2021 (October through December) surface emissions testing event is scheduled to be performed by the end of December 2021 in accordance with the Republic SOP unless an alternative timeline is requested by site personnel.

#### STANDARD PROVISIONS

This report addresses conditions of the subject site during the testing dates only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the surface emissions at the subject site or adjacent properties.

Attachment 1

Landfill Grid



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#### LEGEND

		APPROXIMATE LINER BOUNDARY
	500	EXISTING 10' CONTOUR
		EXISTING GAS PIPE, ABOVE GRADE
		EXISTING GAS PIPE, BELOW GRADE
— ·	_ · _ · _ · _	- EXISTING HORIZONTAL GAS COLLECTOR
		EXISTING AIR FORCE MAIN, ABOVE GRADE
	ABC ABC ABC	EXISTING AIR FORCE MAIN, BELOW GRADE
		EXISTING AIR LEACHATE LINE
	⊕ EW−170	EXISTING GAS/LEACHATE EXTRACTION WELL
	⊕ EW−165	EXISTING VERTICAL GAS EXTRACTION WELL
	(1) 88.5	EXISTING VERTICAL GAS EXTRACTION WELL WITH PUMP ADDED
	8	EXISTING REMOTE WELLHEAD
	-1><1-	EXISTING CONTROL VALVE
	11	EXISTING BLIND FLANGE
	-44	EXISTING FLANGE CONNECTION
		EXISTING REDUCER FITTING
		EXISTING END CAP
		EXISTING CONDENSATE PUMP STATION
ī	400	
	120	SURFACE EMISSIONS MONITORING GRID
L		



NOTES: 1. THE 2020 TOPOGRAPHIC MAP WAS PREPARED BY COOPER AERIAL SURVEYS CO. DATE OF PHOTOGRAPHY: JANUARY 31, 2020. HORIZONTAL DATUM: NAD27, ZONE 2 VERTICAL DATUM: NGVD29. 2. THE 2018 GCCS AS-BUILT GCCS IMPROVEMENTS PROVIDED BY REPUBLIC SERVICES INC. ON SEPTEMBER 20, 2018.



SONOMA COUNTY CENTRAL LANDFILL PETALUMA, CALIFORNIA



SURFACE EMISSIONS MONITORING **GRID MAP** 

Attachment 2

Surface Pathway



Third Quarter 2021 LMR Surface Emissions Monitoring Pathway Sonoma Central Landfill, Petaluma, California Attachment 3

## Instantaneous and Component Emissions Monitoring Results

### Third Quarter 2021

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

#### Instantaneous Data Report for July 26, 27, 28, and August 6, 16 and 27, 2021

#### Highest Component Reading

Location	Initial Monitoring (ppmv) July 28, 2021	10-Day Follow Up Monitoring (ppmv) August 6, 2021	20-Day Follow Up Monitoring (ppmv) August 16, 2021	30-Day Follow Up Monitoring (ppmv) August 27, 2021	GPS Position
RBBO2	2,000	9,700	120	250	N38° 17.935' W122° 45.144'
RebarB1	1,000	1,000	52	28	N38° 17.873' W122° 44.992'
SCEW2103	900	3,000	10	36	N38° 18.255' W122° 45.153'
SCV048-A	700	3	NA	30	N38° 17.905' W122° 45.019'
SCV057-0	3,000	4	NA	180	N38° 17.787' W122° 45.015'
SCEW2005	1,000	5,800	70	300	N38° 18.228' W122° 45.095'
SCV49-1A	1,700	1,000	12	24	N38° 17.892' W122° 45.100'
SCW88-5A	4,000	1,000	50	200	N38° 18.055' W122° 45.082'
SCEW2108	1,400	1,000	97	10	N38° 18.221' W122° 45.188'

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

Location	Initial Monitoring (ppmv) July 28, 2021	10-Day Follow Up Monitoring (ppmv) August 6, 2021	20-Day Follow Up Monitoring (ppmv) August 16, 2021	30-Day Follow Up Monitoring (ppmv) August 27, 2021	GPS Position
SCV84A	800	70	NA	40	N38° 18.136' W122° 45.000'
SCV044-A	1,000	31,100	150	280	N38° 17.861' W122° 45.095'
LF2-LCRS	9,500	800 8		48	N38° 17.766' W122° 44.720'
SCLEW-05	1,100	5,000 240		75	N38° 17.822' W122° 45.072'
SCV103-A	1,000	5	NA	9.5	N38° 17.887' W122° 45.032'
SCLEW-06	5,500	1,900	260	100	N38° 17.805' W122° 45.031'
SCV113-0	2,500	700 6		150	N38° 18.037' W122° 45.001'
SCV1007A	1,800	338	NA	60	N38° 17.929' W122° 45.161'
SCV092-A	1,500	1,500	1,500 52		N38° 17.950' W122° 45.158'
SCEW2003	300	NA	NA	NA	N38° 18.251' W122° 45.194'
SCEW2008	300	NA	NA	NA	N38° 18.225' W122° 45.146'

## Third Quarter 2021

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

#### Highest Pressurized Pipe Reading

Location	Date	Concentration (ppmv)
Flare	7/28/2021	4.8
PGF Facility	7/28/2021	51.5

No additional exceedances of the 500 ppm threshold were observed during the monitoring performed during the third quarter 2021.



Third Quarter 2021 Emissions Monitoring Locations Greater Than 200 ppmv and 500 ppmv Sonoma Central Landfill, Petaluma, California Attachment 4

Integrated Monitoring Results

Point Name	Record Date	FID Concentration (ppm)	Comments
SC001			Exempted
SC002			Exempted
SC003			Exempted
SC004			Exempted
SC005			Exempted
SC006			Exempted
SC007	7/26/2021 09:40	4.98	
SC008	7/25/2021 22:35	7.00	
SC009	7/26/2021 10:43	6.61	
SC010	7/26/2021 10:37	7.28	
SC011	7/26/2021 10:45	6.53	
SC012	7/25/2021 23:34	4.39	
SC013	7/26/2021 11:48	2.69	
SC014	7/26/2021 09:45	2.47	
SC015	7/26/2021 09:47	4.64	
SC016	7/26/2021 09:39	3.59	
SC017	7/25/2021 22:40	4.83	
SC018	7/26/2021 10:46	7.60	
SC019	7/26/2021 10:36	14.51	
SC020	7/26/2021 10:41	7.10	
SC021	7/25/2021 23:37	3.16	
SC022	7/26/2021 11:50	4.21	
SC023	7/26/2021 11:20	3.52	
SC024	7/26/2021 09:53	2.47	
SC025	7/26/2021 09:47	2.89	
SC026	7/26/2021 09:41	3.76	
SC027	7/25/2021 22:40	4.54	
SC028	7/26/2021 10:48	3.51	
SC029	7/26/2021 10:38	4.18	
SC030	7/26/2021 10:41	2.91	
SC031	7/25/2021 23:38	1.96	
SC032	7/26/2021 11:51	2.92	
SC033	7/26/2021 11:30	5.07	
SC034	7/26/2021 09:52	2.26	
SC035	7/26/2021 09:47	3.22	
SC036	7/26/2021 09:38	6.82	
SC037	7/25/2021 22:39	7.32	
SC038	7/26/2021 10:47	3.28	
SC039	7/26/2021 10:36	5.44	
SC040	7/26/2021 10:39	6.06	
SC041	7/25/2021 23:34	5.17	
SC042	7/26/2021 11:52	5.73	
SC043	7/26/2021 11:23	8.55	

SCS DataServices - Secure Environmental Data

Point Name	Record Date	FID Concentration (ppm)	Comments
SC044			Exempted
SC045	7/26/2021 12:43	1.01	
SC046	7/26/2021 12:10	1.53	
SC047	7/26/2021 08:57	4.87	
SC048			Exempted
SC049			Exempted
SC050			Exempted
SC051	7/26/2021 11:22	12.27	
SC052			Exempted
SC053	7/26/2021 00:23	9.51	
SC054	7/27/2021 08:59	5.97	
SC055	7/26/2021 12:00	4.28	
SC056			Exempted
SC057	7/26/2021 12:08	1.50	
SC058			Exempted
SC059			Exempted
SC060			Exempted
SC061			Exempted
SC062	7/26/2021 11:16	10.87	
SC063			Exempted
SC064	7/26/2021 00:19	7.99	
SC065	7/27/2021 08:58	5.24	
SC066	7/26/2021 11:57	6.10	
SC067			Exempted
SC068	7/27/2021 08:11	3.90	
SC069			Exempted
SC070	7/27/2021 03:15	1.11	
SC071			Exempted
SC072			Exempted
SC073			Exempted
SC074	7/27/2021 01:58	2.31	
SC075	7/27/2021 13:54	3.93	
SC076	7/27/2021 01:22	3.71	
SC077	7/27/2021 12:17	3.40	
SC078	7/27/2021 10:26	3.11	
SC079	7/27/2021 09:51	3.35	
SC080			Exempted
SC081			Exempted
SC082	7/27/2021 10:51	3.63	
SC083	7/27/2021 10:37	4.28	
SC084	7/27/2021 09:07	5.86	
SC085			Exempted
SC086			Exempted

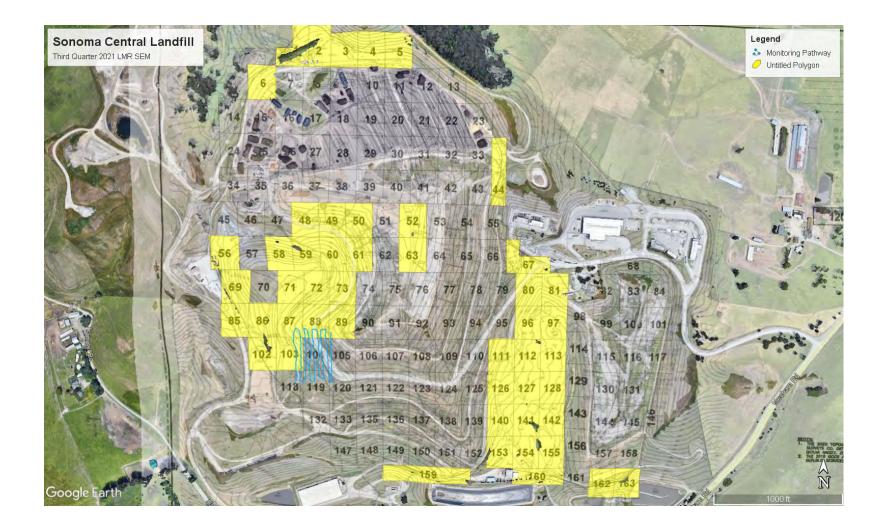
SCS DataServices - Secure Environmental Data

Point Name	Record Date	FID Concentration (ppm)	Comments
SC087			Exempted
SC088			Exempted
SC089			Exempted
SC090	7/27/2021 02:01	3.78	
SC091	7/27/2021 13:47	6.80	
SC092	7/27/2021 01:28	13.29	
SC093	7/27/2021 12:20	8.34	
SC094	7/27/2021 10:26	3.04	
SC095	7/27/2021 09:50	3.41	
SC096			Exempted
SC097			Exempted
SC098	7/27/2021 08:13	14.54	
SC099	7/27/2021 11:16	5.95	
SC100	7/27/2021 10:31	8.43	
SC101	7/27/2021 09:07	5.85	
SC102			Exempted
SC103			Exempted
SC104	7/27/2021 15:22	68.74	Initial
SC104	8/6/2021 10:56	6.58	First 10-Day
SC105	7/27/2021 14:47	4.48	
SC106	7/27/2021 02:10	12.66	
SC107	7/27/2021 13:52	13.34	
SC108	7/27/2021 01:25	15.70	
SC109	7/27/2021 12:15	4.17	
SC110	7/27/2021 13:42	12.80	
SC111			Exempted
SC112			Exempted
SC113			Exempted
SC114	7/27/2021 08:20	5.09	
SC115	7/27/2021 11:10	4.60	
SC116	7/27/2021 10:31	6.72	
SC117	7/27/2021 09:00	4.88	
SC118	7/28/2021 08:48	5.04	
SC119	7/28/2021 09:07	11.17	
SC120	7/28/2021 08:13	7.14	
SC121	7/28/2021 08:38	10.09	
SC122	7/27/2021 14:24	10.47	
SC123	7/28/2021 08:28	12.59	
SC124	7/27/2021 12:52	8.78	
SC125	7/27/2021 13:39	13.11	
SC126			Exempted
SC127			Exempted
SC128			Exempted

SCS DataServices - Secure Environmental Data



Point Name	Record Date	FID Concentration (ppm)	Comments
SC129	7/27/2021 08:23	4.69	
SC130	7/27/2021 11:13	4.29	
SC131	7/27/2021 10:39	8.72	
SC132	7/28/2021 09:08	8.04	
SC133	7/28/2021 08:08	7.75	
SC134			Not on Grid Map
SC135	7/28/2021 08:40	4.73	
SC136	7/27/2021 14:20	2.66	
SC137	7/28/2021 08:31	3.45	
SC138	7/27/2021 12:49	9.26	
SC139	7/27/2021 13:48	17.35	
SC140			Exempted
SC141			Exempted
SC142			Exempted
SC143	7/27/2021 08:31	15.75	
SC144	7/27/2021 11:09	4.11	
SC145	7/27/2021 10:32	7.82	
SC146	7/27/2021 09:55	9.05	
SC147	7/28/2021 08:02	2.24	
SC148	7/28/2021 08:36	4.62	
SC149	7/27/2021 14:19	1.67	
SC150	7/28/2021 08:31	3.15	
SC151	7/27/2021 12:49	1.81	
SC152	7/27/2021 13:33	10.64	
SC153			Exempted
SC154			Exempted
SC155			Exempted
SC156	7/27/2021 08:23	10.79	
SC157	7/27/2021 11:13	3.89	
SC158	7/27/2021 10:37	3.14	
SC159			Exempted
SC160			Exempted
SC161	7/27/2021 08:22	3.76	
SC162			Exempted
SC163			Exempted



Third Quarter 2021 LMR 10-Day Follow Up Surface Emissions Monitoring Pathway Sonoma Central Landfill, Petaluma, California Attachment 5

Calibration Logs

SURFACE EMISSIONS MONITORING						
	19-21-21	CALIBRATION AN	ID PERTINEN	IT DATA		
Date:	11-16 M		Site Name:	Jonamo	1	
Inspector(s):	MIChall M	Mis_	Instrument:	TVA 2020		
WEATHER OB	SERVATIONS			(6)		
Wind Speed	:мрн	Wind Direction:		Barometric <u>30</u>	"Hg	
Ai Temperature	<u>95</u> •F	General Weath Condition		r		
CALIBRATION	INFORMATION					
Pre-monitoring	Calibration Precision Check					
and calculate th	brate the instrument. Make of the average algebraic difference the less than or equal to 10% of al Number:	e between the instrument	reading and the			
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (seconds)	
2	1	tray			74	
3	12			9	77	
Calibration Prec	ision= Average Difference/Ca	Gas Conc. X 100% = 100%	.1	_/500 x 100%		
Span Sensitivity:		= 49.9	%			
Trial 1: Co	ounts Observed for the Span= nters Observed for the Zero=	man	1	nts Observed for the Span= ers Observed for the Zero=	158620	
F <b>rial 2:</b> Co	ounts Observed for the Span=	IMAILOIL				
Counters Observed for the Zero=						
ero Air leading:	ppm	Cal Gas Reading:	500	ppm		
BACKGROUND CONCENTRATIONS CHECKS						
Ipwind Location		Entrange	-	Reading: 1.3	maa	
lownwind Locat	ion Description:	6154	-	Reading:	ppm	
	Wind speed averages were o exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred v	within the previou	s 24 hours of the monitorin	g event. Therefore, site	

						pre	
			SURFACE EMISSI	ONS MONIT	FORING		
	CALIBRATION AND PERTINENT DATA						
)	Date:	2-26-2 Don (7	_1	Site Name:	Sonom	$\alpha$	
	Inspector(s):	pon (7		Instrument:	TVA 2020		
	WEATHER OBS	SERVATIONS					
	Wind Speed	:мрн	Wind Direction: 500	-	Barometric Pressure: 30		
	Air Temperature:	64 °F	General Weather Conditions:		4		
	CALIBRATION	INFORMATION		1			
	Pre-monitoring	Calibration Precision Check					
	and calculate th	orate the instrument. Make a e average algebraic differenc ne less than or equal to 10% oj	e between the instrument i				
	Instrument Seria		20		Cal Gas Concentration:	500ppm	
ŀ	Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	ioncCal Gas Reading	Response Time (seconds)	
ł	2		502		6	3	
t	3	20	Mag		2	3	
	alibration Preci	sion≃ Average Difference/Cal	Average Difference:	*Perform recalibration	1 if average difference is greater than	] 10	
ľ			= 100%-	1.3	/500 x 100%		
			1011	%	_7300 X 100%		
	pan Sensitivity:						
-	rial 1:	unts Observed for the Span=	139920	Trial 3: Cour	nts Observed for the Span=	140925	
		nters Observed for the Zero=	39.558		ers Observed for the Zero=	3975	
I	rial 2:	unts Observed for the Span=	MULL				
		iters Observed for the Zero=	3959				
Post Monitoring Calibration Check							
	ero Air	0	Cal Gas				
	eading:	ppm	Reading:	500	ppm		
BACKGROUND CONCENTRATIONS CHECKS							
υ	pwind Location	Description:	Entrance	re	Reading: <u>\</u>	ppm	
D	ownwind Locatio	on Description	(1159		Reading: <u>L</u> , 6	ppm	
N	e	Nind speed averages were ob exceeded 20 miles per hour. I neteorological conditions we	No rainfall had occurred wi	thin the previou	s 24 hours of the monitorin	g event. Therefore, site	

- It

SURFACE EMISSIONS MONITORING						
CALIBRATION AND PERTINENT DATA						
Date:	7-26-2	-1	Site Name:	SUNOM		
Inspector(s):	Bryan	0	Instrument:	TVA 2020		
WEATHER O	BSERVATIONS			200		
	ſ	Wind _		Barometric		
Wind Spee	ed:MPH	Direction:	_	Pressure: 30	"Hg	
Temperatur	Air re: 64 °F	General Weathe Conditions		2		
CALIBRATIO	N INFORMATION		-			
Pre-monitorin	g Calibration Precision Check			ę.		
and calculate	librate the instrument. Make a the average algebraic differenc t be less than or equal to 10% o	e between the instrument i	nts by alternating reading and the	g zero air and the calibration calibration gas as a percent	n gas. Record the readings age. The calibration	
Instrument Se	rial Number: <u>\2\</u> 7	>		Cal Gas Concentration:	500ppm	
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (seconds)	
2	0	502		2	3	
3	. 1	500		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2	
Calibration Pre	cision= Average Difference/Cal	Gas Conc. X 100% = 100%-	13	_/500 x 100%		
		=99.7	%			
Span Sensitivity	y:					
<u>Trial 1:</u>	Counts Observed for the Span=	121528	<u>Trial 3:</u> Cou	nts Observed for the Span=	1249965	
	unters Observed for the Zero=	3263	Count	ers Observed for the Zero=	3049	
<u>Trial 2:</u> C	Counts Observed for the Span=	0150236				
Со	unters Observed for the Zero=	3123				
Post Monitoring Calibration Check						
Zero Air		Cal Gas				
Reading:	ppm	Reading:	500	ppm		
BACKGROUND	BACKGROUND CONCENTRATIONS CHECKS					
Upwind Locatio	n Description: _	Entrance	، ب	Reading: 13	opm	
Downwind Loca	tion Description:	(1159		Reading:	opm	
Notes:	Wind speed averages were ob exceeded 20 miles per hour. I meteorological conditions we	No rainfall had occurred wi	thin the previou	s 24 hours of the monitoring	event. Therefore, site	

	-	ы			Rost
		SURFACE EN	IISSIONS MONIT	TORING	
		CALIBRATION	AND PERTINEN	NT DATA	
Date:	1-26.	-21	Site Name:	Sonoa	na
Inspector	(s): <u>Qov</u>	19	Instrument:	TVA 2020	
WEATHE	ER OBSERVATIONS			۰.	
Wind	Speed:N	Wind ۱PH Direction: <u>س</u>	<b>)</b>	Barometric Pressure:	"Hg
Tempe	Air <b>D</b> 6 "i rature:"i	General W	ditions: SUNN	<u>-</u> )	
CALIBRA	TION INFORMATION				
Pre-monit	toring Calibration Precisio	on Check	N)		
and calcu	late the average algebra	nt. Make a total of three measu ic difference between the instru al to 10% of the calibration gas	ment reading and the		
Instrumer	nt Serial Number	5420		Cal Gas Concentratio	n: 500ppm
Trial 1	Zero Air Rea	ading Cal Gas Readin	ng  Cal Gas C	ConcCal Gas Reading	Response Time (secon
2		5.01		2	2
3	-2	501		C	4
Calibration	n Precision= Average Diff		100%	_/500 x 100%	
		= 9.9	× %		
Span Sensi	itivity:				
Trial 1:	Counts Observed for	the Span= 3829	Cour	nts Observed for the Spa	n= <u>138699</u>
	Counters Observed for	the Zero= 57999	Count	ers Observed for the Zer	<u>0=</u> 391C
<u>Trial 2:</u>	Counts Observed for	the Span= 13846	6		
	Counters Observed for	the Zero= 39(17			
Post Monit	coring Calibration Check				
Zero Air Reading:	pp	Cal Gas m Readin		_ppm	
BACKGRO	UND CONCENTRATION				
	cation Description	Entr	ance	Reading:	ppm
	Location Description:	Clin	N	Reading: <u>V</u>	ppm
Downwind					

	1	1			Post
		SURFACE EMISSIO		_	
		CALIBRATION AND	PERTINEN	ΓΟΑΤΑ	
Date:	1-26-21		Site Name:	Sonome	2
Inspector(s):	Bryan	0	Instrument:	TVA 2020	
WEATHER OB	SERVATIONS			10.	
Wind Speed	:мрн	Wind Direction:		Barometric Pressure: 30	"Hg
Ai Temperature	r <u>40</u> •F	General Weather - Conditions: (		wy .	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th	brate the instrument. Make a ne average algebraic differenc be less than or equal to 10% oj	e between the instrument re f the calibration gas value.			
Instrument Seri	al Number: <u>\</u>	2		Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Co	oncCal Gas Reading	Response Time (seconds)
2	-1	499			4
3	а ( <u>к</u>	501			5
Calibration Prec	ision= Average Difference/Cal	= 100%		/500 x 100%	
		= 49.7%	6		
Span Sensitivity:					
<u>Trial 1:</u> Co	ounts Observed for the Span=	126693 I	Trial 3: Count	ts Observed for the Span=	126975
Trial 2:	nters Observed for the Zero=	2775	Counter	rs Observed for the Zero=	2493
Co	ounts Observed for the Span=				
Cou	nters Observed for the Zero=	2975			
Post Monitoring	Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	500_p	opm	
BACKGROUND	CONCENTRATIONS CHECKS				
Upwind Location	Description:	Entranc	e F	Reading: <u>\.Z</u>	ppm
Downwind Locat	ion Description:	(7159	Я	Reading: 15	ppm
Notes:	Wind speed averages were ob				
	exceeded 20 miles per hour. I meteorological conditions we				

Personal Contraction of the Cont

			ONS MONITORING	
	2010	CALIBRATION AN	D PERTINENT DATA	
Date;	1-16-11		Site Name: Solomo	
inspector(s):	Lidm		Instrument: TVA 2020	
WEATHER OBS	SERVATIONS		) j	
	7	Wind	Barometric	
Wind Speed	:МРН	Direction:	Pressure:	
Air Temperature	<u>95_</u> °F	General Weather Conditions		
CALIBRATION	INFORMATION			
Pre-monitoring	Calibration Precision Check		(	
	e less than or equal to 10% of		reading and the calibration gas as a percent	tage. The calibration
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (second
2	2	hat		4
3	01	509	2	2
	sion= Average Difference/Ca	= 100%-	) /500 x 100%	
		= 99.8	%	
Span Sensitivity:				
Trial 1: Co	unts Observed for the Span=	(18560	Trial 3: Counts Observed for the Span=	<u></u>
Cou	nters Observed for the Zero=	3173	Counters Observed for the Zero=	7135
Trial 2: Co	unts Observed for the Span=	22		
	nters Observed for the Zero=	0110		
Post Monitoring	Calibration Check			
Zero Air	0	Cal Gas	Ena	
Reading:	ppm	Reading:	D P ppm	
BACKGROUND	CONCENTRATIONS CHECK	S	5° a 10.	
Upwind Location	Description:	Entrance	Reading: 1.3	ppm
Downwind Locati	on Description:	6199	Reading: 117	ppm
	exceeded 20 miles per hour.	No rainfall had occurred w	ne alternative requested 10 miles per hour a ithin the previous 24 hours of the monitorin ternatives of the LMR requirements on the a	g event. Therefore, site

Mad toi and B. 14

I WANT & BUTTO IN A POPULATION

	ere							
Dete:       126224       Site Name:       Some and the source of the s								
Inspector(s):       Middle       Instrument:       TVA 2020         WeATHER OBSERVATIONS       Wind Speed:       MPH       Directions:       Barometric       "Hg         Air       Air       Directions:       Wind Speed:       "Hg       "Hg       "Hg         Air       Emperature:       'F'       General Weather       "Hg       "Hg         CallBRATION INFORMATION       Pre-monitoring Calibration Precision Check       Procedure: Calibrate the instrument. Make a total of three measurements by oftenating zero air and the calibration gas. Record: and doclate the userage algebraic difference between the instrument reading and the calibration gas of a percentage. The calibrate and calibration percentage. The calibrate and calibrate and calibration percentage. The calibrate and ca								
WEATHER OBSERVATIONS         Wind Speed:       MPH         Direction:       Series Series         Air       General Weather         Temperature:       "F         Calibration Information         Pre-monitoring Calibration Precision Check:         Procedure: Colibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record, and calibration must be less throme the instrument reading and the calibration gas as a percentage. The colib procession must be less throm or equitor 10 Kg the calibration gas value.         Instrument Serial Number:       LSS         Cal Gas Concentration:       South the calibration gas value.         Instrument Serial Number:       LSS         Cal Gas Concentration:       South the calibration gas value.         Instrument Serial Number:       LSS         Cal Gas Reading       Ical Gas Reading         1       LS         2       South the calibration of the calibration gas value.         Instrument Serial Number:       LSS         Cal Gas Concentration:       South the calibration of the calibration gas value.         Instrument Serial Number:       LSS         Cal Gas Concentration:       South the calibration of th								
Wind Speed:       MPH       Wind Speed:       Pressure:								
Wind Speed:       MPH       Direction:       Pressure:       "Hg         Air       Temperature:       "F:       General Weather       Conditions         CALIBRATION INFORMATION         Pre-monitoring Calibration Precision Check         Procedure:       Calibration Precision Check         Procedure:       Calibration precision Check         Procedure:       Calibration of equit to 10% of the calibration gas value.         Instrument Serial Number:       Image: C								
Temperature:	3							
Pre-monitoring Calibration Precision Check         Pracedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record, and collulate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration gas must be less than or equal to 10% of the calibration gas value.         Instrument Serial Number:								
Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas as a percentage. The calibration gas uses that are equal to 10% of the calibration gas value.         Instrument Serial Number:								
and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration must be less than or equal to 10% of the calibration gas value.       Instrument Serial Number:								
Trial       Zero Air Reading       Cal Gas Reading       [Cal Gas ConcCal Gas Reading]       Response Ti         1<								
1       1	500ppm							
2       3       500         Average Difference:	nse Time (seconds)							
Average Difference:       Image: Control of the spane of	6							
*Perform recalibration If average difference is greater than 10  Calibration Precision= Average Difference/Cal Gas Conc. X 100%  = 100%/500 × 100% = 049.9%  Span Sensitivity: Trial 1: Counts Observed for the Span= 1599.9% Counters Observed for the Span= 1599.9% Counters Observed for the Zero= 3183 C	3							
*Perform recalibration If average difference is greater than 10 Calibration Precision= Average Difference/Cal Gas Conc. X 100% = 100%/500 × 100% = 049.9% Span Sensitivity: Trial 1: Counts Observed for the Span= 154745 Counters Observed for the Span= 15483 Counters Observed for the Zero= 3483 Counters Observed for the Zero= 3465 Trial 2: Counters Observed for the Span= 1643544 Counters Observed for the Zero= 3465 Post Monitoring Calibration Check Zero Air Reading: ppm BACKGROUND CONCENTRATIONS CHECKS Upwind Location Description: Efff. Reading: ppm								
Calibration Precision= Average Difference/Cal Gas Conc. X 100% $= 100\% - 3 /500 \times 100\%$ $= 00\% - 3 /500 \times 100\%$								
Counts Observed for the Span=       Image: Counts Observed for the Zero=       Stars       Counters Observed for the Span=       Image: Counters Observed for the Zero=       Stars       Stars       Counters Observed								
Counters Observed for the Zero=       S183       Counters Observed for the Zero=       S163         Trial 2:       Counters Observed for the Span=       Counters Observed for the Zero=       S163         Counters Observed for the Span=       Counters Observed for the Zero=       S163         Counters Observed for the Zero=       S163       Counters Observed for the Zero=         Post Monitoring Calibration Check       Cal Gas         Zero Air       Cal Gas         Reading:      ppm         BACKGROUND CONCENTRATIONS CHECKS       Reading:      ppm	440							
Trial 2:       Counts Observed for the Span=       GUSSU         Counters Observed for the Zero=       GUSZ         Post Monitoring Calibration Check         Zero Air       Cal Gas         Reading:      ppm         Reading:      ppm         BACKGROUND CONCENTRATIONS CHECKS         Upwind Location Description:       EmtionApple         Reading:      ppm								
Counts Observed for the Span=       GUSSU         Counters Observed for the Zero=       GUSZU         Post Monitoring Calibration Check         Zero Air       Cal Gas         Reading:      ppm         BACKGROUND CONCENTRATIONS CHECKS         Upwind Location Description:       EmtionAppendicular	<u> </u>							
Post Monitoring Calibration Check Zero Air Reading: ppm Reading: ppm BACKGROUND CONCENTRATIONS CHECKS Upwind Location Description: Entronce Reading: ppm								
Zero Air     Cal Gas       Reading:    ppm       BACKGROUND CONCENTRATIONS CHECKS       Upwind Location Description:         Entimeted         Reading:         Reading:         Reading:         Reading:         Reading:         Reading:         Reading:         Reading:         Reading:								
Reading:    ppm     Reading:    ppm       BACKGROUND CONCENTRATIONS CHECKS     Upwind Location Description:     Entimeter Concentration								
Upwind Location Description: <u>Entrance</u> Reading: <u>L2</u> ppm								
Upwind Location Description: <u>Entrance</u> Reading: <u>L2</u> ppm								
Downwind Location Description:								
Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantar exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. There meteorological conditions were within the requested alternatives of the LMR requirements on the above mentione	Therefore, site							

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	SURFACE EMISSIONS MONITORING						
	CALIBRATION AND PERTINENT DATA						
$\cap$	Date:	7-26-21		Site Name:	Simon	0~	
	Inspector(s):	Liam		Instrument:	TVA 2020		
	WEATHER OBS	SERVATIONS			*		
	Wind Speed	а МРН	Wind Direction: SW	-	Barometric Pressure: <u>30</u>	"Hg	
	Air Temperature:	I_M	General Weather Conditions		<u>}</u>		
	CALIBRATION	INFORMATION					
	Pre-monitoring	Calibration Precision Check					
	and calculate th precision must b	prate the instrument. Make a e average algebraic difference e less than or equal to 10% of	e between the instrument		calibration gas as a percent	age. The calibration	
	Instrument Seria	al Number:	<u> </u>		Cal Gas Concentration:	500ppm	
	Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (seconds)	
	2	. 3	400		E	E	
	3	12	500		0	2	
0	Average Difference: *Perform recalibration if average difference is greater than 10 Calibration Precision= Average Difference/Cal Gas Conc. X 100%						
			= 100%-		_/500 × 100%		
			= 99.8	%			
	Span Sensitivity:						
	<u>Trial 1:</u> Co	unts Observed for the Span=	127368	Trial 3: Cou	nts Observed for the Span=	121852	
	Cou	nters Observed for the Zero=	3179	Count	ers Observed for the Zero=	3087	
	<u>Trial 2:</u> Co	unts Observed for the Span=	127600				
	Cou	nters Observed for the Zero=	3146				
	Post Monitoring	Calibration Check					
	Zero Air Reading:	ppm	Cal Gas Reading:	500	_bbw		
	BACKGROUND	CONCENTRATIONS CHECKS					
$\cup$	Upwind Location	Description:	Entrar (1159	nce	Reading: 12	ppm	
	Downwind Locati	on Description:	(1159		Reading: 5	ppm	
and the local data		Wind speed averages were ob exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred w	ithin the previou ternatives of the	is 24 hours of the monitorin	g event. Therefore, site bove mentioned date.	

					Post
		SURFACE EMISSI	ONS MONITO	RING	
		CALIBRATION AN	D PERTINENT	DATA	
Date:	1-27-2 Bryan		Site Name:	Sonoma	<b>`</b>
Inspector(s):	Bryan	0	Instrument:	TVA 2020	
WEATHER OF	SERVATIONS			1921	
Wind Speed	d:MPH	Wind Direction:	_	Barometric Pressure:	- "Нg
A Temperature	ir <b>71</b> e:*F	General Weathe Conditions	5 6 1	)	
CALIBRATION	INFORMATION		1		
Pre-monitoring	g Calibration Precision Check				
and calculate t	ibrate the instrument. Make a he average algebraic difference be less than or equal to 10% o	e between the instrument i	reading and the cal		
Instrument Ser	ial Number:	5		Cal Gas Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Cor	cCal Gas Reading]	Response Time (seconds
1		500		0	y
2		yar		3	ż
Calibration Pred	cision= Average Difference/Cal	Gas Conc. X 100% = 100%-	* ( 2	average difference is greater than 500 x 100%	10
		= { 9.7	%		
1	ounts Observed for the Span=		Trial 3: Counts	Observed for the Span=	124050
Cou Trial 2:	unters Observed for the Zero=	2856	Counters	Observed for the Zero=	2930
C	ounts Observed for the Span=	237.04			
Cou	unters Observed for the Zero=	2894			
Post Monitoring	; Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	500 pr	om	
BACKGROUND	CONCENTRATIONS CHECKS	5			
Upwind Location	Description:	61159	Re	eading:	ppm
Downwind Locat	tion Description:	riare	Re	eading: 1.5	ppm
Notes:	Wind speed averages were of exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred wi	ithin the previous 2	4 hours of the monitorin	g event. Therefore, site

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	τ.	lie				
	SURFACE EMIS	SSIONS MONITORING				
	CALIBRATION AND PERTINENT DATA					
ĺ	Date: 1-27-21	Site Name: SUNOMA				
	Inspector(s): T-ZT-ZI Don G	Instrument:TVA 2020				
	WEATHER OBSERVATIONS	3				
	Wind Speed: MPH Direction:	Barometric Pressure: 30 "Hg				
	Air General Wea Temperature:*F Conditi	ions: SUVVVY				
	CALIBRATION INFORMATION					
	Pre-monitoring Calibration Precision Check					
	Procedure: Calibrate the instrument. Make a total of three measure and calculate the average algebraic difference between the instrume precision must be less than or equal to 10% of the calibration gas val					
	Instrument Serial Number:	Cal Gas Concentration: 500ppm				
	Trial Zero Air Reading Cal Gas Reading	Cal Gas ConcCal Gas Reading  Response Time (seconds)				
	2	2				
	3 . 0 502	- <u> </u>				
	Average Difference	*Perform recalibration if average difference is greater than 10				
	Calibration Precision= Average Difference/Cal Gas Conc. X 100%					
		0%/500 x 100%				
	<u>-</u> ترمر؟	₹ %				
	Span Sensitivity:	· · ·				
-	Trial 1: Counts Observed for the Span= 139892	Counts Observed for the Span= 135084				
	Counters Observed for the Zero= 38 14	Counters Observed for the Zero= 39 39				
Ī	Counts Observed for the Span= 134 91	8				
	Counters Observed for the Zero= 3902					
F	Post Monitoring Calibration Check					
Z	ero Air Cal Gas					
F	leading:ppm Reading:	<u>Σ δ υ</u> ppm				
B	ACKGROUND CONCENTRATIONS CHECKS					
L	Ipwind Location Description:	Reading: ppm				
C	Pownwind Location Description:	Reading:				
N	exceeded 20 miles per hour. No rainfall had occurre	w the alternative requested 10 miles per hour and no instantaneous speeds ed within the previous 24 hours of the monitoring event. Therefore, site d alternatives of the LMR requirements on the above mentioned date.				

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						PVC
			SURFACE EMISSI	ONS MONIT	ORING	
			CALIBRATION AN	D PERTINEN	T DATA	
q	Date:	4-27-21	<b></b>	Site Name:	SUNOV	19
	Inspector(s):	Bryan	0	Instrument:	TVA 2020	
	WEATHER OBS	ERVATIONS			а.	
	Wind Speed:	МРН	Wind Direction: <u> </u>	<u></u>	Barometric Pressure:	-"Hg
	Air Temperature:	GO "F	General Weathe Conditions			
	CALIBRATION I	NFORMATION				
	Pre-monitoring C	Calibration Precision Check				
	and calculate the	rate the instrument. Make a e average algebraic differenc e less than or equal to 10% oj	e between the instrument <sup>f</sup> the calibration gas value.			
	Instrument Seria	I Number:	5		Cal Gas Concentration:	500ppm
	Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Co	oncCal Gas Reading	Response Time (seconds)
ł	2	.0	SOL		<u> </u>	1
ŀ	3		512	ļ	Ċ	3
	Calibration Precis	sion= Average Difference/Cal		3	if average difference is greater than	10
			= 100%- = 9(9,-7		/500 x 100%	
-	Span Sensitivity: [rial 1:		11	Trial 3:		
ľ		unts Observed for the Span=		Coun	ts Observed for the Span=	133935
Ļ	Coun	nters Observed for the Zero=		Counte	ers Observed for the Zero=	28 05
ľ	Cou	unts Observed for the Span=				
ŀ	Coun	ters Observed for the Zero=	28 67			
P	ost Monitoring C	Calibration Check				
	ero Air	~	Cal Gas	500		
	leading:	ppm	Reading:	500	ppm	
B	ACKGROUND C	CONCENTRATIONS CHECKS			<	
lu	Ipwind Location I	Description:	6159		Reading:	ppm
D	ownwind Locatic	on Description:	Flare		Reading:	ppm
N	e	Vind speed averages were ob exceeded 20 miles per hour. neteorological conditions we	No rainfall had occurred w	ithin the previous	s 24 hours of the monitorin	g event. Therefore, site

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	-				post
		SURFACE EMISSIO	ONS MONI	FORING	
		CALIBRATION AND			
	1 7 7 71			<u> </u>	
Date:	<u>- [· [ [ - []</u>		Site Name:	JANONC	
Inspector(s):	bong		Instrument:	TVA 2020	
WEATHER OBS	ERVATIONS			27	
Wind Speed:	МРН	Wind Direction:		Barometric Pressure: 30	"Hg
Air Temperature:	44	General Weather Conditions:		<u>4</u>	
CALIBRATION I	NFORMATION				
Pre-monitoring (	Calibration Precision Check				
and calculate th	rate the instrument. Make a e average algebraic difference e less than or equal to 10% oj	e between the instrument r			
Instrument Seria	Number: 54	20		Cal Gas Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	I Cal Gas C	ConcCal Gas Reading	Response Time (seconds)
1		602	1001 003 0	2	
2		500			5
3		500		<u>0</u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Calibration Preci	sion= Average Difference/Cal	Gas Conc. X 100%	*Perform recalibratio	n if average difference is greater than : /500 x 100%	10
Span Sensitivity:					
Trial 1:		100 11	Trial 3:		1220
Co	unts Observed for the Span=	197046	Cou	nts Observed for the Span=	135507
	nters Observed for the Zero=	3-07-55	Count	ers Observed for the Zero=	3941
Trial 2: Con	unts Observed for the Span=	133195			
Cour	iters Observed for the Zero=	3906			
Post Monitoring (	Calibration Check				
ero Air Reading:	ppm	Cal Gas Reading	560	ppm	-
ACKGROUND	CONCENTRATIONS CHECKS			ē.	
Ipwind Location	Description: -	Florre		Reading:	ppm
ownwind Locati	on Description	51159		Reading: <u>C</u> U	ppm
e	Wind speed averages were ob exceeded 20 miles per hour. I neteorological conditions we	No rainfall had occurred wi	thin the previou	s 24 hours of the monitorin	g event. Therefore, site

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	1				YOSE
		SURFACE EMISSI	ONS MONI	TORING	
		CALIBRATION AN	D PERTINE	NT DATA	
Date:	1-27-21		Site Name:	Schome	۹
Inspector(s):	bor your a	CC	Instrument:	TVA 2020	-
WEATHER O	BSERVATIONS			a	
Wind Spee		Wind Direction:	_	Barometric Pressure: <u>30</u>	"Hg
Temperatur	Air <u>45</u> re:°F	General Weathe Conditions	A	4	
CALIBRATIO	N INFORMATION				
Pre-monitorin	g Calibration Precision Check				
and calculate	librate the instrument. Make a the average algebraic difference t be less than or equal to 10% o	e between the instrument	reading and the		
Instrument Se	rial Number:	<u> </u>		Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas (	ConcCal Gas Reading	Response Time (seconds)
2	-\ -0.	300		2	5
3		Uag		2	3
Calibration Pre	cision= Average Difference/Cal		1.3	_/500 x 100%	
Span Sensitivit	v:	= 0	%		
<u>Trial 1:</u>	Counts Observed for the Span=	181384	<u>Trial 3:</u> Cou	nts Observed for the Span=	121 896
Trial 2:	unters Observed for the Zero=	21-7-1	Count	ters Observed for the Zero=	2-134
	Counts Observed for the Span=	1971			
	unters Observed for the Zero=	646			
	g Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	500	ppm	
BACKGROUNE	CONCENTRATIONS CHECKS	5			
Upwind Locatio	n Description:	gare		Reading:	ppm
Downwind Loca	ition Description:	61159		Reading:	ppm
Notes:	Wind speed averages were of exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred w	ithin the previou	is 24 hours of the monitorin	ng event. Therefore, site

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		SURFACE EMISSIO	ONS MONIT	ORING	
		CALIBRATION ANI	<b>D PERTINEN</b>	T DATA	
Date:	07-27-21		Site Name:	sonomd	
Inspector(s):	Michael M	arris	Instrument:	TVA 2020	
WEATHER OBS	ERVATIONS			2.001	
Wind Speed:	2 МРН	Wind Direction:	-	Barometric Pressure:	"Hg
Air Temperature:	<u>63</u> .F	General Weather Conditions:	the COOM		
CALIBRATION I	NFORMATION				
Pre-monitoring (	Calibration Precision Check				
and calculate the	rate the instrument. Make a e average algebraic difference e less than or equal to 10% of I Number:	e between the instrument i			-
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (seconds)
1		500		0	3
2		490			2
3		544	L	0	
Calibration Precis	sion= Average Difference/Cal	Average Difference: Gas Conc. X 100% = 100%-	*Perform recalibration	/500 x 100%	J 10
Span Sensitivity:		[ 1.0]	70		
<u>Trial 1:</u> Co	unts Observed for the Span= nters Observed for the Zero=	143707 4085		nts Observed for the Span= ers Observed for the Zero=	142643
<u>Trial 2:</u> Co	unts Observed for the Span=	44980	count		
Post Monitoring (			h		
Zero Air Reading: -	ppm	Cal Gas Reading:	500	ppm	
BACKGROUND	CONCENTRATIONS CHECKS				
Upwind Location	Description:	6159		Reading:	ppm
Downwind Locati	on Description:	FARE		Reading:	ppm
(	Wind speed averages were of exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred w	ithin the previou	s 24 hours of the monitorir	g event. Therefore, site

			SURFACE	EMISSI	ONS MONI	TORING			
	0	2001	CALIBRAT	ION AN	D PERTINE	_			
Date:	07-1	7-21			Site Name:	SOM	oma		
Inspector(s):	Linm	Mcgi	nr		Instrument:	TVA 202	20		
WEATHER OBS	SERVATIONS						*		
Wind Speed	4	_MPH	Wind Direction:	W	_	Barome <sup>.</sup> Pressu	- / / //	<b>7</b> нg	
Aiı Temperature	87	°F	Gene	ral Weathe Conditions	Clerv				
CALIBRATION	INFORMATION	1							
Pre-monitoring	Calibration Prec	ision Check							
Procedure: Calib and calculate th precision must b	e average algel	oraic difference	between the	instrument	reading and the				
Instrument Seria	al Number:	(11	2			Cal Gas	Concentration:		500ppm
Trial 1	Zero Air	Reading	Cal Gas R	leading	Cal Gas	ConcCal Ga	is Reading	Respons	e Time (seconds)
2	4		201			0			4
3	1		600			P			2
Calibration Preci	sion= Average L	Difference/Cal	Gas Conc. X 10 = =	100% 100%- 100%-	.3	/500 x 100	0%		
Span Sensitivity:				211	1				
<u>Trial 1:</u>	ounts Observed	for the Span=	1365	74	Trial 3:	ints Observe	ed for the Span=	[3]	2029
	nters Observed		186	10			ed for the Zero=	28	42
Trial 2:	unts Observed	ġ	1378	591					12
Cou	nters Observed	for the Zero=	285	3					
Post Monitoring	Calibration Che	ck				8			
Zero Air Reading:	0	ppm		al Gas eading:	500	_ppm			
BACKGROUND	CONCENTRAT	ONS CHECKS	<i>c</i> .	~ 1			C =1		
Upwind Location	Description		613	19	-,	Reading:	1.7	ppm	
Downwind Locat	ion Description:	-	FIAN	P.	4	Reading:	10	ppm	
							miles per hour a of the monitorir		ntaneous speeds

exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

Contraction of the

		SURFACE EMISSI	ONS MONI	TORING	
	~~~	CALIBRATION ANI	D PERTINEI	NT DATA	
Date:	07-27-21	1	Site Name:	Sonama	
Date:	Mil AL AA	ANVIE	Site Name:	00.011	
Inspector(s):	//// droc / ///	1115	Instrument:	TVA 2020	
WEATHER OBS	SERVATIONS	147			
Wind Speed:		Wind Wind Direction:	-	Barometric Pressure:	<b>7</b> - <sup>"Hg</sup>
Air Temperature	87 .	General Weather Conditions		N/	
	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th	prate the instrument. Make a e average algebraic difference be less than or equal to 10% og al Number:	e between the instrument i			
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas	CopcCal Gas Reading	Response Jime (seconds)
1	9	501		(	4
2	-	592		En month	76
3	9	500	(	1	<u> </u>
		Average Difference:	*Perform recalibration	on if average difference is greater than	10
Calibration Preci	sion≃ Average Difference/Cal	Gas Conc. X 100% = 100%- = 999	%	_/500 × 100%	
Span Sensitivity:					
	ounts Observed for the Span= nters Observed for the Zero≠	145676	1	ints Observed for the Span= ters Observed for the Zero=	147092 30197
Trial 2:	unts Observed for the Span=	1468/5	Cour		1410
Cou	nters Observed for the Zero=	3974			
Post Monitoring	Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	508	_ppm	1
BACKGROUND	CONCENTRATIONS CHECKS				
Upwind Location	Description:	6159		Reading:	ppm
Downwind Locat	ion Description:	FIONE		Reading:	ppm
	Wind speed averages were ol exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred w	ithin the previo	us 24 hours of the monitorir	ng event. Therefore, site

		CALIBRATION AND	Site Name:	SONOMO	e l
Date: Inspector(s):	1-27-2 Lian McGi	nn	Instrument:	TVA 2020	
			High Ground		
		Wind		Barometric 30	
Wind Speed:	2МРН	Direction:	-	Barometric 30	_ "Hg
Air Temperature:	78 ·F	General Weather Conditions:	(Cor	1	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th precision must b	prate the instrument. Make a e average algebraic difference be less than or equal to 10% of	e between the instrument i the calibration gas value.	nts by alternating reading and the c	alibration gas as a percent	age. The calibration
Instrument Seria	al Number: 12:	/		Cal Gas Concentration:	
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (seconds)
2	0	500		0	3
3	0	800			3
	ision= Average Difference/Cal		- <u>-</u> 7 %	_/500 x 100%	
Span Sensitivity: Trial 1:		12 D	Trial 3:		122941
Co	ounts Observed for the Span=	175820	1	nts Observed for the Span=	2921
Cou Trial 2:	Inters Observed for the Zero=	2100	Count	ers Observed for the Zero=	
Co	ounts Observed for the Span=	136342			
Cou	inters Observed for the Zero=	2100	]		
Post Monitoring	; Calibration Check				
<b>Zero</b> Air Reading:	ppm	Cal Gas Reading:	500	_ppm	
BACKGROUND	CONCENTRATIONS CHECKS	5		( <b>7</b>	
Upwind Location	n Description:	(2159	-	Reading:	_ppm
Downwind Loca	tion Description:	Floure		Reading:	ppm
Notes:	Wind speed averages were o exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred v	within the previou	us 24 hours of the monitor	and no instantaneous speeds ing event. Therefore, site above mentioned date.

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		SURFACE EMISSIO	ONS MONIT	ORING	
		CALIBRATION ANI	D PERTINE	IT DATA	
Date:	07-28-21		Site Name:	Songma	
Inspector(s);	07-28-21 Dom Gibson	n	Instrument:	TVA 2020	
WEATHER OBS	SERVATIONS			>	
Wind Speed		Wind Direction:	-	Barometric Pressure: <u>30</u>	
Air Temperature	9/	General Weather Conditions	LNIMI	-, 2	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th	orate the instrument. Make a e average algebraic differenc be less than or equal to 10% of	e between the instrument i	reading and the		
Instrument Seria	al Number: 397	10		Cal Gas Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas (	ConcCal Gas Reading]	Response Time (seconds)
1		601			2
2	Q	500	6	2	3
3		50()	6	2	
alibration Preci	sion= Average Difference/Cal	Gas Conc. X 100% = 100%-	.3	_/500 x 100%	
ipan Sensitivity:		= 97.9	%		
Frial 1:		1011701	Trial 3:		1020110
	ounts Observed for the Span=	134/96		nts Observed for the Span=	33/42
Cou	nters Observed for the Zero=	3094	Coun	ters Observed for the Zero=	7126
	ounts Observed for the Span=	35827 3862			
Cou	nters Observed for the Zero=	9002		Ň	
ost Monitoring	Calibration Check		•		
ero Air leading:	ppm	Cal Gas Reading:	590	_ppm	
ACKGROUND	CONCENTRATIONS CHECKS	5			
<b>Ipwi</b> nd Location	Description:	(1159		Reading:	ppm
ownwind Locat	ion Description:	Flare		Reading:	ppm
	Wind speed averages were or exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred w	ithin the previo	us 24 hours of the monitori	ng event. Therefore, site

			SURFACE EMISSI			
		00001	CALIBRATION AN	D PERTINEN	2	
$\bigcirc$	Date:	Bryan Octo		Site Name:	Sonoma	
	inspector(s);	Bryan Octo		Instrument:	TVA 2020	
	WEATHER OBS	ERVATIONS			*	
	Wind Speed:	ЗМРН	Wind Direction:	-	Barometric 300	"Hg
	Air Temperature:	0/	General Weathe Conditions	Land		
	CALIBRATION	NFORMATION				
	Pre-monitoring	Calibration Precision Check				
	and calculate th	rate the instrument. Make a e average algebraic difference e less than or equal to 10% of	e between the instrument	reading and the		
	Instrument Seria	I Number:	2		Cal Gas Concentration:	500ppm
	Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas (	ConcCal Gas Reading	Response Time (seconds)
	2	4	601			-
	3	0	607		2	3
( )	Calibration Preci	sion= Average Difference/Cal	Average Difference: Gas Conc. X 100%	*Perform recalibratio	1.3 on if average difference is greater than	] 10
		,	= 100%	1.3	_/500 x 100%	
	Span Sensitivity:		= 99.7	%		
	TRACTOR CONTRACTOR	ounts Observed for the Span=	(21648	Trial 3: Cou	unts Observed for the Span=	120961
	Cou	nters Observed for the Zero=	3142	Coun	ters Observed for the Zero=	3155
		ounts Observed for the Span=	(22749	-		
	Cou	nters Observed for the Zero=	3181	]		
	Post Monitoring	Calibration Check				
	Zero Air Reading:	ppm	Cal Gas Reading:	600	_ppm	
	BACKGROUND	CONCENTRATIONS CHECKS	i			
$\bigcirc$	Upwind Location	Description:	6-159	-	Reading:	ppm
	Downwind Locat	ion Description:	FLORE		Reading:	ppm
		Wind speed averages were of exceeded 20 miles per hour. meteorological conditions we	No rainfall had occurred v	vithin the previo	us 24 hours of the monitorin	ng event. Therefore, site

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					2	post
		SURFACE EMISSI				
Date:	7-28-21		Site Name:	Sonol	$\neg q$	
Inspector(s):	Gigan	0	Instrument:	TVA 2020		
WEATHER OB	SERVATIONS			1.401		
Wind Speed		Wind Direction:	-	Barometric Pressure: 3	0	"Hg
Aiı Temperature		General Weather Conditions		r)		
CALIBRATION	INFORMATION			2		
Pre-monitoring	Calibration Precision Check					
and calculate th	prate the instrument. Make a e average algebraic differenc ne less than or equal to 10% o	e between the instrument				
Instrument Seria	al Number: 59			Cal Gas Concen	tration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Co	oncCal Gas Read	ing	Response Time (seconds)
1	-0	502		2		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
2	.0.	500		2		
Calibration Preci	sion= Average Difference/Cal	= 100%-		/500 x 100%		
		= 491.J	%			
Span Sensitivity:						
<u>Trial 1:</u> Co	unts Observed for the Span=	120137	Trial 3: Coun	ts Observed for th	ne Span=	20 585
Cou Trial 2:	nters Observed for the Zero=	3146	Counte	ers Observed for t	he Zero=	3189
Co	unts Observed for the Span=	· · · · · · · · · · · · · · · · · · ·				
	nters Observed for the Zero=	51.19				
	Calibration Check					
Zero Air Reading:	ppm	Cal Gas Reading:	500	ppm		
BACKGROUND	CONCENTRATIONS CHECKS				2	
Upwind Location	Description:	61159		Reading: 📃	<u>, </u>	om
Downwind Locati	on Description:	1-lave		Reading:	PI	m
	Wind speed averages were of		ne alternative requ	uested 10 miles p		l no instantaneous speeds event. Therefore, site

	2	-		C C	iost
		SURFACE EMISSI			
_	1	CALIBRATION AN	D PERTINEN		
Date:	1-28-21	<u></u>	Site Name:	JONOMA	à
Inspecto	r(s): Pablo		Instrument:	TVA 2020	
WEATH	ER OBSERVATIONS			3	
Wind	Speed: MPH	Wind Direction:	-	Barometric Pressure: 30	"Hg
Tempe	Air erature: <u>1</u> *F	General Weathe Conditions		<u>-</u> 9	
CALIBRA	TION INFORMATION				
Pre-moni	toring Calibration Precision Check				
and calcu	e: Calibrate the instrument. Make Ilate the average algebraic differen must be less than or equal to 10%	nce between the instrument			
Instrume	nt Serial Number:	(19		Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (seconds)
2	.0	502		2	2
3		630		0	L 5
		Average Difference:	*Perform recalibratio	n if average difference is greater than	10
Calibratio	n Precision= Average Difference/C	al Gas Conc. X 100% = 100%-	.6	_/500 x 100%	
		= 99,8	%		
Span Sens	itivity:		T. 1. 1. 2.		
Trial 1:	Counts Observed for the Span	157862	Trial 3: Cou	nts Observed for the Span=	158145
	Counters Observed for the Zero	= 5719	Count	ers Observed for the Zero=	5786
<u>Trial 2:</u>	Counts Observed for the Span	157 992			
	Counters Observed for the Zero	5152			
Post Moni	toring Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	500	ppm	
BACKGRO	UND CONCENTRATIONS CHECK	۲S		2	
	cation Description	<u>C1159</u>	5	Reading:	ppm
Downwind	Location Description	Frate	,	Reading:	ppm
Notes:	Wind speed averages were exceeded 20 miles per hour meteorological conditions w	. No rainfall had occurred w	ithin the previou	s 24 hours of the monitori	-
The second second			THE NEW YORK	Lind the sere the	1.40

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	<u>.</u>				Post
		SURFACE EMISSI			
		CALIBRATION AN	D PERTINENT	DATA	
Date:	1-28.21	<u></u> z	Site Name:	J0,10m	G
Inspector(	s): <u>Don(7</u>		Instrument:	TVA 2020	
WEATHER	ROBSERVATIONS			74	
Wind S	peed: MPH	Wind Direction:	-	Barometric Pressure: <u>30</u>	"Hg
Tempera	Air 51 ature: 57 °F	General Weathe Conditions		G	
CALIBRAT	ION INFORMATION				
Pre-monito	oring Calibration Precision Check				
and calculo precision n	Calibrate the instrument. Make a ate the average algebraic difference aust be less than or equal to 10% of Serial Number:	ce between the instrument of the calibration gas value.	reading and the cal		
Trial	Zero Air Reading	Cal Gas Reading	<i>i</i>	cCal Gas Reading	Response Time (second
1	. (	500	003 CON		
2	-0	502	2		5
3		498			5
Calibration	Precision= Average Difference/Ca	l Gas Conc. X 100% = 100%-	. 2	iverage difference is greater than : :00 x 100%	
		= - (9.7	%		
Span Sensit	ivity:				
Trial 1:	Counts Observed for the Span=	133146	Trial 3: Counts	Observed for the Span=	133625
	Counters Observed for the Zero=	36999	Counters	Observed for the Zero=	3951
Trial 2:	Counts Observed for the Span=	133385			
	Counters Observed for the Zero=	39.17			
Post Monito	oring Calibration Check				
Zero Air Reading:	ppm	Cal Gas Reading:	<u>500</u> pp	m	
BACKGROU	IND CONCENTRATIONS CHECK	S			
Upwind Loca	ation Description:	<u>(7159</u> <u>Flase</u>	Re	ading:	ppm
Downwind L	ocation Description:	Flare	Re	ading:	ppm
Notes:	Wind speed averages were o	bserved to remain below th	ne alternative reque		nd no instantaneous spee g event. Therefore, site

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		SURFACE EMISSI			
		CALIBRATION AN	D PERTINEN	IT DATA	
Date:	99-28-21		Site Name:	Sonoma	
Inspector(s)	10610		Instrument:	TVA 2020	
WEATHER OBS	SERVATIONS			<u>a</u>	
Wind Speed:	МРН	Wind Direction:	_	Barometric Pressure: 30	"Hg
Air Temperature:	<u>57</u> °F	General Weathe Conditions			
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th	prate the instrument. Make a e average algebraic difference ne less than or equal to 10% of	e between the instrument	reading and the		
Instrument Seria	I Number: <u>991</u>	9		Cal Gas Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	concCal Gas Reading	Response Time (seconds)
1		500			3
2	0	501			
alibration Preci	sion= Average Difference/Cal		.7	_/500 × 100%	
ipan Sensitivity:					
<b>Frial 1:</b> Co	unts Observed for the Span= - nters Observed for the Zero=	198848 16901		nts Observed for the Span= ers Observed for the Zero=	199653 6729
T <b>rial 2:</b> Co	unts Observed for the Span=	157821 5687			5.21
ost Monitoring (	Calibration Check				i.
ero Air leading:	ppm	Cal Gas Reading:	600	ppm	
	CONCENTRATIONS CHECKS				
pwind Location	Description:	4159	r.	Reading:	ppm
ownwind Locati	on Description:	Flare		Reading:	ppm
	Wind speed averages were ob exceeded 20 miles per hour. I neteorological conditions we	No rainfall had occurred w	ithin the previou	s 24 hours of the monitorin	g event. Therefore, site

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		12			1	Post
			SURFACE EMIS			
		0.90.21	CALIBRATION A	ND PERTINEN	IT DATA	
$\cap$	Date:	OFIS-U		Site Name:	Sanamo	1
	Inspector(s)	Linm mcgi	nn	Instrument:	TVA 2020	
	WEATHER C	DBSERVATIONS			<u>22</u>	
	Wind Spe	еd: <u>6</u> мрн	Wind SW Direction:		Barometric Pressure: 30	"Нд
	Temperatu	Air 89 *F	General Weat Conditio	1 1/101	<u>-</u>	
	CALIBRATIO	N INFORMATION				
	Pre-monitori	ng Calibration Precision Check				
	and calculate precision mus	alibrate the instrument. Make of the average algebraic differen it be less than or equal to 10% of the less than on equal to 10\% of	ce between the instrume	nt reading and the	calibration gas as a percent	age. The calibration
	Instrument Se		2		Cal Gas Concentration:	500ppm
	Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (seconds)
	2	8	500		2	2
	3		500	ى		3
	Calibration Pr	ecision= Average Difference/Ca	I Gas Conc. X 100% = 100 = 49.9	M	n if average difference is greater than : _/500 x 100%	10
	Span Sensitivi	tv:				
	<u>Trial 1:</u>	Counts Observed for the Span=	INCA		nts Observed for the Span=	126392
	Crial 2:	ounters Observed for the Zero=	10100	Count	ers Observed for the Zero=	1706
		Counts Observed for the Span=	1401	_		
	C	ounters Observed for the Zero=	[19]			
	Post Monitorir	ng Calibration Check				
	Zero Air Reading:	ppm	Cal Gas Reading:	500	ppm	
	BACKGROUN	D CONCENTRATIONS CHECK	s			
$\bigcirc$	Upwind Location	on Description:	6159		Reading: 1.2	ppm
	Downwind Loc	ation Description:	Flore		Reading:	ppm
- Color	Notes:	Wind speed averages were o exceeded 20 miles per hour. meteorological conditions w	No rainfall had occurred	within the previou	s 24 hours of the monitoring	g event. Therefore, site bove mentioned date.

	1.07	5		Post
		SURFACE EMISSIC	DNS MONITORING	10-
1	0 1	CALIBRATION AND	PERTINENT DATA	
Date:	07-28-21		Site Name: Sange	ma
Inspector(s):	Michael Mi	MIS	Instrument: TVA 2020	
WEATHER OB	SERVATIONS			
Wind Speed	:мрн	Wind SW	Barometric Pressure: <u>30</u>	"Нg
Air Temperature	199	General Weather Conditions:	C/Con	
CALIBRATION	INFORMATION			
Pre-monitoring	Calibration Precision Check			
and calculate th		e between the instrument re	ts by alternating zero air and the calibra eading and the calibration gas as a perc	
Instrument Seria	al Number:	1/	Cal Gas Concentration	n:500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (seconds)
1	6	495		
2		200		4
	sion≕ Average Difference/Cal	= 100%- = 44.8 9	/500 x 100%	
	unts Observed for the Span≃ nters Observed for the Zero=		Trial 3: Counts Observed for the Spa Counters Observed for the Zer	2600
	unts Observed for the Span= nters Observed for the Zero=	147757 3903		
Post Monitoring	Calibration Check			
Zero Air Reading:	ppm	Cal Gas Reading: 🥖	ррт	
BACKGROUND	CONCENTRATIONS CHECKS	lica		<b>)</b>
Jpwind Location	Description:	0199	Reading:	ppm
Downwind Locati	on Description:	FILLE	Reading:	ppm
	exceeded 20 miles per hour.	No rainfall had occurred wit	e alternative requested 10 miles per hou hin the previous 24 hours of the monito prnatives of the LMR requirements on th	ring event. Therefore, site

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		SURFACE EMISSI	ONS MONITORI	NG	
		CALIBRATION AN	D PERTINENT DA	ATA	
Date:	07-28-21	0	Site Name: S	mand	
Inspector(s):	Llam Mcgi	nn	Instrument: TV/	A 2020	
WEATHER OB	SERVATIONS				
Wind Speed	d:МРН	Wind Direction:		ometric ressure:	"Hg
Ai Temperature	5/	General Weather Conditions	20000	z.	
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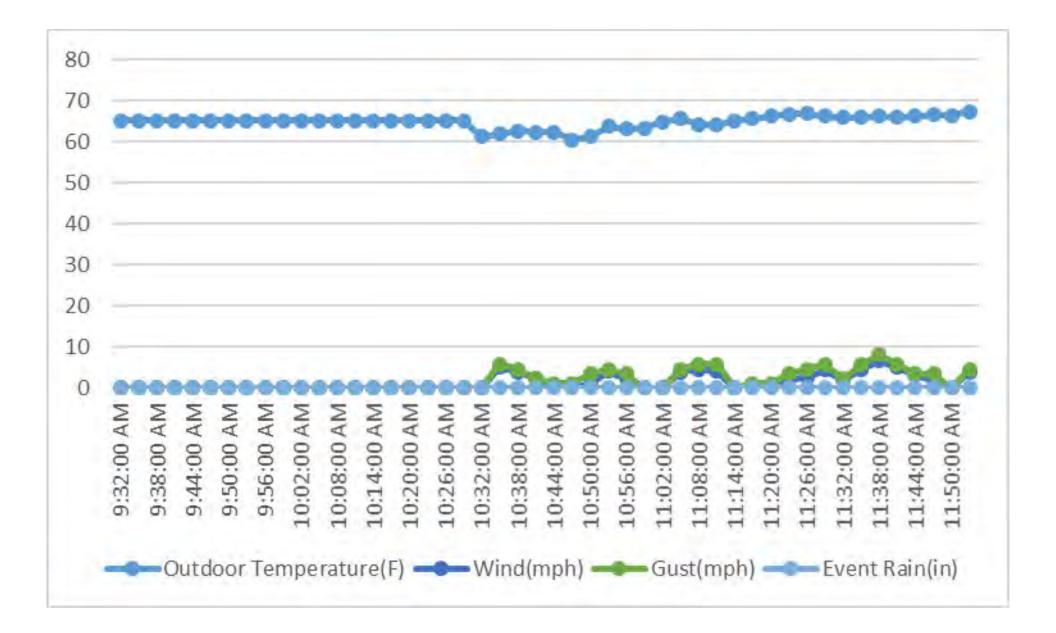
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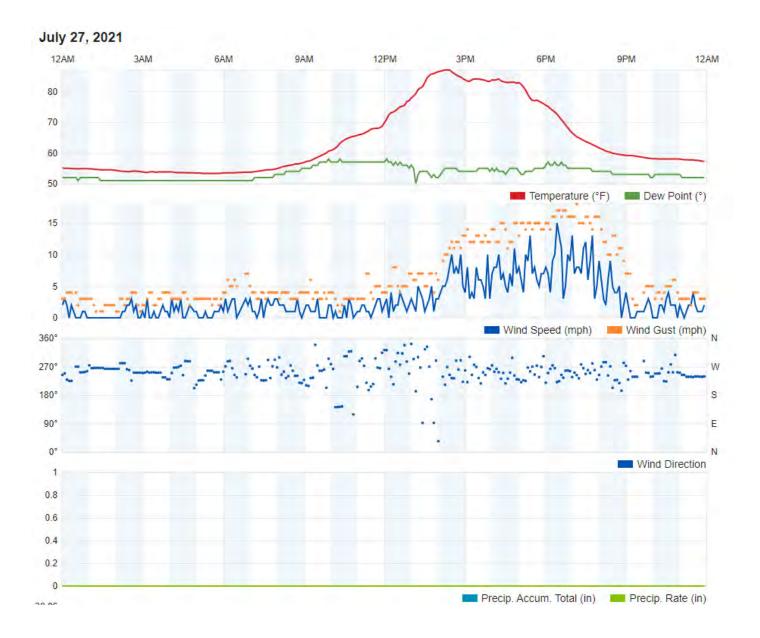
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Attachment 6

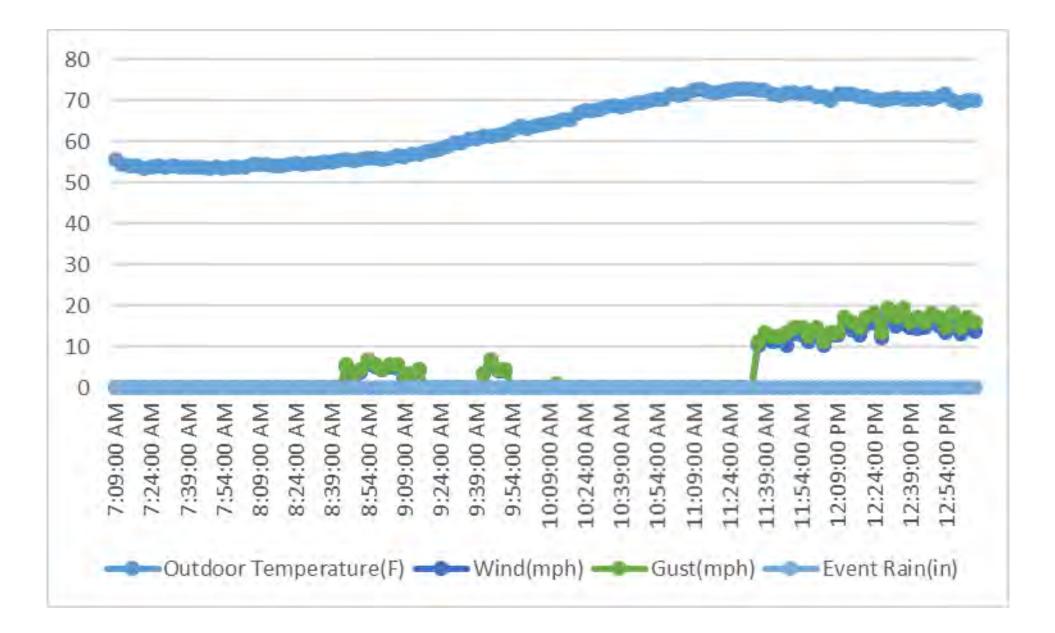
Weather Data



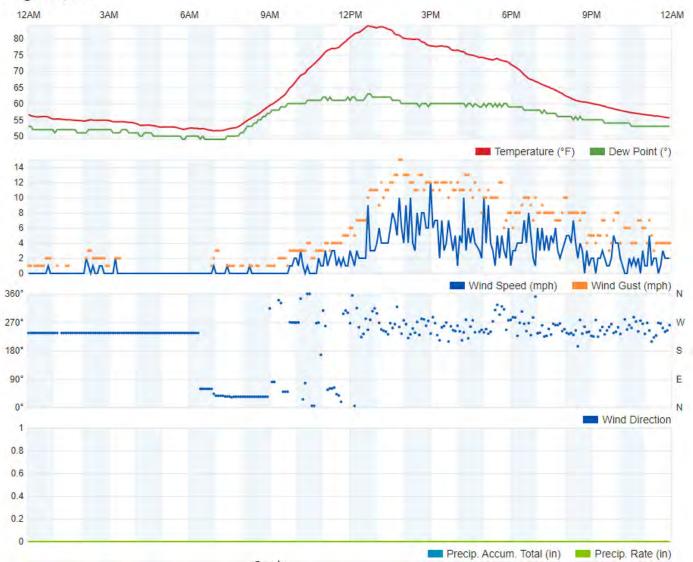
Third Quarter 2021 LMR Instantaneous Weather Data for July 26, 2021 Sonoma Central Landfill, Petaluma, California



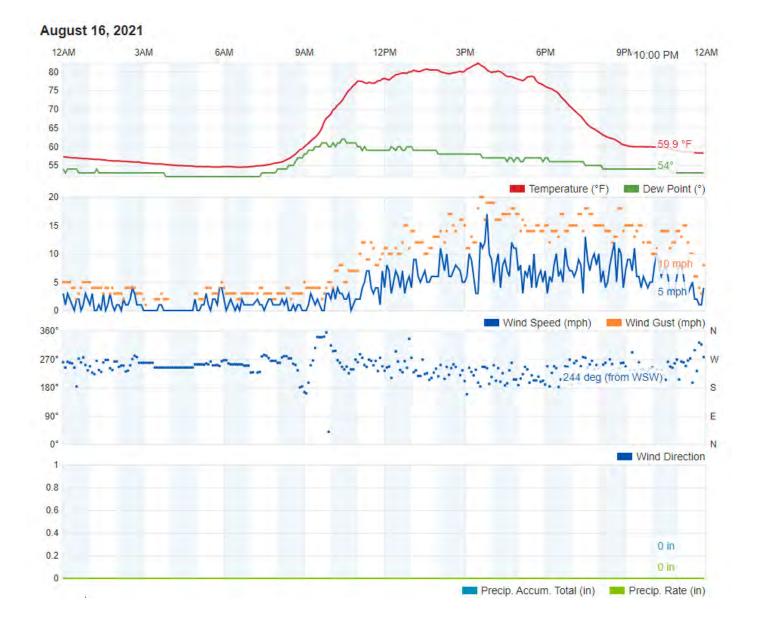
Third Quarter 2021 LMR Instantaneous Weather Data for July 27, 2021 Sonoma Central Landfill, Petaluma, California



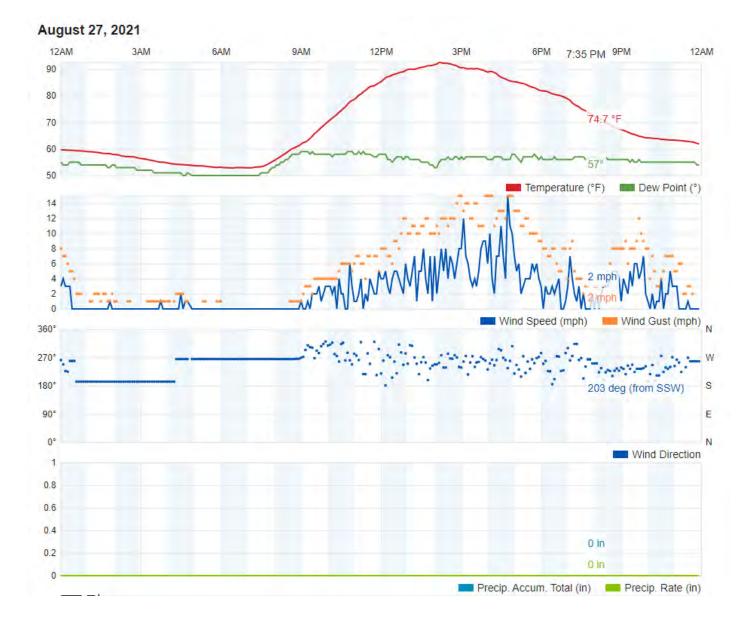
Third Quarter 2021 LMR Instantaneous Weather Data for July 28, 2021 Sonoma Central Landfill, Petaluma, California August 6, 2021



Third Quarter 2021 LMR Instantaneous Weather Data for August 6, 2021 Sonoma Central Landfill, Petaluma, California



Third Quarter 2021 LMR Instantaneous Weather Data for August 16, 2021 Sonoma Central Landfill, Petaluma, California



Third Quarter 2021 LMR Instantaneous Weather Data for August 27, 2021 Sonoma Central Landfill, Petaluma, California

# SCS FIELD SERVICES

February 24, 2022 File No. 07221077.00

Mr. Derek Cheney Republic Services – Sonoma Central Landfill 500 Mecham Road Petaluma, California 95492

Subject: Sonoma Central Landfill - Petaluma, California

Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring for Fourth Quarter 2021.

Dear Mr. Cheney:

SCS Field Services (SCS) is pleased to provide the Republic Services, with the enclosed report summarizing the surface emissions monitoring services provided at the Sonoma Central Landfill (Site) during the Fourth Quarter 2021. This report includes the results of surface scan, component emissions and blower/flare station emissions monitoring for the Site for this monitoring period.

SCS appreciates the opportunity to be of assistance to Republic Services on this project. As you review the enclosed information, please contact Michael Flanagan at (510) 363-7796 or Whitney Stackhouse at (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney Stackhouse Project Manager SCS Field Services

High Muss

Michael Flanagan Project Manager SCS Field Services

Encl.

Sean Bass, SCS Field Services Art Jones, SCS Field Services



# Sonoma Central Landfill

# Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring

Fourth Quarter 2021

Presented to:



Mr. Derek Cheney Republic Services – Sonoma Central 500 Mecham Road Petaluma, California 94952

# SCS FIELD SERVICES

File No. 07221078.00 Task 01 | February 24, 2022

SCS FIELD SERVICES 4730 Enterprise Way Suite A Modesto, CA 95356

# Sonoma Central Landfill

# Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring Fourth Quarter 2021

### INTRODUCTION

This letter provides results of the November 1, 2, 4, 5, 8, 12, and 22, 2021, LMR and NSPS landfill surface emissions monitoring (SEM) performed by SCS Field Services (SCS) at the subject site. All work was performed in accordance with our approved Work Scope dated December 23, 2020, and the LMR requirements.

The Sonoma Central Landfill is an active 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 gas, 40 to 50 percent carbon dioxide, and trace amount of various other gases, some of which are odorous. The Sonoma Central property contains a system to control the combustible gases generated in the landfill.

#### SUMMARY AND CONCLUSIONS

As stipulated in LMR, if uncorrectable exceedances within the 10-day limitation are detected or emissions are discovered during an inspection by Regulatory Agencies, the landfill must perform monitoring on a 25-foot pathway on a quarterly basis for active disposal sites. Upon completion of four consecutive SEM events without an uncorrectable exceedance of the 25 ppmv or 500 ppmv standards, other than non-repeatable momentary readings, the landfill may perform the monitoring on a 100-foot spacing on an annual basis for closed landfills or quarterly for active disposal sites. Therefore, based on the previous monitoring events, in which exceedances were observed, the monitoring at the Sonoma Central Landfill was performed on 25-foot pathways in accordance with the LMR.

On November 1, 2, 4, 5, 8, 12, and 22, 2021, SCS performed fourth quarter 2021 SEM as required by the Bay Area Air Quality Management District (BAAQMD). Instantaneous surface emissions monitoring results indicated that eight (8) locations exceeded the 500 ppmv maximum concentration during the initial monitoring event (Table 1 in Attachment 3). The required first and second 10-day (LMR/NSPS) follow-up monitoring indicated that all areas had returned to below regulatory compliance limits following system adjustments and remediation (well field adjustments and installation of new bentonite plugs) by SCS personnel. Based on these monitoring results no additional follow up testing was required.

Also, during the instantaneous monitoring event, SCS performed concurrent integrated monitoring of the landfill surface. As required by the LMR, the landfill was divided into 50,000 square foot areas. The Sonoma Central Landfill surface area was therefore divided into 163 grids, as shown on Figure 1 in Attachment 1. During this monitoring event, several grids were not monitored, in accordance with

the regulations, due to ongoing active landfilling activities, unsafe conditions, or there was no waste in place prior to the monitoring event.

During the monitoring event, there were three 3) grid areas observed to exceed the 25 ppmv LMR integrated average threshold (Table 2 in Attachment 4). The required 10-day (LMR) follow-up monitoring indicated that the areas had returned to below regulatory compliance limits following system adjustments and remediation (well field adjustments) by SCS personnel. Based on these monitoring results, no additional follow up monitoring is required at this time. These results are discussed in a subsequent section of this report.

In addition, quarterly monitoring of the pressurized piping or components of the Gas Collection and Control System (GCCS) that are under positive pressure must be performed. Results of the testing of the landfill gas (LFG) Blower Flare Station (BFS) pressurized piping and components indicated that all test locations were in compliance with the 500 ppmv requirement. However, results of the testing of the Power Generation Facility (PGF) pressurized piping and components indicated that one location tested, the ENGINE S10 6, was not in compliance with the 500 ppmv requirement. The required follow up monitoring indicated compliance with the rule and no further testing is required.

Further, as required under the LMR, any location on the landfill that has an observed instantaneous methane concentration above 200 ppmv, must be stake-marked and Global Positioning System (GPS) located on a site figure. During this reporting period, ten (10) location were observed to exceed the 200 ppmv, reporting threshold. When these readings are observed, the locations are reported to site personnel for tracking and/or remediation and will be reported in the next submittal of the annual LMR report. Please see the figure in Attachment 3 for location details.

Finally, to help prevent potential future exceedances, SCS recommends that the landfill surface be routinely inspected and any observed surface erosion be routinely repaired.

## SURFACE EMISSIONS MONITORING

On November 1, 2, 4, 5, 8, 12, and 22, 2021, the instantaneous and integrated SEM was performed over the surface of the subject site. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring in the 50,000 square foot grids as required under the LMR. During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rules as required.

## EMISSIONS TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the landfill surface emission 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 TVA 2020 meets the State of California Air Resources Board (CARB) requirements for combined instantaneous and integrated monitoring and was calibrated in accordance with United States Environmental Protection Agency (US EPA) Method 21.
- Weather Anemometer with continuous recorder for meteorological conditions in accordance with the LMR.

Instrument calibration logs and weather information are shown in Attachments 5 and 6.

## SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the LMR and NSPS requirements. Monitoring was performed with the FID inlet held within 3-inches of the landfill surface while a technician walked a grid in parallel paths not more than 25 -feet apart over the surface of the landfill. Cracks, holes and other cover penetrations in the surface were also tested. Surface emissions readings were monitored continuously and recorded every 5 seconds. Any areas in exceedance of the 200 or 500 ppmv standards (reporting and compliance levels, respectively) would be GPS tagged and stake-marked for on-site personnel to perform remediation or repairs.

The integrated average is based on the readings stored on the instrument, which are recorded every 5 seconds. The readings are then downloaded and the averages are calculated for each grid using SCS eTools®. All readings are maintained in this secure SCS Database. The readings are not provided in the report due to the volume of readings, but can be furnished upon request.

Recorded wind speed results are shown in Attachment 6. Wind speed averages were observed to remain below the alternative threshold of 10 miles per hour, and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within 72 hours of the monitoring events. Therefore, site meteorological conditions were within the alternatives of the LMR requirements on the above mentioned dates.

## TESTING RESULTS

During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rule as required under the LMR and NSPS. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR or NSPS threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring (LMR).

On November 1, 2, 4, 5, and 8, 2021, SCS performed fourth quarter 2021 instantaneous emissions monitoring testing as required by the BAAQMD. During this monitoring, surface emissions results indicated that eight (8) locations exceeded the 500 ppmv maximum concentration. The required first and second 10-day (LMR/NSPS) follow-up monitoring performed on November 12, and 22, 2021, respectively, indicated that all areas had returned to compliance following system adjustments and remediation (wellfield adjustment and borehole repairs using bentonite and soil) performed by SCS personnel. Based on these monitoring results no additional follow up testing was required. Results of the monitoring are shown in Attachments 2 and 3 (Table 1).

Additionally, calculated integrated grid monitoring indicated three (3) areas exceeded the 25-ppmv requirement during this monitoring event. The required 10-day (LMR) follow-up monitoring performed on November 12, 2021, indicated that the areas had returned to compliance following system adjustments and remediation (wellfield adjustment) performed by SCS personnel. Based on these monitoring results no additional follow up testing was required. Results of the monitoring are shown in Attachment 4 (Table 2). Calibration logs for the monitoring equipment are provided in Attachment 5.

During this monitoring event, several grids were not monitored, in accordance with the LMR, due to active landfilling activities, unsafe conditions or no waste in place. SCS will continue to monitor all accessible locations during the first quarter 2022.

### PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On November 1, 2021, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS and PGF Facility. Monitoring was performed with the detector inlet held one-half of an inch from pressurized pipe and associated components. One location exceeding the 500 ppmv threshold was observed during our monitoring event. The required 8-34 and LMR follow up monitoring results indicated the location had returned to below compliance limits and no further monitoring is required at this time, (see Table 1 for component results). Therefore, all pressurized piping and components located at the LFG BFS and PGF were in compliance at the time of our testing.

#### PROJECT SCHEDULE

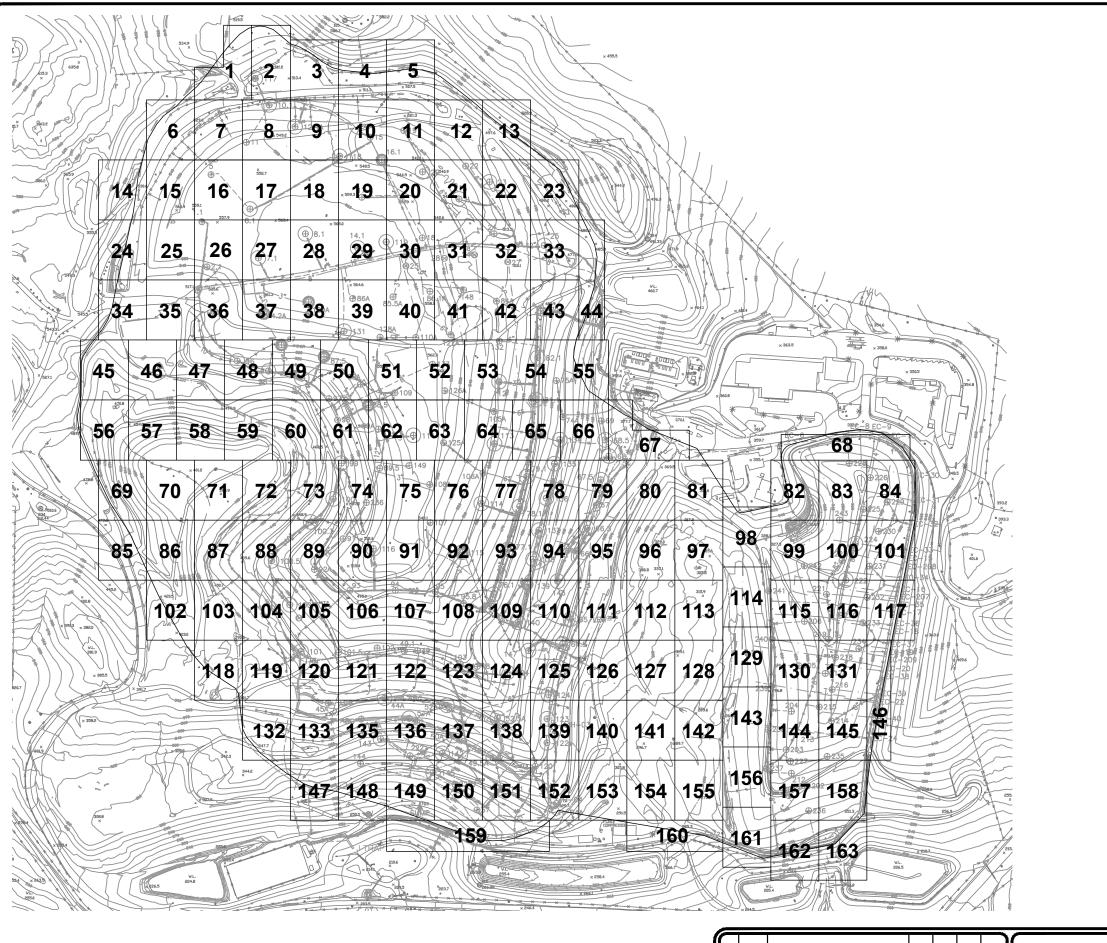
According to the LMR and NSPS, surface emissions monitoring at active landfills is required to be performed on a quarterly basis. Therefore, in accordance with our approved Work Scope, the first quarter 2022 (January through March) surface emissions testing event is scheduled to be performed by the end of February 2022 in accordance with the Republic SOP unless an alternative timeline is requested by site personnel.

#### STANDARD PROVISIONS

This report addresses conditions of the subject site during the testing dates only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the surface emissions at the subject site or adjacent properties.

Attachment 1

Landfill Grid



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property of Tetro Tech, Any modification to an personnal violates its original purpose and leah all not be held liable for any changes	l	DAT	E OF I	issue 2020	DRAWN BY <u>GVP</u> Designed by KK	CHECKED		HLV			

#### LEGEND

APPROXIMATE LINER BOUNDARY         500         EXISTING 10' CONTOUR         EXISTING GAS PIPE, ABOVE GRADE         EXISTING GAS PIPE, BELOW GRADE         EXISTING HORIZONTAL GAS COLLECTOR         M00       M00         EXISTING AIR FORCE MAIN, ABOVE GRADE         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR LEACHATE LINE         EXISTING AIR LEACHATE LINE         EXISTING VERTICAL GAS EXTRACTION WELL         EXISTING VERTICAL GAS EXTRACTION WELL         EXISTING VERTICAL GAS EXTRACTION WELL         EXISTING CONTROL VALVE         III       EXISTING BLIND FLANGE         IIII       EXISTING REDUCER FITTING         IIII       EXISTING REDUCER FITTING         IIII       EXISTING CONTROL VALVE         III       EXISTING REDUCER FITTING         IIII       EXISTING END CAP         IIIIIIIIIIII	•	
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EXISTING GAS PIPE, BELOW GRADE         EXISTING HORIZONTAL GAS COLLECTOR         M0       M0         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR LEACHATE LINE         EXISTING VALVE         EXISTING VERTICAL GAS EXTRACTION WELL         EXISTING REMOTE WELLHEAD         M0       EXISTING FLANGE CONNECTION         M1       EXISTING REDUCER FITTING         M1       EXISTING REDUCER FITTING         M2       SUMP       EX		
		EXISTING GAS PIPE, ABOVE GRADE
M0       M0       EXISTING AIR FORCE MAIN, ABOVE GRADE         M0       M0       EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR LEACHATE LINE       EXISTING GAS/LEACHATE EXTRACTION WELL         Image: Bas.5       EXISTING VERTICAL GAS EXTRACTION WELL         Image: Bas.5       EXISTING CONTROL VALVE         Image: Bas.5       EXISTING BLIND FLANGE         Image: Bas.5       EXISTING REDUCER FITTING         Image: Bas.5       EXISTING REDUCER FITTING         Image: Bas.5       EXISTING CONTROL VALVE         Image: Bas.5       EXISTING FLANGE CONNECTION         Image: Bas.5       EXISTING REDUCER FITTING         Image: Bas.5       EXISTING END CAP         Image: Bas.5       EXISTING CONDENSATE PUMP STATION		EXISTING GAS PIPE, BELOW GRADE
H00       H00       EXISTING AIR FORCE MAIN, BELOW GRADE         EXISTING AIR LEACHATE LINE       EXISTING AIR LEACHATE LINE         Image: Bit Distribution of the second s	_ · _ · _ · _ · _ ·	- EXISTING HORIZONTAL GAS COLLECTOR
EXISTING AIR LEACHATE LINE         Image: Bit of the stress of the stre	AAG AAG AAG	EXISTING AIR FORCE MAIN, ABOVE GRADE
EW-170 EXISTING GAS/LEACHATE EXTRACTION WELL      EW-165 EXISTING VERTICAL GAS EXTRACTION WELL      B8.5 EXISTING VERTICAL GAS EXTRACTION WELL      B8.5 EXISTING VERTICAL GAS EXTRACTION WELL      B8.5 EXISTING REMOTE WELLHEAD      -\top = EXISTING CONTROL VALVE      H EXISTING BLIND FLANGE      -\top = EXISTING REDUCER FITTING   EXISTING END CAP      SUMP EXISTING CONDENSATE PUMP STATION	ABG ABG ABG	EXISTING AIR FORCE MAIN, BELOW GRADE
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Image: Substrain State       Existing Remote wellhead         Image: Substrain State       Existing Control Valve         Image: Substrain State       Existing Blind Flange         Image: Substrain State       Existing Flange Connection         Image: Substrain State       Existing Reducer Fitting         Image: Sump       Existing Condensate Pump Station	⊕ EW−165	EXISTING VERTICAL GAS EXTRACTION WELL
-⋈-       EXISTING CONTROL VALVE         -₩       EXISTING BLIND FLANGE         -₩-       EXISTING FLANGE CONNECTION         -₩-       EXISTING REDUCER FITTING         -→-       EXISTING END CAP         ▲       SUMP         EXISTING CONDENSATE PUMP STATION	<b>(1)</b> 88.5	EXISTING VERTICAL GAS EXTRACTION WELL WITH PUMP ADDED
Image: Constraint of the second se	8	EXISTING REMOTE WELLHEAD
EXISTING FLANGE CONNECTION     EXISTING REDUCER FITTING     EXISTING END CAP     SUMP EXISTING CONDENSATE PUMP STATION	-1><1-	EXISTING CONTROL VALVE
EXISTING REDUCER FITTING     EXISTING END CAP     SUMP     EXISTING CONDENSATE PUMP STATION	-11	EXISTING BLIND FLANGE
EXISTING END CAP	-11-	EXISTING FLANGE CONNECTION
SUMP     EXISTING CONDENSATE PUMP STATION	-D	EXISTING REDUCER FITTING
		EXISTING END CAP
400	SUMP	EXISTING CONDENSATE PUMP STATION
	400	
120 SURFACE EMISSIONS MONITORING GRID	120	SURFACE EMISSIONS MONITORING GRID



NOTES: 1. THE 2020 TOPOGRAPHIC MAP WAS PREPARED BY COOPER AERIAL SURVEYS CO. DATE OF PHOTOGRAPHY: JANUARY 31, 2020. HORIZONTAL DATUM: NAD27, ZONE 2 VERTICAL DATUM: NGVD29. 2. THE 2018 GCCS AS-BUILT GCCS IMPROVEMENTS PROVIDED BY REPUBLIC SERVICES INC. ON SEPTEMBER 20, 2018.



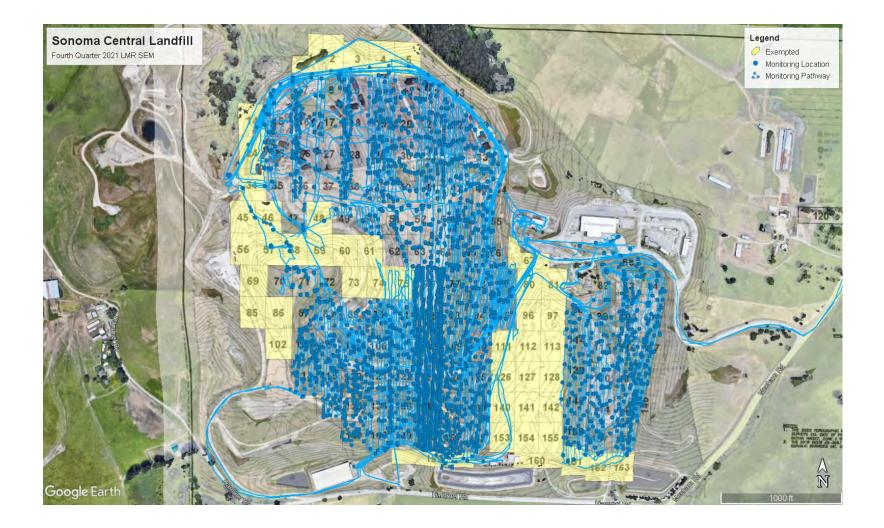
SONOMA COUNTY CENTRAL LANDFILL PETALUMA, CALIFORNIA



SURFACE EMISSIONS MONITORING **GRID MAP** 

Attachment 2

Surface Pathway



Fourth Quarter 2021 LMR Surface Emissions Monitoring Pathway Sonoma Central Landfill, Petaluma, California Attachment 3

### Instantaneous and Component Emissions Monitoring Results

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

Instantaneous Data Report for November 1, 2, 4, 5, 8, 12, and 22, 2021

Location	Initial Monitoring (ppmv) 11/1/2021	Initial Monitoring (ppmv) 11/2/2021	Initial Monitoring (ppmv) 11/4/2021	Initial Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/22/2021	GPS Position
SCV143-0		2,500				20,000		375	N38° 17.833' W122° 45.099'
SCV145-0		3,000				30,000		117	N38° 17.811' W122° 45.052'
SCV222-0		500				3,800		304	N38° 17.942' W122° 44.698'
SCV51-5A		600				13.5		NA	N38° 17.846' W122° 45.116'
SCV092-A		500				3,800		354	N38° 17.951' W122° 45.158'

#### Highest Component Reading

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

Location	Initial Monitoring (ppmv) 11/1/2021	Initial Monitoring (ppmv) 11/2/2021	Initial Monitoring (ppmv) 11/4/2021	Initial Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/22/2021	GPS Position
SCV052-A		30,000				10,000		18	N38° 17.858' W122° 45.042'
SCV094-A		2,000				90,000		389	N38° 17.933' W122° 45.095'
SCV112-0			1,800			34		NA	N38° 18.080' W122° 45.000'
SCEW2004		264				NA		NA	N38° 18.259' W122° 45.114'
SCEW2005		387				NA		NA	N38° 18.229' W122° 45.094'
SCEW2104		400				NA		NA	N38° 18.248' W122° 45.071'
SCW88-5A		305				NA		NA	N38° 18.055' W122° 45.081'

# Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

Location	Initial Monitoring (ppmv) 11/1/2021	Initial Monitoring (ppmv) 11/2/2021	Initial Monitoring (ppmv) 11/4/2021	Initial Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/5/2021	First 10-Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/12/2021	Second 10- Day Follow Up Monitoring (ppmv) 11/22/2021	GPS Position
SCEW89-B		400				NA		NA	N38° 18.046' W122° 45.078'
Surface Reading Grid 137				321		NA		NA	N38° 17.862' W122° 45.039'
Surface Reading Grid 120				225		NA		NA	N38° 17.894' W122° 45.139'
Surface Reading Grid 148				225		NA		NA	N38° 17.792' W122° 45.127'
Surface Reading Grid 121				350		NA		NA	N38° 17.899' W122° 45.112'
Surface Reading Grid 106				350		NA		NA	N38° 17.923' W122° 45.103'

### Table 1. Instantaneous Surface Emissions Monitoring ResultsSonoma Central Landfill, Sonoma, California

#### Highest Pressurized Pipe Reading

Location	Initial Monitoring (ppmv) 11/1/2021	7-Day/First 10-Day Follow Up Monitoring (ppmv) 11/5/2021	Second 10-Day Follow Up Monitoring (ppmv) 11/12/2021	GPS Position
Flare	3.7	NA	NA	N38° 18.097' W122° 44.895'
ENGINE S10 6	4,000	684	32	N38° 18.114' W122° 44.907'

No additional exceedances of the 500 ppm threshold were observed during the monitoring performed during the fourth quarter 2021.



Fourth Quarter 2021 Emissions Monitoring Locations Greater Than 200 ppmv and 500 ppmv Sonoma Central Landfill, Petaluma, California Attachment 4

Integrated Monitoring Results

Point Name	Record Date	FID Concentration	Comments
SC001		(ppm) 	Exempted
SC002			Exempted
SC003			Exempted
SC004			Exempted
SC005			Exempted
SC006	11/1/2021	3.12	
SC007	11/1/2021	4.59	
SC008	11/1/2021	14.68	
SC009	11/1/2021	20.15	
SC010	11/4/2021	10.23	
SC010	11/4/2021	9.61	
SC012	11/4/2021	6.04	
SC012	11/4/2021	6.19	
SC013			Exempted
SC014	11/1/2021	5.43	Exempted
SC015	11/1/2021	3.15	
SC010	11/1/2021	7.85	
SC017	11/1/2021	11.29	
SC018	11/4/2021	7.36	
SC019	11/4/2021	4.77	
SC020	11/4/2021	2.47	
SC022	11/4/2021	7.46	
SC022	11/4/2021	3.68	
SC023			Exempted
SC024	11/1/2021	4.77	exempted
SC025	11/1/2021	3.42	
SC020	11/1/2021	8.96	
SC027	11/1/2021	5.88	
SC028	11/4/2021	2.89	
SC029	11/4/2021	2.30	
SC030	11/4/2021	1.07	
SC031	11/4/2021	3.58	
SC032	11/4/2021	4.70	
SC034			Exempted
SC034	11/1/2021	2.78	Exempled
SC036	11/1/2021	9.87	
SC038	11/1/2021	14.26	
SC037	11/1/2021	6.38	
SC039	11/4/2021	4.56	
SC039 SC040	11/4/2021	7.29	
SC040	11/4/2021	5.31	
SC041	11/4/2021	8.13	
SC043	11/4/2021	5.00	

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Point Name	Record Date	FID Concentration (ppm)	Comments
SC044	11/4/2021	4.91	
SC045			Exempted
SC046			Exempted
SC047	11/4/2021	4.70	· · · · · · · · · · · · · · · · · · ·
SC048			Exempted
SC049	11/4/2021	8.40	
SC050	11/4/2021	9.58	
SC051	11/4/2021	9.64	
SC052	11/4/2021	6.18	
SC053	11/4/2021	2.77	
SC054	11/4/2021	4.89	
SC055	11/4/2021	4.00	
SC056			Exempted
SC057			Exempted
SC058			Exempted
SC059			Exempted
SC060			Exempted
SC061			Exempted
SC062	11/4/2021	9.99	
SC063	11/4/2021	4.78	
SC064	11/4/2021	2.69	
SC065	11/4/2021	7.67	
SC066	11/4/2021	7.72	
SC067			Exempted
SC068	11/4/2021	3.86	
SC069			Exempted
SC070	11/4/2021	1.82	
SC071	11/4/2021	4.59	
SC072	11/4/2021	5.42	
SC073			Exempted
SC074			Exempted
SC075			Exempted
SC076	11/5/2021	5.56	
SC077	11/8/2021	5.17	
SC078	11/8/2021	10.62	
SC079	11/4/2021	3.89	
SC080			Exempted
SC081			Exempted
SC082	11/4/2021	5.70	
SC083	11/4/2021	6.78	
SC084	11/4/2021	4.43	
SC085			Exempted
SC086			Exempted

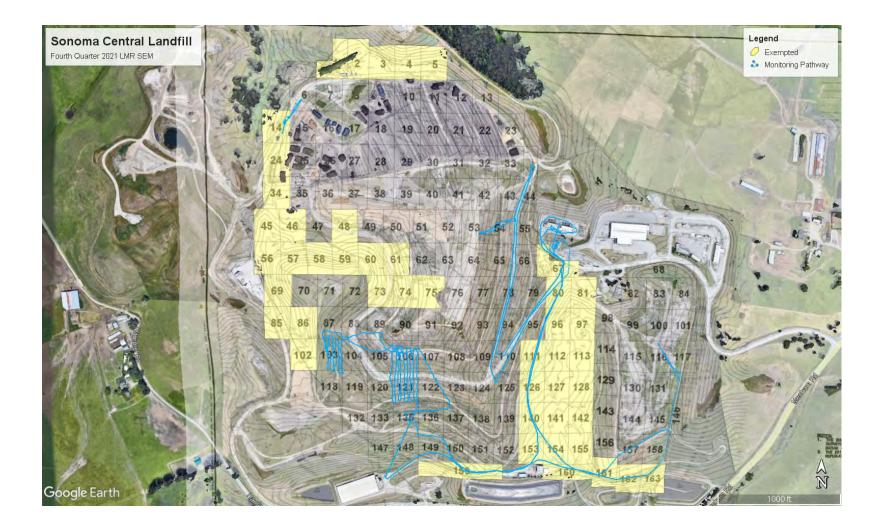
SCS DataServices - Secure Environmental Data

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Point Name	Record Date	FID Concentration (ppm)	Comments
SC087	11/4/2021	6.69	
SC088	11/4/2021	10.89	
SC089	11/4/2021	9.25	
SC090	11/5/2021	5.84	
SC091	11/5/2021	7.20	
SC092	11/5/2021	22.91	
SC093	11/8/2021	3.02	
SC094	11/8/2021	4.14	
SC095	11/4/2021	3.23	
SC096			Exempted
SC097			Exempted
SC098	11/4/2021	8.12	
SC099	11/4/2021	7.03	
SC100	11/4/2021	7.67	
SC101	11/4/2021	5.91	
SC102			Exempted
SC103	11/5/2021	31.40	Initial Monitoring
SC103	11/12/2021	15.93	First 10-Day Follow Up Monitoring
SC104	11/5/2021	15.93	
SC105	11/4/2021	20.45	
SC106	11/5/2021	27.19	Initial Monitoring
SC106	11/12/2021	22.55	First 10-Day Follow Up Monitoring
SC107	11/5/2021	11.42	
SC108	11/5/2021	17.93	
SC109	11/8/2021	4.93	
SC110	11/5/2021	8.30	
SC111			Exempted
SC112			Exempted
SC113			Exempted
SC114	11/4/2021	2.93	
SC115	11/4/2021	3.17	
SC116	11/4/2021	5.60	
SC117	11/4/2021	3.89	
SC118	11/5/2021	11.05	
SC119	11/5/2021	8.18	
SC120	11/8/2021	20.36	
SC121	11/5/2021	133.72	Initial Monitoring
SC121	11/12/2021	20.48	First 10-Day Follow Up Monitoring
SC122	11/5/2021	16.82	
SC123	11/5/2021	15.21	
SC124	11/8/2021	10.66	
SC125	11/5/2021	8.95	

SCS DataServices - Secure Environmental Data

Point Name	Record Date	FID Concentration (ppm)	Comments
SC127			Exempted
SC128			Exempted
SC129	11/4/2021	2.64	
SC130	11/4/2021	2.82	
SC131	11/4/2021	3.47	
SC132	11/5/2021	7.72	
SC133	11/8/2021	13.84	
SC134			Grid Not On Map
SC135	11/5/2021	17.22	
SC136	11/5/2021	8.24	
SC137	11/5/2021	24.98	
SC138	11/8/2021	20.79	
SC139	11/5/2021	17.07	
SC140			Exempted
SC141			Exempted
SC142			Exempted
SC143	11/4/2021	1.93	
SC144	11/4/2021	2.66	
SC145	11/4/2021	3.15	
SC146	11/4/2021	2.70	
SC147	11/8/2021	6.29	
SC148	11/5/2021	11.30	
SC149	11/5/2021	3.67	
SC150	11/5/2021	7.24	
SC151	11/8/2021	5.45	
SC152	11/5/2021	2.52	
SC153			Exempted
SC154			Exempted
SC155			Exempted
SC156	11/4/2021	1.45	
SC157	11/4/2021	2.70	
SC158	11/4/2021	2.04	
SC159			Exempted
SC160			Exempted
SC161			Exempted
SC162			Exempted
SC163			Exempted



Fourth Quarter 2021 LMR 10-Day Follow Up Surface Emissions Monitoring Pathway Sonoma Central Landfill, Petaluma, California Attachment 5

Calibration Logs

			ONS MONITORING D PERTINENT DATA	
	11001.01	CALIDITATION AN	Canan	1
Date:	5 Mint		Site Name:	7
nspector(s): 1	sign 0		Instrument: TVA 2020	
WEATHER OBSE	RVATIONS			
	6	Wind 6F	Baramatria 2	
Wind Speed:	0МРН	Direction: 5E	Barometric Pressure:	<b>?</b> "Нg
Air	10	Constanting	1 10	7
Temperature:	60 °F	General Weather Conditions:	I Sal I III I III I	
ALIBRATION IN	FORMATION			
re-monitoring Ca	alibration Precision Check			
rocedure: Calibro	ate the instrument. Make a	n total of three measuremen	nts by alternating zero air and the calibrat	ion gas. Record the reading
nd calculate the	average algebraic differend	ce between the instrument r	reading and the calibration gas as a perce	ntage. The calibration
recision must be	less than or equal to 10% o	of the calibration gas value		
strument Serial	Number:	2	Cal Gas Concentration	: 500ppm
rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (second
2	-ik-	400	0	3
3		200	2	5
	11	0110	1	
libration Precisio	on= Average Difference/Cal	Average Difference:	*Perform recalibration if average difference is greater th	an 10
an Sensitivity: al 1:		Gas Conc. X 100% = 100%- = U.O. S	/500 x 100% % Trial 3:	1711670
an Sensitivity: al 1: Cour	its Observed for the Span=	Gas Conc. X 100% = 100%- = U.O. S	/500 x 100% % Trial 3: Counts Observed for the Span	124678
an Sensitivity: al 1: Court Counte		Gas Conc. X 100% = 100%- = U.O. S	/500 x 100% % Trial 3:	124678
an Sensitivity: al 1: Courte <u>Counte</u>	its Observed for the Span=	Gas Conc. X 100% = 100%- = U.a. S [122960 3340 3340	/500 x 100% % Trial 3: Counts Observed for the Span	124678
an Sensitivity: al 1: Court Counte al 2: Coun	nts Observed for the Span= ers Observed for the Zero=	Gas Conc. X 100% = 100%- = U.a. S [122960 3340 3340	/500 x 100% % Trial 3: Counts Observed for the Span	124678
an Sensitivity: al 1: Court Counte al 2: Coun	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Gas Conc. X 100% = 100%- = U.a. S [122960 3340 3340	/500 x 100% % Trial 3: Counts Observed for the Span	124678
an Sensitivity: al 1: Counte al 2: Counte t Monitoring Ca	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Gas Conc. X 100% = 100%- = U.a. S 172960 3740 3740 1274700 33232	/500 x 100% % Trial 3: Counts Observed for the Span	124678
an Sensitivity: al 1: Courte <u>Counte</u> al 2: Counte	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Gas Conc. X 100% = 100%- = U.a. S [122960 3340 3340	/500 x 100% % Trial 3: Counts Observed for the Span	124678
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		SURFACE EMISSI			
	11-01-21	CALIDITATION AN		Saman	1
Date:	1.01.11		Site Name:	Jaylours	
Inspector(s):	vonG		Instrument:	TVA 2020	
WEATHER OBS	ERVATIONS				
Wind Speed:	в мрн	Wind <u>SF</u>	(c) 21	Barometric 20	"Hg
Air Temperature:	57 .	General Weathe Conditions	VAIDITI	m	
CALIBRATION IN	FORMATION				
Tro monitorino C	alibration Precision Check				
				g zero air and the calibration	
recision must be Instrument Serial	less than or equal to 10% of 6	of the calibration gas value.	-	calibration gas as a percent	
rial	Zero Air Reading	Cal Gas Reading	Cal Gas	ConcCal Gas Reading	Response Time (seconds
1	An	400		6	3
2	1	600		9	2
3	17	501		1	12
			*Perform recalibration	on if average difference is greater than	10
alibration Precisio	on= Average Difference/Cal	Gas Conc. X 100%	*Perform recalibratio	on if average difference is greater than /500 x 100%	10
alibration Precisio	on= Average Difference/Cal		*Perform recalibratio		10
oan Sensitivity:	on= Average Difference/Cal		*Perform recalibratio		10
oan Sensitivity: r <mark>ial 1:</mark> Cour	nts Observed for the Span=	= 100%- = 99.9	2 % Trial 3:		15/962
oan Sensitivity: <mark>fal 1:</mark> Court Counte		= 100%- = 99.9	2 % <u>Trial 3:</u> Cou	_/500 x 100%	15/962 4084
oan Sensitivity: ial 1: Court Count ial 2: Court	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span=	= 100%- = 99.9	2 % <u>Trial 3:</u> Cou	_/500 x 100% nts Observed for the Span=/	15/962 4084
oan Sensitivity: ial 1: Court Count ial 2: Court	nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.9	2 % <u>Trial 3:</u> Cou	_/500 x 100% nts Observed for the Span=/	15/962 4084
oan Sensitivity: ial 1: Court Counto ial 2: Courte	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.9	2 % <u>Trial 3:</u> Cou	_/500 x 100% nts Observed for the Span=/	15/962 4084
an Sensitivity: ial 1: Court ial 2: Court St Monitoring Ca	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.9	2 % <u>Trial 3:</u> Cou	_/500 x 100% nts Observed for the Span=/	19/962 4084
an Sensitivity: ial 1: Court Count al 2: Court St Monitoring Ca	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.9 [49727 42103 150637 4095	2 % <u>Trial 3:</u> Cou	_/500 x 100% nts Observed for the Span=/	15/962 4084
aan Sensitivity: ial 1: Counte Counte ial 2: Counte St Monitoring Ca ro Air ading:	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span=, ers Observed for the Zero= libration Check	= 100%- = 99.9 [49777 49.03 [50537 [50537 [4095]	2 % <u>Trial 3:</u> Cou	_/500 x 100% Ints Observed for the Span=/ ters Observed for the Zero=	15/962 4084
oan Sensitivity: ial 1: Count Count ial 2: Counte st Monitoring Ca ro Air ading: CKGROUND CO	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span=, ers Observed for the Zero= libration Check ppm DICENTRATIONS CHECKS	= 100%- = 99.9 [[19] [19] [19] [19] [19] [19] [19] [1	2 % <u>Trial 3:</u> Cou	_/500 x 100%	1 <u>5/9,62</u> <u>4084</u>
aan Sensitivity: ial 1: Counter ial 2: Counter St Monitoring Ca ro Air ading:	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= libration Check ppm <b>DNCENTRATIONS CHECKS</b> escription:	= 100%- = 99.9 [49777 49.03 [50537 [50537 [4095]	2 % <u>Trial 3:</u> Cou	_/500 x 100%	151962 4084

Date:	101-21	CALIBRATION AND		
Inspector(s);	Som M		Samal	MA
		1	Site Name:	-1
WEATHER OBSER	11/1/1/		Instrument: TVA 2020	
	VATIONS			
Wind Speed:	6 мрн	Wind 5F	Barometric Pressure:	
			Pressure.	"Hg
Air Temperature:	• 0 • ₽	General Weather Conditions:	KAIMM	
CALIBRATION INFO	ORMATION			
re-monitoring Calit	bration Precision Check			
rocedure: Calibrate	e the instrument. Make o	total of three measurements	s by alternating zero air and the co	libration gas. Record the reading
ind calculate the av	erage algebraic different	ce between the instrument re	ading and the calibration gas as a	percentage. The calibration
recision must be le	ss than or equal to 10% of	of the calibration gas value.		
nstrument Serial Nu	umber:	PJ	Cal Gas Concent	ration: 500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Conc -Cal Gas Readin	g Response Time (second
2	1	2010	2	13
3	1	500	0	In
				_ /
		Average Difference:		
			/500 x 100%	
Counters ial 2:	Observed for the Span Sobserved for the Zero= Observed for the Span=	2742	rial 3: Counts Observed for the Counters Observed for the	nant
ial 1: Counts Counters ial 2: Counts		14637 II 2742	rial 3: Counts Observed for the	nant
ial 1: Counts Counters ial 2: Counts	s Observed for the Zero= Observed for the Span= s Observed for the Zero=	14637 II 2742	rial 3: Counts Observed for the	nant
ial 1: Counts <u>Counters</u> ial 2: Counters Counters	s Observed for the Zero= Observed for the Span= s Observed for the Zero=	14637 2742 125498 2737	rial 3: Counts Observed for the	nant
ial 1: Counts Counters ial 2: Counts Counters	s Observed for the Zero= Observed for the Span= s Observed for the Zero=	14637 II 2742	rial 3: Counts Observed for the	nant
ial 1: Counts Counters ial 2: Counters Counters ost Monitoring Calib ro Air ading:	s Observed for the Zero= Observed for the Span= Observed for the Zero= Oration Check	(24137 2742 125498 125498 2737	rial 3: Counts Observed for the	nant
ial 1: Counts Counters ial 2: Counters Counters ost Monitoring Calib ro Air ading:	s Observed for the Zero= Observed for the Span= Observed for the Zero= oration Check	(24137 2742 125498 125498 2737	rial 3: Counts Observed for the	nant
ial 1: Counts Counters ial 2: Counters Counters St Monitoring Calib ro Air ading:	S Observed for the Zero= Observed for the Span= Observed for the Zero= Observed for the Zero= Diration Check ppm CENTRATIONS CHECKS	125498 125498 2737 Cal Gas Reading:	rial 3: Counts Observed for the Counters Observed for the	Zero= 2721

Charles C Roll

1 m		SURFACE EMISSIO			
Date:	11-01-21		Site Name:	Sonom	A
Inspector(s);	Michall	M	Instrument:	TVA 2020	
WEATHER OB	SERVATIONS				
	~				
Wind Speed	1: МРН	Wind Direction:		Barometric Pressure:	2 "Нg
Ai Temperature	1. /1	General Weather Conditions:	Roimin	19	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
and calculate th	brate the instrument. Make of the average algebraic difference the less than or equal to 10% of al Number:	e between the instrument re	ading and the co	alibration gas as a percei Cal Gas Concentration:	ntage. The calibration
rial	Zero Air Reading	Cal Gas Reading	Cal Gas Co	pcCal Gas Reading	Response Time (seconds
1	12	501	6		1
2		50%	4		9
3	11	501	/		4
alibration Preci	sion= Average Difference/Cal		1.3	Faverage difference is greater tha	n 10
alibration Preci	sion= Average Difference/Cal	*	1.3	f average difference is greater tha	n 10
	sion≃ Average Difference/Cał	*	1.3		n 10
<del>pan Sensitivity:</del> r <mark>ial 1:</mark> Co	unts Observed for the Span=	Gas Conc. X 100% = 100%- = CIA.7 %	(, 3) s rial 3: Count	'500 x 100% s Observed for the Span	122-941
oan Sensitivity: rial 1: Co Cour rial 2:	unts Observed for the Span= nters Observed for the Zero=	Gas Conc. X 100% = 100%- = CIA.7 %	(, 3) s rial 3: Count	′500 x 100%	122-941
<mark>rial 1:</mark> Co <u>Cour</u> Cour	unts Observed for the Span=	Gas Conc. X 100% = 100%- = CIA.7 %	(, 3) s rial 3: Count	'500 x 100% s Observed for the Span	122-941
oan Sensitivity: rial 1: Co Cour rial 2: Co Cour	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span=	Gas Conc. X 100% = 100%- = CIA.7 %	(, 3) s rial 3: Count	'500 x 100% s Observed for the Span	122-941
pan Sensitivity: rial 1: Co <u>Cour</u> rial 2: Co Cour Dist Monitoring (	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero=	Gas Conc. X 100% = 100%- = 0/01.7 % [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37] [100/37	(, 3) s rial 3: Count	'500 x 100% s Observed for the Span	122-941
pan Sensitivity: rial 1: Co Cour rial 2: Co Cour Ost Monitoring ( ro Air	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero=	Gas Conc. X 100% = 100%- = CIA.7 %	(, 3) rial 3: Counter	'500 x 100% s Observed for the Span	122-941
pan Sensitivity: rial 1: Co Cour rial 2: Co Cour Ost Monitoring ( ro Air eading:	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero= Calibration Check	Gas Conc. X 100% = 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % Cal Gas Reading:	(, 3) rial 3: Counter	/500 x 100% s Observed for the Span s Observed for the Zero	122-941
oan Sensitivity: rial 1: Co Cour rial 2: Co Cour est Monitoring ( ro Air ading:	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero= Calibration Check ppm CONCENTRATIONS CHECKS	Gas Conc. X 100% = 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % Cal Gas Reading:	(, 3) rial 3: Counter	/500 x 100% s Observed for the Span s Observed for the Zero	122-941
pan Sensitivity: rial 1: Co Cour rial 2: Co Cour est Monitoring ( ro Air ro Air rading:	unts Observed for the Span= <u>nters Observed for the Zero=</u> unts Observed for the Span= <u>nters Observed for the Zero=</u> Calibration Check <u>ppm</u> CONCENTRATIONS CHECKS Description:	Gas Conc. X 100% = 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % Cal Gas Reading:	(, 3) rial 3: Counter	/500 x 100% s Observed for the Span s Observed for the Zero:	122-941 4862
an Sensitivity: ial 1: Co Cour ial 2: Co Cour st Monitoring ( ro Air ading: CKGROUND ( wind Location wnwind Location wnwind Location tes: Kes: Kes: Co	unts Observed for the Span= <u>nters Observed for the Zero=</u> unts Observed for the Span= <u>nters Observed for the Zero=</u> Calibration Check <u>ppm</u> CONCENTRATIONS CHECKS Description:	Gas Conc. X 100% = 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % 100%- = 0/01.7 % Cal Gas Reading: Entrone Entrone bserved to remain below the No rainfall had occurred with	(1,3)         rial 3:         Counter         Counter         Image: Counter <t< td=""><td>2500 x 100%</td><td>_ppm _ppm _ppm and no instantaneous speed ng event. Therefore, site</td></t<>	2500 x 100%	_ppm _ppm _ppm and no instantaneous speed ng event. Therefore, site

SCS DataServices - Secure Envi	ronmental Data
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1		CALIBRATION AN	IONS MON		
Detail	11-01-21			Conom	
Date:	Azinit in O		Site Name:	20110110	
inspector(s):	gryoy 0		Instrument:	TVA 2020	
WEATHER OBS	SERVATIONS				
	1	Wind St		Barometric 20	
Wind Speed:	МРН	Direction:	-t-ci //	Pressure:	Hg
Air Temperature:		General Weathe Conditions	No Intil 1	19	
CALIBRATION I	NFORMATION				
Pre-monitoring (	Calibration Precision Check				
and calculate the	e average algebraic differer e less than or equal to 10%	a total of three measurement ace between the instrument of the calibration gas value	reading and the	calibration gas as a percen Cal Gas Concentration:	tage, The calibration
rial	Zero Air Reading	Cal Gas Reading	I Cal Gas (	Conc <u>Ca</u> l Gas Reading	
1		500 ····	juai das t		Response Time (seconds
2	.7	201		3	
		il Gas Conc. X 100%			
		al Gas Conc. X 100% = 100%-	_	_/500 x 100%	
			%	_/500 × 100%	
an Sensitivity:		= 100%- = 99.8	%	/500 x 100%	
an Sensitivity: ial 1:	nts Observed for the Span=	= 100%- = 99.8	% Trial 3:	/500 x 100%	12(470
<mark>ial 1:</mark> Court		= 100%- = 99.8	Cou		12 <i>(470</i> 34 <i>6</i> 5
<mark>ial 1:</mark> Cou Count <b>ial 2:</b>	nts Observed for the Span=	= 100%- = 99.8 [19049 3489	Cou	its Observed for the Span=	12 <i>(470</i> 34 <i>6</i> 5
oan Sensitivity: ial 1: Court ial 2: Court	nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.8 [19049 3489	Cou	its Observed for the Span=	12 <i>(470</i> 34 <i>6</i> 5
oan Sensitivity: ial 1: Cour Count ial 2: Cour	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.8 [19049 3489	Cou	its Observed for the Span=	12(470 3465
oan Sensitivity: ial 1: Court ial 2: Court st Monitoring Ca	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	= 100%- = 99.8 [19049 3489	Cou	its Observed for the Span=	12(470 3465
oan Sensitivity: ial 1: Count ial 2: Count St Monitoring Ca ro Air ading:	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= elibration Check	= 100%- = \$99.8 (19049 3489 129969 3491 29969 3491 Scal Gas Reading:	Cou	its Observed for the Span=	12/4-70 3465
ban Sensitivity: ial 1: Count ial 2: Count count st Monitoring Ca ro Air ading: CKGROUND CC	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= alibration Check	= 100%- = 99.8 (19049 3489 (20069 3489 (20069 349) Cal Gas Reading:	Count Count	nts Observed for the Span= ers Observed for the Zero=	12/4-70 34-65
ban Sensitivity: ial 1: Count ial 2: Count st Monitoring Ca ro Air ading:	nts Observed for the Span= eers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= elibration Check DRCENTRATIONS CHECKS escription:	= 100%- = \$99.8 (19049 3489 129969 3491 29969 3491 Scal Gas Reading:	Count	ppm Reading: $\frac{1}{12}$	3465

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meteorological conditions were within the requested altern	ative
SCS DataServices - Secure Environmental D	GIN

		CALIRDATION AND	ONS MONI	TDATA	
	11-01-01	CALIBRATION AN	DPERIMEN	DATA	
Date:	101-21		Site Name:	SUNAMA	
Inspector(s);	Don GO		Instrument:	TVA 2020	
WEATHER OBSE	RVATIONS				
	1	Wind PL			
Wind Speed:	И мрн	Wind Direction:	1210	Barometric Pressure:	"Hg
Air Temperature: <	57 .	General Weather Conditions:		19	
ALIBRATION IN	FORMATION				
re-monitoring Cal	ibration Precision Check	< c			
rocodura Calif		e a total of three measuremen			
strument Serial N	CIL	6 of the calibration gas value. 20		Cal Gas Concentration:	500ppm
ial	Zero Air Reading	Cal Gas Reading	Cal Gas Co	oncCal Gas Reading	Response Time (se
2	12	444		4	4
					22
3	.7	600		0	PL
3	a= Average Difference/C		Perform recalibration	if average difference is greater than 10	- G
3	n= Average Difference/C	al Gas Conc. X 100% = 100%		/f average difference is greater than 10	- G
3	a= Average Difference/C	al Gas Conc. X 100%			- Ef
3 libration Precision an Sensitivity:		Tal Gas Conc. X 100% = $100\%$ = $100\%$ = $100\%$			G.
3 libration Precision an Sensitivity: al 1: Counts	s Observed for the Span	Tal Gas Conc. X 100% = 100%- = $U01/8$ = $(46694)$	6 Trial 3:		SEIL
3 libration Precision an Sensitivity: al 1: Counter Counter		Tal Gas Conc. X 100% = 100%- = $U01/8$ = $(46694)$	rial 3: Count	/500 x 100%	551/
3 Ilbration Precision an Sensitivity: al 1: Counter Counter. 1 2:	s Observed for the Span	al Gas Conc. X 100% $= 100%$ $= 494/8%$ $= (44/6 - 654)$	rial 3: Count	/500 x 100%	551
3 libration Precision an Sensitivity: al 1: Counter Counter l 2: Counts	s Observed for the Span s Observed for the Zero	$al Gas Conc. \times 100\%$ $= 100\%$ $= 494.8\%$ $= 494.8\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$	rial 3: Count	/500 x 100%	1561 192
3 libration Precision an Sensitivity: al 1: Counter Counter l 2: Counts	s Observed for the Span s Observed for the Zero Observed for the Span s Observed for the Zero:	$al Gas Conc. \times 100\%$ $= 100\%$ $= 494.8\%$ $= 494.8\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$	rial 3: Count	/500 x 100%	9 551 102
3 libration Precision an Sensitivity: al 1: Counter Counter Counters t Monitoring Calib o Air	s Observed for the Span s Observed for the Zero Observed for the Span s Observed for the Zero:	$al Gas Conc. \times 100\%$ $= 100\%$ $= 494.8\%$ $= 494.8\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$ $= 492.6\%$	rial 3: Count	/500 x 100%	551
3 libration Precision an Sensitivity: al 1: Counter Counters Counters t Monitoring Calib	s Observed for the Span s Observed for the Zero Observed for the Span s Observed for the Zero:	al Gas Conc. X 100% $= 100%$ $= 494.8%$ $= 496.654$ $= 492.26$ $= 492.76$ $= 492.76$ $= 492.76$	rial 3: Counter Counter	/500 x 100%	9 561 102
3 libration Precision an Sensitivity: al 1: Counter Counters Counters t Monitoring Calib o Air ding:	s Observed for the Span s Observed for the Zero Observed for the Span c Observed for the Zero oration Check	fal Gas Conc. X 100% = 100%	rial 3: Counter Counter	/500 x 100% s Observed for the Span= rs Observed for the Zero=	551/
3 libration Precision an Sensitivity: al 1: Counter Counter Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters	s Observed for the Span s Observed for the Zero Observed for the Span s Observed for the Zeros oration Check	fal Gas Conc. X 100% = 100%	rial 3: Counter	/500 x 100% s Observed for the Span= rs Observed for the Zero=	4 551 102
3 Ilbration Precision an Sensitivity: al 1: Counter Counter Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters Counters	s Observed for the Span s Observed for the Zero Observed for the Span s Observed for the Zeros oration Check	fal Gas Conc. X 100% = $100\%$ - = $100\%$ -	rial 3: Counter Counter	/500 x 100% rs Observed for the Span= rs Observed for the Zero= pm	15611 1902

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And the second se	The second second second	CONTRACTOR OF THE OWNER OF	and the second second	And and a state of the state of	and the second sec		
C. N. M. D.	1 12 1 3 3		- V-V-10		NAME OF A DESCRIPTION OF A	and a stand of the	101-14
	Contraction of the local division of the loc		and the second s			A - B 4 B R + B	

	And the second		ONS MONITORING		
	110/01			40	
Date:	1-01-11		Site Name: 501	noma	
Inspector(s):	lichael 1	1	Instrument:	020	
WEATHER OBS	ERVATIONS			The second se	
	1			_	
Wind Speed:	6МРН	Wind SE	Barome Press		"Hg
Air Temperature:	57 °F	General Weathe Conditions			
CALIBRATION IN	FORMATION				
Pre-monitoring Ca	alibration Precision Check				
0					
precision must be Instrument Serial	Lifess than or equal to 10%	nce between the instrument i of the calibration gas value.		Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading		as Doodies 1	
1		500	Cal Gas ConcCal Ga	as Reading   F	lesponse Time (secor
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rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCa	Gas Reading	Response Time (seco
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ilibration Precisio	n= Average Difference/Cal		*Perform recalibration if average		
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		CALIBRATION AND	PERTINENT DATA	
Date:	11-02-21	1 10	Site Name: SONOM	1
Inspector(s):	1 anall	11	Instrument:TVA 2020	
WEATHER OBS	ERVATIONS			
Wind Speed:	2	Wind ME	Barometric <b>3</b> C	2 "Hg
Air Temperature:	53 "	General Weather Conditions:	FOMMY	
CALIBRATION IN	NFORMATION			
Pre-monitoring C	alibration Precision Cl	neck		
and calculate the	e less than or equal to	ference between the instrument re 10% of the calibration gas value. 445	s by alternating zero air and the calibra ading and the calibration gas as a perc Cal Gas Concentration	entage. The calibration
[ria]	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (second
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3	.7	500		3
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st Monitoring Cal	libration Check			
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wind Location De	escription:	Flare	Reading: 1.2	ppm
wnwind Location	Description	Entrance	Reading: 1.6	ppm
<b>tes:</b> Wir exc	nd speed averages we eeded 20 miles per ho	re observed to remain below the a our. No rainfall had occurred withi	Iternative requested 10 miles per hour in the previous 24 hours of the monitor	and no instantaneous speed:

exceeded 20 miles per hour. No rainfall had occurred within the	e pr
meteorological conditions were within the requested alternative	es o
SCS DataServices - Secure Environmental Dat	G

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		SURFACE EMISSI			
	11-00-21	SALIDIATION AN		Colored A	
Date:	11-02-21		Site Name:	Sunama	
Inspector(s):	Liam M	1	instrument:	TVA 2020	
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	0				
Wind Speed:	МРН	Wind NE		Barometric <b>30</b> Pressure:	"Hg
Air Temperature:	53 .	General Weathe Conditions		V	
CALIBRATION IN	FORMATION		~		
lro monitarina C	alibration Precision Check				
ecision must be strument Serial	less than or equal to 10% of $17.7$	of the calibration gas value.		calibration gas as a percentage.	500ppm
rial	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading   Res	ponse Time (s
1	- 12	287		3	4
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an Sensitivity: al 1: Counte Counte al 2: Counte Counte t Monitoring Cali D Air ding:	ts Observed for the Span= rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check	Gas Conc. X 100% = $100\%$ - = $0\%$ . 7 0% 0% 12710 12710 12710 12710 12710 12710 12710 12710 12895 123880 2882 Cal Gas	(,3 % Trial 3: Counte	/500 x 100% ts Observed for the Span= 12 ers Observed for the Zero= 2	874
an Sensitivity: al 1: Counte Counte al 2: Counte Counte t Monitoring Cali D Air ding:	ts Observed for the Span= rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check CENTRATIONS CHECKS	Gas Conc. X 100% = $100\%$ - = $0\%$ . 7 0% 0% 12710 12710 12710 12710 12895 123880 2882 Cal Gas	(,3 % Trial 3: Counte	/500 x 100% ts Observed for the Span= 12 ers Observed for the Zero= 2	874
an Sensitivity: al 1: Counte Counte al 2: Counte Counte t Monitoring Cali O Air ding: CKGROUND COR	ts Observed for the Span= rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check	Gas Conc. X 100% = $100\%$ - = $0\%$ . 7 0% 0% 12710 12710 12710 12710 12895 123880 2882 Cal Gas	(.3 % Trial 3: Counte 500	$\frac{1}{2}$ /500 x 100% ts Observed for the Span= $\frac{1}{2}$ ars Observed for the Zero= $\frac{1}{2}$	874

- With Carl

		SURFACE EMISS			
	11 01	CALIBRATION AN	ID PERTINE	NT DATA	
Date:	(1-07-21		Site Name:	Somama	
Inspector(s):	Bryano		Instrument:	TVA 2020	
WEATHER OB	SERVATIONS				
Wind Speed	: 2 MPH	Wind NE	, 	Barometric Pressure:	<b>7</b> "Hg
Air Temperature:	511	General Weathe Conditions			
CALIBRATION	INFORMATION				
Pre-monitoring (	Calibration Precision Check				
and calculate th	orate the instrument. Make a e average algebraic differenc e less than or equal to 10% o I Number:	e between the instrument	reading and the	calibration gas as a percente	age. The calibration
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (secon
1		7.4		4	3
3	.1	500	4	0	3
					-
alibration Precis	ion= Average Difference/Cal	Average Difference: Gas Conc. X 100%	*Perform recalibration	) if average difference is greater than 1	0
alibration Precis	sion= Average Difference/Cal	Gas Conc. X 100% = 100%-		n if average difference is greater than 1	D
	ion= Average Difference/Cal	Gas Conc. X 100%			0
an Sensitivity: ial 1:	nts Observed for the Span=	Gas Conc. X 100% = 100%-	/ % Trial <u>3:</u>		29421
<del>ial 1:</del> Cou		Gas Conc. X 100% = 100%-	% <u>Trial 3:</u> Cour	/500 x 100%	29421 3373
an Sensitivity: ial 1: Cou Count	ints Observed for the Span=	Gas Conc. X 100% = 100%-	% <u>Trial 3:</u> Cour	/500 x 100%	29421 3373
an Sensitivity: ial 1: Cou Count ial 2: Cou	ints Observed for the Span=	Gas Conc. X 100% = 100%-	% <u>Trial 3:</u> Cour	/500 x 100%	29421 3373
an Sensitivity: ial 1: Count ial 2: Count Count	unts Observed for the Span= ters Observed for the Zero= ints Observed for the Span=_	Gas Conc. X 100% = 100%-	% <u>Trial 3:</u> Cour	/500 x 100%	29421 3373
an Sensitivity: ial 1: Count ial 2: Count Count	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero=	Gas Conc. X 100% = 100%-	% <u>Trial 3:</u> Cour	/500 x 100%	29421 3373
an Sensitivity: ial 1: Count ial 2: Count St Monitoring Ca o Air ading:	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero= alibration Check	Gas Conc. X 100% = 100%- = 99,8 127724 127724 128962 3388 Cal Gas Reading:	% Trial 3: Count Count	/500 × 100%	29421 3373
an Sensitivity: ial 1: Count ial 2: Count St Monitoring Ca o Air ading:	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero= alibration Check ppm DNCENTRATIONS CHECKS	Gas Conc. X 100% = 100%- = 99,8 127724 127724 128962 3388 Cal Gas Reading:	% Trial 3: Count Count	ppm	o 29421 3373
an Sensitivity: ial 1: Count Count ial 2: Count st Monitoring Ca o Air ading: CKGROUND CO	ants Observed for the Span= ters Observed for the Zero= ants Observed for the Span= ters Observed for the Zero= alibration Check ppm DNCENTRATIONS CHECKS rescription:	Gas Conc. X 100% = 100%- = 99.8 127724 127724 13894 (128962 3388 Cal Gas	% Trial 3: Count Count	$\frac{1}{2}$ /500 x 100% ats Observed for the Span=/ ers Observed for the Zero= ppm Reading: $\frac{12}{15}$ pr	29421 3373

- Harris Bull

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CALIBRATION AN	D PERTINE	NT DATA	
	11,0,71			Calasia	
Date:	11-91-61		Site Name:	200000	9
Inspector(s):	Dan G		Instrument:	TVA 2020	
WEATHER OB	SERVATIONS			4	
Wind Speed	2	Wind NF	2	Barometric 3	7
wind speed	:МРН	Direction:	-	Pressure:	"Hg
Temperature:	57 °F	General Weath Condition		Y	
CALIBRATION	INFORMATION		02 V.		
Pre-monitoring	Calibration Precision Check				
and calculate th	rate the instrument. Make of e average algebraic different e less than or equal to 10% of I Number:	ce between the instrument	reading and the	calibration gas as a percen Cal Gas Concentration:	tage. The calibration
Trial	Zero Air Reading	Cal Gas Reading			500ppm
1		40101		ConcCal Gas Reading	Response Time (secon
2	17	500,		O,	3
3		Fal			6
	ion= Average Difference/Cal		0	nif average difference is greater than	]
	ion= Average Difference/Cal	Gas Conc. X 100% = 100%-	2	nif average difference is greater than /500 x 100%	] 10
Calibration Precis	ion= Average Difference/Cal	Gas Conc. X 100%	2		] 10
alibration Precis	ion= Average Difference/Cal	Gas Conc. X 100% = 100%-	<u>?</u> %		
alibration Precis pan Sensitivity: rial 1: Cou	ints Observed for the Span=	Gas Conc. X 100% = 100%- = (19,9)			14082
Calibration Precis pan Sensitivity: rial 1: Cou		Gas Conc. X 100% = 100%- = (19,9)	7%	_/500 x 100%	14082
Calibration Precis pan Sensitivity: rial 1: Cou rial 2:	ints Observed for the Span=	$Gas Conc. X 100\%$ $= 100\%$ $= CPQ.Q$ $\frac{138964}{4966}$ $\frac{4966}{12422}$	7%	/500 x 100%	14082
Calibration Precis pan Sensitivity: rial 1: Cou rial 2: Cou	ints Observed for the Span= ters Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= CPQ.Q$ $\frac{138964}{4966}$ $\frac{4966}{12422}$	7%	/500 x 100%	14082
Calibration Precis	ints Observed for the Span= ters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= CPQ.Q$ $\frac{138964}{4966}$ $\frac{4966}{12422}$	7%	/500 x 100%	14082
Calibration Precis pan Sensitivity: rial 1: Cou rial 2: Count count Dost Monitoring Co	ints Observed for the Span= ters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= 099.91$ $\frac{138964}{4966}$ $\frac{138964}{4966}$ $\frac{138964}{4966}$ $\frac{138972}{4952}$	7%	/500 x 100%	14082
Calibration Precis pan Sensitivity: rial 1: Cou rial 2: Count ost Monitoring Count post Monitoring Count count count	ints Observed for the Span= ters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= CPQ.Q$ $\frac{138964}{4966}$ $\frac{4966}{12422}$	7%	/500 x 100%	14082
Calibration Precis	ints Observed for the Span= ters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero= alibration Check	Gas Conc. X 100% = 100%- = CP9,9 (38964 (38964 (39666 (39672) 4052 Cal Gas Reading:	7%	/500 x 100%	14082
Calibration Precis	ints Observed for the Span= ters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero= alibration Check	Gas Conc. X 100% = 100%- = CP9,9 (38964 (38964 (39666 (39672) 4052 Cal Gas Reading:	% Trial 3: Count Count	/500 x 100%	14082
Calibration Precis	Ints Observed for the Span= ters Observed for the Zero= Ints Observed for the Span= ters Observed for the Zero= alibration Check Description:	Gas Conc. X 100% = 100%- = CP9,9 (38964 (38964 (39666 (39672) 4052 Cal Gas Reading:	n 7% Trial 3: Counte Counte	_/500 x 100% hts Observed for the Span= ers Observed for the Zero=	14082

			ONS MONITORIN	-	
1	11	CALIBRATION AN	D PERTINENT DAT	ГА	
Date:	1-0221		Site Name: 501	nama	
Inspector(s):	Michael	M	Instrument:	2020	
WEATHER OBS	ERVATIONS			R	
Wind Speed:	<u>Мрн</u>	Wind ME	Baror Pres	netric ssure:	<b>7</b> "Hg
Air Temperature:	65.	General Weathe Conditions	FOGY		
CALIBRATION I	NFORMATION				
Pre-monitoring (	Calibration Precision Check				
and calculate the	rate the instrument. Make of a average algebraic difference e less than or equal to 10% of Number:	ce between the instrument i	reading and the calibratic	and the calibration on gas as a percente as Concentration:	agas, Record the reading age. The calibration 500ppm
Trial	149		10 <sup>-</sup>		
1	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal	Gas Reading	Response Time (secon
2			- C		1
L	10	halla	10		2
3	ion= Average Difference/Cal	Average Difference:	*Perform recalibration if average of	difference is greater than 1	۰ ۵
3	ion= Average Difference/Cal		*Perform recalibration if average of /500 x 1		0 0
3	ion= Average Difference/Cal	l Gas Conc. X 100%	1		0
3 Calibration Precis Span Sensitivity:	ion= Average Difference/Cal	l Gas Conc. X 100%	/500 x 1		₽ °
3 Calibration Precis Span Sensitivity: Trial 1:	ion= Average Difference/Cal	Gas Conc. X 100% = 100%- = AI9. 8	/500 x 1		° 11/7/4
3 Calibration Precis Span Sensitivity: <u>Trial 1:</u> Cou		Gas Conc. X 100% = 100%- = AI9. 8	/500 x 1	.00% ved for the Span	4 11/7/4 4800
3 Calibration Precis Span Sensitivity: Trial 1: Cou Coun	ints Observed for the Span=	Gas Conc. X 100% = 100%- = 99.8 [091(10) [0916] [1016] [1016]	/500 x 1	.00%	1/7/4 4800
3 Calibration Precis Span Sensitivity: Trial 1: Cou Coun Trial 2: Cou	ints Observed for the Span-	Gas Conc. X 100% = 100%- = 99.8 [091(10) [0916] [1016] [1016]	/500 x 1	.00% ved for the Span	4 0 11/714 4800
3 Calibration Precis Span Sensitivity: Trial 1: Cou Coun Trial 2: Cou	ints Observed for the Span- ters Observed for the Zero- nts Observed for the Span- ters Observed for the Zero-	Gas Conc. X 100% = 100%- = 99.8 [091(10) 48/6 48/6	/500 x 1	.00% ved for the Span	4 11/7/4 4800
3 Calibration Precis Span Sensitivity: Trial 1: Cou Coun Trial 2: Cou Count Post Monitoring Count Post Monitoring Count Post Monitoring Count	ants Observed for the Span- ters Observed for the Zero- nts Observed for the Span= ters Observed for the Zero= alibration Check	Gas Conc. X 100% = 100%- = 99.8 [091.10 [091.10 [091.6 [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8] [109.8]	/500 x 1	.00% ved for the Span	11/714 4800
3 Calibration Precis Span Sensitivity: Trial 1: Count Trial 2: Count Count Post Monitoring C Zero Air Reading:	ants Observed for the Span= ters Observed for the Zero= nts Observed for the Span= ters Observed for the Zero= alibration Check	E Gas Conc. X 100% = 100%- = 99.8 100%- = 99.8 100%- 100%- = 99.8 100%- 100%- = 99.8 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 10	/500 x 1	.00% ved for the Span	11/7/4 4800
3 Calibration Precis Span Sensitivity: Trial 1: Cou Count Trial 2: Cou Count Post Monitoring C Zero Air Reading: SACKGROUND C	ants Observed for the Span- ters Observed for the Zero- nts Observed for the Span= ters Observed for the Zero= alibration Check	Gas Conc. X 100% = 100%- = 99.8 100%- = 99.8 10%- 10%- 10%- 10%- 10%- = 99.8 10%- = 99.8 10%- = 99.8 10%- = 99.8 10%- 10%- = 99.8 10%- 10%- = 99.8 10%- 10%- 10%- = 99.8 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10%- 10	/500 x 1	.00% rved for the Span-	11/714 4800
3 Calibration Precis Span Sensitivity: Trial 1: Count Trial 2: Count Count Post Monitoring C Zero Air Reading:	ants Observed for the Span- ters Observed for the Zero- nts Observed for the Span- ters Observed for the Zero- alibration Check ppm ONCENTRATIONS CHECKS Description:	E Gas Conc. X 100% = 100%- = 99.8 100%- = 99.8 100%- 100%- = 99.8 100%- 100%- = 99.8 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 100%- 10	/500 x 1	.00%	11/14 4000

SCS DataServices - Secure Enviro	n man him Distant
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				ORING	
		CALIBRATION AN	ID PERTINEN	IT DATA	
Date:	1-02-11			Sannan	1
Jate.	Cur of	1	Site Name:	DOMANN	1
nspector(s):	Jann N	/	Instrument:	TVA 2020	
VEATHER OBSERVA	ATIONS			90	
	16	Wind Att			
Wind Speed:	МРН	Wind Direction	_	Pressure: 20	"Hg
Air Temperature:	5.	General Weathe Conditions		V	
ALIBRATION INFOR	RMATION				
e-monitoring Calibra	ation Precision Check				
ocedure: Calibrate to	he instrument. Make a i	total of three measureme	nts by alternating	zero air and the calibration	gas. Record the reading
		between the instrument the calibration gas value.		calibration gas as a percent	age. The calibration
	190	1.2			
strument Serial Num	ber: _///	1		Cal Gas Concentration:	500ppm
(a) I	7	0.1.0 P	1		
ial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (second
2	1	not		2	top
3	19	600		1	a
		100	1.	4	-1
libration Precision= /	Average Difference/Cal (	Gas Conc. X 100%		if average difference is greater than 1	0
libration Precision= /	Average Difference/Cal (	Gas Conc. X 100% = 100%-	1	if average difference is greater than 1 /500 x 100%	.0
libration Precision= /	Average Difference/Cal (		1		.0
	Average Difference/Cal (		1		.0
an Sensitivity: al 1:			7%	/500 x 100%	22026
an Sensitivity:	Average Difference/Cal ( bserved for the Span=		7%		22026
an Sensitivity: i <mark>al 1:</mark> Counts O	bserved for the Span= _		Trial 3: Cour	/500 x 100% ts Observed for the Span	27026
an Sensitivity: al 1: Counts O Counters C			Trial 3: Cour	/500 x 100%	127076 2721
an Sensitivity: al 1: Counts O <u>Counters C</u> al 2:	bserved for the Span= _		Trial 3: Cour	/500 x 100% ts Observed for the Span	27026
an Sensitivity: al 1: Counts O <u>Counters C</u> al 2: Counts O	bserved for the Span= bserved for the Zero= bserved for the Span=		Trial 3: Cour	/500 x 100% ts Observed for the Span	27076
an Sensitivity: al 1: Counts O <u>Counters C</u> al 2: Counts O	bserved for the Span= bserved for the Zero=		Trial 3: Cour	/500 x 100% ts Observed for the Span	127076 2721
an Sensitivity: ial 1: Counts O <u>Counters C</u> al 2: Counts O <u>Counters O</u>	bserved for the Span= bserved for the Zero= bserved for the Span= bserved for the Zero=		Trial 3: Cour	/500 x 100% ts Observed for the Span	127076 2721
an Sensitivity: al 1: Counts O <u>Counters C</u> al 2: Counts O <u>Counters O</u> st Monitoring Calibra	bserved for the Span= bserved for the Zero= bserved for the Span= bserved for the Zero=	= 100%- = c/9, & (256 [] 2747 2547 2547 2547	Trial 3: Cour	/500 x 100% ts Observed for the Span	27026
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an Sensitivity: ial 1: Counts O <u>Counters C</u> al 2: Counts O <u>Counters O</u> st Monitoring Calibra to Air ading:	bserved for the Span= bserved for the Zero= bserved for the Span= bserved for the Zero= tion Check	= 100%- = C/9, E (156/ 2747) 169/ 269/ 2019 2019 Cal Gas	Trial 3: Cour	/500 x 100% ts Observed for the Span	27026
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an Sensitivity: al 1: Counts O Counters C al 2: Counts O Counters O St Monitoring Calibra o Air ading: CKGROUND CONCE wind Location Descrip	bserved for the Span= bserved for the Zero= bserved for the Span= bserved for the Zero= tion Check ppm ENTRATIONS CHECKS	= 100%- = C/9, E (156/ 2747) 169/ 269/ 2019 2019 Cal Gas	Trial 3: Courte	/500 x 100% ts Observed for the Span- ers Observed for the Zero=	27026
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Chalin Content.

1	4	Distance	VIGES -	Secure En	vironmental	DESKAG
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			ONS MONITORING	
	11 -0 -01	CALIBRATION AN	D PERTINENT DATA	
Date:	110111		Site Name: 5010000	1
Inspector(s):	VON 6		Instrument: TVA 2020	
WEATHER OBS	SERVATIONS			
Wind Speed:	МРН	Wind <u>MF</u>	Barometric Pressure: 30	/ "Hg
Air Temperature:	17	General Weathe Conditions	LINNY	
CALIBRATION	INFORMATION			
Pre-monitoring (	Calibration Precision Check			
and calculate the	e average algebraic differen e less than or equal to 10% of 10% of 10% o	ce between the instrument i	nts by alternating zero air and the calibration reading and the calibration gas as a percente Cal Gas Concentration:	a gas. Record the readin age. The calibration 500ppm
Trial	Zoro Air Roading	Cal Cas Baadias		
1	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (secon
2	19	2601	9	12
3	.0	BOS	m	h
Calibration Precis	sion= Average Difference/Ca	Average Difference:   Gas Conc. X 100%	*Perform recalibration if average difference is greater than 1	0
Calibration Precis	sion= Average Difference/Ca		*Perform recalibration if average difference is greater than 1	0
	sion= Average Difference/Ca		1/3	0
Span Sensitivity:	sion= Average Difference/Ca	I Gas Conc. X 100% = 100%- = Main	1-3_/500 × 100%	0
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-		CALIBRATION AND	ONS MONITORING	
	11-02-01		( Manno	4
Date:	10/1		Site Name: Source	1
Inspector(s):	BNAN G	7	Instrument: TVA 2020	
WEATHER OB	SERVATIONS			
	M	Wind	Barometric 3/	2
Wind Speed	:МРН	Direction:	Pressure: 76	"Hg
Ai	16	General Weather	EXMA	
Temperature	F F	Conditions:	£ 0/1/	
CALIBRATION	INFORMATION			
re-monitoring	Calibration Precision Check			
Procedure: Calif	wate the instrument Make	a total of three measurement	s by alternating zero air and the calibration	as Pocord the reading
and calculate th	e average algebraic differei	ice between the instrument re	eading and the calibration gas as a percent	aae. The calibration
		of the calibration gas value.		.g
	121	6		- 1 Carlor 1
nstrument Seria	ar Number:		Cal Gas Concentration:	500ppm
rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (second
1	+4	501		2
2		204	4	2
5	10	591		4
		Average Difference:	12	
			10	
		= 100%	1.3 /500 x 100%	
0		= 100% = (19,8%		
		= d9,8%	6	topat
ial 1:	unts Observed for the Span	= d9,89		327(1
<b>ial 1:</b> Co Cour	unts Observed for the Span nters Observed for the Zero	= d9,8°	rial 3:	327(1 3125
rial 1: Co Cour ial 2:	nters Observed for the Zero	= d9,83	Trial 3: Counts Observed for the Span	327(1 3125
ial 1: Co <u>Cour</u> ial 2: Cou	nters Observed for the Zero- unts Observed for the Span-	= d9,8°	Trial 3: Counts Observed for the Span	327(1 3125
ial 1: Co Cour ial 2: Cour Cour	nters Observed for the Zero unts Observed for the Span nters Observed for the Zero	= d9,8°	Trial 3: Counts Observed for the Span	327(1 3125
r <u>ial 1:</u> Co Cour rial 2: Cour Cour	nters Observed for the Zero- unts Observed for the Span-	= d9,8°	Trial 3: Counts Observed for the Span	327(1 3(25
rial 1: Co <u>Cour</u> ial 2: Cour cour	nters Observed for the Zero unts Observed for the Span nters Observed for the Zero	= d9,89	Trial 3: Counts Observed for the Span	327(1 3125
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ial 1: Cour ial 2: Cour Cour st Monitoring ( ro Air ading:	nters Observed for the Zero- unts Observed for the Span nters Observed for the Zero- Calibration Check	$= d^{q}, 8^{9}$	Trial 3: Counts Observed for the Span- Counters Observed for the Zero=	327(1 3125
ial 1: Co <u>Cour</u> ial 2: Cour st Monitoring ( ro Air ading:	nters Observed for the Zero unts Observed for the Span nters Observed for the Zero Calibration Check	$= d^{q}, 8^{9}$	Trial 3: Counts Observed for the Span- Counters Observed for the Zero=	327(1 3(25
rial 1: Co Cour ial 2: Cour cour est Monitoring C ro Air ading: CKGROUND C	nters Observed for the Zero- unts Observed for the Span- nters Observed for the Zero- Calibration Check	$= d^{q}, 8^{9}$	Trial 3:       Counts Observed for the Span         Counters Observed for the Zero=         Counters Observed for the Zero=         Counters Observed for the Zero=         Reading:	327(1 3(25
al 1: Co Cour al 2: Cour Cour Cour Cour Cour Cour Cour Cour	nters Observed for the Zero- unts Observed for the Spans nters Observed for the Zero- Calibration Check Calibration Check Concentrations check Description:	= d9,8° (306/3) 3(47) 3(47) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6) (319/6)	Trial 3:       Counts Observed for the Spand         Counters Observed for the Zero=         Counters Observed for the Zero=         Counters Observed for the Zero=         Reading:         Reading:         I         Reading:         I         Reading:	ppm
al 1: Co Cour al 2: Cour Cour Cour Cour Cour Cour Cour Cour	nters Observed for the Zero unts Observed for the Span nters Observed for the Zero Calibration Check Calibration Check Concentrations check Description: On Description: Vind speed averages were of exceeded 20 miles per hour.	= d9, 8° = d9, 9 = d9,	Trial 3:       Counts Observed for the Span-         Counters Observed for the Zero=         Counters Observed for the Zero=         Reading:         Reading:         Reading:         Image:         Image:	opm d no instantaneous speed s event. Therefore, site
Cour rial 2: Cour Cour ost Monitoring C ero Air eading: ACKGROUND C owind Location f ownwind Location ownwind Location over the second courses of the seco	nters Observed for the Zero unts Observed for the Span nters Observed for the Zero Calibration Check Calibration Check Concentrations check Description: On Description: Vind speed averages were of exceeded 20 miles per hour.	= d9, 8° = d9, 9 = d9,	Trial 3:       Counts Observed for the Span         Counters Observed for the Zero=         Counters Observed for the Zero=         Reading:         Reading:         Reading:         Image:         Image:      <	opm d no instantaneous speec s event. Therefore, site

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		SURFACE EMISSI CALIBRATION AN			
Date:	1-4-21		Site Name:	Sonome	
Inspector(s):	Don Gib	son	Instrument:	TVA 2020	
WEATHER OBSI	ERVATIONS			19	
Wind Speed:	6	Wind Direction:	÷ .	Barometric Pressure: 90	"Hg
Air Temperature:	57 -	General Weather Conditions:		Y	
CALIBRATION IN	FORMATION		,		
Pre-monitoring Ca	alibration Precision Check				
nstrument Serial I	Number: <u>5</u>	nce between the instrument r of the calibration gas value. <b>126</b>		Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Co	ncCal Gas Reading	Response Time (secon
2	1	400		4	3
3		9016		2	2
		= 100%-		′500 x 100%	
		$= dd \mathcal{R}$	%		
oan Sensitivity:		= 99,8	%		
oan Sensitivity: ial 1: Coun	ts Observed for the Span=	12-20100	% Frial 3: Count	s Observed for the Span=	39732
<u>ial 1:</u> Coun Counte	ts Observed for the Span= rs Observed for the Zero=	137913	Count	s Observed for the Span=	39737 7884
ial 1: Coun <u>Counte</u> ial 2: Count	rs Observed for the Zero= ts Observed for the Span=	137913	Count	-	39737 7884
ial 1: Count Counte ial 2: Count Counter	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero=	137913	Count	-	39737 7884
ial 1: Counte ial 2: Counte Counter st Monitoring Cali	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero=	137913	Count	-	39737 7884
ial 1: Count Counte ial 2: Count Counter	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero=	137913	Counter	-	39737 4884
ial 1: Counte Counte Counte Counte St Monitoring Cali St Air ading:	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check	137913 3901 198419 3892 Cal Gas Reading:	Counter	s Observed for the Zero≃	39737 7884
ial 1: Counte Counte Counte Counte St Monitoring Cali St Air ading:	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check D ppm NCENTRATIONS CHECKS	137913 3901 198419 3892 Cal Gas Reading:	Counter	s Observed for the Zero≃	39737 7884
ial 1: Counte Counte ial 2: Counte Counte st Monitoring Cali o Air ading: CKGROUND COR	rs Observed for the Zero= ts Observed for the Span= rs Observed for the Zero= bration Check <b>O</b> ppm <b>NCENTRATIONS CHECKS</b> scription:	137913 3901 198419 3892 Cal Gas Reading:	Counter 500 p	s Observed for the Zero=	

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	CONTRACT IN THE	- 12 days and a stranger	Contract of the second second	A set of the second set of
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

					1.40
	A second second	CALIBRATION A	ND PERTINE		
Date:	11-4.21		Site Name:	JONON	nci
Inspector(s):	Liam	m	Instrument:	TVA 2020	
WEATHER OB	SERVATIONS			4	
Wind Speed	:MPH	Wind Direction:	-	Barometric Pressure: 301	3 "нд
Ai Temperature		General Weath Conditio		44	
CALIBRATION	INFORMATION			)	
Pre-monitoring	Calibration Precision Check				
		a total of these many		A	
una calculate tri	brate the instrument. Make ne average algebraic differer	ice between the instrumen	t reading and the i	g zero air and the calibrati calibration aas as a perce	on gas. Record the reading stage. The calibration
precision must b	pe less than or equal to 10%	of the calibration gas valu	e.	<u>j</u>	unger me canbration
Instrument Seria	al Number: 12	-23		Cal Gas Concentration	500ppm
[ria]	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (second
1 2	1	499		01	3
3		502		L	- C
alibration Precis	sion= Average Difference/Ca	Average Difference:	*Perform recalibration	if average difference is greater tha	] n 10
alibration Precis	sion= Average Difference/Ca		*Perform recalibration	if average difference is greater tha	n 10
alibration Precis	sion= Average Difference/Ca			if average difference is greater tha /500 x 100%	n 10
alibration Precis	sion= Average Difference/Ca	al Gas Conc. X 100%	<u>    1                                </u>		] n 10
	sion= Average Difference/Ca	el Gas Conc. X 100%	<u>    1                                </u>		] n 10
pan Sensitivity: rial 1:		el Gas Conc. X 100% = 100% = 99.9	۲- <u>۲</u> %	/500 x 100%	
pan Sensitivity: rial 1:	sion= Average Difference/Ca unts Observed for the Span=	al Gas Conc. X 100% = 100% = 99.8	۲- <u>۲</u> %		
pan Sensitivity: rial 1: Cou Coun		el Gas Conc. X 100% = 100% = 99.9	5 7 %   Coun	/500 x 100%	126841
oan Sensitivity: rial 1: Cou Coun ial 2:	unts Observed for the Span=	= 100% $= 99.%$ $= 100%$ $= 99.%$ $= 100%$ $= 100%$	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
oan Sensitivity: rial 1: Cou Coun ial 2: Cou	unts Observed for the Span= ters Observed for the Zero=	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $1$	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
pan Sensitivity: rial 1: Cou Coun rial 2: Count	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span=	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $1$	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
<u>pan Sensitivity:</u> rial 1: Cou <u>Coun</u> rial 2: Cou Count	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero=	= 100% $= 99.9$ $= 100%$ $= 99.9$ $= 125292$ $= 126192$ $= 126192$ $= 30.9$	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
pan Sensitivity: rial 1: Coun ial 2: Count st Monitoring C ro Air	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero=	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $100\%$ = $100\%$ = $99.\%$ = $100\%$ = $1$	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
pan Sensitivity: rial 1: Coun ial 2: Count st Monitoring C ro Air ading:	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero= alibration Check	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $125292$ = $126192$ = $126192$ = $30.9$ Cal Gas Reading:	5 7 %   Coun	/500 x 100% ts Observed for the Span=	126841
pan Sensitivity: rial 1: Coun ial 2: Count ist Monitoring C ro Air ading: CKGROUND Co	unts Observed for the Span= iters Observed for the Zero= ints Observed for the Span= ters Observed for the Zero= alibration Check ppm ONCENTRATIONS CHECKS	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $125292$ = $126192$ = $126192$ = $30.9$ Cal Gas Reading:	Trial 3: Counte	/500 x 100% ts Observed for the Span=	126841
pan Sensitivity: rial 1: Coun rial 2: Count st Monitoring C ro Air ading:	unts Observed for the Span= ters Observed for the Zero= unts Observed for the Span= ters Observed for the Zero= alibration Check ppm ONCENTRATIONS CHECKS Description:	al Gas Conc. X 100% = $100\%$ = $99.\%$ = $125292$ = $126192$ = $126192$ = $30.9$ Cal Gas Reading:	5 % Trial 3: Counter Counter Secore	ts Observed for the Spansers Observed for the Zeros	126841 3684

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1 Decision	and and a		The second se	The second second second	and the second s	and the second s	and the second second	the state of the s
A CONTRACTOR	10 2000	Well BENERS	- International -	The second se	And	and the second se	and the second se	A DESCRIPTION OF THE REAL PROPERTY AND ADDRESS OF THE REAL PROPERTY ADDRESS OF THE REAL
the state of the	X - N	1 · · · · · · · · ·	A Market and a second	Y Y TNL	7 - I - I - I - I - I - I - I - I - I -	THE REPORT OF THE	and the second se	The second second
- Addree	- Chall	and the second s	vices -	W - 2 - 4 - 14 -	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 10 10. S I N & A	1-3422.48	

r					Pre
· · · · ·		SURFACE EMISS			
		CALIBRATION AN	ID PERTINE		
Date:	11-4-21		Site Name:	Bonome	A
Inspector(s):	Michea	Im	Instrument	TVA 2020	
WEATHER OBSE	RVATIONS			~	
Wind Speed:	16_мрн	Wind Direction:	÷.,1	Barometric Pressure: 30.1	<b>3</b> "Hg
Air Temperature: _	51 °F	General Weathe Conditions	cloud	<u> </u> Q	
CALIBRATION IN	FORMATION			)	
Pre-monitoring Ca	libration Precision Check				
					on gas. Record the readings
precision must be Instrument Serial M	average algebraic difference less than or equal to 10% of Number:	f the calibration gas value		Cal Gas Concentration:	
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (seconds
1 2	0	501			
3	:/	601		1	-2
		= 100%- = <i>A</i> []]	1	/500 × 100%	
nan Sonsitiuitur		9019	<i></i>		
pan Sensitivity: rial 1:			Trial 3:		
Count	ts Observed for the Span=_	101324	Coun	ts Observed for the Span=	107872
Counte	rs Observed for the Zero=	4854	Counte	ers Observed for the Zero=	4931
rial 2: Count	s Observed for the Span=_	108961			
Counter	rs Observed for the Zero=	1877			
ost Monitoring Cali	bration Check				
ero Air eading:	ppm	Cal Gas Reading:	500	opm	
	NCENTRATIONS CHECKS	-			
wind Location Des		Flare	F	Reading: 1.12	ppm
wnwind Location [	Description:	Entrance	٩	Reading: 16	opm
exce	d speed averages were obs eeded 20 miles per hour. N eorological conditions were	o rainfall had occurred wit	thin the previous	24 hours of the monitorin	nd no instantaneous speeds g event. Therefore, site pove mentioned date.

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1000	DataServices	and the second se	and the second second	and the second se
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SCALCE.				-HAMMEN DY-KAT
		the second se	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Date: Inspector(s):	11-4-71	SURFACE EMISS	IONS MONI	TORING	
	11-4-71	CALIBRATION AN			
	11-4-71		ND PERTINE	NT DATA	
Inspector(s):			Site Name:	Sonoma	~
	pryano		Instrument:	TVA 2020	
WEATHER OBS	SERVATIONS				
Wind Speed:	. 6 мрн	Wind Direction:	_	Pressure: 300	<u>1</u> 3 "Hg
Air Temperature:	1-0	General Weath Condition		ty	
CALIBRATION	INFORMATION			)	
Pre-monitoring (	Calibration Precision Check				
Procedure: Calib	rate the instrument. Make a t	otal of three measurem			
ind calculate the	e average algebraic difference	between the instrument	reading and the	calibration gas as a percen	tage. The calibration
recision must b	e less than or equal to 10% of t	the calibration gas value	8		-
nstrument Seria	Number:	5		Cal Gas Concentration:	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (second
2		503			2
3	1	501		1	3
		= 100%	_/	/500 x 100%	
		= 99, 8	1/2		
an Sensitivity:					100000000
i <mark>al 1:</mark> Cou	ints Observed for the Span= $\sum$	18832	Trial 3: Cour	nts Observed for the Span=	(1921)
	ters Observed for the Zero=	5427	Count	ers Observed for the Zero=	34/1
<u>al 2:</u> Cou	nts Observed for the Span=	24640			
Count	ers Observed for the Zero=	ا مالاح			
	alibration Check				
o Air			1		
iding:	<b>O</b> ppm	Cal Gas Reading:	200	ррт	
	NCENTRATIONS OUTCING	10.11			
	DINCENTRATIONS CHECKS			10	
CKGROUND CO		Flare	- 1	Reading:	ρpm
	escription:	Flare		11	ppm

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L. Colla	D V TT VT L	a strate and	- Charles	Taking 1	Service for	No. and I want and	are the second	Contraction of the local division of the loc
C. C. C.	EVEL D	ervices	A STATE	A . (	-0 A A 7/2 (		A DOM: NO	DIGNG

		CALIBRATION AN	ONS MONIT		
Date:	11-7-2	·[	Site Name:	Somma	
Inspector(s)	Robert M		Instrument:	TVA 2020	
WEATHER OBSI	ERVATIONS			24	
Wind Speed:	МРН	Wind Direction:	_	Barometric 30	"Hg
Air Temperature:	<u>57</u> °F	General Weathe Conditions	/ /////	/	
CALIBRATION IN	FORMATION				
Pre-monitoring Ca	alibration Precision Check				
recision must be	less than or equal to 10% of Number:	the calibration gas value.		alibration gas as a percentage.	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Co	ncCal Gas Reading   Ri	esponse Time (sec
2	0	440		2	3
3	0	500		0	a.
		= 100%-			
		= 94.8	~	′500 x 100%	
pan Sensitivity:		alle	~	′500 x 100%	
rial 1:	ts Observed for the Span=_	= 014.8	Trial 3:	'500 x 100% s Observed for the Span=	0/2
r <mark>ial 1:</mark> Coun Counte	its Observed for the Span=	= 014.8	Trial 3: Count		1020
r <mark>ial 1:</mark> Coun Counte	,	= 014.8	Trial 3: Count	s Observed for the Span=	1030
rial 1: Coun <u>Counte</u> ial 2: Coun	ers Observed for the Zero=	= 014.8	Trial 3: Count	s Observed for the Span=	1030
rial 1: Coun <u>Counte</u> ial 2: Coun	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero=	= 014.8	Trial 3: Count	s Observed for the Span=	1012 1030
tial 1: Counte tal 2: Counte st Monitoring Cal	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero=	= 014.8	Trial 3: Count	s Observed for the Span=	1012 1030
rial 1: Counte <u>Counte</u> Counte Counte	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero=	= 99.8 129708 4055 128770 7012	Trial 3: Count Counter	s Observed for the Span=	1030
rial 1: Counte ial 2: Counte st Monitoring Cal ro Air ading:	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= ibration Check	= 99.8 129708 4055 1287 7 0 7012 Cal Gas	Trial 3: Count Counter	s Observed for the Span=	1030
rial 1: Counte ial 2: Counte st Monitoring Cal ro Air ading:	ers Observed for the Zero= ts Observed for the Span=_ ers Observed for the Zero= ibration Check ppm NCENTRATIONS CHECKS	= 99.8 129708 1055 128770 1012 Cal Gas Reading:	Trial 3: Counter	s Observed for the Span=	1030
rial 1: Counte ial 2: Counte counte st Monitoring Cal ro Air ading:	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= ibration Check D ppm NCENTRATIONS CHECKS scription:	= 99.8 129.708 1055 1287 7 0 1012 Cal Gas Reading:	Trial 3: Counter	s Observed for the Span= $\frac{1}{2}$ s Observed for the Zero=	1030

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S. A. K. A.	ABARAS		- 1 - H - H - H - H		ALL R. C. S. Z.	• P • • • • - 3! • h //	 Hall do I

		SURFACE EMISS			
	1104-71			Somoma	
Date:	nom	1 CAM	Site Name:	0	
Inspector(s):	2941 611	62001	instrument:	TVA 2020	
WEATHER OBS	ERVATIONS				
	6	Wind		Barometric 20	
Wind Speed:	МРН	Direction:	÷	Pressure: 79	"Hg
Air	87	General Weathe	1 1 11/1	14	
Temperature:	₽/°₣	Condition	s: C/ YV/M	1	
CALIBRATION IN	NFORMATION				
Pre-monitoring C	alibration Precision Check				
Procedure Calibr	ate the instrument Make	e a total of three measureme	nto bu alternatio	a same air and the collination	n an
and calculate the	average algebraic differe	nce between the instrument	reading and the	calibration gas as a percent	rgas, Record the redaing. age. The calibration
precision must be	less than or equal to 10%	of the calibration gas value	5		
nstrument Serial	Number: <u>74</u>	20		Cal Gas Concentration	500ppm
rial	Zero Ajc Reading	Cal Gas Reading	I Cal Gas (	Conc,-Cal Gas Reading	Response Time (second
1	19	990	10010000		2
2	·h	500		0	- EL
	1.1.	601		4	7
alibration Precisi	on= Average Difference/C	Average Difference; al Gas Conc. X 100%	*Perform recalibratio	n if average difference is greater than 1	0
alibration Precisi	on= Average Difference/C		*Perform recalibratio	n if average difference is greater than 1	0
	on= Average Difference/C	al Gas Conc. X 100%	*Perform recalibratio		0
pan Sensitivity:	on= Average Difference/C	al Gas Conc. X 100% = 100%- - 001. 8	%		0
pan Sensitivity: rial 1:	on= Average Difference/C	al Gas Conc. X 100% = 100% = 99.8	% Trial 3:		
pan Sensitivity: r <b>ial 1:</b> Cour	nts Observed for the Span	tal Gas Conc. X 100% = 100% = $09.8$ = $100\%$	% Trial 3: Cour	/500 x 100%	
oan Sensitivity: rial 1: Court Count ial 2:	nts Observed for the Span ers Observed for the Zero	fal Gas Conc. X 100% $= 100%$ $= 99.8$ $= 100%$ $= 100%$ $= 99.8$	% Trial 3: Cour	_/500 x 100%	
oan Sensitivity: rial 1: Court Count ial 2:	nts Observed for the Span	fal Gas Conc. X 100% $= 100%$ $= 99.8$ $= 100%$ $= 100%$ $= 99.8$	% Trial 3: Cour	/500 x 100%	
oan Sensitivity: rial 1: Cour <u>Count</u> ial 2: Cour	nts Observed for the Span ers Observed for the Zero	al Gas Conc. X 100% $= 100%$ $= 99.8$ $= 1409/1$ $= 3742$ $= 141077$	% Trial 3: Cour	/500 x 100%	
oan Sensitivity: rial 1: Count <u>ial 2:</u> Count Count	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero	al Gas Conc. X 100% $= 100%$ $= 99.8$ $= 1409/1$ $= 3742$ $= 141077$	% Trial 3: Cour	/500 x 100%	
oan Sensitivity: rial 1: Count ial 2: Count count est Monitoring Ca	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero	al Gas Conc. X 100% $= 100%$ $= 099.8$ $= 099.8$ $= 099.8$ $= 099.8$ $= 099.8$ $= 099.8$	% Trial 3: Cour	/500 x 100%	
oan Sensitivity: <b>ial 1:</b> Count <b>ial 2:</b> Count st Monitoring Ca ro Air	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero	Cal Gas Conc. X 100% = 100% = $99.8$ = $1409/1/$ = $3742$ = $17/027$ Cal Gas	% Trial 3: Cour	_/500 x 100% nts Observed for the Span=_ ers Observed for the Zero=	
oan Sensitivity: rial 1: Count rial 2: Count ost Monitoring Ca ro Air rading:	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero dibration Check	Eal Gas Conc. X 100% = 100% = $099.8$ = $140911$ = $3742$ = $141077$ = $3742$ Gal Gas Reading.	% Trial 3: Cour	/500 x 100%	
pan Sensitivity: rial 1: Count rial 2: Count set Monitoring Ca ero Air eading:	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero dibration Check	cal Gas Conc. X 100% = 100%- = $99.8$ = $140911$ = $3792$ = $171077$ = $37939$ Cal Gas Reading.	% Trial 3: Cour	_/500 x 100% nts Observed for the Span=_ ers Observed for the Zero=	
pan Sensitivity: rial 1: Count rial 2: Count set Monitoring Ca ero Air eading:	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero dibration Check	al Gas Conc. X 100% $= 100%$ $= 99.8$ $= 99.8$ $= 140911$ $= 3792$ $= 171077$ $= 37939$ Cal Gas Reading.	% Trial 3: Count Count	_/500 x 100% hts Observed for the Span= ers Observed for the Zero=	
pan Sensitivity: rial 1: Count rial 2: Count ist Monitoring Ca st Monitoring Ca ading: CKGROUND CC	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero dibration Check DRCENTRATIONS CHECK escription	cal Gas Conc. X 100% = 100%- = $99.8$ = $140911$ = $3792$ = $171077$ = $37939$ Cal Gas Reading.	% Trial 3: Count Count	_/500 x 100%  Ints Observed for the Span= ers Observed for the Zero=  ppm Reading:	14/036 3748
ban Sensitivity: ial 1: Count ial 2: Count ist Monitoring Ca ro Air ading: CKGROUND CC wind Location Do wnwind Location	nts Observed for the Span ers Observed for the Zero nts Observed for the Span ers Observed for the Zero dibration Check ppm DNCENTRATIONS CHECK escription: n Description:	al Gas Conc. X 100% $= 100%$ $= 99.8$ $= 99.8$ $= 140911$ $= 3792$ $= 171077$ $= 37939$ Cal Gas Reading.	% Trial 3: Count Count	_/500 x 100% hts Observed for the Span= ers Observed for the Zero= ppm Reading:	14/036 3798

		SURFACE EMISS			
	11-11-11	CALIBRATION AN		Colocha I	
Date:	12-04-61		Site Name:	SIMAMA	
nspector(s)	Liam MCG	51MM	Instrument:	TVA 2020	
<b>WEATHER OBSER</b>	VATIONS	1		14	
	6	Wind V		Barranatain D. D.	
Wind Speed:	ОМРН	Direction:		Barometric <b>9</b> 0 Pressure:	"Hg
Air	67	General Weathe	r Clola	-10/	
Temperature:	°F	Condition	s: <u>6/940</u>	17	
ALIBRATION INF	ORMATION				
re-monitoring Cali	bration Precision Check				
rocedure: Calibrati	e the instrument Make a	total of three measureme	nts hy alternatio	g zero air and the calibration g	ac Bacard the reading
nd calculate the av	verage algebraic differenc	e between the instrument	reading and the	g zero air and the calibration g calibration gas as a percentag	e. The calibration
recision must be le	rss than or equal to 10% oj	f the calibration gas value.			
strument Serial No	umber: 12-7	-3		Cal Gas Concentration:	500ppm
ial	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (secon
2	9	198		2	3
		177			4
3	1	501		1	Z
	– Average Difference/Cal	Average Difference:	*Perform recalibratio	n if average difference is greater than 10	
	= Average Difference/Cal	Average Difference: Gas Conc. X 100%	*Perform recalibratio	/ n if average difference is greater than 10 /500 x 100%	
	– Average Difference/Cal	Average Difference: Gas Conc. X 100%			3
libration Precision	= Average Difference/Cal	Average Difference: Gas Conc. X 100%	<u> </u>		
libration Precision an Sensitivīty: al 1:	= Average Difference/Cal	Average Difference: Gas Conc. X 100% = 100%- = <b>99.7</b>	<b>1.3</b> % Trial 3:		3
libration Precision an Sensitivity: al 1: Counter		Average Difference: Gas Conc. X 100% = 100%- = <b>99.7</b>	<b>1.3</b> % Trial 3: Cour	/500 x 100%	3 126408 2971
libration Precision an Sensitivīty: al 1: Counter Counters al 2:	5 Observed for the Span=	Average Difference: Gas Conc. X 100% = 100%- = 99,7 126178 2976	<b>1.3</b> % Trial 3: Cour	/500 × 100%	3 126408 2971
libration Precision an Sensitivity: al 1: Counts Counter: al 2: Counts	s Observed for the Span= s Observed for the Zero= s Observed for the Span=	Average Difference: Gas Conc. X 100% = 100%- = 99,7 126178 2976	<b>1.3</b> % Trial 3: Cour	/500 × 100%	3 126408 2971
libration Precision an Sensitivīty: al 1: Counts <u>Counters</u> al 2: Counts	S Observed for the Span= S Observed for the Zero= S Observed for the Span= S Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100%- = 99,7 126178 2976	<b>1.3</b> % Trial 3: Cour	/500 × 100%	3 126408 2971
libration Precision an Sensitivīty: al 1: Counter Counters Counters Counters	S Observed for the Span= S Observed for the Zero= S Observed for the Span= S Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100%- = 99,7 126178 2976	<b>1.3</b> % Trial 3: Cour	/500 × 100%	3 126408 2971
libration Precision an Sensitivity: al 1: Counter Counters Counters t Monitoring Calit	s Observed for the Span= s Observed for the Zero= s Observed for the Span= s Observed for the Zero= oration Check	Average Difference: Gas Conc. X 100% = $100\%$ = $99.7$ 126178 2976 126399 126399 2964 Cal Gas	<b>1.3</b> % Trial 3: Cour	/500 x 100% hts Observed for the Span= ers Observed for the Zero=	3 126408 2971
libration Precision an Sensitivity: al 1: Counts Counters al 2: Counters it Monitoring Calits o Air ding:	s Observed for the Span= s Observed for the Zero= s Observed for the Span= s Observed for the Zero= oration Check	Average Difference: Gas Conc. X 100% = 100%- = $99.7$ 126178 2976 126399 2964 Cal Gas Reading:	<b>1.3</b> % Trial 3: Cour	/500 × 100%	3 126408 2971
libration Precision an Sensitivity: al 1: Counter Counter al 2: Counters t Monitoring Calib o Air nding: CKGROUND CON	s Observed for the Span= s Observed for the Zero= c Observed for the Span= s Observed for the Zero= oration Check	Average Difference: Gas Conc. X 100% = 100%- = $99.7$ 126178 2976 126399 126399 2964 Cal Gas Reading:	I.3 % Trial 3: Count Count	/500 x 100% hts Observed for the Span= ers Observed for the Zero=	3 126408 2971
libration Precision an Sensitivity: al 1: Counts Counters al 2: Counters it Monitoring Calits o Air ding:	s Observed for the Span= s Observed for the Zero= c Observed for the Span= s Observed for the Zero= oration Check	Average Difference: Gas Conc. X 100% = 100%- = $99.7$ 126178 2976 126399 126399 2964 Cal Gas Reading:	I.3 % Trial 3: Count Count	/500 x 100% hts Observed for the Span= ers Observed for the Zero=	3 126408 2971
libration Precision an Sensitivity: al 1: Counter Counter al 2: Counters t Monitoring Calib o Air nding: CKGROUND CON	S Observed for the Span= S Observed for the Zero= Observed for the Span= S Observed for the Zero= oration Check ppm CENTRATIONS CHECKS cription:	Average Difference: Gas Conc. X 100% = 100%- = $99.7$ 126178 2976 126399 2964 Cal Gas Reading:	I.3 % Trial 3: Count Count	/500 x 100% hts Observed for the Span= ers Observed for the Zero=	3 126408 2971

SCS DataServices - Secure Environmental Data	SCS DataSe	rvices - S	ecure Enviro	amental Data	- Hunt mi	
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Date: Inspector(s): WEATHER OBSERVATIONS Wind Speed: Air Temperature: 67 °F CALIBRATION INFORMATION Pre-monitoring Calibration Precision Check	Wind Direction: General Weath Condition		Son om TVA 2020 Barometric Pressure: 30	102 13 "Hg
Wind Speed: MPH Air Temperature: °F CALIBRATION INFORMATION	Wind Direction:	er l la	TVA 2020 Barometric	17
Wind Speed: 6 MPH Air Temperature: 67 °F CALIBRATION INFORMATION	Direction:			.13 "Нg
Air Temperature: <u>67</u> °F CALIBRATION INFORMATION	Direction:			"Нg
CALIBRATION INFORMATION				
re-monitoring Calibration Precision Check				
nd calculate the average algebraic difference l recision must be less than or equal to 10% of the strument Serial Number:			Cal Gas Concentrati	
ial Zero Air Reading	Cal Gas Reading	Cal Gas Co	oncCal Gas Reading	Response Time (second
1 ( 2 <b>D</b>	502			
3 /	501		r	
libration Precision= Average Difference/Cal Ga			if average difference is greater	than 10
llibration Precision= Average Difference/Cal Ga	is Conc. X 100% = 100% = <b>99.7</b>		if average difference is greater	than 10
an Sensitivity:	= 100%	- <u>l.3</u> %		than 10
an Sensitivity:	= 100% = <b>99</b> .7	- <u>l.3</u> %	/500 x 100%	an= <u>110346</u>
ban Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero≃	= 100% = <b>99</b> .7	- <u>l.3</u> % <u>Trial 3:</u> Coun	/500 x 100%	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero≃	= 100% = 99.7 10263 4638	- <u>l.3</u> % <u>Trial 3:</u> Coun	/500 x 100% ts Observed for the Sp	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span=	= 100% = 99.7 10263 4638	- <u>l.3</u> % <u>Trial 3:</u> Coun	/500 x 100% ts Observed for the Sp	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero=	= 100% = 99.7 10263 4638 16317	- <u>l.3</u> % <u>Trial 3:</u> Coun	/500 x 100% ts Observed for the Sp	an= <u>110346</u>
Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check	= 100% = 99.7 10263 4638 16317 4627	- <u>l.3</u> % <u>Trial 3:</u> Coun	/500 x 100% ts Observed for the Sp	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check	= 100% = 99.7 10263 1638 16317 1627 1627	Trial 3: Counte	/500 x 100% ts Observed for the Sp rs Observed for the Ze	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero= St Monitoring Calibration Check ro Air ading:	= 100% = 99.7 10263 4638 16317 4627	Trial 3: Counte	/500 x 100% ts Observed for the Sp	an= <u>110346</u>
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check ro Air	= 100% = 99.7 10263 1638 16317 1627 1627	Trial 3: Counte	/500 x 100% ts Observed for the Sp rs Observed for the Ze	an= <u>110346</u>

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-1	el		D	14	16 S	A.V.	150	0.5	100	NEW MILL	10	Envin		1.00	IN THE R O	1.1		<b>Balic</b>	
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		SURFACE EMISS			<b>a t</b>
	11 11 2 2	CALIBRATION A	NU PERIINEI		Post
Date:	11-9-2		Site Name:	Sonoma	
Inspector(s):	Bryano		Instrument:	TVA 2020	
WEATHER OF	BSERVATIONS			ix.	
Wind Speed	d:МРН	Wind Direction:	-	Barometric Pressure: 30	"Hg
A Temperature		General Weatl Conditio		<u></u>	
CALIBRATION	INFORMATION				
Pre-monitoring	g Calibration Precision Check				
and calculate ti	ibrate the instrument. Make a he average algebraic differenc be less than or equal to 10% oj ial Number:	e between the instrumer	it reading and the i	calibration gas as a percento	gos: Necora the reading r
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	ConcCal Gas Reading	Response Time (seco
1 2	8	502		2	\$
3	ľ í	500		0	7
Calibration Prec	ision= Average Difference/Cal	Average Difference: Gas Conc. X 100%	*Perform recalibration	n if average difference is greater than 1	<b>.</b>
Calibration Prec	ision= Average Difference/Cal		,	n if average difference is greater than 1	
		Gas Conc. X 100% = 1009 <b>= 99 %</b>	,		
Span Sensitivity: Trial 1:		Gas Conc. X 100% = 1009 = <b>99.8</b>	% 7		123572
Span Sensitivity: Trial 1: Cou		Gas Conc. X 100% = 1009 = 99.8 12-1 0 78	6% <u>Trial 3:</u> Cour	/500 x 100%	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Co	ounts Observed for the Span= <u>nters Observed for the Zero=</u> punts Observed for the Span=	Gas Conc. X 100% = 1009 = 99.8 121078 3386 123669	6% <u>Trial 3:</u> Cour	_/500 x 100% hts Observed for the Span=_	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Co	ounts Observed for the Span= nters Observed for the Zero=	Gas Conc. X 100% = 1009 = 99.8 121078 3386 123669	6% <u>Trial 3:</u> Cour	_/500 x 100% hts Observed for the Span=_	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Cou Cou	ounts Observed for the Span= <u>nters Observed for the Zero=</u> punts Observed for the Span=	Gas Conc. X 100% = 1009 = 99.8 121078 3386 123669	6% <u>Trial 3:</u> Cour	_/500 x 100% hts Observed for the Span=_	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Cou Cou	ounts Observed for the Span= inters Observed for the Zero= ounts Observed for the Span= inters Observed for the Zero=	Gas Conc. X 100% = 1009 = 99.8 121078 3386 123669	6% <u>Trial 3:</u> Cour	_/500 x 100% hts Observed for the Span=_	12-3572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Cou Cour Courtion of the sense o	ounts Observed for the Span= inters Observed for the Zero= ounts Observed for the Span= inters Observed for the Zero=	Gas Conc. X 100% = 1009 = 99.8 12-1078 3386 12-3669 32-91	6- % Trial 3: Court Counte	_/500 x 100% hts Observed for the Span=_	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Co Cou Cou Cou Cou Cou Cou Cou	ounts Observed for the Span= Inters Observed for the Zero= ounts Observed for the Span= Inters Observed for the Zero= Calibration Check	Gas Conc. X 100% = 1009 = 99.8 12-1 0 78 3386 12-3669 32-91 Cal Gas	6- % Trial 3: Court Counte	_/500 x 100% hts Observed for the Span=_ ers Observed for the Zero=	123572 3
Span Sensitivity: Trial 1: Cou Cou Trial 2: Co Cou Cou Cou Cou Cou Cou Cou	ounts Observed for the Span= inters Observed for the Zero= ounts Observed for the Span= inters Observed for the Zero= Calibration Check ppm CONCENTRATIONS CHECKS	Gas Conc. X 100% = 1009 = 99.8 12-1 0 78 3386 12-3669 32-91 Cal Gas	6%Courte	_/500 x 100% hts Observed for the Span=_ ers Observed for the Zero=	م ا <u>کح 3 57 ک</u> <u>3</u>
Span Sensitivity: Trial 1: Cou Cou Trial 2: Cou Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour Cour	ounts Observed for the Span= inters Observed for the Zero= ounts Observed for the Span= inters Observed for the Zero= Calibration Check Concentrations checks Description:	Gas Conc. X 100% = 1009 = 99.8 12-1 0 78 33.86 12-3669 32-91 Cal Gas Reading:	6 % Courte  500	/500 x 100% hts Observed for the Span= ers Observed for the Zero=	ρm ρm

		SURFACE EMISSI			Post
Date:	11-4-21		Site Name:	Sonoma	-
Inspector(s):	Robert M		Instrument: T	VA 2020	
WEATHER OBSE	RVATIONS				
Wind Speed:	6МРН	Wind Direction:		arometric Pressure: <u>30</u>	"Hg
Air Temperature: _	67 .	General Weather Conditions			
CALIBRATION IN	FORMATION				
re-monitoring Ca	libration Precision Check				
strument Serial I	average algebraic difference less than or equal to 10% of t Number:	the calibration gas value.		ation gas as a percentag	ge. The calibration
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Conc	Cal Gas Reading	Response Time (second
2	2	499	1		3
3	0	500	C	>	3
		= 100%- = <b>99.7</b>		) x 100%	
an Sensitivity:		1 /*/			
ial 1: Coun	its Observed for the Span=	131126	Trial 3: Counts Ol	oserved for the Span=	131152
Counte	ers Observed for the Zero=	3912	Counters O	bserved for the Zero=	3890
	ts Observed for the Span=	3/147			
Counte	ers Observed for the Zero=	3846			
st Monitoring Cal		.,			
o Air	•	Cal Gas	_		
ading:	<b>D</b> ppm	Reading:	500 ppm		
CKGROUND CO	NCENTRATIONS CHECKS				
wind Location De	scription:	Flare Intrance	Read	ing: <u>12</u> pp	m
wnwind Location	Description	intrance	Read	ing:pp	m
exc	nd speed averages were obse eeded 20 miles per hour. No	erved to remain below the rainfall had occurred wit within the requested alte	hin the previous 24 h	ours of the monitoring e	event. Therefore, site

S 1.		SURFACE EMISSI			
Date:	11-5-2	1	Site Name:	Sonomo	
Inspector(s)	Bryan o		Instrument:	TVA 2020	
WEATHER	OBSERVATIONS			w	
Wind Spe	eed: <u>3</u> MPH	Wind Direction: NU	-	Barometric Pressure: <u>30</u>	"Hg
Temperat	Air <u>56</u> <sub>"F</sub>	General Weather Conditions:		_	
CALIBRATIC	ON INFORMATION				
Pre-monitori	ing Calibration Precision Check				
precision mu	e the average algebraic differen ist be less than or equal to 10% of erial Number:	of the calibration gas value.	eading and the	Cal Gas Concentration:	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	concCal Gas Reading	Response Time (second
2	i	499		T	3
3		500		0	3
		= 100%- = <b>99.8</b>	%	/500 x 100%	
oan Sensitivi	ty:				
rial 1:	Counts Observed for the Span=	120642	Trial 3: Cour	nts Observed for the Span=	12712
	ounters Observed for the Zero=	3227	Counte	ers Observed for the Zero=	32-58
rial 2:	Counts Observed for the Span=	120673			
Co	ounters Observed for the Zero=	3242			
st Monitorir	ng Calibration Check				
ast womeon	<u>^</u>	Cal Gas	500		
	()		300	ррт	
ro Air	ppm	Reading:			
ro Air ading:	D CONCENTRATIONS CHECKS	5			
ro Air ading: ACKGROUN		5		Reading:	ıpm
ero Air eading: ACKGROUN pwind Locatio	D CONCENTRATIONS CHECKS			14	pm

and the	-	-		-	the second second		And and all the second	The rest of the local division in which the	and the second se	and the second s		the laws and
a Call	10	1.00	and the second second	1. Same	States and see	I A MARKED AT A STATE OF A STATE	The second	and the second second	and the second s	- Auguren	Section 2.	No. 11 MI
X	- 21	001	otifula	Y = M = A	AT ALLEY	- Secure	E IN WITH A	TANAN STATEMAN	31.68.	I PARSA	Concerns of	- CA C -
	-		and the second second	Contraction of the second							-	

10 million - 10 mi		CALIBRATION AN	D PERTINEN	IT DATA	
Date:	11-5-2	1	Site Name:	Sonomer	
Inspector(s):	Michea	IM	Instrument:	TVA 2020	
WEATHER OBSER	VATIONS				
	z	Wind		Barometric	
Wind Speed:	МРН	Direction: NW	÷	Pressure: <u>50</u>	"Hg
Air Temperature:	56 ·F	General Weathe Conditions		_	
CALIBRATION INFO	ORMATION				
Pre-monitoring Calil	pration Precision Check	<			
Procedure: Calibrate	the instrument. Make	e a total of three measuremer	nts by alternating	gzero air and the calibration	gas. Record the read
and calculate the av	erage algebraic differe	ence between the instrument in 6 of the calibration gas value.	reading and the o	calibration gas as a percente	ge. The calibration
	5	• of the contraction gus value.			
nstrument Serial Nu	imber:			Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (sec
2	ò	500		0	3
2 3	2 = Average Difference/(	<b>500</b> <b>449</b> Average Difference:	*Perform recalibration	•7 • If average difference is greater than 1	3
2 3	2 = Average Difference/0	500 449 Average Difference: Cal Gas Conc. X 100% = 100%- - 444 Q	-1	i .7	3
2 3	2 = Average Difference/C	Average Difference:	-1	o if average difference is greater than 1	3
2 3 Calibration Precision: pan Sensitivity: rial 1:		500 449 Average Difference: Cal Gas Conc. X 100% = 100%- = 99.8	• 7 % Trial 3:	1 o if average difference is greater than 1 /500 × 100%	
2 3 Calibration Precision: pan Sensitivity: rial 1:	Average Difference/O	500 449 Average Difference: Cal Gas Conc. X 100% = 100%- = 99.8	• 7 % Trial 3:	o if average difference is greater than 1	N 44: D
2 3 Calibration Precision pan Sensitivity: rial 1: Counters		500 449 Average Difference: Cal Gas Conc. X 100% = 100%- = 99,8 n= 109795	• 7 % <u>Trial 3:</u> Cour	1 o if average difference is greater than 1 /500 × 100%	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters rial 2:	Observed for the Spar	$\frac{500}{449}$ Average Difference: Cal Gas Conc. X 100% $= 100\%$ $= 99.8$ $n = 109.795$ $p = 1576$	• 7 % <u>Trial 3:</u> Cour	1 o if average difference is greater than 1 /500 x 100% hts Observed for the Span=_	
2 3 Calibration Precision pan Sensitivity: rial 1: Counts Counters rial 2: Counts	Observed for the Spar	$\frac{500}{449}$ Average Difference: Cal Gas Conc. X 100% $= 100\%$ $= 99.8$ $m = 109795$ $m = 109795$ $m = 109795$ $m = 109811$	• 7 % <u>Trial 3:</u> Cour	1 o if average difference is greater than 1 /500 x 100% hts Observed for the Span=_	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters rial 2: Counters Counters	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero	$\frac{500}{449}$ Average Difference: Cal Gas Conc. X 100% $= 100\%$ $= 99.8$ $m = 109795$ $m = 109795$ $m = 109795$ $m = 109811$	• 7 % <u>Trial 3:</u> Cour	1 o if average difference is greater than 1 /500 x 100% hts Observed for the Span=_	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters rial 2: Counters Counters Dist Monitoring Calib	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero		• 7 % <u>Trial 3:</u> Cour	1 o if average difference is greater than 1 /500 x 100% hts Observed for the Span=_	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters rial 2: Counters Counters	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero		5 Counter	1 1 If average difference is greater than 1 /500 x 100% ats Observed for the Span=_ ers Observed for the Zero=	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters Counters rial 2: Counters Set Monitoring Calibre Part Monitoring Calibre Pro Air Part Manager Pro Air Part Manager Pro Air Pro Air Pr	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero ration Check		5 Counter	1 o if average difference is greater than 1 /500 x 100% hts Observed for the Span=_	
2 3 Calibration Precision Calibration Precision Counters	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero ration Check		5 Counter	1 1 If average difference is greater than 1 /500 x 100% ats Observed for the Span=_ ers Observed for the Zero=	
2 3 Calibration Precision pan Sensitivity: rial 1: Counters Counters rial 2: Counters Set Monitoring Calibre Part Monitoring Calibre Pro Air Part Manager Pro Air Part Manager Pro Air Pro Air Pr	Observed for the Spar Observed for the Zero Observed for the Spar Observed for the Zero ration Check		• 7 % Trial 3: Counte	ppm	

		SURFACE EMISSION			
Date:	11-5-2		ite Name:	Sonoma	i.
Inspector(s):	Robert	- M	istrument:	TVA 2020	
WEATHER OBSE	RVATIONS			15	
Wind Speed:	МРН	Wind Direction: NW		Barometric Pressure: 30	"Hg
Air Temperature:	56 .	General Weather Conditions:	clear		
CALIBRATION IN	IFORMATION				
Pre-monitoring Ca	libration Precision Check				
nstrument Serial		20		Cal Gas Concentration:	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas Cond	Cal Gas Reading	Response Time (second
2	6	200		0	3
3		501		1	3
		= 100%	/50	00 x 100%	
oan Sensitivity:					
	ts Observed for the Span=	127970 Tris	al 3: Counts (	Observed for the Span=_	128026
Cour	nts Observed for the Span=	127970 3964	Counts	Dbserved for the Span=_ Observed for the Zero=	128026
Counte		39,64	Counts	-	128026 2987
Courte <u>Counte</u> ial 2: Coun	ers Observed for the Zero=	39,64	Counts	-	128026 2987
Courte <u>ial 2:</u> Counte Counte	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero=	39,64	Counts	-	128026
Courte ial 2: Counte Counte st Monitoring Ca ro Air	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= libration Check	127970 3964 128010 9006	Counts (	– Observed for the Zero=	128026
Counte ial 2: Counte Counte St Monitoring Ca ro Air ading:	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= libration Check	127970 3964 128010 7006	Counts	– Observed for the Zero=	128026
Counte ial 2: Counte Counte Counte St Monitoring Ca ro Air ading: CKGROUND CO	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= libration Check ppm PRCENTRATIONS CHECKS	127970 3964 128010 9006	Counts (	Dbserved for the Zero=	3987
Counte rial 2: Counte Counte est Monitoring Ca ero Air eading:	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= libration Check ppm INCENTRATIONS CHECKS escription:	127970 3964 128010 9006	Counts ( Counters	Dbserved for the Zero=	12-8026 3987

I

		SURFACE EMISSIO		1051
Date:	11-5-21		Site Name: Sonc	m ch.
nspector(s)	LIAM M			
			Instrument: TVA 2020	
WEATHER (	OBSERVATIONS			
Wind Spe	eed:MPH	Wind N W Direction:	Barometric Pressure:	<b>&gt;</b> "нg
Temperatu	Air <u>65</u> *F	General Weather Conditions:	clear	
ALIBRATIO	IN INFORMATION			
Ire-monitori	ng Calibration Precision Check			
recision mus	e the average algebraic differences st be less than or equal to 10% of erial Number:		ading and the calibration gas as a p Cal Gas Concentra	
rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	Response Time (second
1		500	0	
3	0	500	2	
		= 100%	• 7 /500 x 100%	
on Constitute		- <b>7</b> 70 %		
an Sensitivit	ty:	Tr	ial 3:	Contraction of the second s
	Counts Observed for the Span=	12/221		
		16210	Counts Observed for the	Span= 126286
Co	ounters Observed for the Zero=	2644	Counts Observed for the Counters Observed for the	
Cc	ounters Observed for the Zero=	2644		
<u>cc</u> ial 2:	Counts Observed for the Span=	2644 126290		
Co ial 2: Co		2644 126290		
Co ial 2: Co st Monitorin ro Air	Counts Observed for the Span= _ punters Observed for the Zero=	2644 126290		
Co ial 2: Co st Monitorin	Counts Observed for the Span= _ punters Observed for the Zero=	2644 126290 2648		
Co ial 2: Co st Monitorin ro Air ading:	Counts Observed for the Span= ounters Observed for the Zero= ng Calibration Check	2644 126240 2678 Cal Gas Reading:	Counters Observed for the	
Co ial 2: Co st Monitorin ro Air ading: CKGROUNI	Counts Observed for the Span= punters Observed for the Zero= ng Calibration Check	2644 126240 2678 Cal Gas Reading:	Counters Observed for the	
Co ial 2: Co st Monitorin ro Air ading: CKGROUNI wind Locatio	Counts Observed for the Span= ounters Observed for the Zero= ng Calibration Check	2644 126290 2678 Cal Gas	Counters Observed for the	Zero= 2632

	·	V -	-	111-2-1	1 91	Varia!	100	1.0	0	2		100	~		11.04	-		- A.											100		1				
2	100	1	10	1 4	6 U	0 0	1	- 1	- 1	6	1.00	- 11	8	100	n co	14	- 11	-11	10.5	15 -	2 1	24	1.25	7.1	6.4	1.1	 	12.	5 11	1.0	(3)	777	100	100	

		SURFACE EMISSION CALIBRATION AND F			Post
Date;	11-5-21	C ia	-	onoma	
Inspector(s):	Bryano	<b>)</b> In:	strument:TVA 2020		
WEATHER OBSE	RVATIONS			8	
Wind Speed:	3мрн	Wind Direction: NW	Barometr Pressur		"Hg
Air Temperature: _	₩65°F	General Weather Conditions:	ilear		
CALIBRATION IN	FORMATION				
're-monitoring Ca	libration Precision Check				
nd calculate the d recision must be Istrument Serial I	less than or equal to 10% of	e between the instrument read the calibration gas value.		as as a percentage.	The calibration
rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas	Reading  Re	esponse Time (secon
2	0	494	ì		3
3	0	500	0		3
		= 100%- = 99.8%	, /500 x 100%	1	
		110			
an Sensitivity:					
ial 1:	ts Observed for the Span=_	122306 Tria	1 <u>3:</u> Counts Observed	for the Span=	22363
ial 1: Coun Counte	ts Observed for the Span=_ ers Observed for the Zero=	122-306 Tria 3078	<b>II 3:</b> Counts Observed Counters Observed	for the Span=	22363
ial 1: Coun Counte	-	3078	Counts Observed	-	22363
ial 1: Coun Counte ial 2: Coun	- ers Observed for the Zero=	3078	Counts Observed	-	22363
ial 1: Counte ial 2: Counte	ts Observed for the Zero= ts Observed for the Span=	3078	Counts Observed	-	22363
ial 1: Counte ial 2: Counte st Monitoring Cal	ts Observed for the Zero= ts Observed for the Span=	3078	Counts Observed	-	071
ial 1: Counte ial 2: Counte st Monitoring Cal ro Air ading:	ers Observed for the Zero= ts Observed for the Span= trs Observed for the Zero= ibration Check	122-306 3078 122-328 3063 Cal Gas	Counts Observed	-	22363
ial 1: Counte ial 2: Counte st Monitoring Cal st Monitoring Cal ro Air ading: CKGROUND CO	ers Observed for the Zero= ts Observed for the Span= ers Observed for the Zero= ibration Check ppm NCENTRATIONS CHECKS	122-306 3078 122-328 3063 Cal Gas Reading:	Counts Observed	-	22363
Counte ial 2: Counte Counte st Monitoring Cal ro Air ading:	ers Observed for the Zero= ts Observed for the Span= trs Observed for the Zero= ibration Check ppm NCENTRATIONS CHECKS scription:	122-306 3078 122-328 3063 Cal Gas	Counts Observed	for the Zero=	071

11	meteorological conditions were within the requested alternatives of the LMR requirements on	the above
ses	DataServices - Secure Environmental Data	

		SURFACE EMISSIC			POST
Date:	11-5-2	1	Site Name: 50	oma	
Inspector(s):	Micheal	M	Instrument:TVA 2020		
WEATHER OBS	ERVATIONS			•	
Wind Speed:	МРН	Wind Direction: NW	Barometric Pressure		lg
Air Temperature:	64 .	General Weather Conditions.	dear		
CALIBRATION I	NFORMATION				
're-monitoring C	alibration Precision Check				
recision must be Instrument Serial	e less than or equal to 10% c	ce between the instrument re of the calibration gas value.		ncentration:	500ppm
rial	Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas R	eading Respo	onse Time (seconds
1 2		500	0		3
3	2	500	6		3
libration Precisi	ion= Average Difference/Cal		Perform recalibration if average differen	ce is greater than 10	
alibration Precisi	ion= Average Difference/Cal	*1	/500 x 100%	ce is greater than 10	
	ion= Average Difference/Cal	Gas Conc. X 100% = 100%	/500 x 100%	te is greater than 10	
an Sensitīvity:	ion= Average Difference/Cal nts Observed for the Span=	Gas Conc. X 100% = $100\%$ - = $99.\%$ %	/500 x 100%	ce is greater than 10	256
<del>an Sensitīvīty:</del> ial 1: Cou Count		Gas Conc. X 100% = $100\%$ - = $99.\%$ %	/500 x 100%	or the Span=	256
an Sensitivity: ial 1: Cou <u>Count</u> ial 2:	nts Observed for the Span=	Gas Conc. X 100% = 100%	/500 × 100%	or the Span=	256
aan Sensitivity: ial 1: Cou Count ial 2: Cou	nts Observed for the Span= ers Observed for the Zero=	Gas Conc. X 100% = 100%	/500 × 100%	or the Span=	256 129
aan Sensitivity: ial 1: Cou Count ial 2: Cou	nts Observed for the Span= ters Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= 99.\%$ $\boxed{1112-36}$ $\boxed{79.7}$ $\boxed{1112-36}$ $\boxed{1112-36}$ $\boxed{1112-36}$	/500 × 100%	or the Span=	256 129
an Sensitivity: ial 1: Cou Count ial 2: Count	nts Observed for the Span= ters Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	$Gas Conc. X 100\%$ $= 100\%$ $= 99.\%$ $\boxed{1112-36}$ $\boxed{79.7}$ $\boxed{1112-36}$ $\boxed{1112-36}$ $\boxed{1112-36}$	/500 × 100%	or the Span=	256 129
an Sensitivity: ial 1: Cou Count ial 2: Count st Monitoring Ca ro Air ading:	nts Observed for the Span= ters Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= allibration Check	Gas Conc. X 100% = 100%- = 99.8 % III 2 3 G III 2 3 G III 2 4 I III 2 4 C Cal Gas Reading:	rial 3: Counts Observed for Counters Observed for	or the Span=	256 129
an Sensitivity: ial 1: Cou Count ial 2: Count st Monitoring Ca ro Air ading:	nts Observed for the Span= ters Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= alibration Check ppm DNCENTRATIONS CHECKS	Gas Conc. X 100% = 100%- = 9998 % III 2 36 TI 112 36 TI 112 41 112 41 112 41 112 41 112 41 112 241 112 241 112 26 Cal Gas Reading:	rial 3: Counts Observed for Counters Observed for	or the Span=	256 129
an Sensitivity: ial 1: Count ial 2: Count st Monitoring Ca ro Air ading: CKGROUND CC	nts Observed for the Span= eers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= alibration Check ppm DNCENTRATIONS CHECKS escription:	Gas Conc. X 100% = 100%- = 99.8 % III 2 3 G III 2 3 G III 2 4 I III 2 4 C Cal Gas Reading:	/500 x 100%	or the Span= <u>111</u> or the Zero= <u>7</u> ~	256 129

		SURFACE EMISSIC			Post
Date:	_11-5-21		Site Name:	Sonom	4
Inspector(s):	Robert M		Instrument:	TVA 2020	
WEATHER OB	SERVATIONS				
Wind Speed	н. У мрн	Wind Direction:		Barometric Pressure: <u>30</u>	"Hg
Ai Temperature		General Weather Conditions:	clear	-	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
nstrument Seria				Cal Gas Concentration:	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (second
2	2	499		1	
3	0	502		2	
libration Preci	sion= Average Difference/Cal Ga			1.3 If average difference is greater than : /500 x 100%	.0
libration Preci	sion= Average Difference/Cal Ga	as Conc. X 100%	*Perform recalibration	11.9	.0
	sion= Average Difference/Cal Ga	as Conc. X 100%		if average difference is greater than :	.0
an Sensitivity: ial 1:	sion= Average Difference/Cal Ga	as Conc. X 100% = 100%- = $99.7_{9}$	<b>1.3</b> %	if average difference is greater than :	
an Sensitivity: ial 1: Co Cour		as Conc. X 100% = 100%- = $99.7_{9}$	<b>1,3</b> % <u>Frial 3:</u> Coun	if average difference is greater than 1	
an Sensitivity: ial 1: Co Cour al 2:	unts Observed for the Span=	as Conc. X 100% = 100%- = $99.7_{9}$	<b>1,3</b> % <u>Frial 3:</u> Coun	if average difference is greater than /500 x 100% ts Observed for the Span=	
an Sensitivity: ial 1: Co Cour al 2: Co	unts Observed for the Span= nters Observed for the Zero=	as Conc. X 100% = 100%- = $99.7_{9}$	<b>1,3</b> % <u>Frial 3:</u> Coun	if average difference is greater than /500 x 100% ts Observed for the Span=	
an Sensitivity: ial 1: Cour al 2: Cour Cour	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span=	as Conc. X 100% = 100%- = $99.7_{9}$	<b>1,3</b> % <u>Frial 3:</u> Coun	if average difference is greater than /500 x 100% ts Observed for the Span=	
an Sensitivity: ial 1: Cour al 2: Cour Cour	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero=	as Conc. X 100% = 100%- = $99.7_{9}$	1.3 % Trial 3: Counte	if average difference is greater than /500 x 100% ts Observed for the Span=	
an Sensitivity: ial 1: Cour al 2: Co cour st Monitoring ( o Air ading:	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero= Calibration Check	as Conc. X 100% = $100\%$ - = $99.7_{9}$ 2-8552 3796 3796 28494 3813 Cal Gas	1.3 % Trial 3: Counte	/500 x 100% ts Observed for the Span= <u>rs Observed for the Zero=</u>	
an Sensitivity: ial 1: Cour al 2: Co cour st Monitoring ( o Air ading:	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero= Calibration Check ppm CONCENTRATIONS CHECKS	as Conc. X 100% = $100\%$ - = $99.7_{9}$ 2-8552 3796 3796 28494 3813 Cal Gas	1,3 % Trial 3: Counte	/500 x 100% ts Observed for the Span= <u>rs Observed for the Zero=</u>	
an Sensitivity: ial 1: Co Cour al 2: Co Cour St Monitoring ( o Air ading: CKGROUND ( wind Location	unts Observed for the Span= nters Observed for the Zero= unts Observed for the Span= nters Observed for the Zero= Calibration Check ppm CONCENTRATIONS CHECKS	as Conc. X 100% = $100\%$ - = $99.7_{9}$ 2-8552 3796 3796 28494 3813 Cal Gas	1,3 % Trial 3: Counte	/500 x 100% ts Observed for the Span= rs Observed for the Zero=	128536 3821

		SURFACE EMISS			
Date:	11-5-2		Site Name:	Sonom	(h .
Inspector(s):	Liam M		Instrument:	TVA 2020	
WEATHER OBS					
Wind Speed:	3МРН	Wind Direction:	_	Barometric Pressure:	.**
Air Temperature:	56 °F	General Weathe Conditions		_	
CALIBRATION IN	NFORMATION				
Pre-monitoring C	alibration Precision Check				
precision must be	Number:	f the calibration gas value.	1.4	Cal Gas Concentration:	500ppm
Trial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (secor
2	0	500		0	3
3	2				
	on= Average Difference/Cal	Average Difference: Gas Conc. X 100%	*Perform recalibration	n if average difference is greater than 1	<b></b>
	on= Average Difference/Cal	Average Difference: Gas Conc. X 100% = 100%-	.3	•3	<b></b>
Calibration Precisi	on= Average Difference/Cal	Average Difference: Gas Conc. X 100%	.3	n if average difference is greater than 1	<b></b>
Calibration Precisi pan Sensitivity: rial 1:		Average Difference: Gas Conc. X 100% = 100%- = 99.9	• <u>3</u> % Trial 3:	n if average difference is greater than 1	
Calibration Precisi Pan Sensitivity: Frial 1: Cour	nts Observed for the Span=	Average Difference: Gas Conc. X 100% = 100%- = 99,9 125781	• 3 % Trial 3: Cour	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Frial 1: Count		Average Difference: Gas Conc. X 100% = 100%- = 99,9 125781	• 3 % Trial 3: Cour	n if average difference is greater than 1	1258/1
Calibration Precisi Span Sensitivity: Trial 1: Count Trial 2:	nts Observed for the Span=	Average Difference: Gas Conc. X 100% = 100%- = 99,9 125781 2746	• 3 % Trial 3: Cour	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Trial 1: Count Trial 2: Court	nts Observed for the Span= ers Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99.9 125781 2746 12586	• 3 % Trial 3: Cour	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Frial 1: Count Frial 2: Court	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99.9 125781 2746 125866	• 3 % Trial 3: Cour	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Trial 1: Count Trial 2: Count Count ost Monitoring Ca	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99.9 125781 2746 12586 2739	• 3 % Trial 3: Cour	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Trial 1: Count Trial 2: Count	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99.9 125781 2746 125866	% Trial 3: Counte	1 if average difference is greater than 1 /500 x 100%	1258/1
Calibration Precisi Span Sensitivity: Frial 1: Count Trial 2: Count Count ost Monitoring Ca ero Air eading:	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= alibration Check	Average Difference: Gas Conc. X 100% = 100%- = 99.9 125781 2746 12586 2739 Cal Gas	% Trial 3: Counte	h if average difference is greater than 1 /500 x 100% hts Observed for the Span=_ ers Observed for the Zero=	1258/1
Calibration Precisi Span Sensitivity: Frial 1: Count Trial 2: Count Count ost Monitoring Ca ero Air eading:	nts Observed for the Span= ers Observed for the Zero= nts Observed for the Span= ers Observed for the Zero= alibration Check ppm DNCENTRATIONS CHECKS	Average Difference: Gas Conc. X 100% = 100%- = 99.9 125781 2746 12586 2739 Cal Gas	% Trial 3: Counte Counte	n if average difference is greater than 1 /500 x 100% Ints Observed for the Span= ers Observed for the Zero=	1258/1

		SURFACE EMISSIO			
Date:	11-8-2	-1	Site Name:	Sonoma	-
Inspector(s):	Lucan N	1	Instrument:	TVA 2020	
WEATHER OB			instrument.		
Wind Speed	:МРН	Wind Direction:	-	Barometric Pressure:	"Hg
Air Temperature:		General Weather Conditions:		-	
CALIBRATION	INFORMATION				
Pre-monitoring	Calibration Precision Check				
Procedure: Calib	prate the instrument Make	e a total of three measuremen	ts hy alternation	zero air and the calibration	age Record the seedin
and calculate th	e average algebraic differe.	nce between the instrument r	eading and the o	calibration gas as a percenta	gas. Record the redain ge. The calibration
precision must b	e less than or equal to 10%	of the calibration gas value.			
nstrument Seria	I Number: 12	23		Cal Gas Concentration:	500ppm
Trial	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (secon
1	6	700		0	3
2	0	502		2	3
alibration Precis	sion= Average Difference/C		*Perform recalibration	1.3 If average difference is greater than 10	/
alibration Precis	sion= Average Difference/C		*Perform recalibration	1. 2	
alibration Precis	sion= Average Difference/C	al Gas Conc. X 100%	*Perform recalibration	if average difference is greater than 10	
pan Sensitivity: rial 1:	sion= Average Difference/C unts Observed for the Span	al Gas Conc. X 100% = 100%- = 99-79	<b>1</b> 3 %	if average difference is greater than 10	
oan Sensitivity: ial 1: Cou	unts Observed for the Span	al Gas Conc. X 100% = $100\%$ - = $99-7$ = $12-7.281$	<mark>الع عام الع مع الع م Coun</mark>	if average difference is greater than 10 /500 x 100% ts Observed for the Span=	
pan Sensitivity: r <mark>ial 1:</mark> Cou Coun <b>ial 2:</b>	unts Observed for the Span ters Observed for the Zero	al Gas Conc. X 100% = $100\%$ - = $99-7$ 9 = $12-7381$ = $2829$	<mark>الع عام الع مع الع م Coun</mark>	if average difference is greater than 10	
oan Sensitivity: 'ial 1: Cou Coun ial 2: Cou	unts Observed for the Span ters Observed for the Zero ants Observed for the Span	al Gas Conc. X 100% = $100\%$ = $99-7$ = $127281$ = $2829$ = $127426$	<mark>الع عام الع مع الع م Coun</mark>	if average difference is greater than 10 /500 x 100% ts Observed for the Span=	
ban Sensitivity: r <u>ial 1:</u> Cou <u>Coun</u> ial 2: Cou Coun	unts Observed for the Span ters Observed for the Zero ants Observed for the Span ters Observed for the Zero	al Gas Conc. X 100% = $100\%$ = $99-7$ = $127281$ = $2829$ = $127426$	<mark>الع عام الع مع الع م Coun</mark>	if average difference is greater than 10 /500 x 100% ts Observed for the Span=	
pan Sensitivity: rial 1: Cou coun ial 2: Cou coun	unts Observed for the Span ters Observed for the Zero ants Observed for the Span	al Gas Conc. X 100% = $100\%$ - = $99-79$ = $127381$ = $2829$ = $127926$ = $2835$	<mark>الع عام الع مع الع م Coun</mark>	if average difference is greater than 10 /500 x 100% ts Observed for the Span=	
ban Sensitivity: r <u>ial 1:</u> Cou <u>Coun</u> ial 2: Cou Coun	unts Observed for the Span ters Observed for the Zero ants Observed for the Span ters Observed for the Zero	al Gas Conc. X 100% = $100\%$ = $99-7$ = $127281$ = $2829$ = $127426$	k3 % Trial 3: Counte	if average difference is greater than 10 /500 x 100% ts Observed for the Span=	
pan Sensitivity: rial 1: Coun ial 2: Coun tat Monitoring C ro Air ading:	unts Observed for the Span iters Observed for the Zeros ants Observed for the Spans ters Observed for the Zeros alibration Check	al Gas Conc. X 100% = $100\%$ - = $99-7$ = $127381$ = $2829$ = $127926$ = $2835$ Cal Gas Reading:	k3 % Trial 3: Counte	if average difference is greater than 10 /500 x 100% ts Observed for the Span= ers Observed for the Zero=	
pan Sensitivity: rial 1: Coun ial 2: Coun tat Monitoring C ro Air ading:	unts Observed for the Span ters Observed for the Zeros unts Observed for the Span ters Observed for the Zeros alibration Check	al Gas Conc. X 100% = $100\%$ - = $99.79$ = $127.781$ = $2.829$ = $127.926$ = $127.926$ = $2.835$ Cal Gas Reading: S Theo Co	<mark>I 3</mark> % Гrial 3: Counte	if average difference is greater than 10 /500 x 100% ts Observed for the Span= ers Observed for the Zero=	124435 2840
Dan Sensitivity: Tial 1: Cou Coun tal 2: Cou Coun tal 2: Cou Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Coun Co	unts Observed for the Span ters Observed for the Zeros ants Observed for the Spans ters Observed for the Zeros falibration Check OCCENTRATIONS CHECK Description:	al Gas Conc. X 100% = $100\%$ - = $99-7$ = $127381$ = $2829$ = $127926$ = $2835$ Cal Gas Reading:	<mark>I 3</mark> % Гrial 3: Counte	if average difference is greater than 10 /500 x 100% ts Observed for the Span= ers Observed for the Zero=	124435 2840

		CALIBRATION AN	IONS MONI		Post
Date:	11-8-21		Site Name:	Gonoma	
Inspector(s):	Liam M		Instrument:	TVA 2020	
WEATHER OBSER	VATIONS				
Wind Speed:	Мрн	Wind F	_	Barometric Pressure: 30	"Hg
Air Temperature:	42°F	General Weathe Condition		-	
	ORMATION				
Pre-monitoring Cali	bration Precision Check				
	ss than or equal to 10% o	f the calibration gas value		calibration gas as a percentage	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas C	oncCal Gas Reading	Response Time (see
2	0	501		<i>i</i>	5
	1	r.		0	2
3	= Average Difference/Cal		_	if average difference is greater than 10	
alibration Precision	= Average Difference/Cal	Average Difference: Gas Conc. X 100%		.7	
alibration Precision pan Sensitivity: ial 1:		Average Difference: Gas Conc. X 100% = 100%- = 9988	<b>7</b> % <u>Trial 3:</u>	/500 x 100%	12/ 52 3
alibration Precision ban Sensitivity: ial 1: Counts	Observed for the Span=	Average Difference: Gas Conc. X 100% = 100%- = 9988		10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	126523
alibration Precision ban Sensitivity: ial 1: Counts Counters ial 2:	Observed for the Span= Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 126571 2710		/500 x 100%	126523
alibration Precision ban Sensitivity: ial 1: Counts Counters ial 2:	Observed for the Span=	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500		10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	126523 2722
alibration Precision pan Sensitivity: ial 1: Counts Counters ial 2: Counts	Observed for the Span= Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500		10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	, 126523 2722
alibration Precision Dan Sensitivity: ial 1: Counts Counters ial 2: Counts	Observed for the Span= SObserved for the Zero= Observed for the Span= SObserved for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500		10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	126523 2722
alibration Precision ban Sensitivity: ial 1: Counters ial 2: Counters st Monitoring Calib ro Air	Observed for the Span= SObserved for the Zero= Observed for the Span= SObserved for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500 2701 Cal Gas		10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	126523 2722
alibration Precision ban Sensitivity: ial 1: Counters ial 2: Counters St Monitoring Calib	Observed for the Span= SObserved for the Zero= Observed for the Span= SObserved for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 8 126511 2710 126500 2701	7 % Trial 3: Court Counte	10 if average difference is greater than 10 /500 x 100% ots Observed for the Span=	, 126523 2722
alibration Precision ban Sensitivity: ial 1: Counters ial 2: Counters st Monitoring Calib ro Air ading:	Observed for the Span= Observed for the Zero= Observed for the Span= Observed for the Zero= observed for the Zero=	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500 2710 126500 2701 Cal Gas Reading:	7 % Trial 3: Court Counte	10 if average difference is greater than 10 /500 x 100% ots Observed for the Span= ers Observed for the Zero=	, 126523 2722
alibration Precision ban Sensitivity: ial 1: Counters ial 2: Counters st Monitoring Calib ro Air ading:	Observed for the Span= S Observed for the Zero= Observed for the Span= Observed for the Zero= oration Check Oppm CENTRATIONS CHECKS	Average Difference: Gas Conc. X 100% = 100% = 99% 126511 2710 126500 2710 126500 2701 Cal Gas Reading:	7 % Trial 3: Courte	10 if average difference is greater than 10 /500 x 100% ots Observed for the Span= ers Observed for the Zero=	<u> </u>

	CALIBRATION AND I		
-11 0 0	CALIDRATION AND I	CRIINENI DATA	
Date: 011-08-71	Si	te Name: <u>501/01/1</u>	2
Inspector(s):	// in	strument:TVA 2020	
WEATHER OBSERVATIONS			
Wind Speed: MPH	Wind E	Barometric Pressure:	"Hg
Air <u>47</u> °F	General Weather Conditions:	Clar	
CALIBRATION INFORMATION			
Pre-monitoring Calibration Precision Check			
Procedure: Calibrate the instrument. Make a and calculate the average algebraic difference precision must be less than or equal to 10% o astrument Serial Number:	e between the instrument read	ny alternating zero air and the calibration fing and the calibration gas as a percentag Cal Gas Concentration:	gas, Record the readir ge. The calibration 500ppm
rial Zero Air Reading	Cal Gas Reading	Cal Gas ConcCal Gas Reading	
	hal	I Car Gas ConcCar Gas Reading	Response Time (secon
2	600	0.	4
3	501	4	h
libration Precision= Average Difference/Cal	Gas Conc. X 100%	form recalibration if average difference is greater than 10	
alibration Precision= Average Difference/Cal	Gas Conc. X 100% = 100%	2 /500 x 100%	
		1	
alibration Precision= Average Difference/Cal pan Sensitivity: ial 1: Counts Observed for the Span=		2 /500 x 100%	6790
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero=	= 100% = 019.01 %	2/500 x 100%	16790 4870
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span=	= 100% = 019.01 %	/500 x 100%	6790
aan Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero=	= 100% = 019.01 %	/500 x 100%	16790 4870
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span=	= 100% = 019.01 %	/500 x 100%	6790
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= al 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check	= 100% = 019.01 %	/500 x 100%	6790
an Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= lal 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check	= 100% = CIA, OI % [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440]	/500 x 100%	6790
aan Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= lal 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check ro Air ading:	= 100% = CIA, OI % [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440]	/500 x 100%	16790 4870
aan Sensitivity: ial 1: Counts Observed for the Span= Counters Observed for the Zero= ial 2: Counts Observed for the Span= Counters Observed for the Zero= st Monitoring Calibration Check To Air ading: ppm CKGROUND CONCENTRATIONS CHECKS	= 100% = CIA, OI % [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440] [1440]	13: Counts Observed for the Span= Counters Observed for the Zero=	<u>(6790</u> ЦС70

I

	SURFACE EMIS			POS
Date: 11-8-2-1		Site Name:	Sonoma	
nspector(s): Micheal M	orris	Instrument:	TVA 2020	
VEATHER OBSERVATIONS				
Wind Speed: 6 MPH	Wind Direction:	_	Barometric ho	"Hg
Air Temperature: <u>67</u> °F	General Weat Conditic	ther Clark	<u>1</u>	
ALIBRATION INFORMATION				
e-monitoring Calibration Precision Check				
cedure: Calibrate the instrument. Make a l calculate the average algebraic difference cision must be less than or equal to 10% of rument Serial Number:	e between the instrume	nt reading and the	calibration gas as a percentage	e. The calibra 500pj
ial Zero Air Reading	Cal Gas Reading	Cal Gas (	oncCal Gas Reading	Response Tim
$\frac{1}{2}$	600		9	32
3	Gan		9	3
bration Precision= Average Difference/Cal (		,	n if average difference is greater than 10	J
libration Precision= Average Difference/Cal (		,	n if average difference is greater than 10 /500 x 100%	U
	Gas Conc. X 100%	,		U
libration Precision= Average Difference/Cal G an Sensitivity: al 1: Counts Observed for the Span=	Gas Conc. X 100%	% 7% <u>Trial 3:</u>		(98)
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero=	Gas Conc. X 100%	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= <u>Counters Observed for the Zero=</u> al 2: Counts Observed for the Span=	Gas Conc. X 100%	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero=	Gas Conc. X 100%	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= <u>Counters Observed for the Zero=</u> al 2: Counts Observed for the Span=	Gas Conc. X 100%	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero= al 2: Counts Observed for the Span= Counters Observed for the Zero= t Monitoring Calibration Check	Gas Conc. X 100%	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero= al 2: Counts Observed for the Span= Counters Observed for the Zero= t Monitoring Calibration Check	Gas Conc. X 100% $= 100%$ $= 999%$ $(17897)$ $(17897)$ $(4386)$ $(892)$ $(1892)$ $(1937)$ $(1937)$	% <b>7%</b> Trial 3: Cour	/500 x 100%	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero= Counts Observed for the Span= Counters Observed for the Zero= t Monitoring Calibration Check o Air ding:ppm	Gas Conc. X 100% = 100 = 999 (17897 4-386 (892) (892) (892) Cal Gas	% <b>7%</b> Trial 3: Cour	$\sqrt{500 \times 100\%}$ Ints Observed for the Span= ers Observed for the Zero= $\frac{4}{9}$	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero= al 2: Counts Observed for the Span= Counters Observed for the Zero= t Monitoring Calibration Check	Gas Conc. X 100% = 100 = 999 (17897 4-386 (892) (892) (892) Cal Gas	% 7% Trial 3: Count Count	$\sqrt{500 \times 100\%}$ Ints Observed for the Span= ers Observed for the Zero= $\frac{4}{9}$	1982
an Sensitivity: al 1: Counts Observed for the Span= Counters Observed for the Zero= al 2: Counts Observed for the Span= Counters Observed for the Zero= t Monitoring Calibration Check o Air ding: ppm CKGROUND CONCENTRATIONS CHECKS	Gas Conc. X 100% = 100 = 999 (17897 4-386 (892) (892) (892) Cal Gas	% 7% Trial 3: Count Count	/500 x 100% hts Observed for the Span= ers Observed for the Zero= ppm	1982

		SURFACE EMISSI CALIBRATION AN			
Date:	11-22-	21	Site Name:	Sonoma	-
Inspector(s)	- Lian M	cGINA	Instrument:	TVA 2020	
<b>NEATHER</b>	OBSERVATIONS			141	
Wind Spe	eed: MPH	Wind Direction:	-	Barometric Pressure: 30	"Hg
Temperati	Air <u> </u>	General Weathe Conditions	1 Mar. 1	-	
ALIBRATIC	ON INFORMATION				
re-monitori	ng Calibration Precision Check				
nd calculate recision mu	alibrate the instrument. Make a e the average algebraic difference st be less than or equal to 10% of erial Number:	e between the instrument	reading and the	g zero air and the calibration <u>c</u> calibration gas as a percentag Cal Gas Concentration:	gas. Record the readings ge. The calibration 500ppm
rial	Zero Air Reading	Cal Gas Reading	Cal Gas (	ConcCal Gas Reading	Response Time (seconds
1		502		2	
2	-0	500		0.	
3	-0	499		/	
		Average Difference:			
oan Sensitivi	ty:	= 100%- = 99 <i>7</i> 8	%	_/500 x 100%	
<u>ial 1:</u>	Counts Observed for the Span=	103620	<u>Trial 3:</u> Cou	nts Observed for the Span=	119868
c ial 2:	ounters Observed for the Zero=	363	Count	ers Observed for the Zero=	
	Counts Observed for the Span=	106068			
С	ounters Observed for the Zero=	2984	5.		
st Monitori	ng Calibration Check				
ro Air	6	Cal Gas	122		
ading:	ppm	Reading:	500	ppm	
CKGROUN	D CONCENTRATIONS CHECKS				
wind Locati	on Description:	Flare	-	Reading: 1-2-pp	m
wnwind Loo	cation Description:	Flare		Reading: 1.6 pp	m
otes:	Wind speed averages were ob exceeded 20 miles per hour. I	No rainfall had occurred wi	ithin the previou	juested 10 miles per hour and s 24 hours of the monitoring e LMR requirements on the abo	event. Therefore, site

I Patra Alation Ala

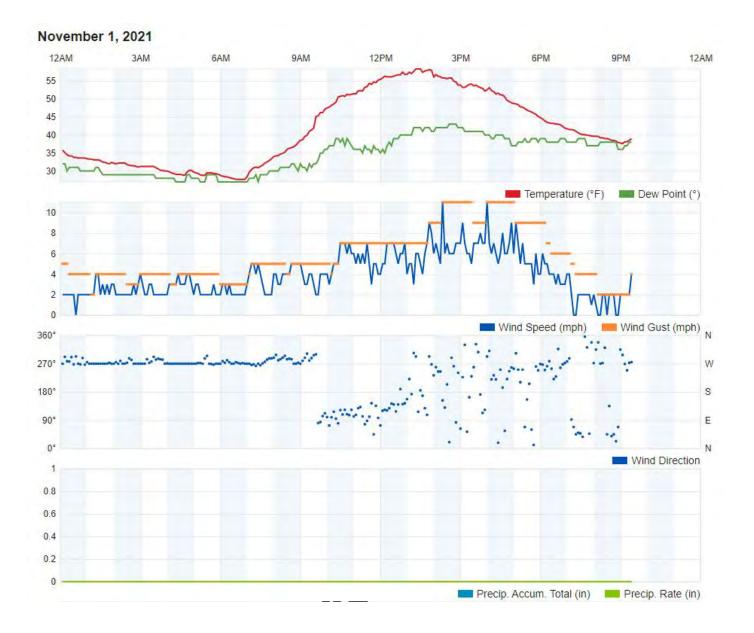
		CALIBRATION A	SIONS MONI		nost
Date:	11-22-2	-1	Site Name:	Sonoma	
nspector(s):	Lan Mr	SIAN	Instrument:	TVA 2020	
VEATHER OBSERV	ATIONS				
1	0-	Wind CT		Barometric 23	
Wind Speed:	A MPH	Direction:	<u> </u>	Pressure: 70	
Air Temperature:	1660.	General Weat Conditio	1 0 00	$\mathcal{L}$	
ALIBRATION INFO	RMATION				
re-monitoring Calib	ration Precision Check				
rocedure: Calibrate	the instrument. Make a	total of three measurer	ments by alternatin	g zero air and the calibratio	on gas. Record the reading
nd calculate the ave		ce between the instrume	ent reading and the	calibration gas as a percer	
	I.		ue.		
nstrument Serial Nu	mber:	r)		Cal Gas Concentration:	500ppm
rial 1	Zero Air Reading	Cal Gas Reading	Cal Gas	ConcCal Gas Reading	Response Time (second
2	0	501		1	3
3	0	500		0	4
ilibration Precision=	- Average Difference/Cal	Average Difference:	-	on if average difference is greater that	10
alibration Precision=	- Average Difference/Cal	Average Difference: I Gas Conc. X 100% = 100	*Perform recalibration	on if average difference is greater that _/500 x 1Ò0%	] n 10
	- Average Difference/Cal	Average Difference: I Gas Conc. X 100%	*Perform recalibration		] n 10
pan Sensitivity:	= Average Difference/Cal	Average Difference: I Gas Conc. X 100% = 100	*Perform recalibration	_/500 x 1Ò0%	
pan Sensitivity: rial 1:	Average Difference/Cal	Average Difference: I Gas Conc. X 100% = 100 = 99.9	*Perform recalibration	_/500 x 1Ò0%	
pan Sensitivity: rial 1: Counts	Observed for the Span=	Average Difference: Gas Conc. X 100% = 100 = 99,9	*Perform recallbration	_/500 × 100% unts Observed for the Span	127668
pan Sensitivity: rial 1: Counts <u>Counters</u>	Observed for the Span= Observed for the Zero=	Average Difference: I Gas Conc. X 100% = 100 = 99.8 128008 3899 12707	*Perform recallbration	_/500 x 1Ò0%	127668
pan Sensitivity: rial 1: Counts <u>Counters</u>	Observed for the Span=	Average Difference: I Gas Conc. X 100% = 100 = 99.8 128008 3899 12707	*Perform recallbration	_/500 × 100% unts Observed for the Span	127668
oan Sensitivity: rial 1: Counts Counters rial 2: Counts	Observed for the Span= Observed for the Zero=	Average Difference: Gas Conc. X 100% = 100 = 99.8 128008 3899 127372	*Perform recallbration	_/500 × 100% unts Observed for the Span	127668
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oan Sensitivity: rial 1: Counts <u>Counters</u> Counts <u>Counters</u> ost Monitoring Calib	Observed for the Span= Observed for the Zero≠ Observed for the Span= Observed for the Zero≈	Average Difference: Gas Conc. X 100% = 100 = 99.8 128008 3899 127372 2714	*Perform recallbration	_/500 × 100% unts Observed for the Span	127668
ban Sensitivity: ial 1: Counts Counters ial 2: Counters Counters est Monitoring Calib	Observed for the Span= Observed for the Zero≠ Observed for the Span= Observed for the Zero≈	Average Difference: Gas Conc. X 100% = 100 = 99.8 128008 3899 127372	*Perform recallbration	_/500 × 100% unts Observed for the Span	127668
oan Sensitivity: rial 1: Counts Counters rial 2: Counters Counters Counters Seat Monitoring Calib ero Air eading:	Observed for the Span= Observed for the Zero= Observed for the Span= Observed for the Zero= ration Check	Average Difference: I Gas Conc. X 100% = 100 = 99.8 128008 3899 1273777 2714 Cal Gas Reading:	*Perform recallbration	_/500 x 100% unts Observed for the Spans ters Observed for the Zeros	127668
pan Sensitivity: rial 1: Counts <u>Counters</u> rial 2: Counts Counters Sost Monitoring Calib ero Air eading:	Observed for the Span= Observed for the Zero= Observed for the Span= Observed for the Zero= ration Check ppm CENTRATIONS CHECKS	Average Difference: I Gas Conc. X 100% = 100 = 99.8 128008 3899 1273777 2714 Cal Gas Reading:	*Perform recallbration	_/500 x 100% unts Observed for the Spans ters Observed for the Zeros	127668
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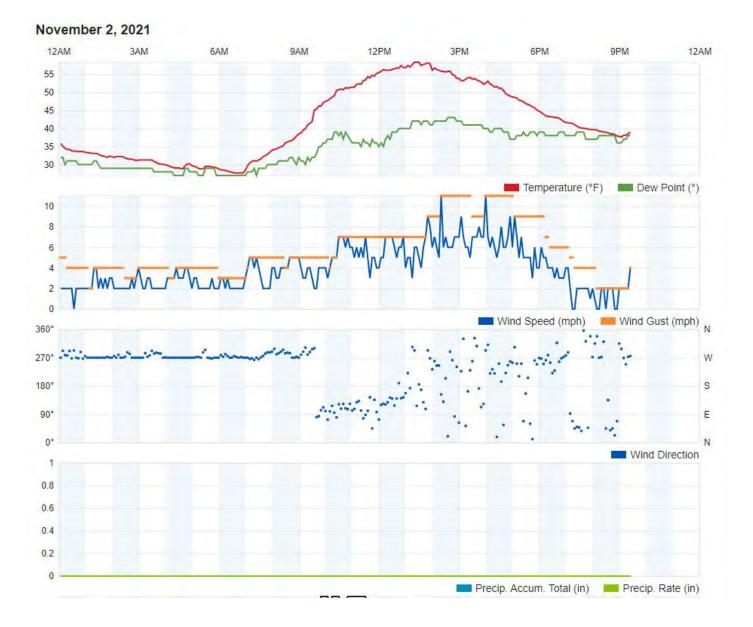
### SCS DataServices - Secure Environmental Data

Attachment 6

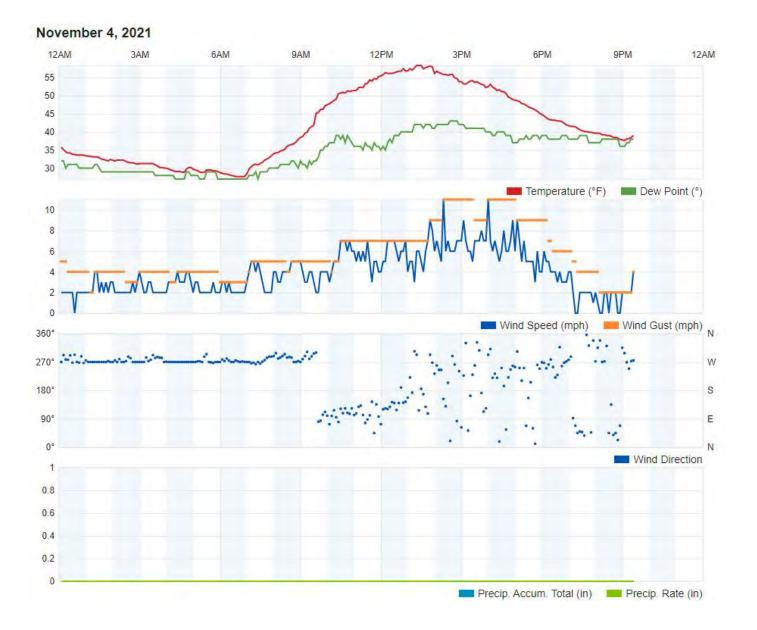
Weather Data



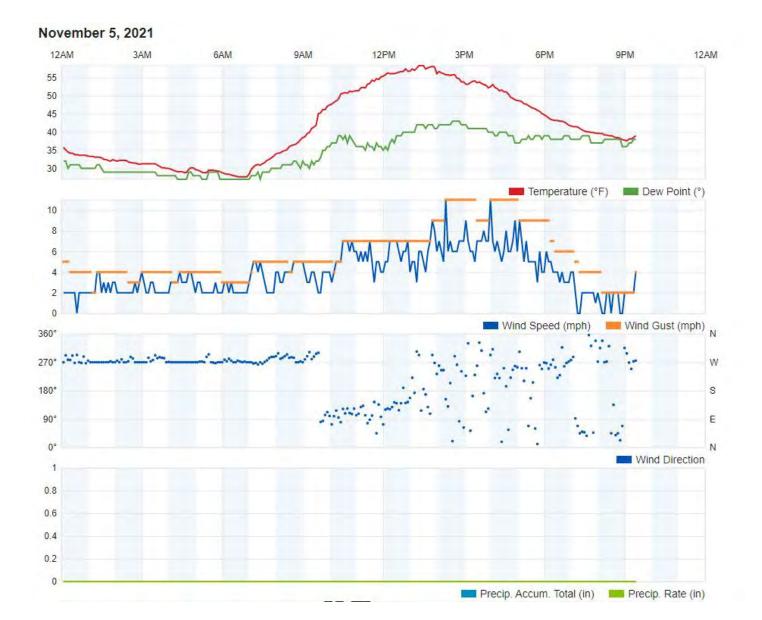
Fourth Quarter 2021 LMR Instantaneous Weather Data for November 1, 2021 Sonoma Central Landfill, Petaluma, California



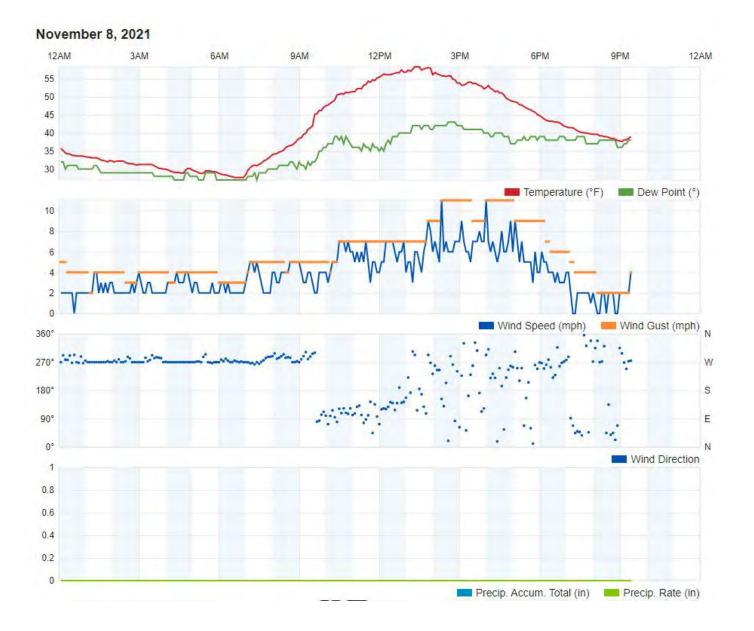
Fourth Quarter 2021 LMR Instantaneous Weather Data for November 2, 2021 Sonoma Central Landfill, Petaluma, California



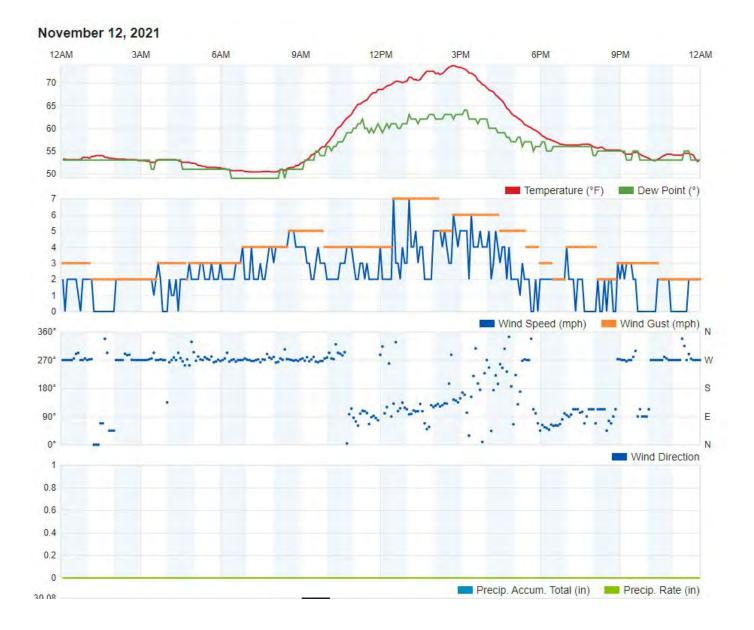
Fourth Quarter 2021 LMR Instantaneous Weather Data for November 4, 2021 Sonoma Central Landfill, Petaluma, California



Fourth Quarter 2021 LMR Instantaneous Weather Data for November 5, 2021 Sonoma Central Landfill, Petaluma, California



Fourth Quarter 2021 LMR Instantaneous Weather Data for November 8, 2021 Sonoma Central Landfill, Petaluma, California



Fourth Quarter 2021 LMR Instantaneous Weather Data for November 12, 2021 Sonoma Central Landfill, Petaluma, California



Fourth Quarter 2021 LMR Instantaneous Weather Data for November 22, 2021 Sonoma Central Landfill, Petaluma, California Appendix E – Excerpts from the Source Test Reports Issued during the Reporting Period (S-4 and S-5)

### **Republic Services of Sonoma County, Inc.**

BAAQMD Plant # 22987

### Compliance Emissions Test Report #21232 Caterpillar Landfill Gas Engine #1 (S-4)

Located at: Central Landfill 500 Mecham Road Petaluma, CA 94952

Prepared for: **Republic Services of Sonoma County, Inc.** 500 Mecham Road Petaluma, CA 94952

> Attn: Derek Cheney DCheney@republicservices.com

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

Attn: Marco Hernandez & Gloria Espena mhernandez@baaqmd.gov & gespena@baaqmd.gov sourcetest@baaqmd.gov

> Testing Performed on: July 28<sup>th</sup>, 2021

Final Report Submitted on: September 16<sup>th</sup>, 2021

Performed and Reported by: Blue Sky Environmental, Inc. 624 San Gabriel Avenue Albany, CA 94706

bluesky@blueskyenvironmental.com Office (510) 525 1261 / Mobile (510) 508 3469



Blue Sky Environmental, Inc. San Gabriel Avenue Albany, CA 94706 Office (510) 525-1261 Cell (510) 508-3469 bluesky@blueskyenvironmental.com

September 16th, 2021

Republic Services of Sonoma County, Inc 500 Mecham Road Petaluma, CA 94952

Attn.: Derek Cheney

<u>Subject:</u> Source emissions test report for Engine #1, located at the Central Landfill in Petaluma, to determine compliance with Bay Area Air Quality Management District (BAAQMD) Title V Permit for Plant 22987.

Engine #1 (S-4) – 1,138 hp Caterpillar Model G3516 lean burn IC engine and genset

Test Date(s): Testing was performed on July 28th, 2021.

<u>Sampling Location</u>: Emission sampling was conducted at the 12-inch diameter exhaust stack of Engine #1 (S-4) through ports that were accessible both from the roof of the facility and from a probe extending from ground level. The  $\frac{3}{4}$ -inch sample ports on the stack met EPA Method 1 minimum criteria of two stack diameters downstream from the nearest disturbance and 0.5 stack diameters upstream from the nearest disturbance or exhaust.

**Sampling Personnel:** Sampling was performed by Jeramie Richardson of Blue Sky Environmental, Inc.

**Observing and Facility Personnel:** BAAQMD was notified of the scheduled testing in a plan submitted on April 13<sup>th</sup>, 2021 and revised July 20<sup>th</sup>, 2021 (NST #6440); however, no agency observers from BAAQMD were present during the test program.

Matt Beat of Republic Services of Sonoma County, Inc. was on site to coordinate engine operations.

**Process Description:** Republic Services of Sonoma County, Inc. operates a central landfill outside of Petaluma, California. The facility operates ten Caterpillar Model G3516 lean burn IC engines that produce power from the waste landfill gas generated at the site. Each of the 1,138 hp reciprocating engines operates with an 800 kW genset. The control room uses a Yokogawa fuel-flow monitoring system to read the LFG flows to each engine. Engines #9 (S-13) and #10 (S-14) are currently out of service; but when operating, carry a 50-kW parasitic load that is added to the generator output kW when calculating total kW.

Each engine has a dedicated fuel meter and individual kW meter that is used to indicate load. Readings taken during testing were used with the gas analysis to calculate the exhaust flow rate and to calculate load.



<u>**Test Program:**</u> The test objective was to demonstrate compliance with the CO,  $NO_x$ ,  $CH_4$  and NMOC emission limitations specified in the BAAQMD Permit to Operate for Plant #22987.

Three consecutive 35-minute gaseous emissions tests were performed for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), and nonmethane organic compounds (NMOC) at the engine exhaust stack. The sampling system was checked for leaks before the start of the testing, by plugging the sample probe and observing the sample rotameter flow drop to zero. Analyzer external calibrations were performed before and after each run using EPA protocol certified gas standards. A NO<sub>x</sub> analyzer converter efficiency check was performed before the first test run and found to be greater than 90%.

Concurrent with the exhaust sampling, Blue Sky Environmental collected a total of three LFG samples from the engine header for CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, CO, N<sub>2</sub>, and BTU, F-Factor analysis. The samples were collected in Tedlar bags using Teflon tubing connections that were filled and purged prior to sampling, and analyzed by Atmospheric Analysis and Consulting, Inc. in Ventura, California.

**Sampling & Analytical Methods:** The following U.S. Environmental Protection Agency (EPA) and ASTM International sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O2 and CO2, Stack Gas Molecular Weight
EPA Method 7E	NOx Emissions and NO2 Converter Efficiency
EPA Method 10	CO Emissions
EPA Method 4	Moisture
EPA Method 25A / ALT-078	CH4 and NMHC Emissions
EPA Method 19	Calculation of Stack Gas Flow Rate
ASTM D-1945/3588	Fuel Analysis for BTU and F-Factors
EPA Method 25C	Analysis of landfill gas for TNMHC (NMOC)

#### EPA Method 1 - Sample and Velocity Traverses for Stationary Sources

This method is used to determine the duct or stack area and appropriate traverse points that represent equal areas of the duct for sampling and velocity measurements.

# EPA Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)

This method is used to measure oxygen and carbon dioxide in stationary source emissions using a continuous instrumental analyzer to determine the molecular weight of the stack gas.

## EPA Method 7E – Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)

This method is used to measure nitrogen oxides in stationary source emissions using a continuous instrumental analyzer. Section 16.2.2 of the method is used to determine the  $NO_x$  analyzer  $NO_2$  to NO conversion efficiency.

#### EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources

This method is used to measure carbon monoxide from integrated or continuous gas samples extracted from a sampling point.



EPA Methods 3A, 7E and 10 are all continuous monitoring techniques using instrumental analyzers. Sampling is performed by extracting exhaust flue gas from the stack, conditioning the sample, and analyzing it by continuous monitoring gas analyzers in a continuing emissions monitoring (CEM) test van. The sampling system consists of a stainless-steel sample probe, Teflon sample line, glass-fiber particulate filter, and glass moisture-knockout condensers in ice, followed by thermoelectric coolers (optional), Teflon sample transfer tubing, a diaphragm pump, and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI is provided to each analyzer to avoid pressure variable response differences. The entire sampling system is leak checked prior to and at the end of the sampling program.

The sampling and analytical system is checked for linearity with zero, mid (40-60%) and high span (80-100%) calibrations and is checked for system bias at the beginning and end of each run. System bias is determined by introducing calibration gas to the probe and pulling it through the entire sampling system. Individual test run calibrations use the calibration gas that most closely matches the stack gas effluent. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test. EPA Methods 3A, 7E and 10 all defer to EPA Method 7E for the calculations of effluent concentration, span, calibration gas, analyzer calibration error (linearity), sampling system bias, zero drift, calibration drift and response time.

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DRP3000 strip chart recorder supported by a Data Acquisition System (DAS).

#### EPA Method 4 - Determination of Moisture Content in Stack Gas

This method is used to determine the moisture content of stack gas. The sample is extracted and condensed in Greenburg-Smith impingers immersed in an ice bath and in a final impinger silica gel trap. The moisture is condensed in a solution of de-ionized water, or solutions of another type of sampling train if the moisture is being determined as part of another sampling method, such as EPA Method 5 or EPA 12. The moisture gain in the impinger solutions and silica gel is determined volumetrically and gravimetrically respectively. <u>QA/QC</u> procedures require that a minimum of 21 cubic feet of sample is pulled using a leak tight pump. The sample volume is measured with a calibrated dry gas meter. The impingers are immersed in an ice bath to maintain a gas outlet temperature of less than 68°F. Pre-test leak checks are performed for each run using a minimum 15 inches of mercury vacuum. Post-test leak checks are performed at the highest sample vacuum or greater. The leak test is acceptable if the leak rate is less than 0.02 cubic feet per minute or 4% of the average sampling rate, whichever is less. If the final leak check exceeds the criteria, either the volume is corrected based on the leak rate or the run is voided and repeated.

## EPA Method 25A/ALT-078 – Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

This method is used to measure total hydrocarbons, methane, and non-methane hydrocarbons in stationary source emissions using a gas chromatograph with a flame ionization detector (GC/FID). Heated Teflon sample gas transfer lines are used to provide a continuous sample to the heated GC/FID hydrocarbon analyzer. Heated lines are used to avoid moisture or hydrocarbon condensation.

The sampling and analytical system is checked for linearity with zero, low (25-35%), mid (45-55%), and high (80-90%) span calibrations. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test. All data is corrected according to the method.



# EPA Method 19 – Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emission Rates

This method is used to determine stack gas volumetric flow rates using oxygen-based F-factors. F-factors are ratios of combustion gas volumes to heat inputs. The heating value of the fuel in Btu per cubic foot is determined from analysis of fuel gas samples using ASTM D1946/1945 gas chromatography analytical procedures. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates are used to determine emission rates.

#### ASTM D1945 – Analysis of Natural Gas by Gas Chromatography

This method is used to measure fixed gases (such as oxygen, nitrogen, carbon monoxide, and carbon dioxide) and methane by gas chromatography (GC/TCD). Light hydrocarbons, including C1-C7, are analyzed by GC/FID.

## ASTM D-3588 – Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels

This method uses the molar composition of gaseous fuel determined from Method ASTM D-1945 to calculate the heating value and F-factor.

# EPA Method 25C – Determination of Nonmethane Organic Compounds (NMOC) in Landfill Gas

This method is used to sample and measure NMOC in landfill gases. The method is written for evacuated tank sampling but is adaptable to Tedlar bag sampling procedures. The sampling equipment consists of a stainless steel or glass lined probe with a short stainless-steel or Teflon transfer line to a Tedlar bag housed in a sealed chamber. The chamber is evacuated by pump at a prescribed rate for the test duration and the Tedlar bag capacity, so the sample is integrated over the test period. The sample is injected into a GC column where the methane and  $CO_2$  are flushed through and removed then the NMOC (ROC) fraction is oxidized to form  $CO_2$  then reduced to methane and analyzed.

Instrument	Analyte	Principle
Servomex Model 1400	O <sub>2</sub>	Paramagnetic
Servomex Model 1400	CO <sub>2</sub>	IR
TECO Model 42C	NO <sub>X</sub>	Chemiluminescence
TECO Model 48C	СО	GFC/IR
TECO Model 55C	THC/CH <sub>4</sub> /NMOC	FID

**Instrumentation:** The following continuous emissions analyzers were used:

Emission Parameter	Average Results Engine #1 (S-4)	Permit Limits	Compliance Status	
NO <sub>x</sub> , ppm @ 15% O <sub>2</sub>	10.9	70	In Compliance	
NO <sub>x</sub> , g/Bhp-hr	0.191	0.80	In Compliance	
CO, ppm @ 15% O <sub>2</sub>	198.4	2,000	In Compliance	
CO, g/Bhp-hr	2.10	2.1	In Compliance	
CH4, ppm @ 15% O2	1,468	3,000	In Compliance	
NMOC, ppm as CH <sub>4</sub> @ 3% O <sub>2</sub>	125.6	120 or	In Compliance*	
NMOC Destruction Efficiency, %	>46.7%	>98%	In Compliance*	

<u>**Test Results:**</u> The compliance summary is presented below. Detailed source test emission results are provided in Table 1. All measured test parameters were in compliance with permit limits.

*Note\*:* NMOC results exceed the 120 ppm limit by 4%. This is within 10% of the permitted limit and is considered in compliance per BAAQMD Resolution No. 1390

The appendices are organized as follows:

#### Calculations

Calculations performed on the continuous emissions monitoring (CEM) data and flow rate calculations.

#### Laboratory Reports

Laboratory reports and chains-of-custody.

#### Field Data Sheets

CEMS data and any transcribed data from the strip charts.

#### Process Information

Relevant and available facility process operating documentation.

#### Calibration Gas Certificates

Certifications for the calibration gas standards.

#### Equipment Calibrations

Calibration records for equipment used (e.g., S-type pitot tubes, dry gas meters, rotameters)

#### <u>Stack Diagram</u>

Sketch or photograph of the stack.

#### Sample System Diagram

Schematic of the sampling system configuration.

#### Permit / Authority to Construct

Permit to Operate / Authority to Construct.

### Source Test Plan

Sampling protocols submitted to the BAAQMD prior to testing.



**Comments:** This source test was performed in accordance with the protocol submitted to BAAQMD. No deviations from the protocol or anomalies were observed during testing. NMOC emission results exceed the 120 ppm limit by 4%. This is within 10% of the permitted limit and is considered in compliance per BAAQMD Resolution No. 1390; therefore, all measured test parameters are in compliance with permit limits.

The work performed herein was conducted under my supervision, and I certify that:

- a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program,
- b) that the sampling and analytical procedures and data presented in the report is authentic and accurate,
- c) that all testing details and conclusions are accurate and valid, and
- d) that the production rate and/or heat input rate during the source test are reported accurately.

If there are any questions concerning this report, please contact Jeramie Richardson at (810) 923-3181, Chuck Arrivas at (925) 338-4875 or Guy Worthington at (510) 508-3469.

Prepared by,

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Anne Richardson

Reviewed by,

Juli be go-

Julie Wose-Jennings

#### TABLE #1

Sonoma Central Landfill Engine #1 (S-4)

Parameter	Run 1	Run 2	Run 3	Average Results	Permit Limits
Test Date	07/28/21	07/28/21	07/28/21		
Test Time	0947-1023	1057-1132	1154-1229		
Standard Temperature, °F	70	70	70	70	
Process Parameters:					
Engine Rating, kW	800	800	800	800	
Engine (Generator) kW	753	748	753	751	
Engine BHp	1,008	1,002	1,008	1,006	
Fuel:					
Fuel Flow Rate, DSCFM	324.1	318.6	318.9	320.5	
Gas Fd-Factor @ 70°F	9,497	9,521	9,514	9,510	
Heat Input, MMBtu/day	236.0	227.9	229.9	231.3	252.6
Stack Gas:					
Exhaust Temperature, °F	778	781	782	780	
Exhaust Flow Rate, DSCFM (EPA Method 19)	2,530	2,472	2,508	2,503	
Oxygen (O <sub>2</sub> ), % volume dry	8.0	8.2	8.2	8.1	6.4 - 8.3
Carbon Dioxide (CO <sub>2</sub> ), % volume dry	11.4	11.2	11.2	11.3	
Carbon Dioxide, lb/hr	1,963	1,898	1,925	1,929	
Water Vapor (H <sub>2</sub> O), %	13.4	12.7	13.3	13.1	
NO <sub>X</sub> Emissions (reported as NO <sub>2</sub> ):					
NOx, ppm	26.5	21.5	23.1	23.7	
NOx, ppm @ 15% O <sub>2</sub>	12.1	10.0	10.7	10.9	70
NOx, lb/hr	0.478	0.379	0.413	0.423	
NOx, lb/MMBtu	0.0487	0.0400	0.0432	0.0439	
NOx, g/Bhp-hr	0.215	0.172	0.186	0.191	0.80
CO Emissions:		0.0.0			0.00
CO, ppm	419.8	429.8	437.0	428.9	
CO, ppm @ 15% O <sub>2</sub>	192.6	199.0	203.7	198.4	2,000
CO, lb/hr	4.61	4.61	4.76	4.66	2,000
CO, lb/MMBtu	0.470	0.487	0.498	0.485	
CO, g/Bhp-hr	2.08	2.09	2.14	2.10	2.1
Methane (CH <sub>4</sub> ) Emissions:	2.00	2.07	211 1	2.1.0	211
CH <sub>4</sub> , ppm wet <i>(EPA Method 25A)</i>	2,566	2,922	2,786	2,758	
CH <sub>4</sub> , ppm	2,962	3,347	3,211	3,173	
CH <sub>4</sub> , ppm @ 15% O <sub>2</sub>	1,359	1,550	1,496	1,468	3,000
CH <sub>4</sub> , lb/hr	18.6	20.5	20.0	19.7	5,000
THC Emissions (reported as CH <sub>4</sub> ):	10.0	20.3	20.0	19.7	
THC, ppm wet <i>(EPA Method 25A)</i>	2641.0	2999.6	2865.1	2835.3	
THC, ppm	3,048.9	3,436.4	3,303.2	3,262.8	
THC, lb/hr	19.1	21.1	20.6	20.3	
NMOC Emissions (reported as CH <sub>4</sub> ):	1711		2010	1015	
NMOC, ppm wet (EPA Method 25A)	75.4	78.1	79.6	77.7	
NMOC, ppm	87.1	89.5	91.8	89.5	
NMOC, ppm @ 3% O <sub>2</sub>	121.2	125.8	129.8	125.6	120*
NMOC, lb/hr	0.547	0.549	0.571	0.556	140
NMOC, g/Bhp-hr	0.246	0.249	0.257	0.251	
Inlet:	0.210	0.217	0.207	0.201	
Inlet CH <sub>4</sub> , % (ASTM D-1945 & EPA Method 25C)	50.9	50.0	50.4	50.7	
Inlet CH <sub>4</sub> , <sup>76</sup> (ASIM D-1945 C EFA Mellou 25C)	409.5	395.4	399.0	404.3	
CH <sub>4</sub> Destruction Efficiency, %	>95.5%	>94.8%	>95.0%	>95.2%	
Inlet THC, %	51.0	50.1	50.5	50.8	
Inlet THC, 70 Inlet THC, lb/hr	410.6	396.5	400.0	405.3	
THC Destruction Efficiency, %	>95.3%	>94.7%	>94.9%	>95.1%	
Inlet NMOC, ppm (EPA Method 25C)	1,347	1,324	1,287	1,317	
Inlet NMOC, lb/hr	1,047	1,324	1.02	1.05	
NMOC Destruction Efficiency, %	>49.5%	>47.6%	>43.9%	>46.7%	>98%*
* NMOC permit limits are 120 ppm @ 3% O <sub>2</sub> or DE >98%	~ 49.370	-+/.0/0	<h3.970< td=""><td>~ +0./70</td><td>~ 90 /0"</td></h3.970<>	~ +0./70	~ 90 /0"

\*\*NMOC emission results exceed the 120 ppm limit by 4%. This is within 10% of the permitted limit and is considered in compliance per BAAQMD Resolution No. 1390; therefore, all measured test parameters are in compliance with permit limits.

#### WHERE:

ppm = parts per million concentration by volume expressed on a dry gas basis

lb/hr = pound per hour emission rate

Tstd. = standard temperature ( $^{\circ}R = ^{\circ}F+460$ )

MW = molecular weight

DSCFM = dry standard cubic foot per minute

 $NO_X = oxides$  of nitrogen, reported as  $NO_2$  (MW = 46)

CO = carbon monoxide (MW = 28)

 $CH_4 = methane (MW = 16)$ 

THC = total hydrocarbons including methane, reported as methane

NMOC = non-methane organic compounds, reported as methane

#### CALCULATIONS:

ppm dry = ppm wet  $\cdot$  100 / (100 - H<sub>2</sub>O%) ppm @  $3\% O_2 = ppm \cdot 17.9 / (20.9 - \%O_2)$ lb/hr = ppm  $\cdot$  8.223 E-05  $\cdot$  DSCFM  $\cdot$  MW / Tstd. °R  $lb/day = lb/hr \cdot 24$  $Ib/MMBtu = Fd \cdot MW \cdot ppm \cdot 2.59E-9 \cdot 20.9/(20.9 - \%O_2)$  Engine BHp = generator kW · 1.34  $g/Bhp-hr = lb/hr \cdot 453.6 / Bhp$ 

#### **Republic Services of Sonoma County, Inc.**

BAAQMD Plant # 22987

#### Compliance Emissions Test Report #21376 Caterpillar Landfill Gas Engine #2 (S-5)

Located at: Central Landfill 500 Mecham Road Petaluma, CA 94952

Prepared for: **Republic Services of Sonoma County, Inc.** 500 Mecham Road Petaluma, CA 94952

> Attn: Derek Cheney DCheney@republicservices.com

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

Attn: Marco Hernandez and Gloria Espena mhernandez@baaqmd.gov and gespena@baaqmd.gov sourcetest@baaqmd.gov

Testing Performed on: **December 6<sup>th</sup>, 2021** 

Final Report Submitted on: February 1<sup>st</sup>, 2022

Performed and Reported by: Blue Sky Environmental, Inc. 624 San Gabriel Avenue Albany, CA 94706

bluesky@blueskyenvironmental.com Office (510) 525 1261 / Mobile (510) 508 3469



Blue Sky Environmental, Inc. San Gabriel Avenue Albany, CA 94706 Office (510) 525-1261 Cell (510) 508-3469 bluesky@blueskyenvironmental.com

February 1<sup>st</sup>, 2022

Republic Services of Sonoma County, Inc 500 Mecham Road Petaluma, CA 94952

Attn.: Derek Cheney

<u>Subject:</u> Source emissions test report for Engine #2, located at the Central Landfill in Petaluma, to determine compliance with Bay Area Air Quality Management District (BAAQMD) Title V Permit for Plant 22987.

Engine #2 (S-5) – 1,138 hp Caterpillar Model G3516 lean-burn internal combustion engine and generator set

Test Date(s): Testing was performed on December 6<sup>th</sup>, 2021.

**Sampling Location:** Emission sampling was conducted at the 12-inch diameter exhaust stack of Engine #2 through ports that were accessible from the roof of the facility. The <sup>3</sup>/<sub>4</sub>-inch sample ports on the stack met EPA Method 1 minimum criteria of two stack diameters downstream from the nearest disturbance and 0.5 stack diameters upstream from the nearest disturbance or exhaust.

**Sampling Personnel:** Sampling was performed by Jeramie Richardson of Blue Sky Environmental, Inc.

**Observing and Facility Personnel:** BAAQMD was notified of the scheduled testing in a source test plan submitted on November 29<sup>th</sup>, 2021 (NST #7051). No agency observers from BAAQMD were present during the test program.

Matt Beat of Republic Services of Sonoma County, Inc. was on-site to coordinate engine operations.

**Process Description:** Republic Services of Sonoma County, Inc. operates a multi-material central landfill with a gas collection system abated by a water spray system and LFG flare, outside of Petaluma, California. The facility operates ten Caterpillar Model G3516 lean burn IC engines that produce power from the waste landfill gas generated at the site. Each of the 1,138 hp reciprocating engines operates with an 800 kW generator set. The control room uses a Yokogawa fuel-flow monitoring system to read the LFG flows to each engine. Engines #9 (S-13) and #10 (S-14) are currently out of service; but when operating, carry a 50-kW parasitic load that is added to the generator output kW when calculating total kW.

Each engine has a dedicated fuel meter and individual kW meter that is used to indicate load. Readings taken during testing were used with the gas analysis to calculate the exhaust flow rate and to calculate load.



<u>**Test Program:**</u> The test objective was to demonstrate compliance with the CO,  $NO_X$ ,  $CH_4$  and NMOC emission limitations specified in the BAAQMD Permit to Operate for Plant #22987.

Three consecutive 35-minute gaseous emissions tests were performed for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), and nonmethane organic compounds (NMOC) at the engine exhaust stack. The sampling system was checked for leaks before the start of the testing, by plugging the sample probe and observing the sample rotameter flow drop to zero. Analyzer external calibrations were performed before and after each run using EPA protocol certified gas standards. A NO<sub>x</sub> analyzer converter efficiency check was performed before the first test run and found to be greater than 90%.

Concurrent with the exhaust sampling, Blue Sky Environmental collected a total of three LFG samples from the engine header for CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, CO, N<sub>2</sub>, and BTU, F-Factor analysis. The samples were collected in Tedlar bags using Teflon tubing connections that were filled and purged prior to sampling, and analyzed by Atmospheric Analysis and Consulting, Inc. in Ventura, California.

**Sampling & Analytical Methods:** The following U.S. Environmental Protection Agency (EPA) and ASTM International sampling and analytical methods were used:

EPA Method 1	Sample and Traverse Point Determination
EPA Method 3A	O2 and CO2, Stack Gas Molecular Weight
EPA Method 7E	NOx Emissions and NO2 Converter Efficiency
EPA Method 10	CO Emissions
EPA Method 4	Moisture
EPA Method 25A / ALT-078	CH4 and NMHC Emissions
EPA Method 19	Calculation of Stack Gas Flow Rate
ASTM D-1945/3588	Fuel Analysis for BTU and F-Factors
EPA Method 25C	Analysis of landfill gas for TNMHC (NMOC)

#### EPA Method 1 - Sample and Velocity Traverses for Stationary Sources

This method is used to determine the duct or stack area and appropriate traverse points that represent equal areas of the duct for sampling and velocity measurements.

# EPA Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)

This method is used to measure oxygen and carbon dioxide in stationary source emissions using a continuous instrumental analyzer to determine the molecular weight of the stack gas.

# EPA Method 7E – Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)

This method is used to measure nitrogen oxides in stationary source emissions using a continuous instrumental analyzer. Section 16.2.2 of the method is used to determine the  $NO_x$  analyzer  $NO_2$  to NO conversion efficiency.

#### EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources

This method is used to measure carbon monoxide from integrated or continuous gas samples extracted from a sampling point.



EPA Methods 3A, 7E and 10 are all continuous monitoring techniques using instrumental analyzers. Sampling is performed by extracting exhaust flue gas from the stack, conditioning the sample, and analyzing it by continuous monitoring gas analyzers in a continuing emissions monitoring (CEM) test van. The sampling system consists of a stainless-steel sample probe, Teflon sample line, glass-fiber particulate filter, and glass moisture-knockout condensers in ice, followed by thermoelectric coolers (optional), Teflon sample transfer tubing, a diaphragm pump, and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI is provided to each analyzer to avoid pressure variable response differences. The entire sampling system is leak checked prior to and at the end of the sampling program.

The sampling and analytical system is checked for linearity with zero, mid (40-60%) and high span (80-100%) calibrations and is checked for system bias at the beginning and end of each run. System bias is determined by introducing calibration gas to the probe and pulling it through the entire sampling system. Individual test run calibrations use the calibration gas that most closely matches the stack gas effluent. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test. EPA Methods 3A, 7E and 10 all defer to EPA Method 7E for the calculations of effluent concentration, span, calibration gas, analyzer calibration error (linearity), sampling system bias, zero drift, calibration drift and response time.

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DRP3000 strip chart recorder supported by a Data Acquisition System (DAS).

#### EPA Method 4 - Determination of Moisture Content in Stack Gas

This method is used to determine the moisture content of stack gas. The sample is extracted and condensed in Greenburg-Smith impingers immersed in an ice bath and in a final impinger silica gel trap. The moisture is condensed in a solution of de-ionized water, or solutions of another type of sampling train if the moisture is being determined as part of another sampling method, such as EPA Method 5 or EPA 12. The moisture gain in the impinger solutions and silica gel is determined volumetrically and gravimetrically respectively. <u>QA/QC</u> procedures require that a minimum of 21 cubic feet of sample is pulled using a leak tight pump. The sample volume is measured with a calibrated dry gas meter. The impingers are immersed in an ice bath to maintain a gas outlet temperature of less than 68°F. Pre-test leak checks are performed for each run using a minimum 15 inches of mercury vacuum. Post-test leak checks are performed at the highest sample vacuum or greater. The leak test is acceptable if the leak rate is less than 0.02 cubic feet per minute or 4% of the average sampling rate, whichever is less. If the final leak check exceeds the criteria, either the volume is corrected based on the leak rate or the run is voided and repeated.

# EPA Method 25A/ALT-078 – Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

This method is used to measure total hydrocarbons, methane, and non-methane hydrocarbons in stationary source emissions using a gas chromatograph with a flame ionization detector (GC/FID). Heated Teflon sample gas transfer lines are used to provide a continuous sample to the heated GC/FID hydrocarbon analyzer. Heated lines are used to avoid moisture or hydrocarbon condensation.

The sampling and analytical system is checked for linearity with zero, low (25-35%), mid (45-55%), and high (80-90%) span calibrations. All calibrations during testing are performed externally to incorporate any system bias that may exist. Sampling system bias, zero and calibration drift values are determined for each test. All data is corrected according to the method.



# EPA Method 19 – Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emission Rates

This method is used to determine stack gas volumetric flow rates using oxygen-based F-factors. F-factors are ratios of combustion gas volumes to heat inputs. The heating value of the fuel in Btu per cubic foot is determined from analysis of fuel gas samples using ASTM D1946/1945 gas chromatography analytical procedures. The total cubic feet per hour of fuel multiplied times the Btu/cf provides million Btu per hour (MMBtu) heat input. The heat input in MMBtu/hr is multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates are used to determine emission rates.

#### ASTM D1945 – Analysis of Natural Gas by Gas Chromatography

This method is used to measure fixed gases (such as oxygen, nitrogen, carbon monoxide, and carbon dioxide) and methane by gas chromatography (GC/TCD). Light hydrocarbons, including C1-C7, are analyzed by GC/FID.

# ASTM D-3588 – Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels

This method uses the molar composition of gaseous fuel determined from Method ASTM D-1945 to calculate the heating value and F-factor.

# EPA Method 25C – Determination of Nonmethane Organic Compounds (NMOC) in Landfill Gas

This method is used to sample and measure NMOC in landfill gases. The method is written for evacuated tank sampling but is adaptable to Tedlar bag sampling procedures. The sampling equipment consists of a stainless steel or glass lined probe with a short stainless-steel or Teflon transfer line to a Tedlar bag housed in a sealed chamber. The chamber is evacuated by pump at a prescribed rate for the test duration and the Tedlar bag capacity, so the sample is integrated over the test period. The sample is injected into a GC column where the methane and  $CO_2$  are flushed through and removed then the NMOC (ROC) fraction is oxidized to form  $CO_2$  then reduced to methane and analyzed.

Instrument	Analyte	Principle
Servomex Model 1400	O <sub>2</sub>	Paramagnetic
Servomex Model 1400	CO <sub>2</sub>	IR
TECO Model 42C	NO <sub>X</sub>	Chemiluminescence
TECO Model 48C	СО	GFC/IR
TECO Model 55C	THC/CH <sub>4</sub> /NMOC	FID

**Instrumentation:** The following continuous emissions analyzers were used:

Emission Parameter	Average Results Engine #2 (S-5)	Permit Limits	Compliance Status
$NO_X$ , ppm @ 15% $O_2$	13.2	$70^{3}$	In Compliance
NO <sub>x</sub> , g/Bhp-hr	0.193	$0.80^{1}$	In Compliance
CO, ppm @ 15% O <sub>2</sub>	182.8	<b>2,</b> 000 <sup>3</sup>	In Compliance
CO, g/Bhp-hr	1.642	2.1 <sup>1</sup>	In Compliance
CH <sub>4</sub> , ppm @ 15% O <sub>2</sub>	1,104	<b>3,</b> 000 <sup>4</sup>	In Compliance
NMOC, ppm as CH <sub>4</sub> @ 3% O <sub>2</sub>	91.9	120 <sup>2</sup>	La Camaliana
NMOC Destruction Efficiency, %	>77.5%	or >98% <sup>1</sup>	In Compliance

<u>Test Results</u>: The compliance summary is presented below. Detailed source test emission results are provided in Table 1. All measured test parameters were in compliance with permit limits.

<sup>1</sup> - Condition 19933 Parts 5, 6 and 7

<sup>2</sup> - Reg 8-34-301.4

<sup>3</sup> - Reg 9-8-302.1 & -302.3

<sup>4</sup> – Landfill Methane Rule

The appendices are organized as follows:

#### Calculations

Calculations performed on the continuous emissions monitoring (CEM) data and flow rate calculations.

#### Laboratory Reports

Laboratory reports and chains-of-custody.

#### Field Data Sheets

CEMS data and any transcribed data from the strip charts.

#### Process Information

Relevant and available facility process operating documentation.

#### Calibration Gas Certificates

Certifications for the calibration gas standards.

#### Equipment Calibrations

Calibration records for equipment used (e.g., S-type pitot tubes, dry gas meters, rotameters)

#### Stack Diagram

Sketch or photograph of the stack.

#### Sample System Diagram

Schematic of the sampling system configuration.

#### Permit / Authority to Construct

Permit to Operate / Authority to Construct.

#### Source Test Plan

Sampling protocols submitted to the BAAQMD prior to testing.



**<u>Comments</u>**: This source test was performed in accordance with the protocol submitted to BAAQMD. No deviations from the protocol or anomalies were observed during testing.

The work performed herein was conducted under my supervision, and I certify that:

- a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program,
- b) that the sampling and analytical procedures and data presented in the report is authentic and accurate,
- c) that all testing details and conclusions are accurate and valid, and
- d) that the production rate and/or heat input rate during the source test are reported accurately.

If there are any questions concerning this report, please contact Jeramie Richardson at (810) 923-3181, Chuck Arrivas at (925) 338-4875 or Guy Worthington at (510) 508-3469.

Prepared by,

Anne Richardson

Reviewed by,

Juli be go-

Julie Wose-Jennings

#### TABLE #1

Sonoma Central Landfill Engine #2 (S-5)

Parameter	Run 1	Run 2	Run 3	Average Results	Permit Limits	
Test Date	12/06/21	12/06/21	12/06/21			
Test Time	0852-0927	0954-1029	1059-1134			
Standard Temperature, °F	70	70	70	70		
Process Parameters:						
Engine Rating, kW	800	800	800	800		
Engine (Generator), kW	782.5	790	815	795.8		
Engine BHp	1,049	1,059	1,092	1,066		
Fuel:				,		
Fuel Flow Rate, DSCFM	285.6	283.6	284.3	284.5		
Gas Fd-Factor @, 70°F	9,525	9,514	9,524	9,521		
Heat Input, MMBtu/day	208.8	207.7	205.0	207.2	252.6	
Stack Gas:						
Exhaust Temperature, °F	778	781	783	781		
Exhaust Flow Rate, DSCFM (EPA Method 19)	2,231	2,205	2,139	2,191		
Oxygen (O <sub>2</sub> ), % volume dry	8.0	7.9	7.7	7.8	6.4 - 8.3	
Carbon Dioxide (CO <sub>2</sub> ), % volume dry	11.3	11.3	11.6	11.4	0.1 0.5	
Carbon Dioxide, lb/hr	1,725	1,699	1,688	1,704		
Water Vapor (H <sub>2</sub> O), % volume	12.2	12.2	12.8	12.4		
NO <sub>x</sub> Emissions (reported as NO <sub>2</sub> ):	14.4	12.2	12.0	14.7	ļ	
NOx, ppmvd	24.5	26.5	36.7	29.2		
NOx, ppmvd @ 15% O <sub>2</sub>	11.2	12.0	16.3	13.2	70	
NOx, lb/hr	0.390	0.416	0.560	0.456	10	
NOx, ID/III NOx, Ib/MMBtu	0.0449	0.0482	0.0657	0.0529		
NOx, g/Bhp-hr	0.169	0.178	0.233	0.193	0.80	
CO Emissions:	0.109	0.170	0.233	0.193	0.00	
	401.4	407.7	385.1	404.7		
CO, ppmvd	421.4	407.7		404.7	2 000	
CO, ppmvd @ 15% O <sub>2</sub>	192.2	184.9	171.5	182.8	2,000	
CO, lb/hr	4.084	3.904	3.578	3.856		
CO, lb/MMBtu	0.4702	0.4518	0.4196	0.4472	2.1	
CO, g/Bhp-hr	1.767	1.673	1.486	1.642	2.1	
Methane (CH <sub>4</sub> ) Emissions:			4 505	<b>2</b> 4 40	1	
CH <sub>4</sub> , ppmv wet (EPA Method 25A)	2,477	2,215	1,727	2,140		
CH <sub>4</sub> , ppmvd	2,821	2,524	1,981	2,442		
CH <sub>4</sub> , ppmvd @ 15% O <sub>2</sub>	1,287	1,144	882	1,104	3,000	
CH <sub>4</sub> , lb/hr	15.6	13.8	10.5	13.3		
THC Emissions (reported as CH <sub>4</sub> ):		I			1	
THC, ppmv wet (EPA Method 25A)	2,542	2,276	1,778	2,199		
THC, ppmvd	2,895	2,593	2,039	2,509		
THC, lb/hr	16.04	14.19	10.82	13.68		
NMOC Emissions (reported as CH <sub>4</sub> ):	1				1	
NMOC, ppmv wet (EPA Method 25A)	64.7	61.1	50.3	58.7		
NMOC, ppmvd	73.6	69.7	57.7	67.0	^	
NMOC, ppmvd @ 3% O <sub>2</sub>	102	95.8	78.0	91.9	120	
NMOC, lb/hr	0.408	0.381	0.306	0.365		
NMOC, g/Bhp-hr	0.176	0.163	0.127	0.156		
Inlet:			1 .		I	
Inlet CH <sub>4</sub> , % (ASTM D-1945 & EPA Method 25C)	51.1	51.2	50.4	50.8		
Inlet CH <sub>4</sub> , lb/hr	362	360	356	359		
CH <sub>4</sub> Destruction Efficiency, %	>95.7%	>96.2%	>97.0%	>96.4%		
Inlet THC, %	51.3	51.4	50.6	51.0		
Inlet THC, lb/hr	364	362	357	361		
THC Destruction Efficiency, %	>95.6%	>96.1%	>97.0%	>96.3%		
Inlet NMOC, ppmvd (EPA Method 25C)	2,272	2,141	2,210	2,241		
Inlet NMOC, lb/hr	1.61	1.51	1.56	1.59		
NMOC Destruction Efficiency, %	>74.7%	>74.7%	>80.4%	>77.5%	>98%*	

\* NMOC permit limits are 120 ppm @ 3% O2 or DE >98%

#### WHERE:

 $\begin{array}{l} \label{eq:powerserv} ppmvd = parts per million concentration by volume expressed on a dry gas basis\\ lb/hr = pound per hour emission rate\\ Tstd. = standard temperature (°R = °F+460)\\ MW = molecular weight\\ DSCFM = dry standard cubic foot per minute\\ NO_X = oxides of nitrogen, reported as NO_2 (MW = 46)\\ CO = carbon monoxide (MW = 28)\\ CH_4 = methane (MW = 16) \end{array}$ 

THC = total hydrocarbons including methane, reported as methane NMOC = non-methane organic compounds, reported as methane

#### CALCULATIONS:

 $\begin{array}{l} ppm \; dry = ppm \; wet \cdot 100 \; / \; (100 - H_2O\%) \\ ppm \; @ \; 3\% \; O_2 = ppm \cdot 17.9 \; / \; (20.9 - \%O_2) \\ lb/hr = ppm \cdot 8.223 \; E-05 \cdot DSCFM \cdot MW \; / \; Tstd. \ ^R \\ lb/day = lb/hr \cdot 24 \\ lb/MtRtu = Fd \cdot MW \cdot ppm \cdot 2.59E-9 \cdot 20.9/(20.9 - \%O_2) \\ Engine \; BHp = generator \; kW \cdot 1.34 \\ g/Bhp-hr = lb/hr \cdot 453.6 \; / \; Bhp \end{array}$ 

Appendix F – Title V Semi-Annual Report

#### TITLE V SEMI-ANNUAL MONITORING REPORT

SITE:	10-10-10-00 m	1.10	FACILITY ID#:	1.000
SONOMA COU	INTY CENTRAL LA	NDFILL		A2254
<b>REPORTING PERIOD:</b>	from	through	Sector 11	
	08/01/2021		01/31/2022	

#### 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:

Signature of Responsible Official

2-25-22

Date

Rob Sherman Name of Responsible Official (please print)

General Manager Title of Responsible Official (please print)

Mail to:

Director of Compliance and Enforcement BAAQMD 375 Beale Street, Suite 600 San Francisco, CA 94105 Attn: Title V reports

### TITLE V SEMI-ANNUAL MONITORING REPORT

SITE:			FACILITY ID#:	
SONOMA COU	NTY CENTRAL LA	NDFILL		A2254
<b>REPORTING PERIOD:</b>	from	through		
	08/01/2021		01/31/2022	

#### List of Permitted Sources and Abatement Device in Title V Permit

Permit Unit Number	Equipment Description
S-#	Description
S-1	Landfill with Gas Collection System
S-15	Landfill Gas Compression Plant
S-22	Waste and Cover Material
S-23	Mobile Surface Equipment
A-4	Landfill Gas Flare (Control Device for S-1)
A-8	Waste Sprays (Control Device for S-1)
S-4, S-5, S-6, S-7, S-9,	Lean Burn Internal Combustion Engines and Generator Sets
S-10, S-11, S-12, S-13,	
S-14	

#### Notes:

- Condition Number 26507 Applies to all sources at the facility. All conditions have been reviewed for compliance, and the site is in compliance.
- S-24 (Portable reciprocating engine, 195 hp, portable landfill truck tipper)
  - On September 21, 2021, the S-24 Tipper Engine was removed from the site and replaced with a 49 horsepower (HP) engine. This source operated under a permit to operate (PTO) (Condition No. 26171) which has not yet been incorporated into the Title V Permit. All conditions have been reviewed for compliance, and the site is in compliance up to the date the source was removed from the site.

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection System Installation Dates	BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition # 4044, Parts 19d, f, g, h	Records	Periodic / On event basis	BAAQMD 8-34- 304.1	For Inactive/Closed Areas: collection system components must be installed and operating by 2 years + 60 days after initial waste placement	Continuous	N/A
Collection System Installation Dates	BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition # 4044, Parts 19d, f, g, h	Records	Periodic / On event basis	BAAQMD 8-34- 304.2 and BAAQMD Condition # 4044, Part 4	For Active Areas: Collection system components must be installed and operating by 5 years + 60 days after initial waste placement	Continuous	N/A

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection	BAAQMD	Records	Periodic / On	BAAQMD 8-34-	For Any	Continuous	N/A
System	8-34-501.7 and		event basis	304.3 and	Uncontrolled Areas		
Installation	501.8 and			BAAQMD	or Cells: collection		
Dates	BAAQMD			Condition #	system		
	Condition #			4044, Part 4	components must		
	4044, Parts 19e-				be installed and		
	h				operating within 60		
					days after the		
					uncontrolled area		
					or cell accumulates		
					1,000,000 tons of		
					decomposable		
					waste		
Collection	40 CFR	Records	Periodic / On	40 CFR 60.753	For Inactive/Closed	Continuous	N/A
System	60.758(a), (d)(1)		event basis	(a)(2) and 60.755	Areas: collection		
Installation	and (d)(2), and			(b)(2)	system		
Dates	60.759(a)(3) and				components must		
	BAAQMD				be installed and		
	Condition #				operating by 2		
	4044, Parts 19d,				years + 60 days		
	f, g				after initial waste		
					placement		

Site: Sonoma	County Central Landfill	Facility ID#:	A225	54
LANDFILL GAS COMPRESSI	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 ON PLANT; S-22 WASTE AND COVER MATERIAL; S- PMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection	40 CFR	Records	Periodic / On	40 CFR 60.753	For Active Areas:	Continuous	N/A
System	60.758(a), (d)(1)		event basis	(a)(1) and 60.755	Collection system		
Installation	and (d)(2) and			(b)(1)	components must		
Dates	BAAQMD				be installed and		
	Condition #				operating by 5		
	4044, Parts 19d,				years + 60 days		
	f, g				after initial waste		
					placement		
Gas Flow	BAAQMD	Gas Flow	Continuous	BAAQMD 8-34-	Landfill gas	Intermittent	There were unplanned shutdowns of
	Condition #4044,	Meter		301 and 301.1;	collection system		the gas collection and control system
	Part 11 and			BAAQMD	shall operate		(GCCS) that did not meet the
	Condition			Condition #	continuously and all		exemption criteria in BAAQMD Rule 8-
	#19933, Part 4			4044,	collected gases		34-113. These events included Pacific
				Parts 4a, 5, 8,	shall be vented to a		Gas and Electric (PG&E) utility power
				and 9; BAAQMD	properly operating		outages, which resulted in shutdowns
				Condition	control system		of the GCCS that occurred on
				#19933, Parts 1			September 18, 2021 from 12:04 to
				& 2			12:12 and 21:34 to 21:42, and
							September 19, 2021 from 16:14 to
							16:40, and thermocouple
							malfunctions, which resulted in
							shutdowns of the GCCS that occurred
							on December 17, 2021 at 22:48 to
							December 18, 2021 00:44 and
							December 19, 2021 from 04:56 to

Site: Sond	ma County Central Landfill	Facility ID#:	A2254			
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 RESSION PLANT; S-22 WASTE AND COVER MATERIAL; S- EQUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from 08/01/2021 thro	ough 01/31/2022		

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
							09:24. These events were reported to
							the BAAQMD as reportable
							compliance activities (RCA) and
							breakdown relief was requested.
							On Contouch an CO. 2024 Notice of
							On September 29, 2021, Notice of
							Violation (NOV) No. A59872 was
							issued by BAAQMD inspector Mr.
							Richard Murray for an alleged
							violation of BAAQMD Regulation 8,
							Rule 34, Section 301.1 (Landfill Gas
							Collection and Emission Control
							Requirements). Per the NOV, Sonoma
							allegedly failed to operate the GCCS
							continuously during three RCA events
							that occurred on September 18 and
							19, 2021 (IDs 08B84 and 08B85;
							08B89 and 08B90; and 08B91 and
							08B92). Additional details can be
							found in the October 7, 2021 10-day
							NOV Response Letter.

A2254
riod: from 08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Gas Flow	BAAQMD 8-34-501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes)	Continuous	BAAQMD 8-34- 301 and 301.1; BAAQMD Condition # 4044, Parts 4a, 5, 8, and 9; BAAQMD Condition #19933, Parts 1 & 2	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system	Continuous	N/A
Gas Flow	40 CFR 60.756(b)(2) (i or ii) and 60.758(c)(2)	Gas Flow Meter and Recorder (every 15 minutes) or Monthly Inspection of Bypass Valve and Lock and Records	Continuous. Periodic/ Monthly	40 CFR 60.753(a) and (e)	Operate a Collection System in each area or cell and vent all collected gases to a properly operating control system	Continuous	N/A

Site: Son	oma County Central Landfill	Facility ID#:	A2254
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 RESSION PLANT; S-22 WASTE AND COVER MATERIAL; S- EQUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from 08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection	BAAQMD	Operating	Periodic / Daily	BAAQMD 8-34-	240 hours per year	Continuous	N/A
and	8-34-501.1 and	Records		113.2	and		
Control	BAAQMD				5 consecutive days		
Systems	Condition #						
Shutdown	4044, Part 19i						
Time							
Collection	40 CFR 60.7(b),	Operating	Periodic / Daily	40 CFR	5 days per event	Continuous	N/A
System	60.757(f)(2) and	Records (all		60.755(e)	for collection		
Startup	(f)(4)	occurrences			system or 1 hour		
Shutdown		and duration			for control system		
or		of each)					
Malfunctio							
n							
Periods of	BAAQMD	Operating	Periodic / Daily	BAAQMD 1-	$\leq$ 15 consecutive	Continuous	N/A
Inoperation	1-523.4	Records for		523.2	days		
for		All			per incident and		
Parametric		Parametric			$\leq$ 30 calendar days		
Monitors		Monitors			per 12-month		
					period		

Site: Sonon	na County Central Landfill	Facility ID#:	A2254		
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022	

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Continuous	40 CFR 60.7(b)	Operating	Periodic / Daily	40 CFR 60.13(e)	Requires	Continuous	N/A
Monitors		Records for			Continuous		
		All			Operation except		
		Continuous			for breakdowns,		
		Monitors			repairs, calibration,		
					and required span		
					adjustments		
Wellhead	BAAQMD	Monthly	Periodic /	BAAQMD 8-34-	< 0 psig	Continuous	N/A
Pressure	8-34-414, 501.9	Inspection	Monthly	305.1			
	and 505.1	and Records					
Wellhead	40 CFR	Monthly	Periodic /	40 CFR	< 0 psig	Continuous	N/A
Pressure	60.755(a)(3),	Inspection	Monthly	60.753(b)			
	60.756(a)(1), and	and Records					
	60.758(c) and (e)						
Temperatu	BAAQMD	Monthly	Periodic /	BAAQMD 8-34-	< 55 °C (< 131 °F),	Continuous	N/A
re of Gas	8-34-414, 501.9	Inspection	Monthly	305.2			
at	and 505.2	and Records					
Wellhead							
Temperatu	40 CFR	Monthly	Periodic /	40 CFR	< 55 °C	Continuous	N/A
re of Gas	60.755(a)(5),	Inspection	Monthly	60.753(c)			
at	60.756(a)(3), and	and Records					
Wellheads	60.758(c) and (e)						

/01/2021 through 01/31/2022
/

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance		
Gas	BAAQMD	Monthly	Periodic /	BAAQMD	N <sub>2</sub> < 20% <b>OR</b> O <sub>2</sub> <	Continuous	N/A	
Concentrat	8-34-414, 501.9	Inspection	Monthly	8-34-305.3 or	5%			
ion at	and 505.3 or	and Records		305.4				
Wellhead	505.4							
Gas	40 CFR	Monthly	Periodic /	40 CFR	N2 < 20% <b>OR</b> O <sub>2</sub> <	Continuous	N/A	
Concentrat	60.755(a)(5),	Inspection	Monthly	60.753(c)	5%			
ion at	60.756(a)(2), and	and Records						
Wellhead	60.758(c) and (e)							
Well	BAAQMD	Records	Periodic / Daily	BAAQMD 8-34-	No more than 5	Continuous	N/A	
Shutdown	8-34-116.5 and			116.2	wells at a time or			
Limits	501.1				10% of total			
					collection system,			
					whichever is less			
Well	BAAQMD	Records	Periodic / Daily	BAAQMD 8-34-	< 24 hours per well	Continuous	N/A	
Shutdown	8-34-116.5 and			116.3				
Limits	501.1							
Well	BAAQMD	Records	Periodic / Daily	BAAQMD 8-34-	No more than 5	Continuous	N/A	
Shutdown	8-34-117.6 and			117.4	wells at a time or			
Limits	501.1				10% of total			
					collection system,			
					whichever is less			
Well	BAAQMD	Records	Periodic / Daily	BAAQMD 8-34-	24 hours per well	Continuous	N/A	
Shutdown	8-34-117.6 and			117.5				
Limits	501.1							

Site: Sonon	na County Central Landfill	Facility ID#:	<b>D#:</b> A2254			
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022		

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
TOC (Total	BAAQMD	Quarterly	Periodic /	BAAQMD 8-34-	Component Leak	Continuous	N/A
Organic	8-34-501.6 and	Inspection of	Quarterly	301.2	Limit: < 1000 ppmv		
Com-	503	collection			as methane		
pounds		and control					
Plus		system					
Methane)		components					
		with OVA					
		and Records					
тос	BAAQMD	Monthly	Periodic /	BAAQMD 8-34-	Surface Leak Limit:	Continuous	N/A
	8-34-415, 416,	Visual	Monthly,	303	< 500 ppmv as		
	501.6, 506 and	Inspection of	Quarterly, and		methane at 2		
	510	Cover,	on an Event		inches above		
		Quarterly	Basis		surface		
		Inspection					
		with OVA of					
		Surface,					
		Various					
		Reinspec-					
		tion Times					
		for Leaking					
		Areas, and					
		Records					

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
тос	40 CFR	Monthly	Periodic /	40 CFR	<500 ppmv as	Continuous	N/A
	60.755(c)(1), (4)	Visual	Monthly,	60.753(d)	methane at 5-10		
	and (5),	Inspection of	Quarterly, and		cm from surface		
	60.756(f), and	Cover,	on an Event				
	60.758(c) and (e)	Quarterly	Basis				
		Inspection					
		with OVA of					
		Surface,					
		Various					
		Reinspection					
		Times for					
		Leaking					
		Areas, and					
		Records					
Non-	BAAQMD	Initial and	Periodic /	BAAQMD 8-34-	> 98% removal by	Continuous	N/A
Methane	8-34-412 and 8-	Annual	Annual	301.3	weight		
Organic	34-501.4 and	Source			OR		
Com-	BAAQMD	Tests			< 30 ppmv,		
pounds	Condition #				dry basis @ 3%		
(NMOC)	4044, Parts 17				O2, expressed as		
	and 19m				methane		

Site: Sonor	na County Central Landfill	Facility ID#:	A225	4
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 ESSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NMOC	40 CFR 60.8 and	Initial Source	Periodic	40 CFR	98% removal by	Continuous	N/A
	60.752(b)	Test and		60.752(b)	weight		
	(2)(iii)(B) and	Records		(2)(iii)(B)	OR		
	60.758				< 20 ppmv dry @		
	(b)(2)(ii)				3% O2, expressed		
					as hexane		
NOx	BAAQMD	Annual	Periodic /	BAAQMD	0.05 lb/MMBTU (as	Continuous	N/A
	Condition #	Source Test	Annual	Condition #	NO2)		
	4044,			4044,			
	Part 17			Part 11			
СО	BAAQMD	Annual	Periodic /	BAAQMD	0.20 lb/MMBTU	Continuous	N/A
	Condition #	Source Test	Annual	Condition #			
	4044,			4044,			
	Part 17			Part 12			
Temperatu	BAAQMD	Temperature	Continuous	BAAQMD	CT > 1400°F	Continuous	N/A
re of	8-34-501.3 and	Sensor and		Condition #			
Combustio	507 and	Recorder		4044,			
n Zone	BAAQMD	(continuous)		Part 10			
(CT)	Condition #						
	4044, Parts 16						
	and 19I						

A2254
riod: from 08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Temperatu	40 CFR	Temperature	Continuous	40 CFR 60.758	CT (3-hour	Continuous	N/A
re of	60.756(b)(1) and	Sensor and		(c)(1)(i)	average)		
Combustio	60.758	Recorder			> (CT <sub>PF</sub> − 28 °C),		
n Zone	(b)(2)(i)	(measured			where CTPF is the		
(CT)		every 15			average		
		minutes and			combustion		
		averaged			temperature during		
		over			the most recent		
		performance			complying		
		test time			performance test		
		period and					
		3-hours)					
Total	BAAQMD	Records	Periodic / Daily	BAAQMD 8-2-	15 pounds/day or	Continuous	N/A
Carbon	Condition #		-	301	300 ppm, dry basis		
	4044, Part 21a-c				(applies only to		
					aeration of or use		
					as cover soil of soil		
					containing < 50		
					ppmw of volatile		
					organic		
					compounds)		

Site: Sonoma County Central Landfill		Facility ID#:	A225	54
LANDFILL GAS COMPRESSI	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 ON PLANT; S-22 WASTE AND COVER MATERIAL; S- PMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Amount of	BAAQMD	Records	Periodic / On	BAAQMD 8-40-	1 cubic yard per	Continuous	N/A
Contamina	Condition #		Event Basis	116.1	project		
ted Soil	4044, Part 20I						
Aerated or							
Used as							
Cover							
Amount of	BAAQMD	Records	Periodic / On	BAAQMD 8-40-	8 cubic yards per	Continuous	N/A
Contamina	8-40-116.2 and		Event Basis	116.2	project, provided		
ted Soil	BAAQMD				organic content		
Aerated or	Condition #				< 500 ppmw		
Used as	4044, Part 20I				and limited to 1		
Cover					exempt project per		
					3 month period		
Amount of	BAAQMD	Records	Periodic / On	BAAQMD 8-40-	Prohibited for Soil	Continuous	N/A
Contamina	Condition #		Event Basis	301	with Organic		
ted Soil	4044, Part 20I				Content >50 ppmw		
Aerated or					unless exempt per		
Used as					BAAQMD 8-40-		
Cover					116, 117, or 118		
Amount of	None	N/A	None	BAAQMD 8-40-	Soil Contaminated	Continuous	N/A
Accidental				117	by Accidental		
Spillage					Spillage of		
					< 5 Gallons of		
					Liquid Organic		
					Compounds		

Site: So	noma County Central Landfill	Facility ID#:	A2254
	IPRESSION PLANT; S-22 WASTE AND COVER MATERIAL; S-	Reporting Period:	from 08/01/2021 through 01/31/2022
23 MOBILE SURFA	CE EQUIPMENT; A-4 LANDFILL GAS FLARE		

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Total Aeration Project	BAAQMD Condition # 4044, Part 20I	Records	Periodic / On Event Basis	BAAQMD 8-40- 118	< 150 pounds VOC per project and toxic air	Continuous	N/A
Emissions					contaminant emissions per year < BAAQMD Table 2-1-316 limits		
Contamina ted Soil Handling	BAAQMD Condition # 4044, Part 20I	Records	Periodic / On Event Basis	BAAQMD Condition # 4044, Part 20d	Limited to 2 on-site transfers per lot of contaminated soil	Continuous	N/A
Contamina ted Soil On-Site Storage Time	BAAQMD Condition # 4044, Part 20I	Records	Periodic / On Event Basis	BAAQMD Condition # 4044, Part 20e-f	If organic content is: < 500 ppmw, storage time < 90 days > 500 ppmw, storage time < 45 days	Continuous	N/A
Opacity	BAAQMD Condition # 4044, Part 19n-o	Records of Dust Suppressant and Water Application	Periodic / On event basis	BAAQMD 6-1- 301	Ringelmann No. 1 for ≤ 3 minutes/hr	Continuous	N/A

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD 6-102	Visual Observation	Periodic / On event basis	SIP 6-301	< Ringelmann No. 1 for 3 minutes in any hour	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	Periodic / On event basis	BAAQMD 6-1- 301	Ringelmann No. 1 for < 3 minutes/hr	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	Periodic / On event basis	SIP 6-302	< 20% Opacity	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	Periodic / On event basis	BAAQMD 6-1-302	< 20% Opacity	Continuous	N/A
FP	None	N/A	None	BAAQMD 6-310	0.15 grains/dscf (applies to Flare A- 4)	Continuous	N/A
Opacity	BAAQMD Condition # 4044, Part 19n-o	Records of Dust Suppressant and Water Application	Periodic / On event basis	BAAQMD Condition # 4044, Part 2	Ringelmann No. 0.5	Continuous	N/A
TSP	BAAQMD 6-1- 501, 502, and 504	Source Test (once every 5 years with initial test results due by 7/1/2024)	Periodic / On event basis	SIP 6-310	< 0.15 grains/dscf (applies to Flare A- 4)	Continuous	N/A

Site: So	noma County Central Landfill	Facility ID#:	A2254
	IPRESSION PLANT; S-22 WASTE AND COVER MATERIAL; S-	Reporting Period:	from 08/01/2021 through 01/31/2022
23 MOBILE SURFA	CE EQUIPMENT; A-4 LANDFILL GAS FLARE		

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
TSP	BAAQMD 6-1- 501, 502, and 504	Source Test (once every 5 years with initial test results due by 7/1/2024)	Periodic / On event basis	BAAQMD 6-1- 310.2	< 0.0697 grains/dscf (Applies to Flare A-4)	Continuous	N/A
Visible Emissions	BAAQMD 6-102	Visual Observation	Periodic / On event basis	BAAQMD 6-1- 307.1	No visible emissions due to fugitive dust from active landfill or stockpile operations	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	Periodic / On event basis	BAAQMD 6-1- 307.2	During Cleanup: < 20% opacity for 3 minutes in any hour or < Ringelmann No. 1 for 3 minutes in any hour	Continuous	N/A
Opacity	BAAQMD Condition # 4044, Part 19n-o	Records of Dust Suppressant and Water Application	Periodic / On event basis	BAAQMD Condition # 4044, Part 2	< Ringelmann No. 0.5	Continuous	N/A

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Particu-	BAAQMD 6-6-	Visual	Periodic / Daily	BAAQMD 6-6-	Trackout onto	Continuous	N/A
late	501.1-4	Observation		301	Paved Public		
Trackout		and			Roads:		
		Measure-			< 25 liear feet		
		ment of			(clean within 4		
		Trackout at			hours)		
		Facility Exits			And < 1 quart of		
		and Records			trackout At end of		
					workday		
Opacity	Visual	Visual	Periodic / On	BAAQMD 6-6-	During Trackout	Continuous	N/A
		Observation	event basis	302	Cleanup:		
		During			< 20% Opacity or		
		Cleaning			< Ringelmann No.		
		Events and			1 for 3 minutes in		
		Records			any hour		
Amount of	BAAQMD	Records	Periodic / Daily	BAAQMD	< 2500 tons/day	Continuous	N/A
Waste	Condition #			Condition #	(except for		
Accepted	4044, Part 19a-c			4044, Part 1	temporary		
					situations approved		
					by the LEA)		
					and		
					< 897,500		
					tons/year		

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Total Amount of Waste and Cover Materials	BAAQMD Condition # 4044, Part 19c	Records	Periodic / Monthly	BAAQMD Condition # 4044, Part 1	< 32.65 E6 yd <sup>3</sup> and < 19.59 E6 tons	Continuous	N/A
SO <sub>2</sub>	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 <sub>2</sub>	BAAQMD Condition # 4044, Parts 18 and 19m	Sulfur analysis of landfill gas and Records	Periodic / Annual	BAAQMD Regulation 9-1- 302	< 300 ppm (dry basis)	Continuous	N/A

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
H <sub>2</sub> S	None	N/A	None	BAAQMD 9-2- 301	Property Line Ground Level Limits: < 0.06 ppm, averaged over 3 minutes and < 0.03 ppm, averaged over 60 minutes	Continuous	N/A
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 4044, Parts 18 and 19m	Sulfur analysis of landfill gas	Periodic / Annual	BAAQMD Condition # 4044, Part 7	< 1300 ppmv	Continuous	N/A
Toxic Air Contamina nts in Collected Landfill Gas	BAAQMD Condition # 4044, Part 18	Annual Source Test	Periodic / Annual	BAAQMD Condition # 4044, Part 6	Benzene < 2.5 ppmv Trichloroethylene < 3.0 ppmv Perchloroethylene < 3.0 ppmv Methylene Chloride<20.0ppmv Vinyl Chloride < 2.5 ppmv	Continuous	N/A

Site: Sonon	na County Central Landfill	Facility ID#:	A225	54
	S-1 LANDFILL WITH GAS COLLECTION SYSTEM; S-15 SSION PLANT; S-22 WASTE AND COVER MATERIAL; S- QUIPMENT; A-4 LANDFILL GAS FLARE	Reporting Period:	from	08/01/2021 through 01/31/2022

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Periods of	BAAQMD 1-	Operating	Periodic / Daily	BAAQMD 1-	15 consecutive	Continuous	N/A
Inoperation	523.4	Records for		523.2	days/incident and		
for		All			30 calendar		
Parametric		Parametric			days/12 month		
Monitors		Monitors			period		
Continuous	40 CFR 60.7(b)	Operating	Periodic / Daily	40 CFR 60.13(e)	Requires	Continuous	N/A
Monitors		Records for			Continuous		
		All			Operation except		
		Continuous			for breakdowns,		
		Monitors			repairs, calibration,		
					and required span		
					adjustments		
Heat Input	BAAQMD	Monthly and	Periodic /	BAAQMD	< 2,190 MMBtu per	Continuous	N/A
	Condition #4044,	Annual	Monthly /	Condition #4044,	day and < 547,680		
	Part 13	Records	Annual	Part 13	MM BTU per year		

Site:	Sonom	a County Central Landfill	Facility ID#:	A225	54
Permitt	ted Unit:	S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13,	- Reporting Period	from	08/01/2021 through 01/31/2022
14 LEAN		COMBUSTION ENGINES AND GENERATOR SETS			-

Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD 6-102	Visual Observation	P/E	SIP 6-301	< Ringelmann No. 1 for 3 minutes in any hour	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	P/E	BAAQMD 6-1-301	< Ringelmann No. 1 for 3 minutes in any hour	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	P/E	SIP 6-302	< 20% Opacity	Continuous	N/A
Opacity	BAAQMD 6-102	Visual Observation	P/E	BAAQMD 6-1-302	< 20% Opacity	Continuous	N/A
TSP	BAAQMD 6-1-501, 502, and 504	N/A	None	BAAQMD 6-310	0.15 grains/dscf	Continuous	N/A
TSP	BAAQMD 6-1-501, 502, and 504	N/A	None	BAAQMD 6-310.1	0.15 grains/dscf	Continuous	N/A
TOC (Total Organic Com-pounds Plus Methane)	BAAQMD 8-34-501.6 and 8- 34-503	Quarterly Inspection and Records	Periodic / Quarterly	BAAQMD 8-34- 301.2	1000 ppmv as methane (component leak limit)	Continuous	N/A
Non- Methane Organic Com-pounds (NMOC)	BAAQMD 8-34-412 and 8-34- 501.4 and BAAQMD Condition #19933, Part 8	Initial and Annual Source Tests and Records	Periodic / Annual	BAAQMD 8-34- 301.4	98% removal by weight OR < 120 ppmv dry @ 3% O2, expressed as methane	Continuous	N/A
NMOC	BAAQMD Condition #24894,	Annual Source Test	Periodic / Annual	BAAQMD Condition #	< 120 ppmv dry @ 3% O2, expressed as methane	Continuous	N/A

Site:	Sonoma County	/ Central Landfi		Facility I					
Permitted Unit:S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-Reporting Period:from08/01/2021through 01/31/202214 LEAN BURN INTERNAL COMBUSTION ENGINES AND GENERATOR SETS									
Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taker		
	Part 8			19933, Part 6	(S-13, S-14: when fired by biogas fuel)				
POC	BAAQMD Condition #19933, Part 8	Annual Source Test	Periodic / Annual	BAAQMD Condition # 19933, Part 7	98% removal by weight OR < 120 ppmv dry @ 3% O2, expressed as methane	Continuous	N/A		
SO <sub>2</sub>	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: < 0.5 ppm for 3 minutes, < 0.25 ppm for 60 minutes & < 0.05 ppm for 24 hours	Continuous	N/A		
SO <sub>2</sub>	BAAQMD Condition # 4044, Parts 15 and 17m	Sulfur Analysis of landfill gas	Periodic / Annual	BAAQMD 9-1-302	300 ppm (dry)	Continuous	N/A		
H <sub>2</sub> S	None	N/A	None	BAAQMD 9-2-301	Property Line ground level limits < 0.06 ppm Averaged over 3 minutes and < 0.03 ppm Averaged over 60 minutes	Continuous	N/A		
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 4044, Parts 15 and 17m	Sulfur Analysis of landfill gas	Periodic / Annual	BAAQMD Condition # 4044, Part 7	< 300 ppmv	Continuous	N/A		
NOx	None	N/A	None	BAAQMD 9-8-301.2	Fossil Fuel Gas, Lean-Burn 65 ppmv dry @ 15% O2	Continuous	N/A		
NO <sub>x</sub>	BAAQMD Condition #19933, Part 8	Annual Source Test	Periodic / Annual	BAAQMD 9-8- 302.1	Waste Fuel Gas, Lean-Burn 70 ppmv dry @ 15% O2	Continuous	N/A		
NOx	BAAQMD Condition #19933,	Annual Source Test	Periodic / Annual	BAAQMD Condition #	0.80 grams per brake horsepower hour (g/bhp-hr)	Continuous	N/A		

Site:	Sonoma County	/ Central Landfi	II	Facility I	<b>D#:</b> A2254		
Permitted 14 Lean Bur	I Unit: S-4, S-5, RN INTERNAL COMBUST	S-6, S-7, S-9, S-1 TION ENGINES AND C			<b>g Period:</b> from 08/01/20	21 through 01/	31/2022
Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
	Part 8			19933, Part 5			
NOx	BAAQMD Condition #24894, Part 8	Annual Source Test	Periodic / Annual	BAAQMD Condition # 24894, Part 4	0.80 grams per brake horsepower hour (g/bhp-hr) (S- 13, S-14: when fired by biogas fuel)	Continuous	N/A
CO	None	N/A	None	BAAQMD 9-8-301.3	Fossil Fuel Gas: 2000 ppmv dry @ 15% O <sub>2</sub>	Continuous	N/A
СО	BAAQMD Condition #19933, Part 8	Annual Source Test	Periodic / Annual	BAAQMD 9-8- 302.3	Waste Fuel Gas: 2000 ppmv dry @ 15% O <sub>2</sub>	Continuous	N/A
CO	BAAQMD Condition #19933, Part 8	Annual Source Test	Periodic / Annual	BAAQMD Condition #19933, Part 6	2.1 g/bhp-hr	Continuous	N/A
CO	BAAQMD Condition #24894, Part 8	Annual Source Test	Periodic / Annual	BAAQMD Condition # 24894, Part 5	2.1 grams per brake horsepower hour (g/bhp-hr) (S- 13, S-14: when fired by biogas fuel)	Continuous	N/A
Heat Input	BAAQMD Condition #19933, Part 9a-e	Records	Periodic / Daily	BAAQMD Condition # 19933, Part 10	Limits for each engine: < 252.6 MM BTU/day And < 92,199 MM BTU/year	Continuous	N/A
Emission Control System Shutdown Time	BAAQMD 8-34-501.2 and BAAQMD Condition #19933, Part 9a	Records	Periodic / Daily	BAAQMD 8-34-113.2	240 hours/year	Continuous	N/A

Site:	Sonoma County			Facility I			04/0000		
Permitted Unit:S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-Reporting Period:from08/01/2021through 01/31/202214 LEAN BURN INTERNAL COMBUSTION ENGINES AND GENERATOR SETSReporting Period:from08/01/2021through 01/31/2022									
Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taker		
Engine Exhaust Oxygen Content	BAAQMD Condition #19933, Part 11 and BAAQMD 8-34-509	Monthly Exhaust Oxygen Monitoring and Records	Periodic / Monthly	BAAQMD 8-34-301.4	98% removal by weight OR < 120 ppmv dry @ 3% O2, expressed as methane (as demonstrated by proper exhaust oxygen content range)	Continuous	N/A		
Natural Gas Usage	BAAQMD Condition #19933, Part 9a-c	Records	Periodic / Daily	BAAQMD Condition # 19933, Part 3	Prohibited when flare is operating and unless it is needed as supplemental fuel	Continuous	N/A		
Gas Flow	BAAQMD Condition #19933, Part 4	Gas Flow Meter (per engine)	Continuous	BAAQMD 8-34-301 and 301.1; BAAQMD Condition # 19933, Parts 1 & 2	Vent all collected gases to a properly operating control system and operate control system continuously.	Continuous	N/A		
Gas Flow	BAAQMD 8-34-501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes);	Continuous	BAAQMD 8-34-301 and 301.1; BAAQMD Condition # 19933, Parts 1 & 2	Vent all collected gases to a properly operating control system and operate control system continuously.	Continuous	N/A		
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.4	Records of occurrence and duration	Periodic / Daily	BAAQMD 1-523.2	15 consecutive days/incident and 30 calendar days/12 month period	Continuous	N/A		

Site:	Sonoma County	Central Landfil	I	Facility I	<b>)#:</b> A2254				
Permitted Unit:         S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-         Reporting Period:         from         08/01/2021         through 01/31/2022									
14 LEAN BURN INTERNAL COMBUSTION ENGINES AND GENERATOR SETS									
Type of Limit or Criteria	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken		
Main- tenance	63.6655(e)	Records of Main- tenance	P/E	40 CFR Part 63. Subpart ZZZZ, Table 2d, 13	Every 1440 Hours of Operation or Annually: Change Oil and Filter, Inspect Spark Plugs, Inspect Hoses and Belts	Continuous	N/A		

Appendix G – Title V Annual Compliance Certification

### SONOMA COUNTY CENTRAL LANDFILL

#### **TITLE V ANNUAL CERTIFICATION**

SITE:	NTY CENTRAL LA		FACILITY ID#: A225	
REPORTING PERIOD:		through	Mary P	ALLOT
	02/01/2021		01/31/2022	

#### 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:

Signature of Responsible Official

25-22 Date

Rob Sherman Name of Responsible Official (please print)

General Manager Title of Responsible Official (please print)

#### Notes:

• On June 9, 2021, Sonoma received an updated Title V permit, expiring June 8, 2026. From the expiration of the previous Title V permit on May 19, 2018 to the issuance of the new permit on June 9, 2021, the site was operating under a permit shield. Permit conditions for the renewed Title V permit and previous Title V permit have been reviewed and compliance has been confirmed for both permits. Deviations from either permit have been noted below.

Site Name: Sonoma County Central Landfill

Site #: A2254 Address: 500 Mecham Road Source #: Facility

**City:** Petaluma, CA **Source Name:** Facility

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 1	General Provisions and Definitions (5/4/11)	Ν	С	
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y	С	
BAAQMD Regulation 2, Rule 1	Permits – General Requirements (3/9/04)	Ν	С	
BAAQMD 2-1-429	Permits – General Requirements: Federal Emissions Statement (12/21/04)	N	С	
SIP Regulation 2, Rule 1	Permits - General Requirements (1/26/99)	Y	С	
SIP Regulation 2-1-429	Permits – General Requirements: Federal Emissions Statement (4/3/95)	Y	C	
BAAQMD Regulation 2, Rule 5	Permits – New Source Review of Toxic Air Contaminants (1/6/10)	N	С	
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N	С	
SIP Regulation 4	Air Pollution Episode Plan (8/6/90)	Y	С	
BAAQMD Regulation 5	Open Burning (3/6/02)	Ν	С	
SIP Regulation 5	Open Burning (9/4/98)	Y	С	
BAAQMD Regulation 6, Rule 1	Particulate Matter – General Requirements (12/5/07)	Ν	С	
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y	С	
BAAQMD Regulation 7	Odorous Substances (3/17/82)	Ν	С	
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y	С	
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	Ν	С	
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (3/22/95)	Y	С	
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (11/21/01)	Ν	С	
BAAQMD Regulation 8, Rule 4	Organic Compounds - General Solvent and Surface Coating Operations (10/16/02)	Y	C	
BAAQMD Regulation 8, Rule 15	Organic Compounds – Emulsified and Liquid Asphalts (6/1/94)	Y	С	
BAAQMD Regulation 8, Rule 16	Organic Compounds - Solvent Cleaning Operations (10/16/02)	Y	С	
BAAQMD Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	N	С	

Site Name: Sonoma County Central Landfill

Site #: A2254 Address: 500 Mecham Road Source #: Facility

**City:** Petaluma, CA **Source Name:** Facility

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
SIP Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and	Y	С	
	Removal of Underground Storage Tanks (4/19/01)			
BAAQMD Regulation 8-40-116	Exemption, Small Volume	Y	С	
BAAQMD Regulation 8-40-117	Exemption, Accidental Spills	Y	С	
BAAQMD Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (6/15/05)	Ν	С	
SIP Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (4/26/95)	Y	C	
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	N	С	
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (3/22/95)	Y	С	
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (7/17/02)	N	С	
SIP Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (2/26/02)	Y	С	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)	N	С	
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/99)	Y	С	
BAAQMD Regulation 9, Rule 2	Inorganic Gaseous Pollutants – Hydrogen Sulfide (3/17/82)	N	С	
BAAQMD Regulation 11, Rule 1	Hazardous Pollutants – Lead (3/17/82)	N	С	
SIP Regulation 11, Rule 1	Hazardous Pollutants – Lead (9/2/81)	Y	С	
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	N	С	
BAAQMD Regulation 11, Rule 3	Hazardous Pollutants - Beryllium (3/17/82)	Y	С	
BAAQMD Regulation 11, Rule 14	Hazardous Pollutants - Asbestos Containing Serpentine (7/17/91)	N	С	
BAAQMD Regulation 11, Rule 18	Hazardous Pollutants – Reduction of Risk from Air Toxic Emissions at Existing Facilities (11/15/17)	N	С	
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	N	С	
BAAQMD Regulation 14, Rule 1	Mobile Sources Emission Reduction Methods – Bay Area Commuter Benefits Program (3/19/14)	N	С	
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y	С	

Site Name: Sonoma County Central Landfill

Site #: A2254 Address: 500 Mecham Road Source #: Facility

City: Petaluma, CA

Source Name: Facility

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
California Health and Safety Code	Portable Equipment	Ν	С	
Section 41750 et seq.				
California Code of Regulations Title 17, Section 93105	Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (7/26/01)	N	C	
California Code of Regulations	Asbestos Airborne Toxic Control Measure for Asbestos-	Ν	С	
Title 17, Section 93106	Containing Serpentine (7/20/00)			
California Health and Safety Code	Air Toxics "Hot Spots" Information and Assessment Act of	Ν	С	
Section 44300 et seq.	1987			
California Health and Safety Code	Airborne Toxic Control Measure for Stationary Compression	Ν	С	
Title 17, Section 93115	Ignition Engines			
California Health and Safety Code	Airborne Toxic Control Measure for Diesel Particulate Matter	Ν	С	
Title 17, Section 93116	from Portable Engines Rated at 50 Horsepower and Greater			
California Health and Safety Code	Mandatory Greenhouse Gas Emissions Reporting	N	С	
Title 17, Sections 95100-95109				
California Health and Safety Code	Methane Emissions from Municipal Solid Waste Landfills	Ν	С	
Title 17, Sections 95460-95476				
40 CFR Part 61, Subpart A	National Emission Standards for Hazardous Air Pollutants -	Y	С	
	General Provisions			
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission	Y	С	
	Standard for Asbestos (6/19/95)			
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (2/21/95)			
Subpart F, 40 CFR 82.154	Prohibitions	Y	С	
Subpart F, 40 CFR 82.156	Required Practices	Y	С	
Subpart F, 40 CFR 82.158	Standards for Recycling and Recovery Equipment	Y	С	
Subpart F, 40 CFR 82.161	Technician Certification	Y	С	
Subpart F, 40 CFR 82.162	Certification by Owners of Recovery and Recycling Equipment	Y	С	
Subpart F, 40 CFR 82.166	Reporting and Recordkeeping Requirements	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD				
Regulation 1	General Provisions and Definitions (5/4/11)			
1-301	Public Nuisance	N	С	
1-523	Parametric Monitoring and Recordkeeping Procedures	Ν	С	
1-523.1	Parametric monitor periods of inoperation	Y	С	
1-523.2	Limit on duration of inoperation	Y	С	
1-523.3	Reports of Violations	Ν	С	
1-523.4	Records	Y	С	
1-523.5	Maintenance and calibration	N	С	
SIP				
Regulation 1	General Provisions and Definitions (6/28/99)			
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	С	
1-523.3	Reports of Violations	Y	С	
BAAQMD				
Regulation 6,				
Rule 1	Particulate Matter – General Requirements (12/5/07)			
6-1-301	Ringelmann No. 1 Limitation	Y	С	
6-1-302	Opacity Limitation	Y	С	
6-1-305	Visible Particles	N	С	
6-1-307	Prohibition of Visible Emissions Within and From Regulated Bulk Material Sites	Ν	С	
6-1-307.1	Fugitive Dust Limitations	N	С	
6-1-307.2	Fugitive Dust Cleanup Provision	N	С	
6-1-310	Particle Weight Limitation (applies to Flare only)	Ν	С	
6-1-310.2	TSP Limits for any source with a PTE > $1000 \text{ kg/year}$ (applies to A-4)	N	С	
6-1-401	Appearance of Emissions	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
6-1-501	Sampling Facilities and Instruments Required	N	С	
6-1-502	Data, Records, and Reporting	N	С	
6-1-504	Demonstration of Total Suspended Particulate (TSP) Compliance	N	С	
6-1-506	Monitoring and Record Keeping at Regulated Bulk Material Sites	N	С	
SIP Regulation	Particulate Matter and Visible Emissions (12/19/90)			
6-301	Ringelmann No. 1 Limitation	Y	С	
6-302	Opacity Limitation	Y	С	
6-305	Visible Particles	Y	С	
6-310	Particle Weight Limitation (applies to flare only)	Y	С	
6-401	Appearance of Emissions	Y	С	
BAAQMD Regulation 6, Rule 6	Particulate Matter – Prohibition of Trackout (8/1/18)	N	С	
6-6-301	Prohibition of Trackout onto Paved Roadways	N	С	
6-6-302	Prohibition of Visible Emissions During Cleanup of Trackout	N	С	
6-6-501	Monitoring and Recordkeeping	N	С	
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)			
8-2-301	Miscellaneous Operations (applies to VOC-laden soil handling and disposal activities only)	Y	С	
SIP Regulation 8, Rule 2	Organic Compounds - Miscellaneous Operations (6/15/94)			
8-2-301	Miscellaneous Operations (applies to low VOC soil handling and disposal	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD Regulation 8, Rule 34	Organic Compounds – Solid Waste Disposal Sites (6/15/05)			
8-34-113	Limited Exemption, Inspection and Maintenance	Ν	С	
8-34-113.1	Emission Minimization Requirement	Ν	С	
8-34-113.2	Shutdown Time Limitation	N	C	
8-34-113.3	Recordkeeping Requirement	N	C	
8-34-116	Limited Exemption, Well Raising	Ν	С	
8-34-116.1	New Fill	N	C	
8-34-116.2	Limits on Number of Wells Shutdown	N	C	
8-34-116.3	Shutdown Duration Limit	N	C	
8-34-116.4	Capping Well Extensions	N	C	
8-34-116.5	Well Disconnection Records	Ν	C	
8-34-117	Limited Exemption, Gas Collection System Components	N	C	
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	N	С	
8-34-117.2	New Components are Described in Collection and Control System Design Plan	N	С	
8-34-117.3	Meets Section 8-34-118 Requirements	N	С	
8-34-117.4	Limits on Number of Wells Shutdown	N	С	
8-34-117.5	Shutdown Duration Limit	N	С	
8-34-117.6	Well Disconnection Records	N	С	
8-34-118	Limited Exemption, Construction Activities	N	С	
8-34-118.1	Construction Plan	N	С	
8-34-118.2	Activity is Required to Maintain Compliance with this Rule	N	С	
8-34-118.3	Required or Approved by Other Enforcement Agencies	N	С	
8-34-118.4	Emission Minimization Requirement	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-118.5	Excavated Refuse Requirements	N	С	
8-34-118.6	Covering Requirements for Exposed Refuse	N	С	
8-34-118.7	Installation Time Limit	Ν	С	
8-34-118.8	Capping Required for New Components	Ν	С	
8-34-118.9	Construction Activity Records	Ν	С	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	N	С	
8-34-301.1	Continuous Operation	Ν	Ι	There were unplanned shutdowns of the gas collection and control system (GCCS) that did not meet the exemption criteria in BAAQMD Rule 8-34-113. These events included a blower shutdown resulting from the variable frequency drive (VFD), which resulted in a shutdown of the GCCS that occurred on February 11, 2021 from 03:20 to 06:34, Pacific Gas and Electric (PG&E) utility power outages, which resulted in shutdowns of the GCCS that occurred on June 5, 2021 from 06:44 to 06:54, September 18, 2021 from 12:04 to 12:12 and 21:34 to 21:42, and September 19, 2021 from 16:14 to 16:40, and thermocouple malfunctions, which resulted in shutdowns of the GCCS that occurred on December 17, 2021 at 22:48 to December 18, 2021 00:44 and December 19, 2021 from 04:56 to 09:24. These events were reported to the BAAQMD as reportable compliance activities (RCA) and breakdown relief was requested.

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
				On September 29, 2021, Notice of Violation (NOV) No. A59872 was issued by BAAQMD inspector Mr. Richard Murray for an alleged violation of BAAQMD Regulation 8, Rule 34, Section 301.1 (Landfill Gas Collection and Emission Control Requirements). Per the NOV, Sonoma allegedly failed to operate the GCCS continuously during three RCA events that occurred on September 18 and 19, 2021 (IDs 08B84 and 08B85; 08B89 and 08B90; and 08B91 and 08B92). Additional details can be found in the October 7, 2021 10-day NOV Response Letter.
8-34-301.2	Collection and Control Systems Leak Limitations	N	С	
8-34-301.3	Limits for Enclosed Flare (applies to A-4 only)	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-303	Landfill Surface Requirements	N	Ι	On May 5 and 6, 2021, the BAAQMD
				inspector arrived at the Landfill to conduct a routine 18-month inspection. During this monitoring, the inspector identified methane exceedances in excess of 500 ppmv near the surface of landfill gas (LFG) extraction wells 49A, 94A, 215, and 218. The inspector subsequently issued an NOV (No. A59863) for these exceedances on May 10, 2021 and cited 8-34-303 as well as the Landfill Methane Rule (LMR), Section 95465(a)(1) of Title 17 of the California Code of Regulations (CCR), as Sonoma is also subject to the LMR which also has a 500 ppmv surface emissions limit. SCS Field Services performed remediation activities to correct these excess exceedances. Additional
				details can be found in the May 18, 2021 10-
0.04.004		N	С	day NOV Response Letter.
8-34-304	Gas Collection System Installation Requirements	N N	C	
8-34-304.1	Based on Waste Age For Inactive or Closed Areas	N	C	
8-34-304.2	Based on Waste Age For Active Areas			
8-34-304.3	Based on Amount of Decomposable Waste Accepted	Ν	С	
8-34-304.4	Based on NMOC Emission Rate	Ν	С	
8-34-305	Wellhead Requirements (unless operating under alternative wellhead requirements)	Ν	С	
8-34-305.1	Wellhead Vacuum Requirements	Ν	С	
8-34-305.2	Wellhead Temperature Limit	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-305.3	Nitrogen Concentration Limit for Wellhead Gas or	N	С	
8-34-305.4	Oxygen Concentration Limit for Wellhead Gas	Ν	С	
8-34-405	Design Capacity Reports	N	С	
8-34-406	Initial NMOC Emission Rate Reports	Ν	С	
8-34-407	Periodic NMOC Emission Rate Reports	N	С	
8-34-408	Collection and Control System Design Plans	N	С	
8-34-408.1	Sites With NMOC Emission Rate > 50 Mg/year			
8-34-408.2	Sites With Existing Collection and Control Systems	N	С	
8-34-411	Annual Report	N	С	
8-34-412	Compliance Demonstration Tests	N	С	
8-34-413	Performance Test Report	N	C	
8-34-414	Repair Schedule for Wellhead Excesses	N	С	
8-34-414.1	Records of Excesses	N	С	
8-34-414.2	Corrective Action	N	С	
8-34-414.3	Collection System Expansion	N	С	
8-34-414.4	Operational Due Date for Expansion	N	C	
8-34-415	Repair Schedule for Surface Leak Excesses	N	С	
8-34-415.1	Records of Excesses	N	C	
8-34-415.2	Corrective Action	N	С	
8-34-415.3	Re-monitor Excess Location Within 10 Days	N	С	
8-34-415.4	Re-monitor Excess Location Within 1 Month	N	С	
8-34-415.5	If No More Excesses, No Further Re-Monitoring	N	С	
8-34-415.6	Additional Corrective Action	Ν	С	
8-34-415.7	Re-monitor Second Excess Within 10 days	N	С	
8-34-415.8	Re-monitor Second Excess Within 1 Month	N	С	
8-34-415.9	If No More Excesses, No Further Re-monitoring	N	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-415.10	Collection System Expansion for Third Excess in a Quarter	N	С	
8-34-415.11	Operational Due Date for Expansion	N	С	
8-34-416	Cover Repairs	Ν	С	
8-34-501	Operating Records	Ν	С	
8-34-501.1	Collection System Downtime	Ν	С	
8-34-501.2	Emission Control System Downtime	Ν	С	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors (applies to A-4)	N	С	
8-34-501.4	Testing	N	С	
8-34-501.6	Leak Discovery and Repair Records	N	С	
8-34-501.7	Waste Acceptance Records	N	С	
8-34-501.8	Non-decomposable Waste Records	N	С	
8-34-501.9	Wellhead Excesses and Repair Records	N	С	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	N	С	
8-34-501.12	Records Retention for 5 Years	N	С	
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	N	С	
8-34-504	Portable Hydrocarbon Detector	N	С	
8-34-505	Well Head Monitoring	N	С	
8-34-506	Landfill Surface Monitoring	Ν	С	
8-34-507	Continuous Temperature Monitor and Recorder (applies to flare)	Ν	С	
8-34-508	Gas Flow Meter	Ν	С	
8-34-510	Cover Integrity Monitoring	N	С	
SIP Regulation	Organic Compounds-Solid Waste Disposal Sites (10/6/99)			
8, Rule 34				
8-34-113	Limited Exemption, Inspection and Maintenance	Y	С	
8-34-113.1	Emission Minimization Requirement	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-113.2	Shutdown Time Limitation	Y	С	
8-34-113.3	Recordkeeping Requirement	Y	С	
8-34-116	Limited Exemption, Well Raising	Y	С	
8-34-116.1	New Fill	Y	С	
8-34-116.2	Limits on Number of Wells Shutdown	Y	С	
8-34-116.3	Shutdown Duration Limit	Y	С	
8-34-116.4	Capping Well Extensions	Y	С	
8-34-116.5	Well Disconnection Records	Y	С	
8-34-117	Limited Exemption, Gas Collection System Components	Y	С	
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	Y	С	
8-34-117.2	New Components are Described in Collection and Control System Design Plan	Y	С	
8-34-117.3	Meets Section 8-34-118 Requirements	Y	С	
8-34-117.4	Limits on Number of Wells Shutdown	Y	С	
8-34-117.5	Shutdown Duration Limit	Y	С	
8-34-117.6	Well Disconnection Records	Y	С	
8-34-118	Limited Exemption, Construction Activities	Y	С	
8-34-118.1	Construction Plan	Y	С	
8-34-118.2	Activity is Required to Maintain Compliance with this Rule	Y	С	
8-34-118.3	Required or Approved by Other Enforcement Agencies	Y	С	
8-34-118.4	Emission Minimization Requirement	Y	С	
8-34-118.5	Excavated Refuse Requirements	Y	С	
8-34-118.6	Covering Requirements for Exposed Refuse	Y	С	
8-34-118.7	Installation Time Limit	Y	С	
8-34-118.8	Capping Required for New Components	Y	С	
8-34-118.9	Construction Activity Records	Y	С	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-301.1	Continuous Operation	Y	С	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	С	
8-34-301.3	Limits for Enclosed Flare	Y	С	
8-34-303	Landfill Surface Requirements	Y	С	
8-34-304	Gas Collection System Installation Requirements	Y	С	
8-34-304.1	Based on Waste Age For Inactive or Closed Areas	Y	С	
8-34-304.2	Based on Waste Age For Active Areas	Y	С	
8-34-304.3	Based on Amount of Decomposable Waste Accepted	Y	С	
8-34-304.4	Based on NMOC Emission Rate	Y	С	
8-34-305	Wellhead Requirements	Y	С	
8-34-305.1	Operate Under Vacuum	Y	С	
8-34-305.2	Temperature < 55 °C	Y	С	
8-34-305.3	Nitrogen < 20% or	Y	С	
8-34-305.4	Oxygen < 5%	Y	С	
8-34-405	Design Capacity Reports	Y	С	
8-34-406	Initial NMOC Emission Rate Reports	Y	С	
8-34-407	Periodic NMOC Emission Rate Reports	Y	С	
8-34-408	Collection and Control System Design Plans	Y	С	
8-34-408.1	Sites With NMOC Emission Rate > 50 Mg/year	Y	С	
8-34-408.2	Sites With Existing Collection and Control Systems	Y	С	
8-34-411	Annual Report	Y	С	
8-34-412	Compliance Demonstration Tests	Y	С	
8-34-413	Performance Test Report	Y	С	
8-34-414	Repair Schedule for Wellhead Excesses	Y	С	
8-34-414.1	Records of Excesses	Y	С	
8-34-414.2	Corrective Action	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-414.3	Collection System Expansion	Y	С	
8-34-414.4	Operational Due Date for Expansion	Y	С	
8-34-415	Repair Schedule for Surface Leak Excesses	Y	С	
8-34-415.1	Records of Excesses	Y	С	
8-34-415.2	Corrective Action	Y	С	
8-34-415.3	Re-monitor Excess Location Within 10 Days	Y	С	
8-34-415.4	Re-monitor Excess Location Within 1 Month	Y	С	
8-34-415.5	If No More Excesses, No Further Re-Monitoring	Y	С	
8-34-415.6	Additional Corrective Action	Y	С	
8-34-415.7	Re-monitor Second Excess Within 10 days	Y	С	
8-34-415.8	Re-monitor Second Excess Within 1 Month	Y	С	
8-34-415.9	If No More Excesses, No Further Re-monitoring	Y	С	
8-34-415.10	Collection System Expansion for Third Excess in a Quarter	Y	С	
8-34-415.11	Operational Due Date for Expansion	Y	С	
8-34-416	Cover Repairs	Y	С	
8-34-501	Operating Records	Y	С	
8-34-501.1	Collection System Downtime	Y	С	
8-34-501.2	Emission Control System Downtime	Y	С	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors	Y	С	
8-34-501.4	Testing	Y	С	
8-34-501.6	Leak Discovery and Repair Records	Y	С	
8-34-501.7	Waste Acceptance Records	Y	С	
8-34-501.8	Non-decomposable Waste Records	Y	С	
8-34-501.9	Wellhead Excesses and Repair Records	Y	С	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	С	
8-34-501.12	Records Retention for 5 Years	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	Y	С	
8-34-504	Portable Hydrocarbon Detector	Y	С	
8-34-505	Well Head Monitoring	Y	С	
8-34-506	Landfill Surface Monitoring	Y	С	
8-34-507	Continuous Temperature Monitor and Recorder	Y	С	
8-34-508	Gas Flow Meter	Y	С	
8-34-510	Cover Integrity Monitoring	Y	С	
BAAQMD Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (12/15/99)			
8-40-110	Exemption, Storage Pile	Y	С	
8-40-112	Exemption, Sampling	Y	С	
8-40-113	Exemption, Non-Volatile Hydrocarbons	Y	С	
8-40-116	Exemption, Small Volume	Y	С	
8-40-116.1	Volume does not exceed 1 cubic yard	Y	С	
8-40-116.2	Volume does not exceed 8 cubic yards, organic content does not exceed 500 ppmw, may be used only once per quarter	Y	С	
8-40-117	Exemption, Accidental Spills	Y	С	
8-40-118	Exemption, Aeration Projects of Limited Impact	Y	С	
8-40-301	Uncontrolled Contaminated Soil Aeration	Y	С	
8-40-304	Active Storage Piles	Y	С	
8-40-305	Inactive Storage Piles	Y	С	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)			
9-1-301	Limitations on Ground Level Concentrations (applies to A-4 only)	Y	С	
9-1-302	General Emission Limitations (applies to A-4 only)	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD Regulation 9, Rule 2	Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)			
9-2-301	Limitations on Hydrogen Sulfide	N	С	
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources – General Provisions (5/4/98)			
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	С	
60.7	Notification and Record Keeping	Y	С	
60.8	Performance Tests	Y	С	
60.11	Compliance with Standards and Maintenance Requirements	Y	С	
60.11(a)	Compliance determined by performance tests	Y	С	
60.11(d)	Control devices operated using good air pollution control practice	Y	С	
60.12	Circumvention	Y	С	
60.13	Monitoring Requirements	Y	С	
60.13(a)	Applies to all continuous monitoring systems	Y	С	
60.13(b)	Monitors shall be installed and operational before performing performance tests	Y	C	
60.13(e)	Continuous monitors shall operate continuously	Y	С	
60.13(f)	Monitors shall be installed in proper locations	Y	С	
60.13(g)	Requires multiple monitors for multiple stacks	Y	С	
60.14	Modification	Y	С	
60.15	Reconstruction	Y	С	
60.19	General Notification and Reporting Requirements	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
40 CFR Part	Standards of Performance for New Stationary Sources –			
60, Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills (2/24/99)			
60.752	Standards for Air Emissions from Municipal Solid Waste Landfills	Y	С	
60.752(b)	Requirements for MSW Landfills with Design Capacity equal to or greater than 2.5 million Mg and 2.5 million m3 (Large Designated Facilities)	Y	С	
60.752(b)(1)	Requirements for Large Designated Facilities with Calculated NMOC Emissions of less than 50 Mg/Year	Y	С	
60.752(b)(1)(i)	Submit Annual Emission Report	Y	С	
60.752(b)(1)(ii)	Recalculate NMOC Emissions Annually until NMOC Emissions > 50 Mg/year or Landfill is Closed	Y	С	
60.752(b)(1)(ii)( A)	If NMOC > 50 Mg/year, comply with 60.752(b)(2)	Y	С	
60.752(b)(1)(ii)( B)	If landfill is permanently closed, submit closure notice to comply with 60.757(d)	Y	С	
60.752(b)(2)	Comply with all requirements in sections (b)(2)(i through iv)	Y	С	
60.752(b)(2)(i)	Submit a Collection and Control System Design Plan	Y	С	
60.752(b)(2)(i)( A)	The collection and control system in the Design Plan shall comply with 60.752(b)(2)(ii)	Y	С	
60.752(b)(2)(i)( B)	Design Plan shall include all proposed alternatives to 60.753 through 60.758	Y	С	
60.752(b)(2)(i)( C)	Design Plan shall conform to 60.759 (active collection system) or demonstrate sufficiency of proposed alternatives	Y	С	
60.752(b)(2)(ii)	Install a collection and control system	Y	С	
60.752(b)(2)(iii)	Route collected gases to a control system.	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.752(b)(2)(iii)	NMOC Control Requirement for Enclosed Combustion	Y	С	
(B)	Devices			
60.752(b)(2)(iv)	Operate in accordance with 60.753, 60.755, and 60.756	Y	С	
60.753	Operational Standards for Collection and Control Systems	Y	С	
60.753(a)	Operate a Collection System in each area or cell in which:	Y	С	
60.753(a)(1)	Active Cell – solid waste in place for 5 years or more	Y	С	
60.753(a)(2)	Closed/Final Grade – solid waste in place for 2 years or more	Y	С	
60.753(b)	Operate each wellhead under negative pressure unless:	Y	С	
60.753(b)(1)	Fire or increased well temperature or to prevent fire	Y	С	
60.753(b)(2)	Use of geomembrane or synthetic cover (subject to alternative Pressure limits)	Y	С	
60.753(b)(3)	Decommissioned well after approval received for shut-down	Y	С	
60.753(c)	Operate each wellhead at < 55 °C, and either < 20% N2 or < than 5% O2 (or other approved alternative levels)	Y	С	
60.753(c)(1)	N2 determined by Method 3C	Y	С	
60.753(c)(2)	O2 determined by 3A and as described in (2)(i-v)	Y	С	
60.753(d)	Surface Leak Limit is less than 500 ppm methane above Background at landfill surface. This section also describes some Surface monitoring procedures.	Y	С	
60.753(e)	Vent all collected gases to a control system complying with 60.752(b)(2)(iii). If collection or control system inoperable, shut down gas mover and close all vents within 1 hour	Y	С	
60.753(f)	Operate the control system at all times when collected gas is Routed to the control system	Y	С	
60.753(g)	If monitoring demonstrates that 60.753(b), (c), or (d) are not Being met, corrective action must be taken	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.754	Test Methods and Procedures	Y	С	
60.754(a)	NMOC Calculation Procedures for NMOC Emission Rate Reports and Comparison to 50 Mg/Year Standard	Y	С	
60.654(a)(1)	Calculate NMOC Emission Rate using either or both of the equations in 60.754(a)(1)(i-ii) with the listed default values	Y	С	
60.754(a)(1)(i)	Equation for known year-to-year waste acceptance rate	Y	С	
60.754(a)(1)(ii)	Equation for unknown year-to-year waste acceptance rate	Y	С	
60.754(a)(2)	Tier 1 - compare calculated NMOC emission rate to 50 Mg/year	Y	С	
60.754(a)(2)(i)	If NMOC Emission Rate < 50 Mg/Year, submit NMOC emission rate report and recalculate NMOC emissions annually	Y	С	
60.754(a)(2)(ii)	If NMOC Emission Rate > 50 Mg/year, comply with 60.752(b)(2) or determine a site specific NMOC concentration and follow 60.754(a)(3).	Y	С	
60.754(a)(3)	Tier 2 – determine site specific NMOC Concentration using Methods 18 or 25C	Y	С	
60.754(a)(3)(i)	Recalculate NMOC Emission Rate using site specific NMOC concentration data	Y	С	
60.754(a)(3)(ii)	If NMOC Emission Rate > 50 Mg/year, comply with $60.752(b)(2)$ or determine a site specific methane generation rate constant and follow $60.754(a)(4)$ .	Y	С	
60.754(a)(3)(iii)	If NMOC Emission Rate < 50 Mg/Year, submit NMOC Emission rate report, recalculate NMOC emissions annually, retest for NMOC Concentration every 5 years.	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	Tier 3 – determine site specific methane generation rate	Y	С	
60.754(a)(4)	Constant using Method 2E and recalculate NMOC Emission Rate			
	using site specific NMOC Concentration and site specific Methane			
	Generation Rate Constant			
60.754(a)(4)(i)	If NMOC Emission Rate > 50 Mg/year, comply with	Y	С	
	If NMOC Emission Rate < 50 Mg/Year, submit NMOC	Y	С	
60.754(a)(4)(ii)	emission rate report, recalculate NMOC emissions annually, retest for			
	NMOC Concentration every 5 years.			
60.754(a)(5)	Allows use of alternative calculation methods if approved by EPA	Y	С	
60.754(c)	For PSD, NMOC emissions shall be calculated using AP-42	Y	С	
60.754(d)	Test Methods for Performance Test (Method 18 or 25C)	Y	С	
60.755	Compliance Provisions	Y	С	
60.755(a)	For Gas Collection Systems	Y	С	
60.755(a)(1)	Calculation Procedures for Maximum Expected Gas Generation Flow	Y	С	
	Rate	Y	С	
60.755(a)(1)(i)	Equation for unknown year-to-year waste acceptance rate	_		
60.755(a)(1)(ii)	Equation for known year-to-year waste acceptance rate	Y	C	
60.755(a)(1)(iii)	For closed or inactive and full sites with gas collection systems, actual flow rates may be used	Y	С	
60.755(a)(2)	Vertical wells and horizontal collectors shall be of sufficient	Y	С	
	density to meet all performance specifications			
	Measure wellhead pressure monthly. If pressure is positive, take	Y	С	
60.755(a)(3)	corrective action (final corrective action = expand system within 120			
	days of initial positive pressure reading)			
60.755(a)(4)	Expansion not required during first 180 days after startup.	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.755(a)(5)	Monitor wellheads monthly for temperature and either nitrogen or oxygen. If readings exceed limits, take corrective action up to expanding system within 120 days of first excess.	Y	С	
60.755(b)	Wells shall be placed in cells as described in design plan And no later than 60 days after:	Y	С	
60.755(b)(1)	Five years after initial waste placement in cell, for active cells	Y	С	
60.755(b)(2)	Two years after initial waste placement in cell, for closed/final grade cells.	Y	С	
60.755(c)	Procedures for complying with surface methane standard	Y	С	
60.755(c)(1)	Quarterly monitoring of surface and perimeter	Y	С	
60.755(c)(2)	Procedure for determining background concentration	Y	С	
60.755(c)(3)	Method 21 except probe inlet placed 5-10 cm above ground	Y	С	
60.755(c)(4)	Excess is any reading of 500 ppmv or more. Take corrective action indicated below (i-v).	Y	С	
60.755(c)(4)(i)	Mark and record location of excess	Y	С	
60.755(c)(4)(ii)	Repair cover or adjust vacuum. Re-monitor within 10 calendar days.	Y	С	
60.755(c)(4)(iii)	If still exceeding 500 ppmv, take additional corrective action. Re- monitor within 10 calendar days of 2nd excess.	Y	С	
60.755(c)(4)(iv)	Re-monitor within 1 month of initial excess.	Y	С	
60.755(c)(4)(v)	For any location with 3 monitored excesses in a quarter, additional collectors (or other approved collection system repairs) shall be operational within 120 days of 1st excess.	Y	С	
60.755(c)(5)	Monitor cover integrity monthly and repair as needed.	Y	С	
60.755(d)	Instrumentation and procedures for complying with 60.755(c).	Y	С	
60.755(d)(1)	Portable analyzer meeting Method 21	Y	С	
60.755(d)(2)	Calibrated with methane diluted to 500 ppmv in air	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.755(d)(3)	Use Method 21, Section 4.4 instrument evaluation procedures	Y	C	
60.755(d)(4)	Calibrate per Method 21, Section 4.2 immediately before monitoring.	Y	С	
60.755(e)	Provisions apply at all times except during startup, shutdown, or Malfunction, provided the duration of these shall not exceed 5 Days for collection systems or 1 hour for control systems.	Y	С	
60.756	Monitoring of Operations	Y	С	
60.756(a)	For active collection systems, install wellhead sampling port	Y	С	
60.756(a)(1)	Measure gauge pressure in wellhead on a monthly basis	Y	С	
60.756(a)(2)	Measure nitrogen or oxygen concentration in wellhead gas on a monthly basis.	Y	С	
60.756(a)(3)	Measure temperature of wellhead gas on a monthly basis.	Y	С	
60.756(b)	Enclosed combustors shall comply with (b)(1) and (b)(2)	Y	С	
60.756(b)(1)	Temperature monitor and continuous recorder (not required for boilers and process heaters with capacity > 44 MW)	Y	С	
60.756(b)(2)	Device that records flow to or bypass of the control device (i or ii below)	Y	С	
60.756(b)(2)(i)	Install, calibrate, and maintain a device that records flow to the control device at least every 15 minutes.	Y	С	
60.756(b)(2)(ii)	Secure a bypass valve in closed position with a lock-and-key configuration and inspect seal and lock monthly.	Y	С	
60.756(e)	Procedures for requesting alternative monitoring parameters	Y	С	
60.756(f)	Monitor surface on a quarterly basis. Closed landfills with no monitored exceedances in 3 consecutive quarters may reduce monitoring frequency to an annual basis	Y	С	
60.757	Reporting Requirements	Y	C	
60.757(a)	Submit an Initial Design Capacity Report	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.757(a)(1)	Initial Design Capacity Report fulfills 60.7(a)(1) construction date notification requirement.	Y	С	
60.757(a)(2)	Initial Design Capacity Report Shall Contain:	Y	C	
60.757(a)(2)(i)	Map indicating size and location of site and all areas where waste may be placed.	Y	С	
60.757(a)(2)(ii)	Permit or other documentation that indicates the maximum Design capacity.	Y	С	
60.757(a)(3)	Amended Design Capacity Report required within 90 days of Receiving a permitted increase in design capacity or within 90 Days of an annual density calculation that results in a design Capacity over the thresholds.	Y	С	
60.757(b)	Submit Initial and Annual NMOC Emission Rate Report	Y	С	
60.757(b)(3)	Sites with Collection and Control Systems operating in Compliance with this subpart are exempt from periodic NMOC emission rate reporting requirements.	Y	С	
60.757(c)	Submit a Collection and Control System Design Plan within 1 year of first NMOC emission rate report showing NMOC > 50 MG/year, except as follows	Y	С	
60.757(f)	Submit Annual Reports containing information required by (f)(1) through (f)(6)	Y	С	
60.757(f)(1)	Value and length of time for exceedance of parameters Monitored per 60.756(a), (b) or (d)	Y	С	
60.757(f)(2)	Description and duration of all periods when gas is diverted from the control device by a by-pass line	Y	С	
60.757(f)(3)	Description and duration of all periods when control device was not operating for more than 1 hour	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.757(f)(4)	All periods when collection system was not operating for more than 5 days.	Y	С	
60.757(f)(5)	Location of each surface emission excess and all re-monitoring dates and concentrations.	Y	С	
60.757(f)(6)	Location and installation dates for any wells or collectors added as a result of corrective action for a monitored excess.	Y	С	
60.757(g)	Initial Performance Test Report Requirements (g)(1-6)	Y	С	
60.757(g)(1)	Diagram of collection system showing positions of all existing collectors, proposed positions for future collectors, and areas to be excluded from control.	Y	С	
60.757(g)(2)	Basis for collector positioning to meet sufficient density requirement	Y	С	
60.757(g)(3)	Documentation supporting percentage of asbestos or non- degradable material claims for areas without a collection system.	Y	С	
60.757(g)(4)	For areas excluded from collection due to non-productivity, calculations and gas generation rates for each non-productive area and the sum for all nonproductive areas.	Y	С	
60.757(g)(5)	Provisions for increasing gas mover equipment if current system inadequate to handle maximum projected gas flow rate.	Y	С	
60.757(g)(6)	Provisions for control of off-site migration	Y	С	
60.758	Recordkeeping Requirements	Y	С	
60.758(a)	Design Capacity and Waste Acceptance Records (retain 5 years)	Y	С	
60.758(b)	Collection and Control Equipment Records (retain for life of Control equipment except 5 years for monitoring data)	Y	С	
60.758(b)(1)	Collection System Records	Y	С	
60.758(b)(1)(i)	Maximum expected gas generation flow rate.	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.758(b)(1)(ii)	Density of wells and collectors	Y	С	
60.758(b)(2)	Control System Records – enclosed combustors other than boilers or process heaters with heat input > 44 MW	Y	С	
60.758(b)(2)(i)	Combustion temperature measured every 15 minutes and Averaged over the same time period as the performance test	Y	С	
60.758(b)(2)(ii)	Percent NMOC reduction achieved by the control device	Y	С	
60.758(c)	Records of parameters monitored pursuant to 60.756 and periods of operation when boundaries are exceeded (retain for 5 years).	Y	С	
60.758(c)(1)	Exceedances subject to record keeping are	Y	С	
60.758(c)(1)(i)	All 3-hour periods when average combustion temperature was more than 28 C below the average combustion temperature during the most recent complying performance test	Y	С	
60.758(c)(2)	Records of continuous flow to control device or monthly Inspection records if seal and lock for bypass valves	Y	С	
60.758(d)	Plot map showing location of all existing and planned collectors with a unique label for each collector (retain for life of collection system)	Y	С	
60.758(d)(1)	Installation date and location of all newly installed collectors	Y	С	
60.758(d)(2)	Records of nature, deposition date, amount, and location of asbestos or non-degradable waste excluded from control	Y	С	
60.758(e)	Records of any exceedance of 60.753, location of exceedance and re- monitoring dates and data (for wellheads and surface). Retain for 5 years.	Y	С	
60.759	Specifications for Active Collection Systems	Y	С	
60.759(a)	Active wells and collectors shall be at sufficient density	Y	С	
60.759(a)(1)	Collection System in refuse shall be certified by PE to achieve comprehensive control of surface gas emissions	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.759(a)(2)	Collection Systems (active or passive) outside of refuse shall address migration control	Y	С	
60.759(a)(3)	All gas producing areas shall be controlled except as Described below (i-iii).	Y	С	
60.759(a)(3)(i)	Any segregated area of asbestos or non-degradable Material only may be excluded, if documented adequately per 60.758(d).	Y	С	
60.759(a)(3)(ii)	Any non-productive areas may be excluded from control, provided total NMOC emissions from all excluded areas is < 1% of total NMOC emissions from landfill. Document amount, location, and age of waste and all calculations for each excluded area.	Y	С	
60.759(a)(3)(iii)	For calculating NMOC emissions, values for k and concentration of NMOC that have been previously approved shall be used or defaults if no values were approved. All non-degradable wastes that are being subtracted from total wastes for NMOC calculations must be documented adequately.	Y	С	
60.759(b)	Gas Collection System Components	Y	С	
60.759(b)(1)	Must be constructed of PVC, HDPE, fiberglass, stainless steel, or other approved material and of suitable dimensions to convey projected gas amounts and withstand settling, traffic, etc.	Y	С	
60.759(b)(2)	Collectors shall not endanger liner, shall manage condensate and leachate, and shall prevent air intrusion and surface leaks.	Y	С	
60.759(b)(3)	Header connection assemblies shall include positive closing throttle valve, seals and couplings to prevent leaks, at least one sampling port, and shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other approved materials.	Y	С	
60.759(c)	Gas Mover Equipment shall be sized to handle maximum expected gas generation rate over the intended period of use.	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.759(c)(1)	For existing systems, flow data shall be used to project maximum flow rate.	Y	С	
60.759(c)(2)	For new systems, shall be calculated per 60.755(a)(1)	Y	С	
40 CFR Part 63, Subpart A	National Emission Standards for Hazardous Air Pollutants: General Provisions (12/22/08)			
63.4	Prohibited activities and circumvention	Y	С	
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	С	
63.6(e)	Operation and maintenance requirements and SSM Plan	Y	С	
63.6(f)	Compliance with non-opacity emission standards	Y	C	
63.10(b)(2) (i-v)	Records for startup, shutdown, malfunction, and maintenance	Y	С	
63.10(d)(5)	Startup, Shutdown, and Malfunction (SSM) Reports	Y	С	
40 CFR Part 63, Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (4/20/06)			
63.1945	When do I have to comply with this subpart?	Y	С	
63.1945(b)	Compliance date for existing affected landfills	Y	С	
63.1955	What requirements must I meet?	Y	С	
63.1955(a)	Comply with either $63.1955(a)(1)$ or $(a)(2)$	Y	С	
63.1955(a)(2)	Comply with State Plan that implements 40 CFR Part 60, Subpart Cc	Y	С	
63.1955(b)	Comply with 63.1960-63.1985, if a collection and control system is required by 40 CFR Part 60, Subpart WWW or a State Plan implementing 40 CFR Part 60, Subpart Cc	Y	С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
63.1955(c)	Comply with all approved alternatives to standards for collection and control systems plus all SSM requirements and 6 month compliance reporting requirements	Y	С	
63.1960	How is compliance determined?	Y	С	
63.1965	What is a deviation?	Y	С	
63.1975	How do I calculate the 3-hour block average used to demonstrate compliance?	Y	С	
63.1980	What records and reports must I keep and submit?	Y	С	
63.1980(a)	Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart WWW or the State Plan implementing 40 CFR Part 60, Subpart Cc, except that the annual report required by 40 CFR 60.757(f) must be submitted every 6 months	Y	С	
63.1980(b)	Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart A and 40 CFR Part 63, Subpart A, including SSM Plans and Reports	Y	С	
BAAQMD	NOTE: Application Numbers (AN) 28194 and 28326 - Change of			
Condition #	Permit Conditions only modified some of the original Condition			
4044	4044 Parts as listed in the Title V Permit. For documentation purposes, only those parts that were changed are provided in detail below for clarity of the compliance requirements that may have changed.			

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
Part 1	Except for temporary emergency situations approved by the Local Enforcement Agency, the total amount of municipal solid waste received at the Sonoma County Central Landfill (S-1) shall not exceed 2,500 tons per day nor 897,500 tons per year. The total cumulative amount of all wastes and cover materials (excluding final cover material) placed in the landfill shall not exceed both 32.65 million cubic yards and 19.59 million tons. (basis: Cumulative Increase and 2-1-301)	Y	С	
Part 2	Dust emission limits (BACT and 1-301)	Y	С	
Part 3	Public nuisance consequences (1-301)	N	С	
Part 4	The Sonoma County Central Landfill includes the landfill gas collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in the current Landfill Collection and Control System Design Plan.	Y	С	
4.a.	Total Number of Vertical Wells: 167 Total Number of Horizontal Collectors: 30		С	
4.b.	The Permit Holder has been authorized to make the landfill gas collection system alterations described below pursuant to Permit Applications #26628 and #28194. All collection system alterations shall comply with subparts 4b(i-vii) below.		С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	The authorized collection system alterations are:		С	
	Install up to 100 new gas collection wells			
	Permanently decommission up to 100 gas collection wells			
	Modify wellhead monitoring locations, as needed, provided that each			
4.b.i.	landfill gas collection system component identified in Part 4a and			
	each new collection system component installed per Part 4b is			
	adequately represented by a wellhead monitoring location. The			
	Permit Holder shall maintain documentation on site that identifies all			
	landfill gas collection system components that are represented by			
	each wellhead monitoring location.			
	The Permit Holder shall apply for and receive a Change of Conditions		С	
	before altering the landfill gas collection components described in			
	subpart 4a. Installing, altering, or permanently decommissioning a			
4.b.ii.	vertical well, horizontal collector, or other gas collection component			
	is subject to this requirement, unless this change constitutes a			
	replacement as defined in subpart 4b(iii) below.			

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	Replacement of landfill gas collection system components with	Y	С	
	identical or functionally equivalent components will not be deemed			
	an alteration and will not be subject to subpart 4b(ii) under the			
	following circumstances. If a well or collector will be shut down and			
	replaced by a new well or collector in essentially the same location as			
	the old component and this decommission/installation will be			
	accomplished in accordance with Regulations 8-34-117 and 8-34-			
	118, then this activity shall be considered a component replacement			
4.b.iii.	that is not subject to the Authority to Construct requirement. For each			
	individual well or collector replacement, this subpart authorizes a			
	maximum vacuum disconnection time of five consecutive days for			
	compliance with Regulation 8-34-117.5. The disconnected			
	component and the new component shall not be counted toward the			
	subpart 4b(i) limits; the numbers of replacement wells and			
	replacement collectors are not limited. Alterations, repairs, or			
	replacements of non-perforated piping sections (such as risers,			
	laterals, or header pipes), piping connectors, or valves are not subject			
	to an Authority to Construct requirement.			
	At least three days prior to initiating operation of a well or collector		С	
	installed pursuant to subpart 4b, the Permit Holder shall submit a			
4.b.iv.	start-up notice to the District that contains the component ID number			
	for each new well or collector and the			
	anticipated initial start-up date for each new component.			

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
4.b.v.	For each well or collector that is permanently decommissioned after January 13, 2017, the Permit Holder shall submit a decommissioning notice to the District within no later than three working days after the component was disconnected from vacuum system. This decommissioning notice shall contain the component ID for each well or collector that was decommissioned, the date and time that each component was disconnected from the vacuum system, and the reason the component was decommissioned.		С	
4.b.vi.	Within six months of installing a new component or permanently decommissioning an existing component, the Permit Holder shall prepare an updated map of the landfill gas collection system that identifies the ID numbers and locations of all operable wells and collectors. On this map or in accompanying documentation, the Permit Holder shall summarize all component changes that were made since the last map was prepared. The previous collection system map, the updated collection system map, and the component change summary shall be provided to District staff upon request.		С	

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	If the Permit Holder has a net reduction (number of decommissioned		С	
	components minus the number of installed components) of more than			
	five components within a 120-day period, the Permit Holder shall			
	submit a more comprehensive decommissioning notice to the District.			
	In addition to the information required by subpart 4b(v), this			
	comprehensive decommissioning notice shall include the maps and			
	documentation required by subpart 4b(vi), shall identify all			
	component changes that have occurred but that are not included on			
	the most recently updated map, shall include a list of all well			
	installations that are expected to occur within the next 120 days, and			
4.b.vii.	shall discuss the reasons why this reduction in gas collection			
	components is not expected to result in surface emission leaks.			
	Upon request, the Permit Holder shall provide wellhead monitoring			
	data, surface leak monitoring data, records of repair attempts made to			
	date, and other information to support the. need for a net collection			
	component reduction of more than five wells. The District may			
	require additional surface monitoring to verify that this net			
	component reduction is not causing landfill surface leaks. The			
	District will notify the Permit Holder in writing of any additional			
	surface monitoring that is required pursuant to this subpart.			
Part 5	Operating Requirements for Landfill Gas Collection System and	Y	С	
	Collection Components.			

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	If the concentrations (dry basis) of toxic air	Ν	С	
	contaminants in the collected landfill gas exceed any of the limits			
	listed below, the Permit Holder shall submit a permit application for a			
	Change of Permit Conditions within 30 days of receiving the test			
Part 6	results.			
	Benzene= 2.5 ppmv			
	Trichloroethylene = 3.0 ppmv			
	Perchloroethylene = 3.0 ppmv			
	Methylene Chloride=20.0 ppmv			
	Vinyl Chloride= 2.5 ppmv			
	(basis: Regulation 2-5-302 and AB2588 Air Toxic Hot Spots Act)			
Part 7	Limit on total reduced sulfur content in landfill gas (9-1-302)	Y	С	
	All collected landfill gas shall be vented to properly operating	Y	С	
	abatement equipment including the Internal Combustion Engines (S-			
	4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, and S-14) and/or the			
	Landfill Gas Flare (A-4). Under no circumstances shall raw landfill			
Part 8	gas be vented to. the atmosphere. This limitation does not apply to			
	unavoidable landfill gas emissions that occur during collection			
	system installation, maintenance, or repair that is performed in			
	compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or			
	118 or to inadvertent component or surface leaks that do not exceed			
	the limits specified in 8-34-301.2 or 8-34-303. (basis: Regulation 8-			
	34-301)			
	The A-4 Landfill Gas Flare shall be operated as necessary to combust	Y	С	
Part 9	excess gas whenever the flow of landfill gas exceeds the capacity of			
	the Internal Combustion Engines in service. (basis: Regulation 8-34-			
	301)			

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
Part 10	During operation, the combustion temperature of the A-4 Landfill Gas Flare shall be maintained at a minimum of 1400 degrees Fahrenheit, each averaged over any 3-hour period. (basis: 8-34-301, BACT, and Regulation 2-5- 302)	N	С	
Part 11	Emissions of Nitrogen Oxides (NOx) from the Flare A-4 shall not exceed 0.05 pounds per million BTU (calculated as N02) per flare. (basis: RACT and Offsets)	Y	С	
Part 12	Emissions of Carbon Monoxide (CO) from the Flare A-4 shall not exceed 0.20 pounds per million BTU per flare. (basis: RACT and Offsets).	Y	С	
Part 13	The Heat Input to the A-4 Landfill Gas Flare shall not exceed 2,190 MMBtu per day per flare and 547,680 million BTU per year combined. In order to demonstrate compliance with this part, the Permit Holder shall calculate and record on a daily and monthly basis the total heat input to the flare based on the landfill gas flow rate recorded pursuant to part 14, the average methane concentration in the landfill gas based on the most recent source test, and a high heating value for methane of 1013 BTU/scf. The records shall be retained for five years and shall be available to the District staff upon request. (basis: Cumulative Increase, Regulation 2-1-301)	Y	C	
Part 14	A flow meter to measure gas flow into the A-4 Landfill Gas Flare shall be installed and maintained in good working condition. (basis: Regulation 8-34-301)	Y	С	
Part 15	The A-4 Landfill Gas Flare shall be equipped with both local and remote alarm systems, which shall be enabled whenever the flare is required to be operated under the requirements of Part 9 above. (basis: Regulation 8- 34-301.41)	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
	The A-4 Landfill Gas Flare shall be equipped with a combustion	Y	С	
Part 16	temperature readout monitor and continuous recorder. (basis: Regulation 8- 34-507, BACT, and Regulation 2-5-302)			
Part 17	In order to demonstrate compliance with Regulation 2.5 502) In order to demonstrate compliance with Regulation 8, Rule 34, Section 301.3, parts 11 and 12 above, 40 CFR 60.752(b)(2)(iii)(B), and CCR, Title 17, Section 95464 (b)(2)(A)(l), the Permit Holder shall ensure that a District approved source test is conducted annually on the Landfill Gas Flare (A-4).	Y	С	
	Annual source tests shall be conducted no later than 12 months after the previous source test. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures at least 14 days in advance of each source test. They shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division within 60 days of the test date. [Basis: Cumulative Increase, Regulations 8-34- 301.3 and 8-34-412, 40 (FR 60.752(b)(2)(iii)(B), and CCR, Title 17, Section 95464 (b)(2)(A)(1)]	Y	C	
Part 18	Landfill Gas Characterization Test (2-1-403 and AB2588 Air Toxic Hot Spots Act)	N	С	
Part 19	Recordkeeping Requirements (Cumulative Increase, 6-301, 6-305, 8- 34-304, 8-34-501.3, and 8-34-501.8)	Y	С	
Part 20	Handling Procedures for Soil Containing VOCs (8-40-301, 8-40-304, and 8-40-305)	N	С	
Part 21	Daily Soil VOC Emissions Limit (8-2-301)	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-1, S-15, S-22, S-23, A-4 Site Name: Sonoma County Central Landfill City: Petaluma, CA Source Name: Sonoma County Central Landfill (S-1), Landfill Compression Plan (S-15), Waste and Cover Material (S-22), Mobile Surface Equipment (S-23), Landfill Gas Flare (A-4)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD	Landfill Gas Compression Plant Operating Requirements		С	
Condition #				
23087				
BAAQMD Condition # 26507				
Part 1	CO emission limits for landfill gas combustion devices (Cumulative Increase and Regulation 2-1-301)	Y	С	
Part 2	Site-wide CO emission limit for all non-mobile combustion equipment (Regulation 2-1-403)	Y	С	
Part 3	Record keeping requirements (Regulations 2-1-301 and 2-1-403)	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

**City:** Petaluma, CA **Source Name:** Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Site Name: Sonoma Country Central Landfill

			Continuous or	
Applicable	Regulation Title or	Federally	Intermittent	
Requirement	Description of Requirement	Enforceable		Days out of compliance / Comments
		(Y/N)		
BAAQMD	General Provisions and Definitions (5/2/01)			
<b>Regulation 1</b>				
1-523	Parametric Monitoring and Recordkeeping Procedures	N	С	
1-523.1	Parametric monitor periods of inoperation	Y	С	
1-523.2	Limit on periods of inoperation	Y	С	
1-523.3	Reports of Violations	N	С	
1-523.4	Records	Y	С	
1-523.5	Maintenance and calibration	Y	С	
SIP	General Provisions and Definitions (6/28/99)			
Regulation 1				
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	С	
1-523.3	Reports of Violations	Y	С	
BAAQMD				
<b>Regulation 6</b>	Particulate Matter – General Requirements (12/5/07)			
6-1-301	Ringelmann No. 1 Limitation	Y	С	
6-1-302	Opacity Limitation	Y	С	
6-1-305	Visible Particles	Y	С	
6-1-310	Particle Weight Limitation	Ν	С	
6-1-310.1	TSP Limit for any source	N	С	
6-1-401	Appearance of Emissions	Y	С	
6-1-501	Sampling Facilities and Instruments Required	N	С	
6-1-502	Data, Records, and Reporting	N	С	
SIP				
<b>Regulation 6</b>	Particulate Matter and Visible Emissions (9/4/98)			
6-301	Ringelmann No. 1 Limitation	Y	С	
6-302	Opacity Limitation	Y	С	
6-305	Visible Particles	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

Site Name: Sonoma Country Central Landfill City: Petaluma, CA Source Name: Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable	Continuous or Intermittent	Days out of compliance / Comments
6-310	Particle Weight Limitation (Applies to A-4 only)	(Y/N)		
		Y	С	
6-401	Appearance of Emissions	1	C	
BAAQMD Regulation 8, Rule 34	Organic Compounds - Solid Waste Disposal Sites (10/6/99)			
8-34-113	Limited Exemption, Inspection and Maintenance	Y	С	
8-34-113.1	Emission Minimization Requirement	Y	С	
8-34-113.2	Shutdown Time Limitation	Y	С	
8-34-113.3	Recordkeeping Requirement	Y	С	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	С	
8-34-301.1	Continuous Operation	Y	С	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	С	
8-34-301.4	Limits for Other Emission Control Systems	Y	С	
8-34-408	Collection and Control System Design Plans	Y	С	
8-34-408.2	Sites With Existing Collection and Control Systems	Y	С	
8-34-410	Equipment Removal Report	Y	С	
8-34-411	Annual Report	Y	С	
8-34-412	Compliance Demonstration Tests	Y	С	
8-34-413	Performance Test Report	Y	С	
8-34-501	Operating Records	Y	С	
8-34-501.2	Emission Control System Downtime	Y	С	
8-34-501.11	Records of Key Emission Control System Operating Parameters	Y	С	
8-34-501.4	Testing	Y	С	
8-34-501.6	Leak Discovery and Repair Records	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

Site Name: Sonoma Country Central Landfill City: Petaluma, CA Source Name: Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

			Continuous or	
Applicable	Regulation Title or	Federally	Intermittent	
Requirement	Description of Requirement	Enforceable		Days out of compliance / Comments
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	(Y/N) Y	С	
8-34-501.12	Records Retention for 5 Years	Y	C	
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	Y	C	
8-34-504		Y	<u> </u>	
8-34-504	Portable Hydrocarbon Detector Gas Flow Meter	Y	<u> </u>	
		Y	<u> </u>	
8-34-509	Key Emission Control System Operating Parameters	1	e	
BAAQMD Basselation 0	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)			
Regulation 9, Rule 1				
9-1-301	Limitations on Ground Level Concentrations	Y	С	
9-1-302	General Emission Limitations	Y	С	
BAAQMD	Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)			
Regulation 9,	inorganic Gaseous i onutants – Hydrogen Sunde (10/0/22)			
Rule 2				
9-2-301	Limitations on Hydrogen Sulfide	Ν	С	
BAAQMD	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon			
Regulation 9,	Monoxide from Stationary Internal Combustion Engines (1/20/93)			
Rule 8				
9-8-301	Emission Limits - Fossil Derived Fuel Gas	Y	С	
9-8-301.2	Lean-Burn Engines: NOx Emission Limit	Y	С	
9-8-301.3	CO Emission Limit	Y	С	
9-8-302	Emission Limits – Waste Derived Fuel Gas	Y	С	
9-8-302.1	Lean-Burn Engines: NOx Emission Limit	Y	С	
9-8-302.3	CO Emission Limit	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

Site Name: Sonoma Country Central Landfill City: Petaluma, CA Source Name: Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Condition # 19933	<b>NOTE:</b> Application Number (AN) 28326-Change of Permit Conditions only modified some of the original Condition 19933 Parts as listed in the Title V Permit. For documentation purposes, only those parts that were changed are provided in detail below for clarity of the compliance requirements that may have changed.	Y	С	
Part 1	All collected landfill gas shall be vented to properly operating abatement equipment including the Internal Combustion Engines (S-4, S-5, S-6, -S- 7, S- 9, S-10, S-11, S-12, S-13, and S-14) or a Landfill Gas Flare (A-4). Under no circumstances shall raw landfill gas be vented to the atmosphere. This limitation does not apply to unavoidable landfill gas emissions that occur during control system installation, maintenance, or repair that is performed in compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or 118 or to inadvertent component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303. (basis: Regulation 8-34-301)	Y	С	
Part 2	The A-4 Landfill Gas Flare shall be operated as necessary to combust excess gas whenever the flow of landfill gas exceeds the capacity of the IC engines in service. (basis: Regulation 8-34-301)	Y	С	
Part 3	The Internal Combustion Engines (S-4, 5-5, S-6, S-7, S-9, S-10, S-11, S- 12, S- 13, and S-14) shall be fired exclusively on landfill gas. If required, natural gas can be used as a supplemental fuel, but it shall not reduce or replace landfill gas available for use in these engines. Natural gas shall not be used as supplemental fuel when the A-4 Flare is operating concurrently with these engines. (basis: Offsets and Cumulative Increase)	Y	С	
Part 4	Landfill Gas Flow Meter Requirement (2-1-403, 8-34-301)	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

Site Name: Sonoma Country Central Landfill City: Petaluma, CA Source Name: Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Angliaghla	Deculation Title on	Fadaualla	Continuous or Intermittent	
Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable	Intermittent	Days out of compliance / Comments
Requirement	Description of Requirement	(Y/N)		Days out of compliance / Comments
Part 5	NOx emission limit (BACT, Offsets, and Cumulative Increase)	Y	С	
Part 6	CO emission limit (BACT)	Y	С	
Part 7	NMOC control requirement (BACT, Offsets, and Regulation 8-34- 301.4)	Y	С	
Part 8	Annual Source Test Requirement (BACT, Offsets, 8-34-114, 8-34- 301.4, 8-34-412, 9-8-302.1, and 9-8-302.3)	Y	С	
Part 9	Record Keeping Requirements (Cumulative Increase and Offsets)	Y	С	
Part 10	Heat Input Limits (2-1-301)	Y	С	
Part 11	Exhaust Gas Oxygen Concentration Monitoring Requirements (Regulations 8-34-301.4, 8-34-501.4, and 8-34-509)	Y	С	
BAAQMD Condition # 24894	Special Conditions for S-13 and S-14 When Fired by Biogas			
Part 1	Biogas fuel requirement (Regulation 2-1-403)	Y	С	
Part 2	Fuel heat input limit (Cumulative Increase)	Y	С	
Part 3	Fuel Flow Meter requirement (Regulation 2-1-403)	Y	С	
Part 4	NOx emission limit (BACT, Offsets, and Cumulative Increase)	Y	С	
Part 5	CO emission limit (BACT)	Y	С	
Part 6	NMOC emission limit (Cumulative Increase)	Y	С	
Part 7	Fuel use monitoring (Cumulative Increase, Offsets, and TRMP)	Y	С	
Part 8	Annual Source Test Requirement (BACT, Cumulative Increase, Regulations 9- 8-302.1, and 9-8-302.3)	Y	С	
Part 9	Record Keeping Requirements (Cumulative Increase, Regulation 2-6- 501)	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

**City:** Petaluma, CA **Source Name:** Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Site Name: Sonoma Country Central Landfill

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
40 CFR Part 63, Subpart A	National Emission Standards for Hazardous Air Pollutants – General Provisions (9/13/10)			
63.4	Prohibited activities and circumvention	Y	С	
63.5	Preconstruction review and notification requirements	Y	С	
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	С	
63.6	Compliance with standards and maintenance requirements	Y	С	
63.6(e)	Operation and maintenance requirements and SSM Plan	Y	С	
63.6(f)	Compliance with non-opacity emission standards	Y	С	
63.10	Record Keeping and reporting requirements	Y	С	
63.10(b)	General record keeping requirements	Y	С	
63.10(b)(2)	For affected sources, maintain relevant records of:	Y	С	
63.10(b)(2) (i-v)	Records for startup, shutdown, malfunction, and maintenance	Y	С	
63.10(d)	General reporting requirements	Y	С	
63.10(d)(5)	Startup, Shutdown, and Malfunction (SSM) Reports	Y	С	
40 CFR Part 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (1/30/13)			
63.6585	Am I subject to this subpart?	Y	С	
63.6585(a)	A stationary reciprocating internal combustion engine (RICE) is not a non-road engine and is not used to propel a motor vehicle.	Y	С	
63.6585(c)	An area source of HAP emissions is a source that is not a major source.	Y	С	
63.6590	What parts of my plant does this subpart cover?	Y	С	

Site #: A2254 Address: 500 Mecham Road Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14

Site Name: Sonoma Country Central Landfill City: Petaluma, CA Source Name: Lean Burn Internal Combustion Engines and Generator Sets (S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-12, S-13, S-14)

Applicable	Regulation Title or	Federally	Continuous or Intermittent	
Requirement	Description of Requirement	Enforceable		Days out of compliance / Comments
		(Y/N)		
63.6590(a)	Affected source is any existing, new or reconstructed stationary RICE located at a major or area source.	Y	С	
63.6590(a)(1)	Existing stationary RICE is:	Y	С	
63.6590(a)(1) (iii)	For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.	Y	С	
63.6595	When do I have to comply with this subpart	Y	С	
63.6595(a)(1)	Comply with the applicable emission limitations, operating limitations, and other requirements no later than 10/19/2013.	Y	С	
63.6603(a)	Emission Limitations and Operating Limitations for Existing Stationary RICE located at an area source of HAP emissions	Y	С	
Table 2d.13	<ul> <li>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;</li> <li>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</li> <li>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</li> </ul>	Y	С	
63.6605	General requirements for complying with this subpart	Y	С	
63.6605(a)	Compliance with the emission limitations and operating limitations in this subpart at all times.	Y	С	
63.6605(b)	Safety and good air pollution control practices for minimizing emissions.	Y	С	
63.6625	What are my monitoring, installation, collection, operation, and maintenance requirements?	Y	С	
BAAQMD Condition # 26507				
Part 1	CO emission limits for landfill gas combustion devices (Cumulative Increase and Regulation 2-1-301)	Y	С	
Part 2	Site-wide CO emission limit for all non-mobile combustion equipment (Regulation 2-1-403)	Y	С	

Site #: A2254	Site Name: Sonoma Country Central Landfill	<b>Reporting Period:</b> 02/1/2021 to 01/31/2022
Address: 500 Mecham Road	City: Petaluma, CA	<b>Zip Code:</b> 94952
Source #: S-4, S-5, S-6, S-7, S-9, S-10, S-11, S-	Source Name: Lean Burn Internal Combustion	
12, S-13, S-14	Engines and Generator Sets (S-4, S-5, S-6, S-7,	
	S-9, S-10, S-11, S-12, S-13, S-14)	

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
Part 3	Record keeping requirements (Regulations 2-1-301 and 2-1-403)	Y	С	