TV Tracking #: 418 (Semi-Annual)
TV Tracking #: 419 (Annual)

REPUBLIC SERVICES

Vasco Road Landfill 4001 N. Vasco Road, Livermore, CA 94551
o 925.447.0491 republicservices.com

1. ☐ RECEIVED IN ENFORCEMENT: 02/28/2022

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

Subject: Combined Initial NESHAP Semi-Annual Report, Bay Area Air Quality Management District Regulation 8, Rule 34, 40 Code of Federal Regulations (CFR) Subpart AAA Semi-Annual Report, Title V Semi-Annual Monitoring Report, and Title V Annual Compliance Certification Report
Vasco Road Landfill, Livermore, California (Title V Facility No. A5095)

Dear Sir or Madam:

Vasco Road, LLC is pleased to submit the enclosed combined 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, Initial National Emissions Standards for Hazardous Air Pollutants (NESHAP) Semi- Annual 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 (USEPA) Region IX for the Vasco Road Landfill (Vasco).

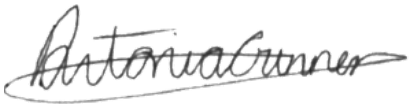
The Title V ACC Report covers the period from February 1, 2021 through January 31, 2022. The Title V Semi-Annual Monitoring Report, the BAAQMD Rule 8-34 Semi-Annual Report and the SSM Plan Report cover the period from August 1, 2021 through January 31, 2022. The Initial NESHAP reports covers the period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

The Title V reports meet the requirements specified in the Title V Permit, BAAQMD guidance on Title V report submittals, and BAAQMD Regulation 2, Rule 6. The Rule 8-34 report includes the information required by BAAQMD Rule 8-34-411, it satisfies the requirements under the New Source Performance Standards (NSPS) for municipal solid waste landfills (40 Code of Federal Regulations [CFR], Part 60, Subpart WWW), including 40 CFR 60.757(f) and also includes the Initial NESHAP subpart AAAA reporting requirements. 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 reports need the requirement under 40 CFR 63.1981(h). The Title V reports and the SSM Plan report each includes a certification by the responsible official for Vasco.

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 reach me at (619) 201-3764 or agunner@republicservices.com or Maria Bowen at (619) 455-9518 or mbowen@scsengineers.com.

Sincerely,



Antonia Gunner
Environmental Manager
Vasco Road Landfill

cc: Matt Ketchem, Vasco
Maria Bowen, SCS Engineers
Hannah Morse, SCS Engineers

NESHAP Initial Report/NSPS/BAAQMD Rule 8-34 Semi-Annual Report, SSM Plan Semi-Annual Report, and Title V Semi-Annual Report
Vasco Road Landfill
Livermore, California (Title V Facility No. 5095)

Prepared for:

Republic Services Vasco Road, LLC
4001 N. Vasco Road
Livermore, CA 94551

For Submittal to:

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

SCS ENGINEERS

01204082.06 Task 5 | February 2022

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

This submittal consisting of the New Source Performance Standards (NSPS)/Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual/Initial National Emission Standards for Hazardous Air Pollutants (NESHAP) Report, the Semi-Annual Startup, Shutdown, and Malfunction (SSM) Plan Report, and the Title V Semi-Annual Monitoring Report for the Vasco Road Landfill in Livermore, California, dated February 2022, was prepared and reviewed by the following:

Hannah Morse
Technical Associate
SCS ENGINEERS

Maria Bowen
Project Manager
SCS ENGINEERS

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

Table of Contents

Section Page

Tables

Appendices

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

1.0 INTRODUCTION

On behalf of Republic Services Vasco Road, LLC, SCS Engineers (SCS) hereby submits this New Source Performance Standard (NSPS) Semi-Annual/Initial National Emission Standards for Hazardous Air Pollutants (NESHAP) Report of information and Bay Area Air Quality Management District (BAAQMD or District) Rule 8-34 Semi-Annual Report and Semi-Annual Start-up, Shutdown, and Malfunction (SSM) Plan Report for Vasco Road Landfill (Vasco Road or Landfill) for the period of August 1, 2021 through January 31, 2022 to the BAAQMD.

1.1 EMISSION GUIDELINE RULE

Vasco Road is considered a "new" landfill under the original landfill NSPS, and as such was subject to 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW, but is considered an "existing" landfill under the new Emissions Guideline (EG) rule, promulgated under 40 CFR Part 60, Subpart Cf in August 2016. The California Air Resources Board (CARB) submitted a State Plan, dated May 25, 2017, to implement the United States Environmental Protection Agency's (USEPA) EG rule. CARB's State Plan claimed that the California AB 32 Landfill Methane Rule (LMR), which the Landfill is already subject to, is already more stringent than the EG rule, and that compliance with the LMR should be sufficient to comply with the EG rule. The USEPA partially approved and partially disapproved CARB's State Plan on January 9, 2020 because CARB's State Plan did not fully meet certain provisions of the EG rule. USEPA published its Federal Plan for the EG under 40 CFR Part 62, Subpart OOO in May 2021, and it became effective on June 21, 2021. At that time, the approved EG Cf rule in California became the LMR plus specific sections of Subpart OOO related to wellhead temperature.

For the reporting period from July 1, 2021 and through September 26, 2021, Vasco Road was required to comply with the LMR and applicable sections of 40 CFR Part 62, Subpart OOO to meet its EG compliance obligations.

1.2 UPDATE NESHAP 40 CFR 63, SUBPART AAAA

Due to the site's permitted design capacity being over the 2.5 million Megagram/2.5 million cubic meter limits and having an uncontrolled non-methane organic compound (NMOC) content exceeding 50 Megagrams per year (mg/year), 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, this semi-annual report will continue to include Subpart WWW 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.

For the reporting period from August 1, 2021 through January 31, 2022, this Semi-Annual Report complies with the sections specified in Subpart WWW, 40 CFR 60.757(f), and Subpart AAAA, 40 CFR 63.1981(h), which describes the items to be submitted in an annual report for landfills using an active collection system. In accordance with NESHAP 40 CFR 63, Subpart AAAA, this report is

submitted semi-annually. This report includes a certification signed by a Responsible Official which is provided in Appendix A.

2.0 SITE BACKGROUND INFORMATION

Vasco Road is located in Livermore, California and is owned and operated by Republic Services Vasco Road, LLC. The MSW landfill is located on Vasco Road about three miles north of Interstate 580 in an unincorporated portion of eastern Alameda County north of the City of Livermore. The Landfill lies within the Northern Diablo Range along the Altamont Anticline. The Landfill was permitted in 1962 and began accepting waste circa 1963. The 323-acre site is currently in operation, accepting nonhazardous solid waste and inert waste.

2.1 EXISTING AIR PERMITS

Vasco Road maintains a BAAQMD permit to operate (PTO) (Plant No. 5095), which includes conditions for the wellfield, collection system, and flare station (Condition No. 818). Permit Condition 818 incorporates all applicable requirements from NSPS Subpart WWW and BAAQMD Rule 8-34, which are addressed in this report. Vasco Road also maintains a Title V Permit (Facility No. A5059), which was most recently renewed in February 4, 2019. The current permit is a Title V revision permit issued on November 6, 2019, expiring in February 3, 2024.

As discussed above, the permit incorporates the new EG requirements and specific parts of NSPS Subpart OOO which became effective June 21, 2021 and NESHAP which became effective September 27, 2021. As the new rules are in effect, they are being implemented by the Landfill, and applications for the Title V Modification to add the new rule elements and remove the old NSPS Subpart WWW removed will be submitted accordingly.

A Gas Collection and Control System (GCCS) Design Plan was prepared for the site to review and determine the adequacy of the existing landfill gas (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 USEPA 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 Vasco Road 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 from collection system components.

A LFG to energy (LFGTE) facility, which is permitted by the BAAQMD separately from Vasco Road as Facility No. 20432, has been the primary control system for Vasco Road’s collected LFG since it began commercial operation in 2012. The LFGTE facility is owned and operated by Ameresco Vasco Road, LLC (Ameresco). The flare station, which is operated and maintained by Republic Services

Vasco Road, LLC, consists of one enclosed flare (A-4) which acts as a supplementary emission control and/or backup control devices in the event that the LFGTE facility goes offline.

In the event the LFGTE facility and the LFG flare go off-line concurrently, an automatic valve is actuated that prevents LFG flow to the control systems. As a result, LFG flow from the collection system ceases entirely, such that there is no free-venting of uncombusted LFG to the atmosphere.

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

3.0 REPORTING REQUIREMENTS

The following information is required to be reported in a semi-annual report:

Table 1. 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)**
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).
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).

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)**
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 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.	Each owner or operator that chooses to comply with the provisions in §63.1958, 63.1960, and 63.1961 of this chapter, as allowed in §62.16716, 62.16720, and 62.16722, must submit the 24-hour high temperature report according to § 63.1981(k) of this chapter.
--	Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs 40 CFR 63.1981(l)(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(l).
--	Submit semi-annual CMS summary reports including required items listed in 40 CFR 63.10(e)(3)(vi)	--

3.1 MONITORED PARAMETERS

The following information is required to be monitored:

Table 2. Monitored Parameters, Corresponding Regulatory References

NSPS Subpart WWW	Updated NESHAP Subpart AAAA	Federal Subpart OOO
40 CFR 60.756(a), (b), (c), (d)	**40 CFR 63.1961(a), (b), (f)**	**40 CFR 62.16722 (a), (b), (f)**
Vacuum applied to the extraction wells via the gas collection header is monitored on a monthly basis. A vacuum must be maintained at each wellhead to be in compliance with 40 CFR 60.753 (b).	Vacuum applied to the extraction wells via the gas collection header is monitored on a monthly basis. A vacuum must be maintained at each wellhead to be in compliance with 40 CFR 63.1961 (a)(1).	Vacuum applied to the extraction wells via the gas collection header is monitored on a monthly basis. A vacuum must be maintained at each wellhead to be in compliance with 40 CFR 62.16722(a)(1).
Nitrogen or oxygen content of LFG at the wellheads is monitored on a monthly basis. Nitrogen must be less than 20 percent (%) or oxygen less than five (5) % to comply with 40 CFR 60.753 (c).	Nitrogen or oxygen content of LFG at the wellheads is monitored on a monthly basis.	Nitrogen or oxygen content of LFG at the wellheads is monitored on a monthly basis to comply with 40 CFR 62.16722(a)(2).
Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C (131 degrees F) to comply with 40 CFR 60.753 (c).	Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 62.8 degrees C (145 degrees F) to comply with 40 CFR 63.1961(a)(3).	Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C (131 degrees F) to comply with 40 CFR 62.16722(a)(3).
A temperature or flame presence monitoring device with a continuous recorder, and a gas flow rate measuring device, which records flow at least once every 15 minutes, must be installed at the flare station. The temperature/flame presence and LFG flow rate monitoring data are used to determine the amount of time the LFG collection and control systems are on-line and to ensure compliance with the minimum temperature requirement for enclosed flares. The flare monitoring devices must be operating continuously to comply with 40 CFR 60.756 (b) and to show that the flare is on-line at any time that the collection system is operating (in compliance with 40 CFR 60.753 (e) and (f)).	A temperature or flame presence monitoring device with a continuous recorder, and a gas flow rate measuring device, which records flow at least once every 15 minutes, must be installed at the flare station. The temperature/flame presence and LFG flow rate monitoring data are used to determine the amount of time the LFG collection and control systems are on-line and to ensure compliance with the minimum temperature requirement for enclosed flares. The flare monitoring devices must be operating continuously to comply with 40 CFR 63.1961(b) and to show that the flare is on-line at any time that the collection system is operating (in compliance with 40 CFR 63.1958 (e) and (f)).	A temperature or flame presence monitoring device with a continuous recorder, and a gas flow rate measuring device, which records flow at least once every 15 minutes, must be installed at the flare station. The temperature/flame presence and LFG flow rate monitoring data are used to determine the amount of time the LFG collection and control systems are on-line and to ensure compliance with the minimum temperature requirement for enclosed flares. The flare monitoring devices must be operating continuously to comply with 40 CFR 62.16722(b) and to show that the flare is on-line at any time that the collection system is operating (in compliance with 40 CFR 62.16716 (e) and (f)).
Landfill surface emissions monitoring was performed on a quarterly basis to measure	Landfill surface emissions monitoring was performed on a quarterly basis to measure concentrations of TOC as	Landfill surface emissions monitoring was performed on a quarterly basis to measure concentrations of TOC as

NSPS Subpart WWW	Updated NESHAP Subpart AAAA	Federal Subpart OOO
40 CFR 60.756(a), (b), (c), (d)	**40 CFR 63.1961(a), (b), (f)**	**40 CFR 62.16722 (a), (b), (f)**
concentrations of total organic carbon (TOC) as methane. A portable flame ionization detector (FID) organic vapor analyzer, which meets NSPS specifications, was used to measure concentrations of TOC as methane (in compliance with 40 CFR 60.756(f).	methane. A portable FID organic vapor analyzer, which meets NSPS specifications, was used to measure concentrations of TOC as methane (in compliance with 40 CFR 63.1961(f)).	methane. A portable FID organic vapor analyzer, which meets NSPS specifications, was used to measure concentrations of TOC as methane (in compliance with 40 CFR 62.16722(f)).
The landfill surface was inspected at least monthly for evidence of cracks or other surface integrity issues, in accordance with 40 CFR 60.755(c)(5).	The landfill surface was inspected at least monthly for evidence of cracks or other surface integrity issues, in accordance with 40 CFR 63.1960(c)(5).	The landfill surface was inspected at least monthly for evidence of cracks or other surface integrity issues, in accordance with 40 CFR 62.16720(c)(5).
Per 40 CFR 60 758(c)(1)(i), the average temperature of the flare for a 3-hour time period cannot fall below 28°C (50°F) less than the average operation temperature based on the most recent source test except during periods of SSM.	Per 40 CFR 63.1983(c)(1)(i), the average temperature of the flare for a 3-hour time period cannot fall below 28°C (50°F) less than the average operation temperature based on the most recent source test. Please note, continuous monitoring of temperature monitoring is required at all times except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (in compliance with 40 CFR 63.1961(h)).	Per 40 CFR 62.16726(c)(1)(i), the average temperature of the flare for a 3-hour time period cannot fall below 28°C (50°F) less than the average operation temperature based on the most recent source test. Please note, continuous monitoring of temperature monitoring is required at all times except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (in compliance with 40 CFR 62.16722(h)).

3.1.1 Gas Extraction System Downtime

During the reporting period, the LFG extraction system was off-line on several occasions for a total of 18.12 hours. All 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 one event. This event occurred on September 19, 2021, and was due to site-wide power outages due to unforeseen utility outage events.

A Reportable Compliance Activity (RCA) form was submitted to the BAAQMD on September 19, 2021, to request breakdown relief. BAAQMD issued RCA IDs 08B86 and 08B87 for the breakdown and excess, respectively, for the September 19, 2021 event. On September 29, 2021 Vasco Road submitted the Combined 10/30-Day Title V Reports and Notifications for RCA IDs 08B86/08B87.

The typical operating scenario involves the LFGTE facility acting as the primary control device and the A-4 Flare acting as backup or supplemental control. In addition, if the LFGTE facility goes offline unexpectedly in the middle of the night, LFGTE facility staff must drive to the site and perform inspection and maintenance of their system prior to the LFGTE facility and/or LFG flare re-starting, as re-starting these control systems without someone first inspecting or conducting maintenance on these systems could cause damage to the systems. Republic staff are alerted each time the LFGTE

facility goes offline, and during each shutdown, Republic staff are in close communications with LFGTE facility staff regarding their inspections and maintenance of the LFGTE facility system and their estimates on when the GCCS can be brought back online. There were no occasions during the reporting period in which the LFGTE facility shut down in the middle of the night when no LFGTE facility staff were onsite.

A summary of the GCCS downtime for this reporting period is provided in Table 3a, 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.

3.1.2 Emission Control System Downtime

A-4 Flare

During the reporting period, the flare was off-line on several occasions. A summary of A-4 Flare downtime is provided in Table 3b, including the date, reason for the downtime, and the total elapsed time for each event. Note that the LFGTE facility acts as the primary control device and the majority of collected LFG is sent to this facility. As a result, the flare has been offline on a regular basis. In the event the LFGTE facility shuts down, or additional control is required, the flare acts as a backup control device. In the event the LFGTE facility and the flare go offline concurrently, the collection system will automatically shut down resulting in the entire GCCS going offline. During the reporting period, the flare was offline for approximately 3,209.93 hours. Emission control system downtime records are available for review at the site. This meets both the LMR and NESHAP provisions for preventing free venting and the work practice stand of the NESHAP.

As previously noted, whenever the LFGTE facility and the flare are offline concurrently, LFG flow to the control systems is automatically stopped. Therefore, during this reporting period, there were no instances during which LFG flow passed through the control devices uncontrolled (i.e., free venting), and the collected LFG stream was never diverted from the control devices.

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 (both engines were offline concurrently). 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. No wells were taken off-line during the reporting period. No wells were abandoned during the reporting period.

Pursuant to permit condition No. 818, Part 2b, the owner/operator must notify the District of expected installation or decommissioning dates prior to commencing any component alterations. On April 21, 2021 (revised on April 26, 2021 and June 4, 2021), a Well Decommissioning and Startup

Notification Letter was submitted to the BAAQMD for the decommissioning of fourteen (14) wells and the startup of twenty (20) wells.

Details of individual well shutdown and well startups occurring during the reporting period are provided in **Table 4**. Please see the Semi-Annual SSM Report included as Section II of this report for additional details.

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 the flare and the flare combustion temperature. As required by Rule 8-34, the A-4 Flare is equipped with a flow measuring device and a temperature gauge that provide continuous readout displays using digital chart recorders. During the reporting period, the flow meter and temperature gauge/recorder 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

Vasco Road is required by permit condition No. 818, Part 5 to operate the flare (A-4) in such a manner that the combustion zone temperature within the flare does not drop below the permitted limit of 1,402 degrees Fahrenheit (°F) (averaged over a 3-hour period) or a higher or lower temperature based on the most recent source test. From August 1, 2021 through January 31, 2022, the minimum temperature above which the flare was required to operate was 1,483°F (source test results of 1533°F minus 50°F), based on the source test (conducted on May 7, 2021) results in the test report dated June 9, 2021.

During the reporting period, the average temperature for the A-4 Flare did not drop below the established minimum temperatures, excluding SSM events from August 1 through September 26, 2021. From September 27, 2021 through January 31, 2022, there were zero (0) missing data events for the flare during the reporting period, except for periods excluded per 40 CFR 63.1961.

Please note the new NESHAP minimum temperature requirement is 82°F below the most recent source test. Due to Vasco's Title V permit still including the WWW requirement of 50°F below the most recent source test, the most stringent requirement was used for this report.

Flare temperature records are available for review at the site. Excerpts from the June 9, 2021 source test report, summarizing the test results for the flare were included in the previous semi-annual report.

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 (ppm_v), 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 and calibration records are provided in **Appendix D** and are available for review at the site.

3.2.1 Third Quarter 2021 Monitoring

SCS Field Services (SCSFS) conducted the component leak testing of the wellfield and flare station on July 2, 2021. No component leaks above 1,000 ppm_v were detected in the wellfield or at the flare station during the Third Quarter 2021 monitoring event.

3.2.2 Fourth Quarter 2021 Monitoring

SCSFS conducted the component leak testing of the wellfield and flare station on October 4, 2021. No component leaks above 1,000 ppm_v were detected in the wellfield or at the flare station during the Fourth Quarter 2021 monitoring events.

3.3 CONTROL EFFICIENCY

LFG Flare A-4 was also tested on April 28, 2021 and retested on May 7, 2021 to demonstrate compliance with the control efficiency standard of 98 percent NMOC destruction efficiency or outlet concentration of 30 ppm_v of NMOC as methane (for flares) as required by BAAQMD Rules 8-34-301.3, 8-34-412, 8-34-501.4, and Condition Number 818, Part 20. On May 5, 2021, Vasco Road notified the BAAQMD of the potential failed source test and provided a retest date. On June 16, 2021, a Title V 10-Day Deviation Report and 30-Day Follow-up Report was submitted to the BAAQMD. On July 13, 2021, Notice of Violation (NOV) number A55868 was issued by BAAQMD inspector Mr. Troy Hash for violation of Title V Permit Condition Number 818, Part 10. The requirement to provide specified information in response to the NOV had already been satisfied by the time the NOV was issued, however, a 10-day NOV response letter was submitted to the BAAQMD out of an abundance of caution. The NMOC destruction efficiency for the May 2021 source retest was measured to be <98 percent by weight, however, the NMOC as methane concentration in the flare outlet was 11.7 ppm_v, which is less than the limit of 30 ppm_v. As such, Flare A-4 is in compliance with the aforementioned rules and permit condition by meeting the exhaust ppm_v limit.

Excerpts from the May 2021 source retest report dated June 9, 2021, summarizing the test results, were provided in the previous semi-annual report.

3.4 LANDFILL SURFACE EMISSIONS MONITORING

Surface emissions monitoring (SEM) was conducted at Vasco Road 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**. Records of SEM are available for review at the site.

3.4.1 Third Quarter 2021 Monitoring

SCSFS technicians monitored the landfill surface for leaks with a methane concentration of greater than 500 ppm_v above background on July 1, 2, 12, 22, and 30, 2021. Surface emissions in excess of 500 ppm_v were detected at three (3) locations during the Third Quarter 2021 monitoring event. The locations with the exceedances and associated methane concentrations are provided in the Third Quarter 2021 SEM report (**Appendix D**).

SCSFS technicians performed appropriate corrective actions, including flow increases to the surrounding extraction wells, cover repairs, and installation of borehole emission control system. SCSFS completed the 10-day re-monitoring event for this location on July 12 and 22, 2021. The methane concentration for these locations were under the 500 ppm_v threshold and thus back in compliance. SCSFS performed the 1-month re-monitoring event, as required by NSPS, on July 30, 2021, and the location remained in compliance.

3.4.1 Fourth Quarter 2021 Monitoring

SCSFS monitored the landfill surface for leaks with a methane concentration of greater than 500 ppm_v above background on October 4, 5, 6, and 7, 2021 and November 3, 2021. Surface emissions in excess of 500 ppm_v was detected at one (1) location during the Fourth Quarter 2021 monitoring event. The location with the exceedance and associated methane concentrations are provided in the Fourth Quarter 2021 SEM report (**Appendix D**).

SCSFS field technicians performed appropriate corrective actions, including flow increases to the surrounding extraction wells and borehole repairs. SCSFS completed the 10-day re-monitoring event for this location on October 7, 2021. All the locations were under the 500 ppm_v threshold and thus back in compliance. SCSFS performed the 1-month re-monitoring event, as required by NSPS/NESHAP, on November 3, 2021, and all locations remained in compliance.

3.5 WELLHEAD MONTHLY MONITORING

Monthly wellhead monitoring for pressure, temperature, and oxygen content was conducted by SCSFS from August 2021 through January 2022 to comply with BAAQMD Rules 8-34-305 and 8-34-414. The results of this monitoring are summarized below. Wellhead exceedances are provided in **Table 5, 6, and 7.**

Please note that during the reporting period, all wells were monitored.

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 Rules 8-34-305 and 8-34-414. One (1) well, VREW2109, exhibited positive pressure during this reporting period, the identification number and date that the well was operating with positive pressure are provided in **Table 5**. The table also includes corrective action and re-monitoring results. Corrective action and re-monitoring were performed in accordance with the 5- and 15-day requirements specified in the NSPS and NESHAP regulations and in Rule 8-34.

No wells demonstrated a positive pressure reading at the end of the reporting period.

3.5.2 Oxygen

Vasco Road has elected to use oxygen as its compliance standard under Rule 8-34-305, rather than nitrogen. Per Vasco Road's PTO Condition No. 818, Part 3b(ii), the oxygen concentration limit does not apply to the wells listed below, provided that the oxygen concentration in the LFG at the main header does not exceed five percent oxygen by volume (dry basis) and the methane concentration in the LFG at the main header is greater than 35 percent by volume (dry basis). The oxygen Higher

Operating Value (HOV) is approved for wells: EW-9 (VRLFEW09), EW-27 (VRLFEW27), EW-31A (VRLFEW31A), EW- 33A (VRLEW33A), and EW- 41R (VRLFEW41).

Pursuant to Title V Permit Condition 818, Part 3c(i-iv) the four vertical leachate recirculation wells (VRLRW001, VRLRW002, VRLRW003, and VRLRW004), and two vertical LFG extraction wells (VR12GT4R and VR12GT05) operate on a non-continuous basis and are subject to an alternative oxygen wellhead standard. Oxygen concentrations in these wells may not exceed 15 percent by volume. The wells may be disconnected from the vacuum system if the oxygen concentration is above 15 percent or the temperature is greater than 131°F.

The majority of the wells were operating within the regulatory limit of five (5) percent oxygen 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 6.

As of the end of this reporting period, all of the operating wells were operating with an oxygen concentration below the 5 or 15 percent limit except for wells VREW1001, VREW116, VR12LR01, VRL0601R, and VR12GT03. These wells will be returned to below the 5 percent limit as specified in BAAQMD Rule 8-34-414, and compliance will be documented in the next semi-annual report. Note under the EG rule and Subpart OOO, which took effect June 21, 2021, and NESHAP Rule that took effect on September 17, 2021, oxygen above 5 percent is no longer an exceedance, but under BAAQMD Rule 8-34-414 it still is, and the Landfill will continue to follow these requirements.

As of the end of the previous reporting period, wells VR12LR01, VREW0901, and VREW1001 were operating with an oxygen concentration above the 5 percent limit. These wells returned to compliance at during this reporting period.

3.5.3 Temperature

BAAQMD Rule 8-34-305 requires the landfill gas temperature in each wellhead to measure less than 55 degrees Celsius (°C) or 131°F. However, Condition No. 818, Part 3b(i) in Vasco Road's BAAQMD PTO allows Vasco Road to operate wells EW- 9 (VRLFEW09), EW- 33A (VRLEW33A), and EW-44 (VRLFEW44) at an alternative temperature of 140°F.

The majority of wells were operating within their respective limits of 131°F or 140°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 these wells are provided in Table 7.

As of the end of the reporting period, all the active wells were operating with temperature limits below their respective limits except for wells VREW2106, VREW2108, and VREW2109. These wells will be returned to below the 131°F or 140°F limit 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 VREW2103, VREW2106, VREW2108, and VREW2109 were operating with a temperature higher than 131 °F. These wells returned to compliance during this reporting period except for well VRE2108. A higher operating value request of 150°F was submitted on September 1, 2021 for wells VREW2103, VREW2106, VREW2108, and VREW2109.

3.5.1 Root Cause 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" 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" is also required. There were multiple exceedances during the reporting period where this occurred, and the appropriate corrective actions and root cause analyses were completed. The root cause analysis and corrective action reports can be found in Appendix I.

3.6 COVER INTEGRITY MONITORING

Under BAAQMD Rule 8-34-510 and the NSPS/NESHAP, 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 in conjunction with the wellhead monitoring on August 8, September 12, October 6, November 17, December 26, 2021 and January 14, 2022 using procedures specified in the GCCS Design Plan. The observations during these monitoring events indicated the landfill surface was in good condition. In the event visual evidence suggested otherwise, the surface will be promptly repaired. Records of cover integrity monitoring are available for review upon request.

3.7 GAS GENERATION ESTIMATE AND MONTHLY LANDFILL GAS FLOW RATES

The Vasco Road GCCS has been operating under BAAQMD Regulation 8-34-404 (Less Than Continuous Operation) as of November 19, 2014.

Pursuant to Application Number (A/N) 26049 Condition 818 Part 1 (b), the owner/operator may operate the A-4 Flare on a less than continuous basis. If the three-month rolling average of LFG methane content exceeds 50 percent, the owner/operator shall attempt to restart the A-4 Flare within one week of discovery of this excess. If the restart is successful, the A-4 Flare shall operate continuously until the remaining amount of LFG available for flaring is less than 800 standard cubic feet per minute (scfm) or the equivalent heat input rate for this excess LFG is less than 24 million British thermal units per hour (MMBTU/hour). The rolling average methane content is currently being calculated using the average of the inlet readings collected onsite.

3.8 ANNUAL WASTE ACCEPTANCE RATE AND REFUSE IN PLACE

Vasco Road is an active landfill that continues to accept refuse for disposal. From August 1, 2021 through January 31, 2022, the site accepted 226483.85 tons of decomposable waste and cover material, resulting in a cumulative waste-in-place total of 18,470,869.88 tons as of January 31, 2022.

3.8.1 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.

3.9 LIQUIDS ADDITION REPORT

40 CFR 62.16724(l) requires documentation and reporting for the addition of liquids or leachate recirculation. The landfill has injected liquid in the last 10 years and injected liquids during the reporting period. Refer to Appendix H for liquid addition records for the last 10 years and the reporting period.

3.10 24 HOUR HIGH TEMPERATURE

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

3.11 REPORTING REQUIREMENTS 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 A. 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.

3.12 TREATMENT SYSTEM MONITORING PLAN

There are no vents within the treatment system, which allow venting of gas to the atmosphere, and the treatment system is not designed nor equipped to bypass a control device and vent directly to the atmosphere. A calibrated flow meter is installed to measure flow to the treatment system. Treated landfill gas, which cannot be routed for sale or beneficial use, is routed to a control system. Ameresco maintains and operates all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required by §62.16726(b)(5)(ii) and §63.1983(b)(5)(ii). During this reporting period, per Ameresco there were no parameter exceedances of the Treatment System Monitoring Plan.

3.13 CMS SUMMARY REPORT

The additional reporting requirements for continuous monitoring systems (CMS) per 40 CFR 63.10(e)(3)(vi) is included in **Appendix G.**

SECTION II. SSM PLAN REPORT

As mentioned previously, Vasco Road is subject to 40 CFR Part 63, Subpart AAAA, the NESHAPS for MSW Landfills. Vasco Road maintains a SSM Plan which documents 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 in this section. Although SSM Requirements within the NESHAP Rule are no longer applicable after September 27, 2021, we have continued to comply with SSSM requirements as they are contained within the Title V Permit.

During the reporting period, there were seven (7) SSM events involving shutdown of the entire GCCS. All of these startup/shutdown events were associated with a malfunction of the GCCS.

During the reporting period, there were no SSM events involving the wellfield.

During the reporting period, there were no planned startups/shutdowns or malfunctions of LFG monitoring equipment (e.g. flow measuring/recording device, temperature measuring/recording device).

In each case described above, the SSM Plan was successfully implemented. Specific information regarding these SSMs are included in **Tables 3a (GCCS Downtime), 3b (A-4 Flare Downtime), and 4 (Individual Well Startup, Shutdown, and Decommissions)**.

No revisions were made to the SSM Plan during this reporting period. 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 Table 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 E.

Tables

Table 3a. GCCS Downtime
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

GCCS Shutdown	Restarted	Downtime Hours	Reason for Downtime	Corrective Actions Taken
There was no GCCS Downtime in August 2021.				
9/19/21 5:50	**9/19/21 19:06**	**13.27**	**Ameresco Plant shutdown due to utility power shutdown**	**The Flare was restarted**
There was no GCCS Downtime in October 2021.				
11/5/21 15:42	**11/5/21 16:00**	**0.30**	**Ameresco Plant shutdown**	**The Flare was restarted**
11/27/21 11:56	**11/27/21 12:52**	**0.93**	**Ameresco Plant shutdown**	**The Flare was restarted**
12/1/21 3:52	**12/1/21 5:12**	**1.33**	**Engine offline due to motor issue**	**The Flare was restarted**
12/14/21 9:34	**12/14/21 11:06**	**1.53**	**High Vacuum shutdown**	**The Flare was restarted**
12/14/21 14:10	**12/14/21 14:48**	**0.63**	**High Vacuum shutdown**	**The Ameresco Engines were restarted**
12/16/21 7:57	**12/16/21 8:04**	**0.12**	**High Vacuum shutdown**	**The Flare was restarted**
There was no GCCS Downtime in January 2022.				
	Total:	**18.12**		

Notes:
TSA = temperature swing adsorption, H2S = hydrogen sulfide, HVAC = Heating, Ventilation, and Air Conditioning

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,

Table 3b. Flare (A-4) Downtime
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Shutdown[1]	Startup[1]	Downtime Hours	Reason for Downtime
8/1/21 0:00	8/3/21 7:32	55.53	Automatic shutdown due to flame failure.
8/3/21 7:46	8/3/21 8:04	0.30	Automatic shutdown due to flame failure.
8/3/21 23:58	8/4/21 9:48	9.83	Automatic shutdown due to flame failure.
8/4/21 18:48	8/10/21 8:16	133.47	Automatic shutdown due to flame failure.
8/11/21 3:22	8/11/21 9:50	6.47	Automatic shutdown due to flame failure.
8/11/21 19:06	8/12/21 6:32	11.43	Automatic shutdown due to flame failure.
8/12/21 8:26	8/13/21 7:32	23.10	Automatic shutdown due to flame failure.
8/13/21 7:52	8/17/21 7:46	95.90	Automatic shutdown due to flame failure.
8/18/21 7:34	8/20/21 8:08	48.57	Automatic shutdown due to flame failure.
8/20/21 9:56	8/22/21 8:58	47.03	Automatic shutdown due to flame failure.
8/22/21 22:08	8/23/21 8:56	10.80	Automatic shutdown due to flame failure.
8/23/21 20:40	8/26/21 6:40	58.00	Automatic shutdown due to flame failure.
8/27/21 7:52	8/30/21 11:32	75.67	Automatic shutdown due to flame failure.
8/31/21 5:12	8/31/21 23:59	18.80	Automatic shutdown due to flame failure.
9/1/21 0:00	9/1/21 9:00	9.00	Automatic shutdown due to flame failure.
9/1/21 15:00	9/5/21 9:46	90.77	Automatic shutdown due to flame failure.
9/5/21 21:24	9/8/21 8:30	59.10	Automatic shutdown due to flame failure.
9/8/21 13:30	9/10/21 6:58	41.47	Automatic shutdown due to flame failure.
9/10/21 11:12	9/14/21 8:24	93.20	Automatic shutdown due to flame failure.
9/14/21 13:18	9/15/21 10:06	20.80	Automatic shutdown due to flame failure.
9/15/21 16:36	9/17/21 8:34	39.97	Automatic shutdown due to flame failure.
9/17/21 10:46	9/19/21 19:06	56.33	Automatic shutdown due to flame failure.
9/19/21 21:58	9/21/21 8:04	34.10	Automatic shutdown due to flame failure.
9/21/21 8:10	9/21/21 8:14	0.07	Automatic shutdown due to flame failure.
9/21/21 9:08	9/21/21 10:34	1.43	Automatic shutdown due to flame failure.
9/21/21 15:22	9/22/21 6:52	15.50	Automatic shutdown due to flame failure.
9/23/21 15:02	9/23/21 15:52	0.83	Automatic shutdown due to flame failure.
9/23/21 18:18	9/24/21 5:58	11.67	Automatic shutdown due to flame failure.
9/24/21 20:48	9/26/21 11:00	38.20	Automatic shutdown due to flame failure.
9/26/21 11:06	9/28/21 7:30	44.40	Automatic shutdown due to flame failure.
9/28/21 21:30	9/30/21 23:59	50.50	Automatic shutdown due to flame failure.
10/1/21 0:00	10/1/21 8:10	8.17	Automatic shutdown due to flame failure.
10/1/21 21:24	10/3/21 20:34	47.17	Automatic shutdown due to flame failure.
10/4/21 8:34	10/4/21 8:46	0.20	Automatic shutdown due to flame failure.
10/4/21 8:50	10/4/21 9:04	0.23	Automatic shutdown due to flame failure.
10/5/21 20:30	10/6/21 6:50	10.33	Automatic shutdown due to flame failure.

Table 3b. Flare (A-4) Downtime
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Shutdown[1]	Startup[1]	Downtime Hours	Reason for Downtime
10/6/21 16:32	10/7/21 5:08	12.60	Automatic shutdown due to flame failure.
10/7/21 10:32	10/7/21 10:50	0.30	Automatic shutdown due to flame failure.
10/7/21 10:54	10/7/21 11:02	0.13	Automatic shutdown due to flame failure.
10/7/21 16:12	10/8/21 7:34	15.37	Automatic shutdown due to flame failure.
10/8/21 9:42	10/8/21 11:06	1.40	Automatic shutdown due to flame failure.
10/8/21 11:20	10/8/21 11:26	0.10	Automatic shutdown due to flame failure.
10/8/21 14:56	10/13/21 6:08	111.20	Automatic shutdown due to flame failure.
10/13/21 14:32	10/14/21 8:24	17.87	Automatic shutdown due to flame failure.
10/14/21 14:52	10/15/21 9:32	18.67	Automatic shutdown due to flame failure.
10/15/21 13:54	10/19/21 8:12	90.30	Automatic shutdown due to flame failure.
10/20/21 1:38	10/21/21 8:06	30.47	Automatic shutdown due to flame failure.
10/21/21 19:18	10/22/21 6:52	11.57	Automatic shutdown due to flame failure.
10/22/21 20:44	10/25/21 8:02	59.30	Automatic shutdown due to flame failure.
11/4/21 15:22	11/4/21 15:58	0.60	Automatic shutdown due to flame failure.
11/4/21 20:28	11/4/21 20:36	0.13	Automatic shutdown due to flame failure.
11/4/21 20:46	11/4/21 21:18	0.53	Automatic shutdown due to flame failure.
11/5/21 9:26	11/11/21 8:12	142.77	Automatic shutdown due to flame failure.
11/11/21 9:14	11/11/21 10:10	0.93	Automatic shutdown due to flame failure.
11/11/21 10:18	11/11/21 10:22	0.07	Automatic shutdown due to flame failure.
11/12/21 7:52	11/17/21 6:08	118.27	Automatic shutdown due to flame failure.
11/17/21 15:06	11/24/21 9:20	162.23	Automatic shutdown due to flame failure.
11/24/21 11:36	11/27/21 12:52	73.27	Automatic shutdown due to flame failure.
11/27/21 19:48	12/1/21 5:14	81.43	Automatic shutdown due to flame failure.
12/1/21 14:20	12/8/21 9:20	163.00	Automatic shutdown due to flame failure.
12/8/21 17:28	12/13/21 9:14	111.77	Automatic shutdown due to flame failure.
12/14/21 8:54	12/14/21 8:58	0.07	Automatic shutdown due to flame failure.
12/14/21 9:30	12/14/21 11:06	1.60	Automatic shutdown due to flame failure.
12/14/21 14:08	12/16/21 8:04	41.93	Automatic shutdown due to flame failure.
12/16/21 14:00	12/19/21 13:04	71.07	Automatic shutdown due to flame failure.
12/20/21 4:18	12/21/21 6:36	26.30	Automatic shutdown due to flame failure.
12/21/21 14:20	12/22/21 8:10	17.83	Automatic shutdown due to flame failure.
12/22/21 14:08	12/29/21 10:36	164.47	Automatic shutdown due to flame failure.
12/30/21 7:48	1/5/22 7:56	144.13	Automatic shutdown due to flame failure.
1/10/22 11:24	1/11/22 7:48	20.40	Automatic shutdown due to flame failure.
1/11/22 7:50	1/11/22 8:10	0.33	Automatic shutdown due to flame failure.
1/11/22 15:28	1/11/22 18:00	2.53	Automatic shutdown due to flame failure.

Table 3b. Flare (A-4) Downtime
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Shutdown[1]	Startup[1]	Downtime Hours	Reason for Downtime
1/14/22 7:14	**1/14/22 9:40**	**2.43**	**Automatic shutdown due to flame failure.**
1/14/22 14:38	**1/18/22 9:44**	**91.10**	**Automatic shutdown due to flame failure.**
1/18/22 12:04	**1/19/22 7:52**	**19.80**	**Automatic shutdown due to flame failure.**
1/19/22 15:28	**1/24/22 8:48**	**113.33**	**Automatic shutdown due to flame failure.**
Total		**3209.93**	

Notes:

Events in bold type denotes Malfunction Events

[1]The A-4 flare was offline at the beginning and end of the reporting period. For reporting purposes, the shutdown and startup is calculated as having started on February 1,

*Per the Startup, Shutdown, and Malfunction (SSM) forms, a flare flame failure shutdown is due to limited gas available while acting as a back-up device to the engine plant.

A-4 flare operated during all instances when the flow rate to the power generating facility was less than 1,200 scfm, in accordance with PTO Condition 818 Part 1(a). In

All events where the entire GCCS was offline listed involved GCCS inspection and/or maintenance activities prior to start up (or as soon as feasible following programmed

Table 4. Individual Well Startups, Shutdowns and Decommissions
Vasco Road Landfill, Livermore, California
(August 1, 2021 through Januart 31, 2022)

Well ID	Shutdown	Start-up	Days Offline	Reason for Shutdown/Startup
No Well Startups, Shutdowns or Decommissions during this Reporting Period				

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

Table 5. Wells with Positive Pressure
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Static Pressure ("H_2O)	Adjusted Static Pressure ("H_2O)	Comments
VREW2109	10/6/2021 12:10	0.01	-0.01	Adjusted Valve
VREW2109	10/6/2021 12:13	-0.03	-0.03	In Compliance

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

Table 6. Wells with Oxygen Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Oxygen (%)	Comments
VREW1001	8/4/2021 13:37	10.7	Adjusted Valve
VREW1001	8/4/2021 13:38	11.6	Second Reading
VREW1001	8/23/2021 12:25	10.4	Adjusted Valve
VREW1001	8/23/2021 12:26	10.2	Second Reading
VREW1001	9/14/2021 9:06	9.0	Adjusted Valve
VREW1001	9/14/2021 9:07	10.5	Second Reading
VREW1001	9/24/2021 12:25	8.5	Adjusted Valve
VREW1001	9/24/2021 12:27	10.8	Second Reading
VREW1001	10/13/2021 13:35	4.9	In Compliance
VREW1001	12/22/2021 14:44	7.4	Adjusted Valve
VREW1001	12/22/2021 14:45	5.5	Second Reading
VREW1001	1/5/2022 15:02	1.9	In Compliance
VREW1001	1/26/2022 12:49	15.9	Adjusted Valve
VREW1001	1/26/2022 12:49	16.3	Second Reading
VRLEW116	1/26/2022 12:13	19.3	Adjusted Valve
VRLEW116	1/26/2022 12:14	14.6	Second Reading
VR12LR01	8/3/2021 10:49	13.8	Adjusted Valve
VR12LR01	8/3/2021 10:50	12.2	Second Reading
VR12LR01	8/23/2021 14:48	3.7	In Compliance
VR12LR01	9/14/2021 9:56	12.0	Adjusted Valve
VR12LR01	9/14/2021 9:57	12.0	Second Reading
VR12LR01	9/21/2021 11:04	15.5	Adjusted Valve
VR12LR01	9/21/2021 11:05	16.2	Second Reading
VR12LR01	10/1/2021 11:18	16.9	Adjusted Valve
VR12LR01	10/1/2021 11:19	16.9	Second Reading
VR12LR01	10/18/2021 10:59	0.8	In Compliance
VR12LR01	11/17/2021 7:51	7.8	Adjusted Valve
VR12LR01	11/17/2021 8:06	7.8	Second Reading
VR12LR01	12/1/2021 9:59	8.8	Adjusted Valve
VR12LR01	12/1/2021 10:01	8.7	Second Reading
VR12LR01	12/22/2021 8:51	0.0	In Compliance
VR12LR01	1/26/2022 8:27	5.0	Adjusted Valve
VR12LR01	1/26/2022 8:28	5.1	Second Reading
VRLEW147	11/17/2021 12:49	19.5	Adjusted Valve
VRLEW147	11/17/2021 12:50	20.1	Second Reading
VRLEW147	12/8/2021 11:14	5.9	Adjusted Valve

Table 6. Wells with Oxygen Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Oxygen (%)	Comments
VRLEW147	12/8/2021 11:17	10.5	Second Reading
VRLEW147	12/8/2021 11:17	10.5	Second Reading
VRLEW147	12/21/2021 13:59	0.0	In Compliance
VRLEW154	10/15/2021 14:14	10.2	Adjusted Valve
VRLEW154	10/15/2021 14:15	7.1	Second Reading
VRLEW154	10/18/2021 10:09	7.2	Adjusted Valve
VRLEW154	10/18/2021 10:11	8.8	Second Reading
VRLEW154	10/21/2021 10:35	4.5	In Compliance
VRLEW38A	10/8/2021 12:39	5.2	Adjusted Valve
VRLEW38A	10/8/2021 12:41	5.3	Second Reading
VRLEW38A	10/19/2021 10:48	3.2	In Compliance
VRL0601R	9/8/2021 14:08	9.1	Adjusted Valve
VRL0601R	9/8/2021 14:10	9.4	Second Reading
VRL0601R	9/14/2021 12:49	0.0	In Compliance
VRL0601R	11/3/2021 9:40	7.4	Adjusted Valve
VRL0601R	11/3/2021 9:41	12.4	Second Reading
VRL0601R	11/17/2021 7:13	1.4	In Compliance
VRL0601R	1/20/2022 10:03	19.0	Adjusted Valve
VRL0601R	1/20/2022 10:04	19.2	Second Reading
VREW0901	12/8/2021 13:21	8.0	Adjusted Valve
VREW0901	12/8/2021 13:25	17.0	Second Reading
VREW0901	12/16/2021 10:48	5.5	Adjusted Valve
VREW0901	12/16/2021 10:48	5.5	Adjusted Valve
VREW0901	12/16/2021 10:49	8.0	Second Reading
VREW0901	12/21/2021 13:12	15.7	Adjusted Valve
VREW0901	12/21/2021 13:15	7.9	Second Reading
VREW0901	1/10/2022 10:17	3.5	In Compliance
VRLEW93A	10/21/2021 13:38	17.5	Adjusted Valve
VRLEW93A	10/21/2021 13:39	18.9	Second Reading
VRLEW93A	11/11/2021 11:41	1.8	In Compliance
VRLEW93A	11/17/2021 12:45	9.9	Adjusted Valve
VRLEW93A	11/17/2021 12:46	9.5	Second Reading
VRLEW93A	12/8/2021 11:07	3.3	In Compliance
VRLEW93A	12/21/2021 13:54	19.1	Adjusted Valve

Table 6. Wells with Oxygen Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Oxygen (%)	Comments
VRLEW93A	12/21/2021 13:55	18.0	Second Reading
VRLEW93A	1/5/2022 13:22	2.8	In Compliance
VR12GT03	8/3/2021 11:05	7.2	Adjusted Valve
VR12GT03	8/3/2021 11:06	8.0	Second Reading
VR12GT03	8/26/2021 9:47	10.9	Adjusted Valve
VR12GT03	8/26/2021 9:48	10.9	Second Reading
VR12GT03	9/14/2021 10:06	2.1	In Compliance
VR12GT03	9/21/2021 11:22	6.0	Adjusted Valve
VR12GT03	9/21/2021 11:24	6.0	Second Reading
VR12GT03	10/14/2021 9:39	4.4	In Compliance
VR12GT03	11/3/2021 10:04	5.7	Adjusted Valve
VR12GT03	11/17/2021 9:39	15.0	Second Reading
VR12GT03	12/8/2021 12:02	12.6	Adjusted Valve
VR12GT03	12/8/2021 12:04	11.1	Second Reading
VR12GT03	12/22/2021 9:53	5.9	Adjusted Valve
VR12GT03	12/22/2021 9:57	5.9	Second Reading
VR12GT03	1/5/2022 11:08	3.0	In Compliance
VR12GT03	1/26/2022 9:49	7.1	Adjusted Valve
VR12GT03	1/26/2022 9:50	7.4	Second Reading

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

*Pursuant to Title V Permit Condition 818, Part 3c(i-iv), the well noted with an asterick operates on a non-

Table 7. Wells with Temperature Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Temp [F]	Adjusted Temp [F]	Comments
VREW2103	8/3/2021 8:28	137.3	136.8	Adjusted Valve
VREW2103	8/3/2021 8:30	136.4	135.1	Second Reading
VREW2103	8/17/2021 8:37	136.8	136.9	Adjusted Valve
VREW2103	8/17/2021 8:37	136.8	136.9	Second Reading
VREW2103	8/17/2021 8:38	136.8	136.7	Adjusted Valve
VREW2103	8/23/2021 13:19	131.2	131.4	Second Reading
VREW2103	8/23/2021 13:20	131.5	131.6	Adjusted Valve
VREW2103	8/30/2021 14:57	134	134	Second Reading
VREW2103	8/30/2021 14:58	133.6	133.7	Adjusted Valve
VREW2103	9/10/2021 8:33	136.2	136.2	Second Reading
VREW2103	9/10/2021 8:38	136.1	136.2	Adjusted Valve
VREW2103	9/14/2021 12:44	134.1	134.2	Second Reading
VREW2103	9/14/2021 12:45	133.6	133.8	Adjusted Valve
VREW2103	9/21/2021 13:08	132.2	132.4	Second Reading
VREW2103	9/21/2021 13:08	132.2	132.4	Adjusted Valve
VREW2103	9/21/2021 13:10	132.7	132.7	Second Reading
VREW2103	9/28/2021 13:12	130.5	130.6	In Compliance
VREW2103	9/28/2021 13:14	131.3	131.3	Adjusted Valve
VREW2103	10/1/2021 13:40	132.3	132.4	Adjusted Valve
VREW2103	10/1/2021 13:41	132.6	132.6	Second Reading
VREW2103	10/21/2021 14:24	132.4	132.4	Adjusted Valve
VREW2103	10/21/2021 14:25	132.4	132.4	Second Reading
VREW2103	11/3/2021 8:11	129.3	129.7	In Compliance
VREW2103	12/1/2021 8:53	132.6	132.8	Adjusted Valve
VREW2103	12/1/2021 8:54	126.6	125.4	In Compliance
VREW2104	8/3/2021 8:33	131.2	131	Adjusted Valve
VREW2104	8/3/2021 8:35	127.1	126.8	In Compliance
VREW2104	9/21/2021 13:13	131.7	131.8	Adjusted Valve
VREW2104	9/28/2021 13:17	131.5	131.7	Adjusted Valve
VREW2104	9/28/2021 13:20	131.5	131.5	Second Reading
VREW2104	10/14/2021 11:45	130.9	130.4	In Compliance
VREW2104	11/11/2021 12:23	134.7	134.7	Adjusted Valve
VREW2104	11/11/2021 12:27	134.7	134.8	Second Reading
VREW2104	11/17/2021 12:25	129.7	129.9	In Compliance
VREW2104	12/1/2021 8:27	134.7	134.8	Adjusted Valve
VREW2104	12/1/2021 8:31	134.8	134.8	Second Reading
VREW2104	12/14/2021 14:04	130.8	130.5	In Compliance
VREW2104	12/22/2021 10:51	134.6	134.7	Adjusted Valve
VREW2104	12/22/2021 10:53	134.5	134.7	Second Reading
VREW2104	1/5/2022 10:08	134	133.7	Adjusted Valve
VREW2104	1/5/2022 10:09	133.4	133.4	Second Reading
VREW2104	1/26/2022 11:15	130.9	130.5	In Compliance
VREW2106	8/17/2021 8:30	136.1	136	Adjusted Valve

Table 7. Wells with Temperature Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Temp [F]	Adjusted Temp [F]	Comments
VREW2106	8/17/2021 8:30	136.3	136.3	Second Reading
VREW2106	8/23/2021 12:51	129.8	131.1	Adjusted Valve
VREW2106	8/23/2021 12:53	133.7	133.7	Second Reading
VREW2106	8/30/2021 14:51	129.1	130.7	In Compliance
VREW2106	8/30/2021 14:52	133.9	134	Second Reading
VREW2106	9/10/2021 8:11	137.4	137.3	Adjusted Valve
VREW2106	9/10/2021 8:17	137.2	137.3	Second Reading
VREW2106	9/14/2021 12:40	136.6	136.6	Adjusted Valve
VREW2106	9/14/2021 12:41	136.3	136.3	Second Reading
VREW2106	9/21/2021 13:18	129.2	131.1	Adjusted Valve
VREW2106	9/21/2021 13:19	135.5	135.6	Second Reading
VREW2106	9/28/2021 13:23	134.4	134.5	Adjusted Valve
VREW2106	9/28/2021 13:24	134.2	134.6	Second Reading
VREW2106	10/14/2021 11:50	136.6	136.7	Adjusted Valve
VREW2106	10/14/2021 11:51	133.4	133.6	Second Reading
VREW2106	10/21/2021 14:28	134.1	134.2	Adjusted Valve
VREW2106	10/21/2021 14:30	137.8	137.9	Second Reading
VREW2106	11/3/2021 8:29	138.5	138.5	Adjusted Valve
VREW2106	11/3/2021 8:30	138.5	138.5	Second Reading
VREW2106	11/11/2021 12:48	139.4	139.3	Adjusted Valve
VREW2106	11/11/2021 12:49	139.1	139.2	Second Reading
VREW2106	11/17/2021 7:17	138.2	138.4	Adjusted Valve
VREW2106	11/17/2021 7:27	138.2	137.9	Second Reading
VREW2106	12/1/2021 8:06	139.4	139.5	Adjusted Valve
VREW2106	12/1/2021 8:06	139.4	139.5	Adjusted Valve
VREW2106	12/1/2021 8:08	139.2	138.9	Second Reading
VREW2106	12/14/2021 14:07	123.5	123.5	In Compliance
VREW2106	12/22/2021 10:43	135.2	135.3	Adjusted Valve
VREW2106	12/22/2021 10:47	134.4	135.7	Second Reading
VREW2106	1/5/2022 12:06	142.3	143.2	Adjusted Valve
VREW2106	1/5/2022 12:07	143.4	143.4	Second Reading
VREW2106	1/26/2022 11:05	139.2	139.3	Adjusted Valve
VREW2106	1/26/2022 11:06	139.6	139.6	Second Reading
VREW2108	8/4/2021 13:50	161	161	Adjusted Valve
VREW2108	8/4/2021 13:52	161	161	Second Reading
VREW2108	8/10/2021 10:44	158.3	159.5	Adjusted Valve
VREW2108	8/10/2021 10:46	162	162	Second Reading
VREW2108	8/17/2021 8:18	165.7	165.9	Adjusted Valve
VREW2108	8/17/2021 8:19	165.9	165.9	Second Reading
VREW2108	8/23/2021 12:43	157.4	158.5	Adjusted Valve
VREW2108	8/23/2021 12:44	161.9	161.9	Second Reading
VREW2108	8/30/2021 14:47	147.8	150.8	Adjusted Valve
VREW2108	8/30/2021 14:47	147.8	150.8	Second Reading
VREW2108	8/30/2021 14:48	162.5	162.6	Adjusted Valve
VREW2108	9/10/2021 7:49	166	165.7	Second Reading
VREW2108	9/10/2021 7:50	165.9	165.9	Adjusted Valve
VREW2108	9/14/2021 12:31	161.6	161.9	Second Reading
VREW2108	9/14/2021 12:33	162.9	162.9	Adjusted Valve

Table 7. Wells with Temperature Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Temp [F]	Adjusted Temp [F]	Comments
VREW2108	9/24/2021 12:33	162.2	162.6	Second Reading
VREW2108	9/24/2021 13:04	163.1	163.2	Adjusted Valve
VREW2108	9/28/2021 13:27	156.2	158	Second Reading
VREW2108	9/28/2021 13:28	161.7	161.7	Adjusted Valve
VREW2108	10/6/2021 8:28	164	164	Second Reading
VREW2108	10/6/2021 8:30	163.7	155.8	Adjusted Valve
VREW2108	10/6/2021 12:16	155.5	156.5	Second Reading
VREW2108	10/6/2021 12:26	155.7	155.3	Adjusted Valve
VREW2108	10/13/2021 9:25	157.3	157.8	Second Reading
VREW2108	10/13/2021 9:26	154.6	154.6	Adjusted Valve
VREW2108	10/22/2021 10:11	158	157.7	Second Reading
VREW2108	10/22/2021 10:11	158	157.7	Adjusted Valve
VREW2108	10/22/2021 10:12	157.6	157.4	Second Reading
VREW2108	10/27/2021 9:53	159.5	159.7	Adjusted Valve
VREW2108	10/27/2021 10:06	157.3	155	Second Reading
VREW2108	11/3/2021 12:42	161.3	161.1	Adjusted Valve
VREW2108	11/3/2021 12:44	161	161.7	Second Reading
VREW2108	11/17/2021 12:45	164.3	164.3	Adjusted Valve
VREW2108	11/17/2021 12:58	164.4	164.1	Second Reading
VREW2108	11/24/2021 10:40	162.8	162.8	Adjusted Valve
VREW2108	11/24/2021 10:41	162.8	162.8	Second Reading
VREW2108	12/8/2021 15:24	160.7	161.1	Adjusted Valve
VREW2108	12/8/2021 15:25	161.1	161	Second Reading
VREW2108	1/14/2022 8:47	160.7	159	Adjusted Valve
VREW2108	1/14/2022 8:49	159.1	159.1	Second Reading
VREW2108	1/21/2022 11:16	158.8	158.8	Adjusted Valve
VREW2109	8/4/2021 13:42	150.8	150.9	Adjusted Valve
VREW2109	8/4/2021 13:44	151.3	151.4	Second Reading
VREW2109	8/10/2021 10:36	147.1	148.4	Adjusted Valve
VREW2109	8/10/2021 10:38	151.5	151.7	Second Reading
VREW2109	8/17/2021 8:11	156.2	156.3	Adjusted Valve
VREW2109	8/17/2021 8:12	156.2	156.1	Second Reading
VREW2109	8/23/2021 12:39	149.3	149.9	Adjusted Valve
VREW2109	8/23/2021 12:41	152.8	152.8	Second Reading
VREW2109	8/30/2021 14:44	154.3	154.3	Adjusted Valve
VREW2109	8/30/2021 14:45	154.3	154.3	Second Reading
VREW2109	9/10/2021 8:01	156.5	156.5	Adjusted Valve
VREW2109	9/14/2021 12:28	154.5	154.6	Second Reading
VREW2109	9/14/2021 12:29	154.5	154.5	Adjusted Valve
VREW2109	9/24/2021 12:29	153.9	154.2	Second Reading
VREW2109	9/24/2021 12:31	155.4	155.4	Adjusted Valve
VREW2109	9/28/2021 13:30	145.6	147.7	Second Reading
VREW2109	9/28/2021 13:31	153	153.2	Adjusted Valve
VREW2109	10/6/2021 8:20	153.2	153.2	Second Reading
VREW2109	10/6/2021 8:26	153	146.9	Adjusted Valve
VREW2109	10/6/2021 12:09	130.5	133.2	Second Reading
VREW2109	10/6/2021 12:10	139.5	141	Adjusted Valve
VREW2109	10/6/2021 12:13	144	144	Second Reading
VREW2109	10/13/2021 9:08	154.9	155	Adjusted Valve
VREW2109	10/13/2021 9:10	148.6	148.3	Second Reading

Table 7. Wells with Temperature Exceedances
Vasco Road Landfill, Livermore, California
(August 1, 2021 through January 31, 2022)

Well ID	Date and Time	Initial Temp [F]	Adjusted Temp [F]	Comments
VREW2109	10/22/2021 10:37	128.4	129.1	In compliance
VREW2109	10/27/2021 10:09	156.7	157	Adjusted Valve
VREW2109	10/27/2021 10:11	159.7	159.7	Second Reading
VREW2109	11/3/2021 12:55	156.5	156.7	Adjusted Valve
VREW2109	11/3/2021 12:57	157.6	157.4	Second Reading
VREW2109	11/11/2021 13:08	155.1	155.1	Adjusted Valve
VREW2109	11/11/2021 13:09	155.1	155.1	Second Reading
VREW2109	11/17/2021 12:59	151.5	151.5	Adjusted Valve
VREW2109	11/17/2021 13:01	151.7	150.1	Second Reading
VREW2109	11/24/2021 10:11	151	151	Adjusted Valve
VREW2109	11/24/2021 10:12	151	151	Second Reading
VREW2109	12/1/2021 10:48	151.9	151.9	Adjusted Valve
VREW2109	12/1/2021 10:50	151.5	151.2	Second Reading
VREW2109	1/14/2022 8:41	150.1	149.6	Adjusted Valve
VREW2109	1/14/2022 8:43	149.2	149.3	Second Reading

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

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:

Matthew D Ketchem

Signature of Responsible Official

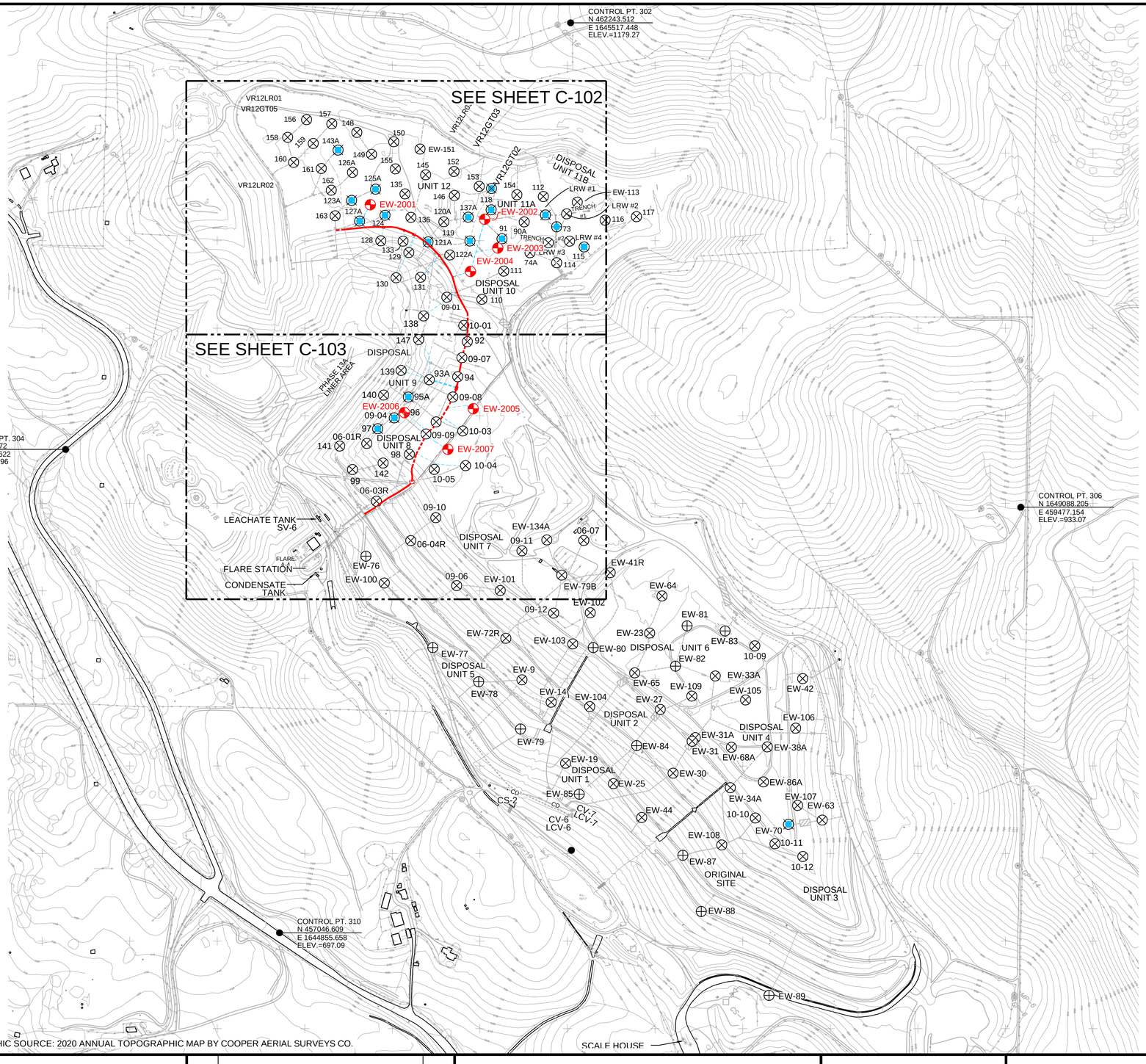
02/25/2022

Date

Matt Ketchem

Name of Responsible Official

Appendix B – Existing GCCS Layout



TOPOGRAPHIC SOURCE: 2020 ANNUAL TOPOGRAPHIC MAP BY COOPER AERIAL SURVEYS CO.

N

GRAPHIC SCALE

300 150 0 300 600

(IN FEET)

LEGEND

- EXISTING VERTICAL GAS EXTRACTION WELL
- NEW VERTICAL GAS EXTRACTION WELL
- EXISTING ABOVE GRADE HEADER/LATERAL/DRAIN LINE
- EXISTING BELOW GRADE HEADER/LATERAL
- NEW 12" HDPE GAS HEADER, ON GRADE
- NEW 12" HDPE GAS HEADER, BELOW GRADE
- NEW 6" HDPE GAS LATERAL, BELOW GRADE
- EXISTING WELL/COLLECTOR TO BE DECOMMISSIONED (SEE DETAIL 2/C-503)

SITE SURVEY CONTROL POINTS

PANEL NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
301	463655.679	1643780.065	855.24	TARGET
302	462243.512	1646517.448	1179.27	TARGET
303	463373.270	1649133.063	1364.74	TARGET
304	459807.072	1643633.622	861.96	TARGET
306	459477.154	1649088.205	933.07	TARGET
309	455726.591	1648751.590	759.42	TARGET
310	457046.609	1644855.658	697.09	TARGET
41	455967.608	1646421.652	653.22	TARGET
51	457517.915	1646521.900	754.95	TARGET

MAP DATUM

HORIZONTAL DATUM:	NAD27
VERTICAL DATUM:	NGVD29
COORDINATE SYSTEM:	CALIFORNIA STATE PLANE
ZONE:	III
UNITS:	US SURVEY FEET

RECORD DRAWING

NO.	REVISION DESCRIPTION	BY:

REPUBLIC SERVICES, INC.

WASTE COLLECTION · RECYCLING · TRANSFER · DISPOSAL

TETRA TECH
21700 Copley Drive, Suite 200
Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017

VASCO ROAD LANDFILL

2020 GCCS IMPROVEMENTS

SITE PLAN/SURVEY CONTROL/INDEX TO PLAN SHEETS

DESIGNED BY : S. ANGUS	SCALE : AS SHOWN		
DRAWN BY : S. ANGUS	DATE : 5/2020	FILE NO.: C-101	
CHECKED BY : S. AYASS, P.E.	DATE : 5/2020	SHEET	C-101
APPROVED BY : G.E. ANDRAOS	DATE : 5/2020		

I:\Dwg\Republic\Vasco Road\Gas\2020 Design\Record Drawings\C-101.dwg 5/08/20 13:06:45 scott.angus

Appendix C – LFGTE Facility Downtime Logs

AMERESCO
Green • Clean • Sustainable

Vasco
Monthly SSM Report

Lead Operator : Mike Rogers
Month : August 2021

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
1	8/4/21 10:46	8/4/21 11:20	0:34	44412	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart
1	8/4/21 11:20	8/4/21 13:20	2:00	44412	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
2	8/4/21 13:20	8/4/21 17:50	4:30	44414	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart
2	8/11/21 9:47	8/11/21 19:02	9:15	44419	Mike Rogers	Planned	Ameresco	Engine	Replace, and Restart
1	8/11/21 9:47	8/11/21 13:29	3:42	44419	Mike Rogers	Proactive	Ameresco	Engine	Restart Only
1	8/11/21 18:28	8/11/21 18:51	0:23	44420	Mike Rogers	Unplanned	Ameresco	Building / HVAC	Restart Only
2	8/20/21 10:14	8/20/21 10:53	0:39	44428	Mike Rogers	Proactive	Ameresco	Engine	Reconfigure, and Restart

Vasco

Monthly SSM Report

Lead Operator : Mike Rogers

Month : September 2021

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
1	9/8/21 9:06	9/8/21 9:38	0:32	44447	Mike Rogers	Unplanned	Electrical Utility	Other	Restart Only
2	9/8/21 9:06	9/8/21 9:43	0:37	44447	Mike Rogers	Unplanned	Electrical Utility	Other	Restart Only
2	9/17/21 8:31	9/17/21 10:40	2:09	44456	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
1	9/19/21 5:50	9/19/21 20:40	14:50	44458	Mike Rogers	Unplanned	Electrical Utility	Other	Restart Only
2	9/19/21 5:50	9/19/21 21:05	15:15	44458	Mike Rogers	Unplanned	Electrical Utility	Other	Restart Only
1	9/23/21 7:30	9/23/21 14:56	7:26	44462	Mike Rogers	Planned	Ameresco	Engine	Replace, and Restart
1	9/23/21 15:50	9/23/21 18:04	2:14	44463	Mike Rogers	Proactive	Ameresco	Blower Skid	Replace, and Restart
2	9/23/21 15:50	9/23/21 18:00	2:10	44463	Mike Rogers	Proactive	Ameresco	Blower Skid	Replace, and Restart
1	9/23/21 21:57	9/24/21 6:52	8:55	44463	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart

AMERESCO
Green • Clean • Sustainable

Vasco

Monthly SSM Report

Lead Operator : Mike Rogers

Month : October 2021

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
2	10/15/21 9:28	10/15/21 12:32	3:04	44484	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
1	10/22/21 9:05	10/22/21 20:12	11:07	44491	Mike Rogers	Proactive	Ameresco	Engine	Reconfigure, and Restart
2	10/22/21 9:05	10/22/21 20:24	11:19	44491	Mike Rogers	Proactive	Ameresco	Engine	Reconfigure, and Restart
2	10/25/21 6:28			44494	Mike Rogers	Planned	Ameresco	Engine	
1	10/25/21 17:09	10/25/21 18:05	0:56	44495	Mike Rogers	Unplanned	Ameresco	Building / HVAC	Reconfigure, and Restart
1	10/25/21 18:09	10/25/21 19:01	0:52	44495	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	10/25/21 19:02	10/25/21 19:14	0:12	44495	Mike Rogers	Unplanned	Ameresco	Engine	Reconfigure, and Restart
1	10/27/21 9:19	10/27/21 16:22	7:03	44496	Mike Rogers	Proactive	Ameresco	Other	Restart Only
1	10/28/21 7:49	10/28/21 15:38	7:49	44497	Mike Rogers	Proactive	Ameresco	Other	Restart Only
1	10/29/21 7:30	10/29/21 16:40	9:10	44498	Mike Rogers	Proactive	Ameresco	Other	Restart Only

AMERESCO
Green • Clean • Sustainable

Vasco
Monthly SSM Report

Lead Operator : Mike Rogers

Month : November 2021

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
2	10/25/21 6:28	11/4/21 11:27	244:59	44494	Mike Rogers	Planned	Ameresco	Engine	Replace, and Restart
1	11/1/21 8:04	11/3/21 12:40	52:36	44501	Mike Rogers	Planned	Ameresco	TSA / H2S / Siloxane Removal	Replace, and Restart
1	11/3/21 14:59	11/3/21 20:18	5:19	44504	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/4/21 11:28	11/4/21 11:49	0:21	44504	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/4/21 11:51	11/4/21 12:05	0:14	44504	Mike Rogers	Unplanned	Ameresco	Generator	Restart Only
2	11/4/21 12:09	11/4/21 14:18	2:09	44505	Mike Rogers	Unplanned	Ameresco	Generator	Restart Only
2	11/4/21 14:19	11/4/21 15:03	0:44	44505	Mike Rogers	Unplanned	Ameresco	Generator	Replace, and Restart
2	11/4/21 15:05	11/4/21 15:15	0:10	44505	Mike Rogers	Unplanned	Ameresco	Generator	Reconfigure, and Restart
2	11/4/21 15:44	11/4/21 20:22	4:38	44505	Mike Rogers	Unplanned	Ameresco	Engine	Repair, and Restart
2	11/4/21 20:25	11/4/21 20:35	0:10	44505	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/4/21 20:59	11/5/21 7:36	10:37	44505	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/5/21 8:01	11/5/21 8:23	0:22	44505	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
2	11/5/21 8:34	11/5/21 9:19	0:45	44505	Mike Rogers	Proactive	Ameresco	Engine	Repair, and Restart
2	11/5/21 10:38	11/5/21 11:47	1:09	44505	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
2	11/5/21 11:49	11/5/21 12:00	0:11	44505	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/5/21 12:02	11/5/21 12:44	0:42	44506	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	11/5/21 15:20	11/5/21 16:06	0:46	44506	Joshua Crouse	Unplanned	Ameresco	Building / HVAC	Reconfigure, and Restart
1	11/5/21 15:40	11/5/21 15:59	0:19	44506	Joshua Crouse	Unplanned	Ameresco	Building / HVAC	Reconfigure, and Restart
2	11/10/21 9:26	11/10/21 16:40	7:14	44510	Mike Rogers	Planned	Ameresco	Engine	Replace, and Restart
1	11/11/21 8:45	11/11/21 9:03	0:18	44511	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	11/11/21 8:45	11/11/21 9:02	0:17	44511	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	11/17/21 6:27	11/17/21 8:31	2:04	44517	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	11/17/21 6:27	11/17/21 7:31	1:04	44517	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	11/17/21 7:41	11/17/21 8:01	0:20	44517	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	11/17/21 8:11	11/17/21 8:33	0:22	44517	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	11/17/21 14:41	11/17/21 14:57	0:16	44518	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Reconfigure, and Restart
1	11/17/21 14:41	11/17/21 14:57	0:16	44518	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Reconfigure, and Restart
1	11/27/21 11:53	11/27/21 13:02	1:09	44527	Mike Rogers	Unplanned	Ameresco	Valves	Restart Only
2	11/27/21 11:53	11/27/21 14:26	2:33	44527	Mike Rogers	Unplanned	Ameresco	Valves	Restart Only
1	11/27/21 13:03	11/27/21 14:13	1:10	44528	Mike Rogers	Unplanned	Ameresco	Valves	Reconfigure, and Restart

AMERESCO
Green • Clean • Sustainable

Vasco
Monthly SSM Report

Lead Operator : Mike Rogers

Month : December 2021

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
1	12/1/21 3:52	12/1/21 4:41	0:49	44531	Mike Rogers	Unplanned	Ameresco	Valves	Replace, and Restart
2	12/1/21 3:52	12/1/21 5:39	1:47	44531	Mike Rogers	Unplanned	Ameresco	Valves	Restart Only
1	12/1/21 4:41	12/1/21 7:32	2:51	44531	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart
1	12/1/21 10:16	12/1/21 10:43	0:27	44531	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart
1	12/1/21 10:47	12/1/21 11:03	0:16	44531	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/1/21 10:47	12/1/21 11:05	0:18	44531	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/1/21 11:23	12/1/21 11:45	0:22	44531	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/1/21 11:23	12/1/21 11:41	0:18	44531	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/1/21 22:18	12/2/21 0:41	2:23	44532	Mike Rogers	Unplanned	Ameresco	Other	Restart Only
2	12/13/21 15:08	12/13/21 17:34	2:26	44544	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/13/21 15:09	12/13/21 17:52	2:43	44544	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/14/21 8:53	12/14/21 9:20	0:27	44544	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/14/21 9:29	12/14/21 14:48	5:19	44544	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/14/21 9:30	12/14/21 14:58	5:28	44544	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/16/21 7:57	12/16/21 8:19	0:22	44546	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/16/21 7:57	12/16/21 8:31	0:34	44546	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/22/21 8:10	12/22/21 12:28	4:18	44552	Mike Rogers	Planned	Ameresco	Engine	Replace, and Restart
1	12/22/21 12:29	12/22/21 12:45	0:16	44553	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/22/21 12:29	12/22/21 12:48	0:19	44553	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/26/21 9:38	12/26/21 10:38	1:00	44556	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	12/29/21 10:57	12/29/21 11:20	0:23	44559	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/29/21 10:57	12/29/21 11:17	0:20	44559	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	12/29/21 11:21	12/29/21 11:35	0:14	44559	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	12/29/21 11:21	12/29/21 11:50	0:29	44559	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only

AMERESCO
Green • Clean • Sustainable

Vasco

Monthly SSM Report

Lead Operator : Mike Rogers

Month : January 2022

Eng	Start Time	End Time	Duration (HH:MM)	Eng Hours	Operator	Type	Cause	Reason	Maintenance
1	1/5/22 13:40	1/5/22 15:47	2:07	44567	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	1/5/22 13:40	1/5/22 15:38	1:58	44567	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
1	1/11/22 9:50	1/11/22 10:07	0:17	44572	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	1/11/22 9:50	1/11/22 10:13	0:23	44572	Mike Rogers	Unplanned	Landfill / Wellfield	Landfill Vacuum / Gas Limited	Restart Only
2	1/11/22 15:27	1/11/22 15:38	0:11	44573	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	1/11/22 16:30	1/11/22 17:00	0:30	44573	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	1/11/22 17:11	1/11/22 18:16	1:05	44573	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	1/11/22 18:18	1/11/22 18:50	0:32	44573	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
2	1/11/22 18:53	1/14/22 7:14	60:21	44573	Mike Rogers	Unplanned	Ameresco	Engine	Replace, and Restart
2	1/14/22 7:50	1/14/22 7:58	0:08	44575	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
1	1/15/22 4:26	1/15/22 5:53	1:27	44576	Mike Rogers	Unplanned	Ameresco	Engine	Restart Only
1	1/18/22 9:38	1/18/22 11:59	2:21	44579	Mike Rogers	Proactive	Ameresco	Engine	Replace, and Restart
1	1/24/22 7:04			44585	Mike Rogers	Planned	Ameresco	Engine	
2	1/26/22 8:05	1/26/22 17:02	8:57	44587	Mike Rogers	Unplanned	Ameresco	Other	Restart Only
2	1/27/22 7:29	1/27/22 16:10	8:41	44588	Mike Rogers	Proactive	Ameresco	Other	Restart Only

Appendix D – Surface Emission and GCCS Component Leak Monitoring Results

September 3, 2021
File No. 07221004.01

Ms. Antonia Gunner
Republic Services – Vasco Road Landfill
4001 N. Vasco Road
Livermore, California 94551

Subject: Vasco Road Landfill - Livermore, California

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

Dear Ms. Gunner:

SCS Field Services (SCS-FS) is pleased to provide the Republic Services, with the enclosed report summarizing the surface emissions monitoring services provided at the Vasco Road 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-FS appreciates the opportunity to be of assistance to Republic Services on this project. As you review the enclosed information, please contact Art Jones (209) 345-2062, Michael Calmes at (209) 573-3364 or Whitney Stackhouse at (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney Stackhouse
Project Manager
SCS Field Services

Michael Calmes
Project Manager
SCS Field Services

Encl.

Art Jones, SCS Field Services

Vasco Road Landfill

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

Third Quarter 2021

Presented to:

Ms. Antonia Gunner
Republic Services – Vasco Road
4001 N. Vasco Road
Livermore, California 94551

SCS FIELD SERVICES

File No. 07221004.01 | September 3, 2021

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

Vasco Road 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 1, 2, 12, 22 and 30, 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.

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 Vasco Road Landfill was performed on 25-foot pathways in accordance with the LMR.

On, July 1, 2, 12, 22 and 30, 2021, SCS performed third quarter 2021 surface emissions monitoring testing as required by the Bay Area Air Quality Management District (BAAQMD). Instantaneous surface emissions monitoring results indicated that three (3) locations exceeded the 500 ppmv maximum concentration during our initial monitoring (Table 1 in Attachment 3). The required first and second 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring indicated that all locations had returned to below regulatory compliance limits following system adjustments and remediation (installation of new bentonite plugs) by site 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 grid areas. The Vasco Road Landfill surface area was therefore divided into 233 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 no grid areas observed to exceed the 25 ppmv LMR integrated average threshold (Table 2 in Attachment 4). Based on these monitoring results, no 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 quarterly. 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, no locations 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.

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

BACKGROUND

The Vasco Road 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 Vasco Road property contains a system to control the combustible gases generated in the landfill.

SURFACE EMISSIONS MONITORING

On July 1, 2, 12, 22 and 30, 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 1 and 2, 2021, SCS performed third quarter 2021 instantaneous emissions monitoring testing as required by the BAAQMD. During this monitoring, surface emissions results indicated that three (3) locations exceeded the 500 ppmv maximum concentration. The required first and second 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring performed on July 12, 22 and 30, 2021, respectively, indicated that all areas had returned to compliance following system adjustments and remediation (borehole repairs using bentonite) performed by site 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 monitoring indicated no integrated exceedances of the 25 ppmv requirement on July 1 and 2, 2021, therefore no further 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 2, 2021, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS. Monitoring was

performed with the detector inlet held one-half of an inch from pressurized piping and associated components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 6.7 ppmv, was well below the maximum threshold (see Table 1 for component results). Therefore, all pressurized piping and components located at the LFG BFS were in compliance at the time of our testing.

PROJECT SCHEDULE

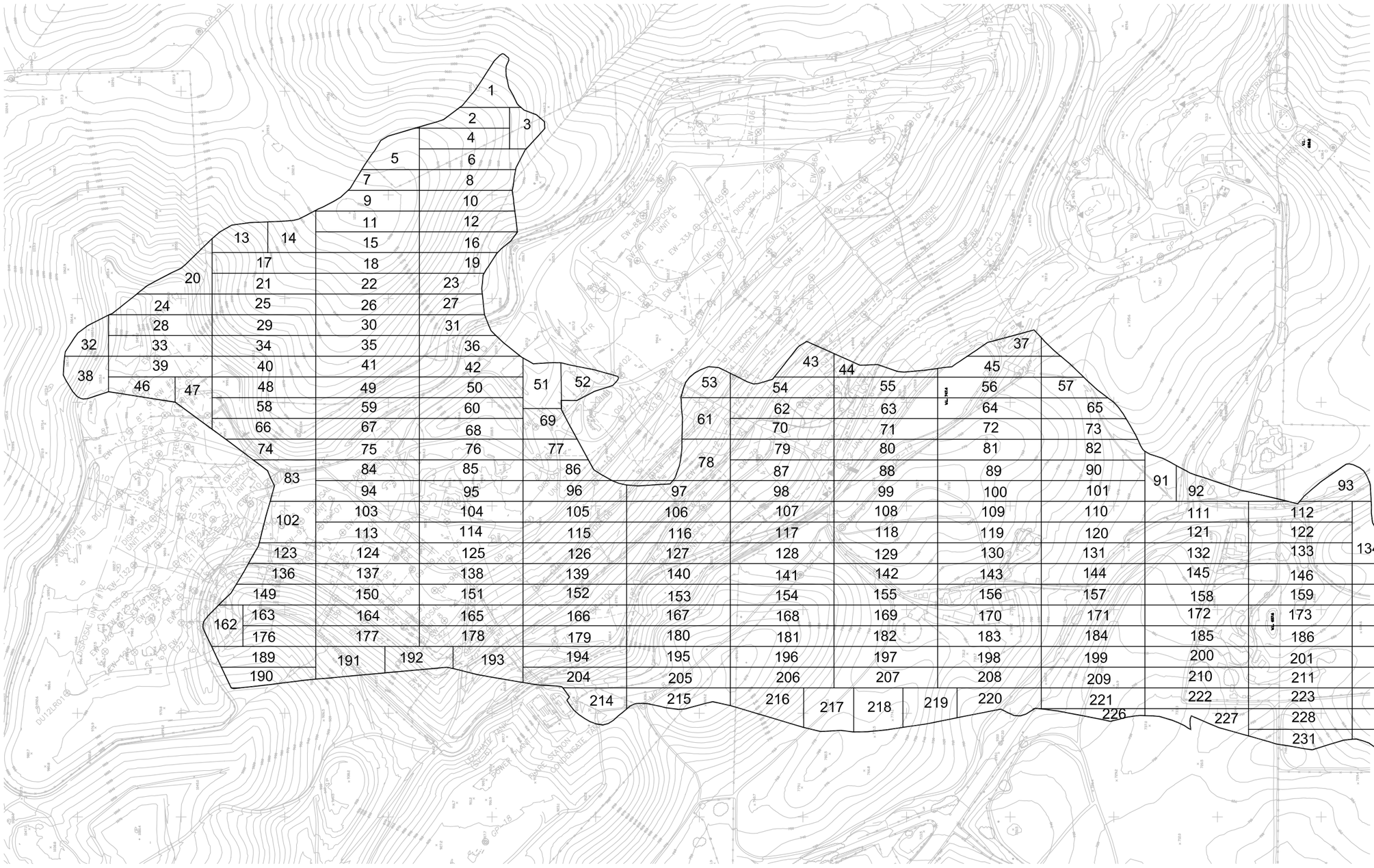
According to the LMR and NSPS, surface emissions monitoring at active landfills is required to be performed on a quarterly basis. Therefore, in accordance with our approved Work Scope, the fourth quarter 2021 (October through December) surface emissions testing event is scheduled to be performed by the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



SCALE IN FEET

500 0 500

(DRAWING SIZE IN 11"X17")

SCS ENGINEERS

ENVIRONMENTAL CONSULTANTS

3117 FITE CIRCLE, SUITE 108
SACRAMENTO, CALIFORNIA 95827
PH. (916) 361-1297 FAX. (916) 361-1299

PROJ. NO.	DWN. BY:	ACAD FILE:
07217028.00	ATV	FIGURE 1.DWG
DSN. BY: ATV	CHK. BY: WBS	APP. BY: AJ

SHEET TITLE:
SURFACE EMISSIONS MONITORING GRID MAP

PROJECT TITLE:
VASCO ROAD LANDFILL
ALAMEDA COUNTY, CALIFORNIA

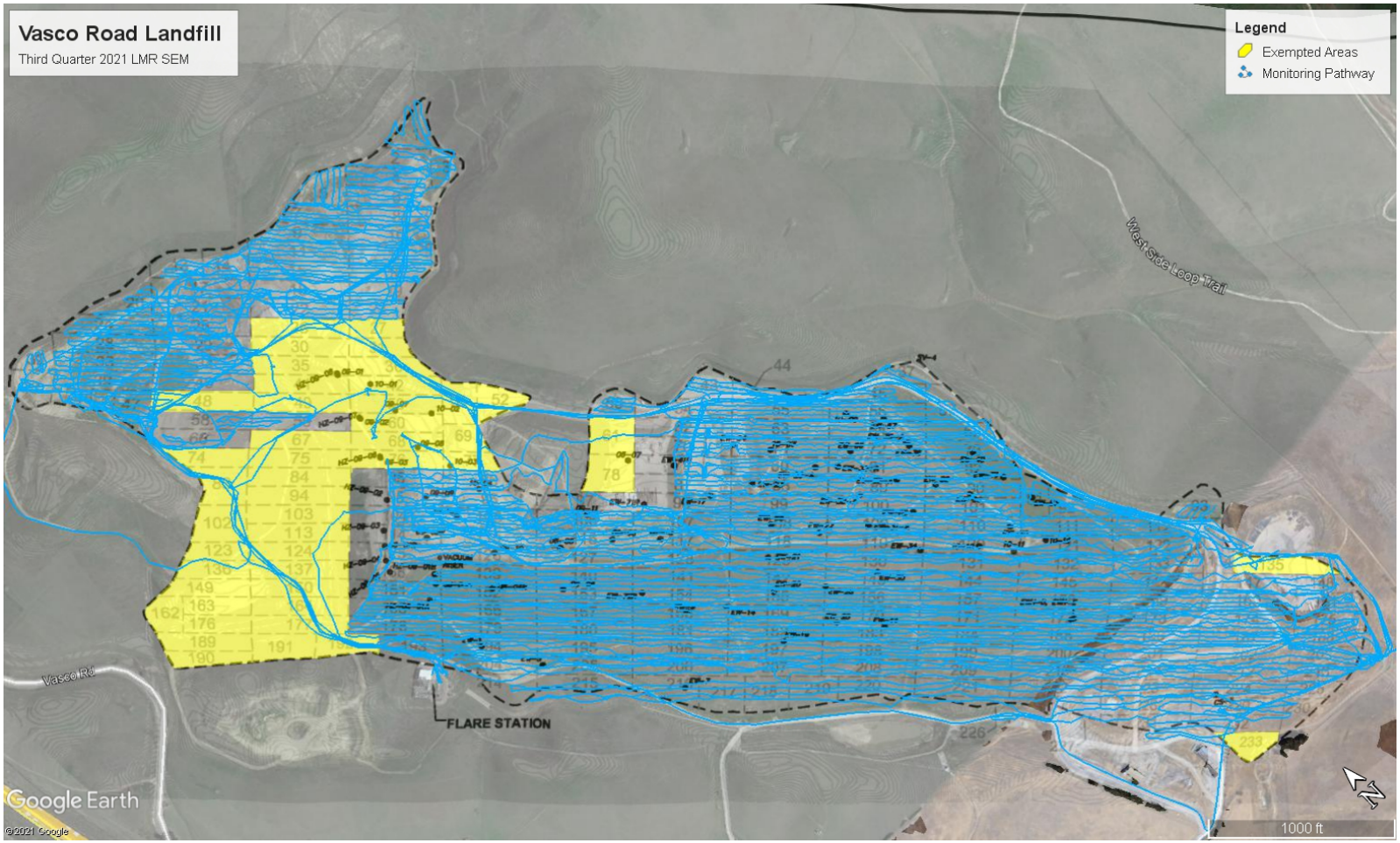
DATE: 3/14/17

SCALE: AS SHOWN

FIGURE: 1 – A

Attachment 2

Surface Pathway



Third Quarter 2021
Initial LMR Surface Emissions Monitoring Pathway
Vasco Road Landfill, Livermore, California

Attachment 3

Instantaneous and Component Emissions Monitoring Results

Third Quarter 2021

Table 1. Instantaneous Surface and Component Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

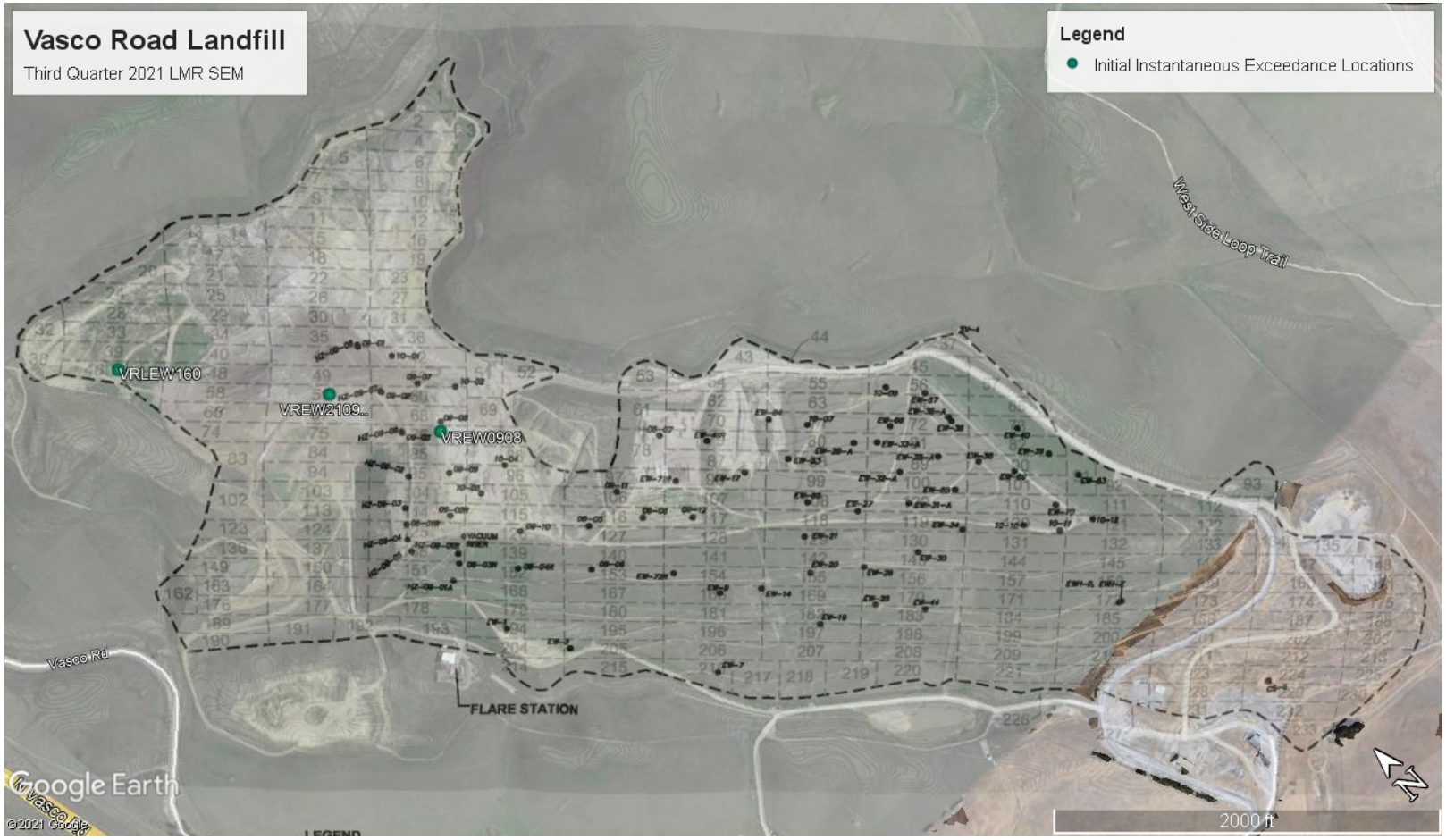
Instantaneous Data Report for July 1, 2, 12, 22, and 30, 2021

Location (Surface)	Initial Monitoring Results (ppmv) July 2, 2021	First 10-Day Follow Up Monitoring Results (ppmv) July 12, 2021	Second 10-Day Follow Up Monitoring Results (ppmv) July 22, 2021	30-Day Follow Up Monitoring Results (ppmv) July 30, 2021	Latitude	Longitude
VRLEW160	1,018	708	5.6	8	37.760851°	-121.729354°
VREW0908	1,019	249	NA	5	37.757246°	-121.726168°
VREW2109	2,100	6,709	50.5	14	37.758697°	-121.727128°

Pressurized Pipe and Component Results

Route	Date	Concentration (ppmv)
FLARE STATION	7/2/2021	6.7

No other exceedances of the 500 ppmv threshold were observed during the third quarter 2021 monitoring.



Third Quarter 2021
Instantaneous Emissions Monitoring Locations Greater Than 500 ppmv
Vasco Road Landfill, Livermore, California

Attachment 4

Integrated Monitoring Results

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 001	7/1/2021	4.91	
VR 002	7/1/2021	4.22	
VR 003	7/1/2021	4.56	
VR 004	7/2/2021	3.44	
VR 005	7/2/2021	4.23	
VR 006	7/2/2021	2.90	
VR 007	7/2/2021	7.06	
VR 008	7/2/2021	3.40	
VR 009	7/2/2021	4.30	
VR 010	7/2/2021	2.63	
VR 011	7/2/2021	2.23	
VR 012	7/2/2021	3.27	
VR 013	7/2/2021	3.78	
VR 014	7/2/2021	1.02	
VR 015	7/2/2021	1.27	
VR 016	7/2/2021	2.18	
VR 017	7/2/2021	1.80	
VR 018	7/2/2021	1.99	
VR 019	7/2/2021	5.23	
VR 020	7/2/2021	1.79	
VR 021	7/2/2021	1.65	
VR 022	7/2/2021	2.19	
VR 023	7/2/2021	4.77	
VR 024	7/2/2021	2.20	
VR 025	7/2/2021	2.16	
VR 026	--	--	Active
VR 027	--	--	Active
VR 028	7/2/2021	2.03	
VR 029	7/2/2021	2.03	
VR 030	--	--	Active
VR 031	--	--	Active
VR 032	7/2/2021	2.95	
VR 033	7/2/2021	2.07	
VR 034	7/2/2021	2.41	
VR 035	--	--	Active
VR 036	--	--	Active
VR 037	7/1/2021	3.15	
VR 038	7/1/2021	1.98	
VR 039	7/1/2021	1.65	
VR 040	7/1/2021	1.67	
VR 041	--	--	Active
VR 042	--	--	Active
VR 043	7/2/2021	1.74	

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 044	7/2/2021	1.43	
VR 045	7/2/2021	1.17	
VR 046	7/2/2021	1.76	
VR 047	7/2/2021	1.81	
VR 048	--	--	Active
VR 049	--	--	Active
VR 050	--	--	Active
VR 051	--	--	Active
VR 052	--	--	Active
VR 053	7/2/2021	1.32	
VR 054	7/2/2021	2.21	
VR 055	7/2/2021	2.35	
VR 056	7/2/2021	2.15	
VR 057	7/2/2021	2.15	
VR 058	7/2/2021	1.20	
VR 059	7/2/2021	1.64	
VR 060	--	--	Active
VR 061	--	--	Inaccessible, Covered by Pallets and Green Waste
VR 062	7/2/2021	1.27	
VR 063	7/2/2021	1.25	
VR 064	7/2/2021	1.30	
VR 065	7/2/2021	1.37	
VR 066	7/2/2021	1.82	
VR 067	--	--	Active
VR 068	--	--	Active
VR 069	--	--	Active
VR 070	7/2/2021	1.16	
VR 071	7/2/2021	1.15	
VR 072	7/2/2021	1.14	
VR 073	7/2/2021	1.33	
VR 074	--	--	Active
VR 075	--	--	Active
VR 076	--	--	Active
VR 077	--	--	Active
VR 078	--	--	Inaccessible, Covered by Pallets and Green Waste
VR 079	7/1/2021	1.91	
VR 080	7/1/2021	1.92	
VR 081	7/1/2021	1.94	
VR 082	7/1/2021	2.12	
VR 083	--	--	Native
VR 084	--	--	Native
VR 085	7/1/2021	2.89	
VR 086	7/1/2021	2.68	

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 087	7/1/2021	1.32	
VR 088	7/1/2021	1.36	
VR 089	7/1/2021	1.35	
VR 090	7/1/2021	1.50	
VR 091	7/1/2021	1.37	
VR 092	7/1/2021	1.44	
VR 093	7/1/2021	1.44	
VR 094	--	--	Native
VR 095	7/1/2021	3.09	
VR 096	7/1/2021	3.27	
VR 097	7/1/2021	1.34	
VR 098	7/1/2021	1.13	
VR 099	7/1/2021	1.14	
VR 100	7/1/2021	1.15	
VR 101	7/1/2021	1.26	
VR 102	--	--	Native
VR 103	--	--	Native
VR 104	7/1/2021	4.32	
VR 105	7/1/2021	3.91	
VR 106	7/1/2021	1.79	
VR 107	7/1/2021	1.89	
VR 108	7/1/2021	1.84	
VR 109	7/1/2021	1.83	
VR 110	7/1/2021	1.68	
VR 111	7/1/2021	2.49	
VR 112	7/1/2021	2.96	
VR 113	--	--	Native
VR 114	7/1/2021	6.93	
VR 115	7/1/2021	6.90	
VR 116	7/1/2021	4.03	
VR 117	7/1/2021	3.95	
VR 118	7/1/2021	3.93	
VR 119	7/1/2021	3.94	
VR 120	7/1/2021	3.94	
VR 121	7/1/2021	5.24	
VR 122	7/1/2021	7.04	
VR 123	--	--	Native
VR 124	--	--	Native
VR 125	7/1/2021	2.77	
VR 126	7/1/2021	2.76	
VR 127	7/1/2021	1.60	
VR 128	7/1/2021	1.47	
VR 129	7/1/2021	1.46	

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 130	7/1/2021	1.48	
VR 131	7/1/2021	1.54	
VR 132	7/1/2021	1.47	
VR 133	7/1/2021	1.94	
VR 134	7/1/2021	3.15	
VR 135	--	--	Active Stock Area
VR 136	--	--	Native
VR 137	--	--	Native
VR 138	7/1/2021	3.44	
VR 139	7/1/2021	3.03	
VR 140	7/1/2021	2.67	
VR 141	7/1/2021	2.66	
VR 142	7/1/2021	2.73	
VR 143	7/1/2021	2.67	
VR 144	7/1/2021	2.67	
VR 145	7/1/2021	2.69	
VR 146	7/1/2021	2.79	
VR 147	7/1/2021	3.67	
VR 148	7/1/2021	3.00	
VR 149	--	--	Native
VR 150	--	--	Native
VR 151	7/1/2021	1.73	
VR 152	7/1/2021	1.94	
VR 153	7/1/2021	1.60	
VR 154	7/1/2021	1.81	
VR 155	7/1/2021	1.81	
VR 156	7/1/2021	1.81	
VR 157	7/1/2021	1.81	
VR 158	7/1/2021	1.84	
VR 159	7/1/2021	2.03	
VR 160	7/1/2021	2.82	
VR 161	7/1/2021	2.56	
VR 162	--	--	Native
VR 163	--	--	Native
VR 164	--	--	Native
VR 165	7/1/2021	1.79	
VR 166	7/1/2021	1.99	
VR 167	7/1/2021	1.51	
VR 168	7/1/2021	1.51	
VR 169	7/1/2021	1.52	
VR 170	7/1/2021	1.52	
VR 171	7/1/2021	1.53	
VR 172	7/1/2021	1.55	

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 173	7/1/2021	1.76	
VR 174	7/1/2021	2.63	
VR 175	7/1/2021	2.79	
VR 176	--	--	Native
VR 177	--	--	Native
VR 178	7/1/2021	1.36	
VR 179	7/1/2021	1.33	
VR 180	7/1/2021	1.13	
VR 181	7/1/2021	1.14	
VR 182	7/1/2021	1.16	
VR 183	7/1/2021	1.17	
VR 184	7/1/2021	1.17	
VR 185	7/1/2021	1.19	
VR 186	7/1/2021	1.43	
VR 187	7/1/2021	2.53	
VR 188	7/1/2021	2.07	
VR 189	--	--	Native
VR 190	--	--	Native
VR 191	--	--	Native
VR 192	--	--	Native
VR 193	7/1/2021	1.84	
VR 194	7/1/2021	1.91	
VR 195	7/1/2021	1.69	
VR 196	7/1/2021	1.89	
VR 197	7/1/2021	1.90	
VR 198	7/1/2021	1.84	
VR 199	7/1/2021	1.90	
VR 200	7/1/2021	2.01	
VR 201	7/1/2021	2.06	
VR 202	7/1/2021	2.84	
VR 203	7/1/2021	2.06	
VR 204	7/1/2021	1.87	
VR 205	7/1/2021	1.78	
VR 206	7/1/2021	1.68	
VR 207	7/1/2021	1.70	
VR 208	7/1/2021	1.81	
VR 209	7/1/2021	2.13	
VR 210	7/1/2021	2.31	
VR 211	7/1/2021	2.23	
VR 212	7/1/2021	2.04	
VR 213	7/1/2021	2.34	
VR 214	7/1/2021	1.50	
VR 215	7/1/2021	2.20	

Third Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 216	7/1/2021	2.07	
VR 217	7/1/2021	2.23	
VR 218	7/1/2021	2.08	
VR 219	7/1/2021	1.53	
VR 220	7/1/2021	1.56	
VR 221	7/1/2021	1.79	
VR 222	7/1/2021	1.36	
VR 223	7/1/2021	1.95	
VR 224	7/1/2021	1.56	
VR 225	7/1/2021	2.27	
VR 226	7/1/2021	2.55	
VR 227	7/1/2021	2.55	
VR 228	7/1/2021	2.57	
VR 229	7/1/2021	2.43	
VR 230	7/1/2021	2.43	
VR 231	7/1/2021	2.46	
VR 232	7/1/2021	2.42	
VR 233	--	--	Pond

Attachment 5

Calibration Logs

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	4
2	.1	500	0	3
3	.0	501	1	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 144928
Counters Observed for the Zero= 2918

Trial 2:
Counts Observed for the Span= 145106
Counters Observed for the Zero= 2945

Trial 3:
Counts Observed for the Span= 145379
Counters Observed for the Zero= 2966

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: G1 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

PRG

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-24 Site Name: Vasco

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: Cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	504	4	3
2	.1	500	0	
3	.1	500	0	

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 141948
Counters Observed for the Zero= 2364

Trial 2:
Counts Observed for the Span= 142039
Counters Observed for the Zero= 2388

Trial 3:
Counts Observed for the Span= 142305
Counters Observed for the Zero= 2396

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: G1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Bon G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	4
2	.1	502	2	3
3	.0	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 146276
Counters Observed for the Zero= 3507

Trial 2:
Counts Observed for the Span= 146408
Counters Observed for the Zero= 3548

Trial 3:
Counts Observed for the Span= 146601
Counters Observed for the Zero= 3572

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: G1 Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Rec.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Ryan Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	3
2	.6	500	0	4
3	.2	502	2	4

Average Difference: .6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .6 /500 x 100%

=99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 119120
Counters Observed for the Zero= 3916

Trial 2:
Counts Observed for the Span= 119384
Counters Observed for the Zero= 3948

Trial 3:
Counts Observed for the Span= 119562
Counters Observed for the Zero= 3976

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Keare Reading: 1.2 ppm

Downwind Location Description: CR1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-7-21 Site Name: Wasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.8 "Hg

Air Temperature: 79 °F General Weather Condition: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	
2	.0	502	2	
3	.1	502	2	

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 143206
Counters Observed for the Zero= 2953

Trial 2:
Counts Observed for the Span= 143523
Counters Observed for the Zero= 2976

Trial 3:
Counts Observed for the Span= 143988
Counters Observed for the Zero= 2998

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: G1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-2021 Site Name: Vasco

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 79 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	4
2	.1	503	3	3
3	.0	501	1	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 141286
Counters Observed for the Zero= 2387

Trial 2:
Counts Observed for the Span= 141528
Counters Observed for the Zero= 2408

Trial 3:
Counts Observed for the Span= 141867
Counters Observed for the Zero= 2439

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Grid Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

POSE

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Nancy Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 79 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	4
2	.0	502	2	4
3	.1	502	2	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 145382
Counters Observed for the Zero= 3592

Trial 2:
Counts Observed for the Span= 145569
Counters Observed for the Zero= 3612

Trial 3:
Counts Observed for the Span= 145897
Counters Observed for the Zero= 3651

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: C1 Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Ryan H Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 79 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1211 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	4
2	.0	502	2	3
3	-2	500	0	5

Average Difference: .6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .6 /500 x 100%

=99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 118246
Counters Observed for the Zero= 3964

Trial 2:
Counts Observed for the Span= 118409
Counters Observed for the Zero= 3992

Trial 3:
Counts Observed for the Span= 118673
Counters Observed for the Zero= 4021

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Elaine Reading: 1.3 ppm

Downwind Location Description: M1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 07-1-21 Site Name: Vasco

Inspector(s): Pablo Rivera Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.8 "Hg

Air Temperature: 79 °F General Weather Conditions: clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	501	1	3
2	.1	498	2	3
3	.1	500	0	3

Average Difference: 1.6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.6 /500 x 100%

= 99.6 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 157193
Counters Observed for the Zero= 4313

Trial 2:
Counts Observed for the Span= 157098
Counters Observed for the Zero= 4293

Trial 3:
Counts Observed for the Span= 157294
Counters Observed for the Zero= 4298

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: Grid 1 Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): Pablo Rivera Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	504	4	5
2	0	502	2	5
3	0	499	1	5

Average Difference: 6.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 6.3 /500 x 100%

= 98.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 157288
Counters Observed for the Zero= 4559

Trial 2:
Counts Observed for the Span= 157043
Counters Observed for the Zero= 4533

Trial 3:
Counts Observed for the Span= 158903
Counters Observed for the Zero= 4545

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: Grid 1 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

DRE

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-1-21 Site Name: Vasco

Inspector(s): COSY Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 17 MPH Wind Direction: WSW Barometric Pressure: 29.88 "Hg

Air Temperature: 55 °F General Weather Conditions: Cloud

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1153 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	21
2	.1	499	1	21
3	.	500	0	

Average Difference: .3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .3 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 173504
Counters Observed for the Zero= 2996

Trial 2:
Counts Observed for the Span= 173204
Counters Observed for the Zero= 2946

Trial 3:
Counts Observed for the Span= 172803
Counters Observed for the Zero= 2889

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: Unit 1 Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 07-1-21 Site Name: Vasco

Inspector(s): Cody Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.8 "Hg

Air Temperature: 79 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1153 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	501	1	3
2	0	499	1	3
3	.1	502	2	3

Average Difference: 2.6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 2.6 /500 x 100%

= 99.4 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 170010
Counters Observed for the Zero= 2817

Trial 2:
Counts Observed for the Span= 170503
Counters Observed for the Zero= 2913

Trial 3:
Counts Observed for the Span= 171008
Counters Observed for the Zero= 2943

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: Grid 1 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 07-1-2021 Site Name: Y-12

Inspector(s): Hunter O. Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 29.8 "Hg

Air Temperature: 79 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	501	1	3
2	.1	500	0	3
3	.1	500	0	3

Average Difference: .3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .3 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 125445
Counters Observed for the Zero= 5015

Trial 2:
Counts Observed for the Span= 124293
Counters Observed for the Zero= 4899

Trial 3:
Counts Observed for the Span= 125669
Counters Observed for the Zero= 49.14

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Grid 1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Dre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 2-8-21 Site Name: VASCO

Inspector(s): Hunter Ott Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: WSW Barometric Pressure: 29.98 "Hg

Air Temperature: 55 °F General Weather Conditions: cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	3
2	1	501	1	3
3	0	500	0	3

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 126708
Counters Observed for the Zero= 5108

Trial 2:
Counts Observed for the Span= 126999
Counters Observed for the Zero= 5100

Trial 3:
Counts Observed for the Span= 127203
Counters Observed for the Zero= 5098

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Grill Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-2-21 Site Name: Yasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 0 MPH Wind Direction: S Barometric Pressure: 30 "Hg

Air Temperature: 61 °F General Weather Conditions: clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	502	2	4
2	.1	500	0	5
3	.0	501	1	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 1478548
Counters Observed for the Zero= 2939

Trial 2:
Counts Observed for the Span= 1479649
Counters Observed for the Zero= 2958

Trial 3:
Counts Observed for the Span= 1480666
Counters Observed for the Zero= 2974

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: Cr1 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-2-21 Site Name: Vasco

Inspector(s): Hunter O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: S Barometric Pressure: 30 "Hg

Air Temperature: 61 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.2	502	2	3
2	.1	500	0	3
3	.1	502	2	1

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 170528
Counters Observed for the Zero= 4703

Trial 2:
Counts Observed for the Span= 172944
Counters Observed for the Zero= 4667

Trial 3:
Counts Observed for the Span= 173069
Counters Observed for the Zero=

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: G1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

8 se

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-2-21 Site Name: Vasco

Inspector(s): Don C Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 9 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 81 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	502	2	4
2	.0	500	0	2
3	.1	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 1468468
Counters Observed for the Zero= 3592

Trial 2:
Counts Observed for the Span= 147784
Counters Observed for the Zero= 3545

Trial 3:
Counts Observed for the Span= 147359
Counters Observed for the Zero= 3572

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: C1 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-2-21 Site Name: Vasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 81 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	4
2	.0	502	2	2
3	.1	500	0	2

Average Difference: .6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .6 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 147036
Counters Observed for the Zero= 2996

Trial 2:
Counts Observed for the Span= 147164
Counters Observed for the Zero= 3016

Trial 3:
Counts Observed for the Span= 147406
Counters Observed for the Zero= 3055

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.3 ppm

Downwind Location Description: G1 Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7.2.21 Site Name: Vasco

Inspector(s): Hunter Ott Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 81 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	502	2	4
2	.2	500	0	3
3	.1	500	0	3

Average Difference: .6

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .6 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 171364
Counters Observed for the Zero= 4709

Trial 2:
Counts Observed for the Span= 171582
Counters Observed for the Zero= 4723

Trial 3:
Counts Observed for the Span= 171842
Counters Observed for the Zero= 4759

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: G1 Reading: 1.4 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 7-2-21 Site Name: Vasco

Inspector(s): Don G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 0 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 81 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	3
2	1	501	1	5
3	1	501	1	5

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 146126
Counters Observed for the Zero= 3597

Trial 2:
Counts Observed for the Span= 146357
Counters Observed for the Zero= 3621

Trial 3:
Counts Observed for the Span= 146588
Counters Observed for the Zero= 3680

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: CH Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 07-30-21 Site Name: Vasco

Inspector(s): Liam McGinn Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: W Barometric Pressure: 30 "Hg

Air Temperature: 94 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	501	1	3
2	.2	501	1	3
3	.2	500	0	2

Average Difference: .7

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .7 /500 x 100%

= 99.8%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 155756
Counters Observed for the Zero= 4987

Trial 2:
Counts Observed for the Span= 156322
Counters Observed for the Zero= 4972

Trial 3:
Counts Observed for the Span= 157988
Counters Observed for the Zero= 4989

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Front Entrance Reading: 1.2 ppm

Downwind Location Description: Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 07-30-21 Site Name: Vasco

Inspector(s): Liam McGinn Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 6 MPH Wind Direction: W Barometric Pressure: 30 "Hg

Air Temperature: 94 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.3	502	2	2
2	.3	500	0	2
3	.2	501	1	2

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 167802
Counters Observed for the Zero= 4942

Trial 2:
Counts Observed for the Span= 166524
Counters Observed for the Zero= 4957

Trial 3:
Counts Observed for the Span= 157348
Counters Observed for the Zero= 4931

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

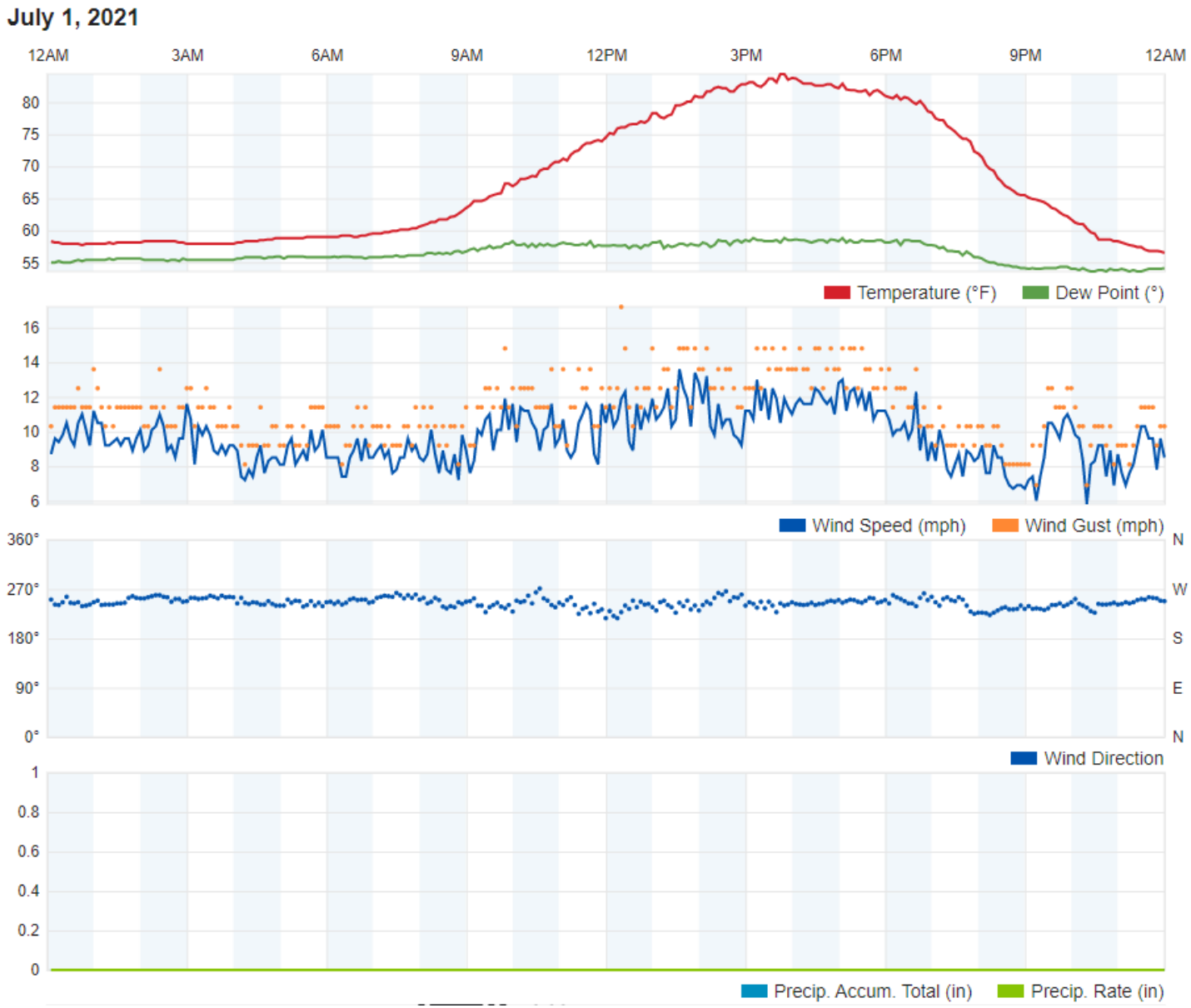
Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Entrance Reading: 1.5 ppm

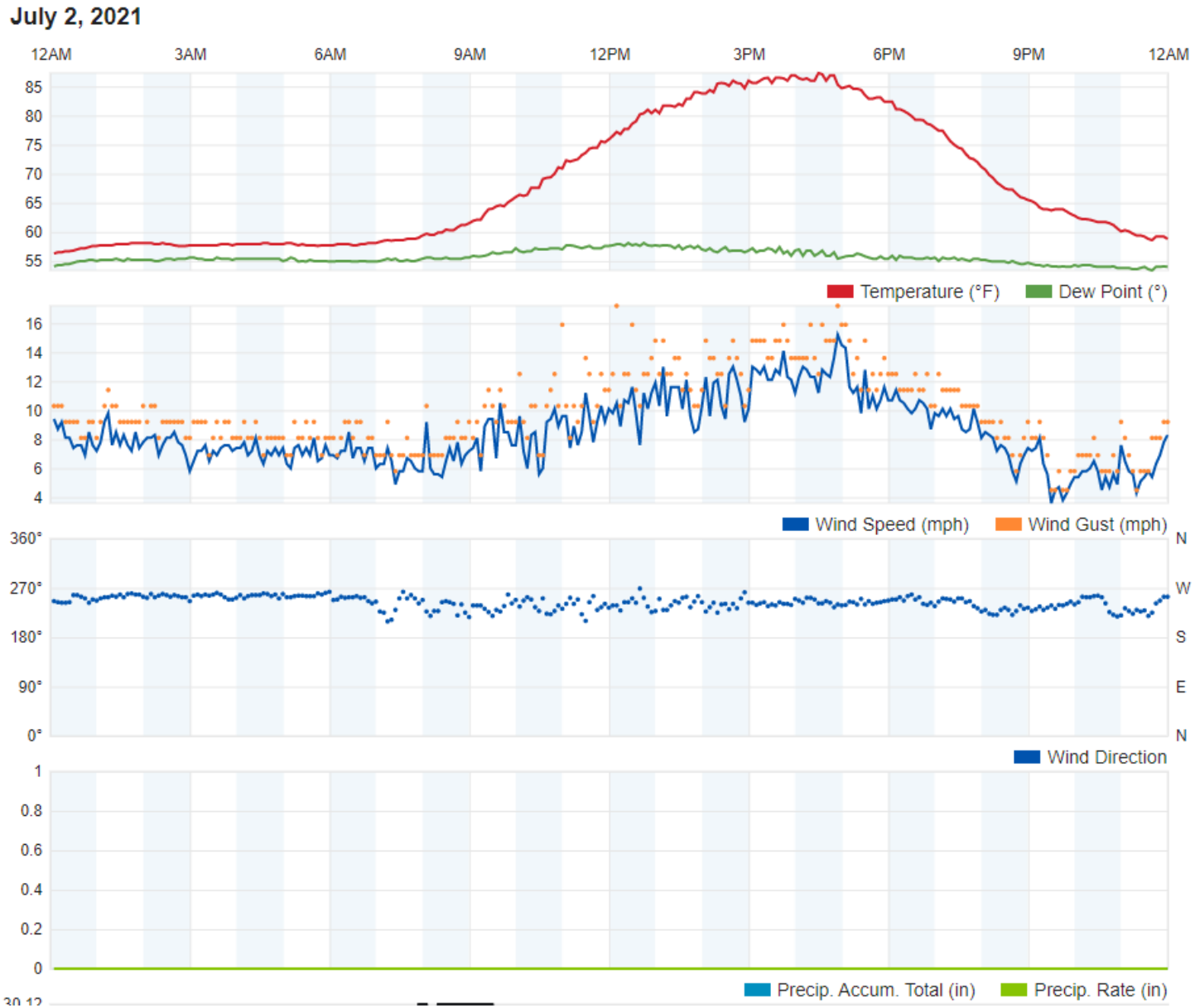
Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

Attachment 6

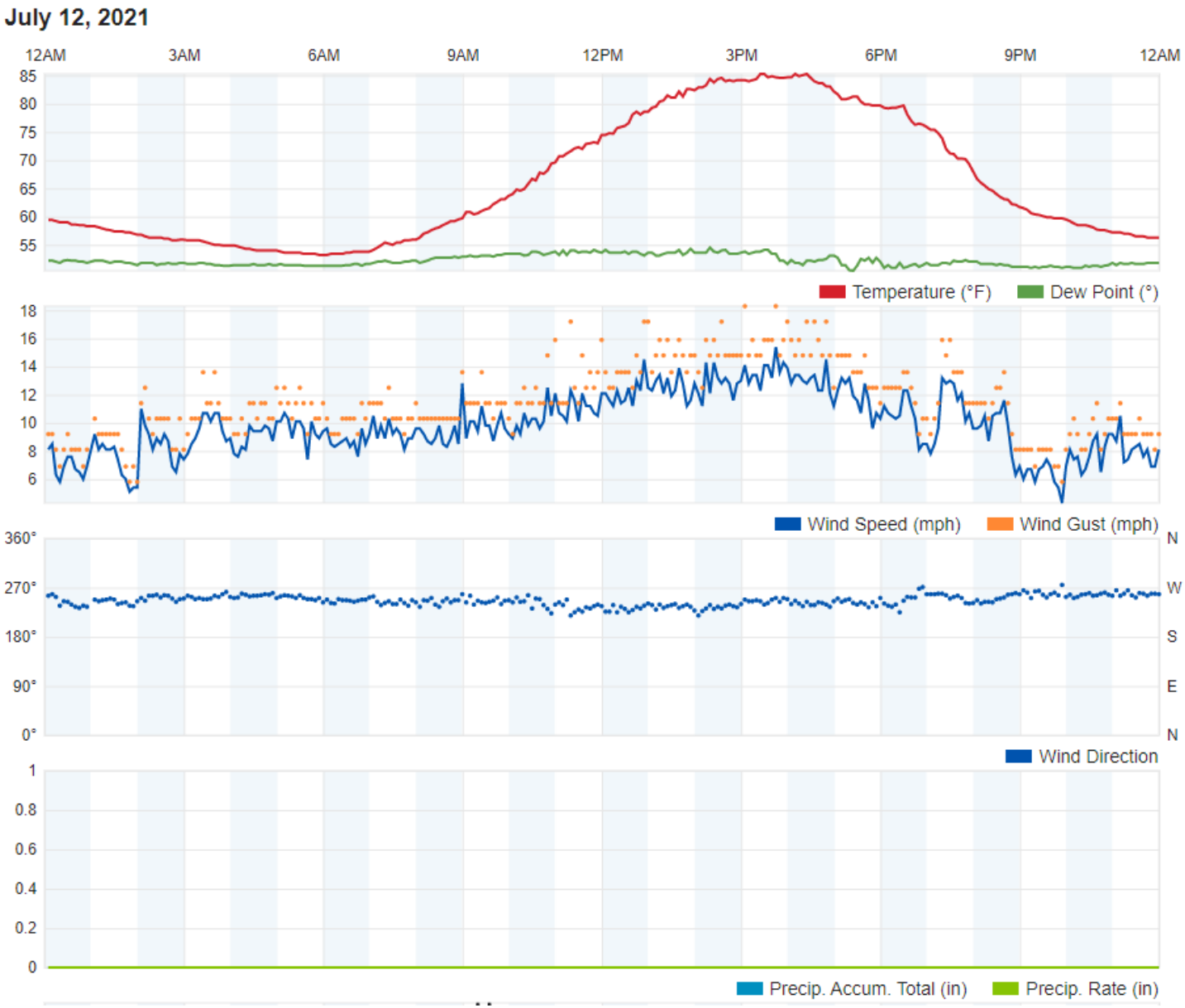
Weather Data



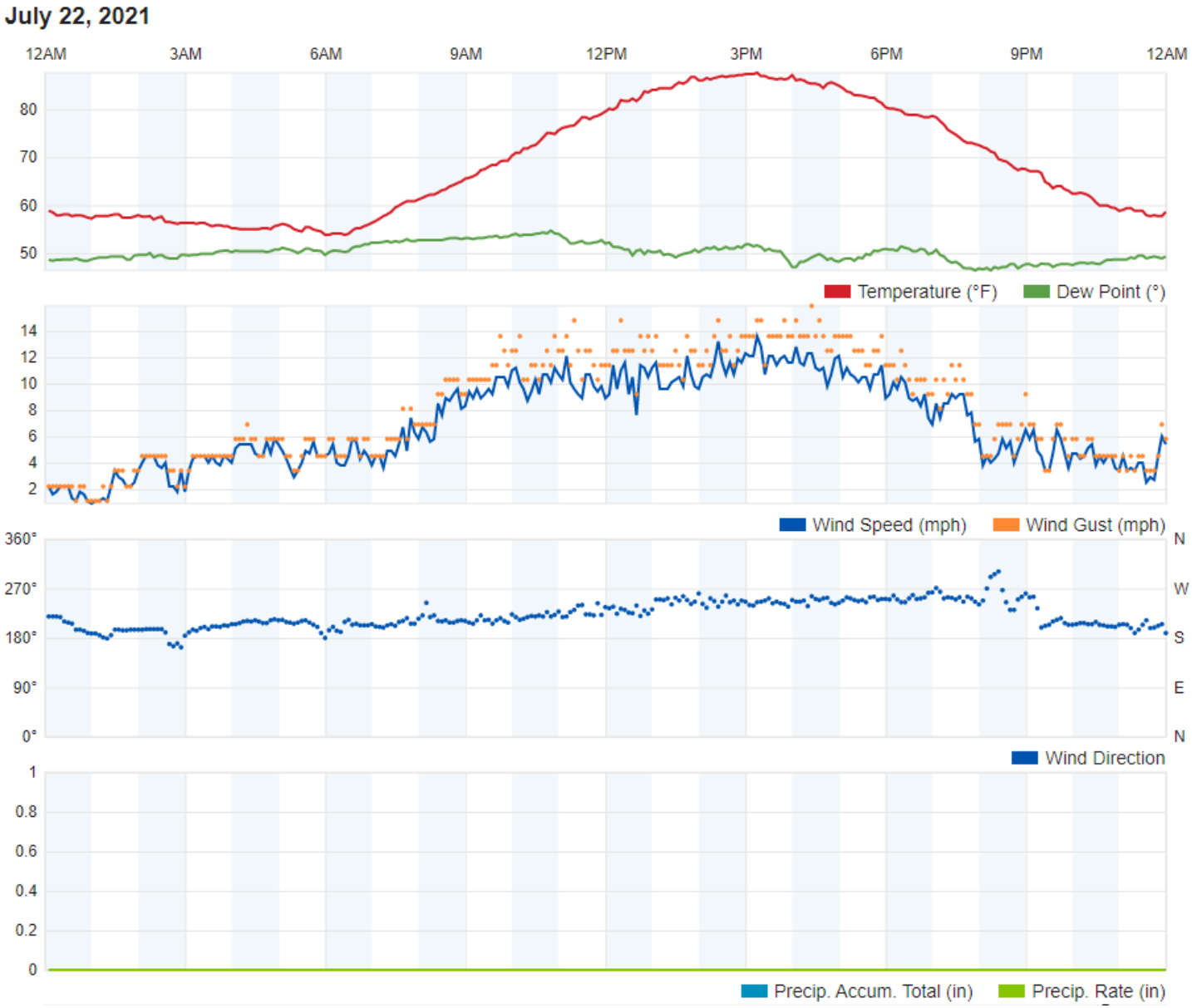
Third Quarter 2021
Weather Data for July 1, 2021
Vasco Road Landfill, Livermore, California



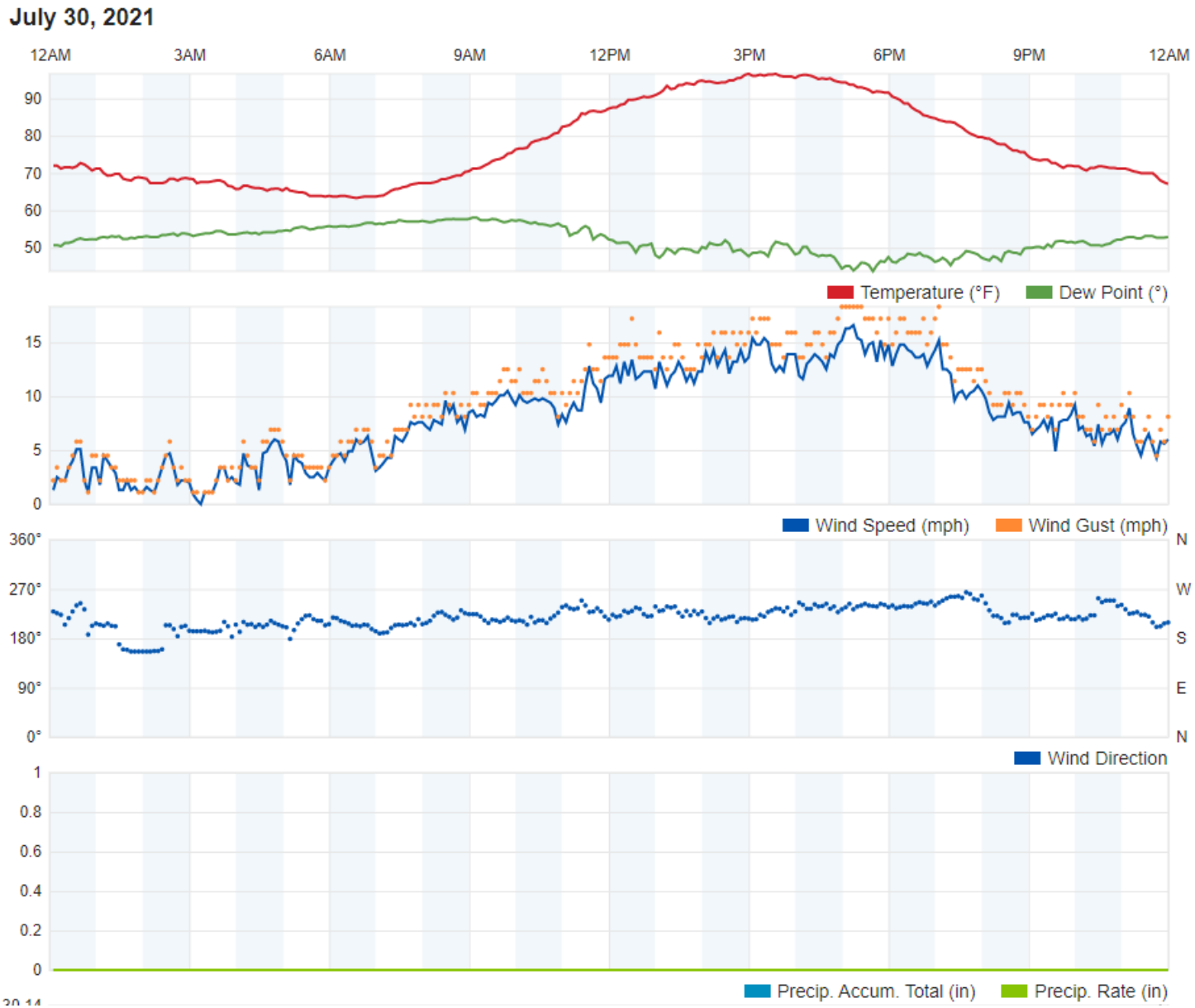
Third Quarter 2021
Weather Data for July 2, 2021
Vasco Road Landfill, Livermore, California



Third Quarter 2021
Weather Data for July 12, 2021
Vasco Road Landfill, Livermore, California



Third Quarter 2021
Weather Data for July 22, 2021
Vasco Road Landfill, Livermore, California



Third Quarter 2021
Weather Data for July 30, 2021
Vasco Road Landfill, Livermore, California

January 18, 2022
File No. 07221004.01

Ms. Antonia Gunner
Republic Services – Vasco Road Landfill
4001 N. Vasco Road
Livermore, California 94551

Subject: Vasco Road Landfill - Livermore, California

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

Dear Ms. Gunner:

SCS Field Services (SCS-FS) is pleased to provide the Republic Services, with the enclosed report summarizing the surface emissions monitoring services provided at the Vasco Road 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-FS appreciates the opportunity to be of assistance to Republic Services on this project. As you review the enclosed information, please contact Art Jones (209) 345-2062, Michael Calmes at (209) 573-3364 or Whitney Stackhouse at (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney Stackhouse
Project Manager
SCS Field Services

Michael Calmes
Project Manager
SCS Field Services

Encl.

cc: Art Jones, SCS Field Services

Vasco Road Landfill

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

Fourth Quarter 2021

Presented to:

Ms. Antonia Gunner
Republic Services – Vasco Road
4001 N. Vasco Road
Livermore, California 94551

SCS FIELD SERVICES

File No. 07221004.01 | January 18, 2022

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

Vasco Road Landfill

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

INTRODUCTION

This letter provides results of the October 4, 5, 6, 7, and November 3, 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.

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 Vasco Road Landfill was performed on 25-foot pathways in accordance with the LMR.

On, October 4, 5, 6, 7, and November 3, 2021, SCS performed fourth quarter 2021 surface emissions monitoring testing as required by the Bay Area Air Quality Management District (BAAQMD). Instantaneous surface emissions monitoring results indicated that one (1) location exceeded the 500 ppmv maximum concentration during our initial monitoring (Table 1 in Attachment 3). The required 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring indicated that the locationhad returned to below regulatory compliance limits following system adjustments and remediation (installation of new bentonite plug) by site 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 grid areas. The Vasco Road Landfill surface area was therefore divided into 233 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 no grid areas observed to exceed the 25 ppmv LMR integrated average threshold (Table 2 in Attachment 4). Based on these monitoring results, no 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 quarterly. 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, no locations 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.

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

BACKGROUND

The Vasco Road 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 Vasco Road property contains a system to control the combustible gases generated in the landfill.

SURFACE EMISSIONS MONITORING

On October 4, 5, 6, 7, and November 3, 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 October 4, 5, 6 and 7 and November 3, 2021, SCS performed fourth quarter 2021 instantaneous emissions monitoring testing as required by the BAAQMD. During this monitoring, surface emissions results indicated that one (1) location exceeded the 500 ppmv maximum concentration. The required first 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring performed on October 5 and November 3, 2021, respectively, indicated that the location had returned to compliance following system adjustments and remediation (borehole repair using bentonite) performed by site 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, no integrated exceedances (the calculated average of the instantaneous monitoring results) of the 25 ppmv requirement on October 4, 5, 6 and 7, 2021 was observed, therefore no further 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 October 4, 2021, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS and power generation facility (reported separately). Monitoring was performed with the detector inlet held one-half of an inch from pressurized piping and associated components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 2.9 ppmv, was well below the maximum threshold (see Table 1 for component results). Therefore, all pressurized piping and components located at the LFG BFS were in compliance at the time of our testing.

PROJECT SCHEDULE

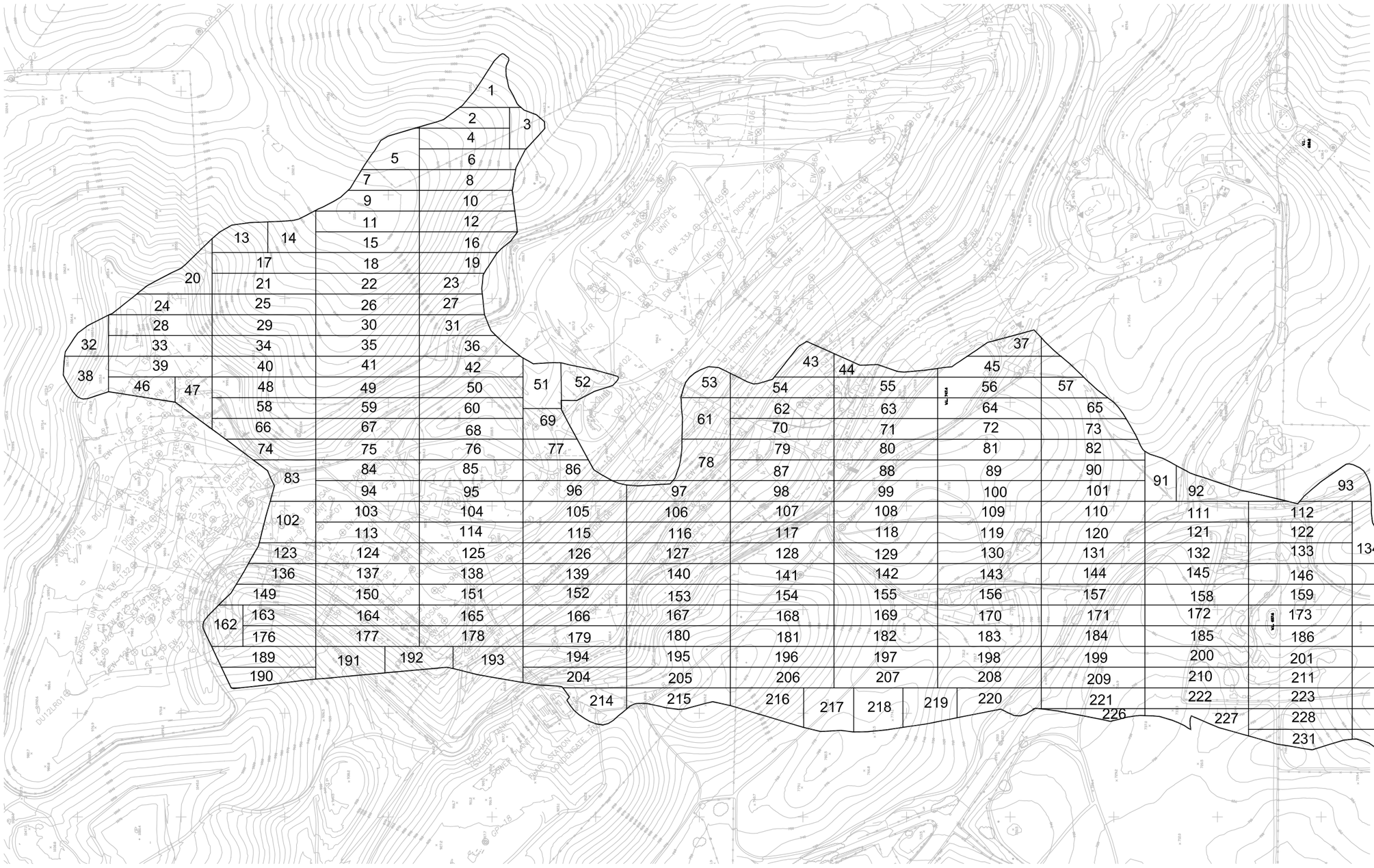
According to the LMR and NSPS, surface emissions monitoring at active landfills is required to be performed on a quarterly basis. Therefore, in accordance with our approved Work Scope, the first quarter 2022 (January through March) surface emissions testing event is scheduled to be performed by the end 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



SCALE IN FEET

500 0 500

(DRAWING SIZE IN 11"X17")

SCS ENGINEERS

ENVIRONMENTAL CONSULTANTS

3117 FITE CIRCLE, SUITE 108
SACRAMENTO, CALIFORNIA 95827
PH. (916) 361-1297 FAX. (916) 361-1299

PROJ. NO.	DWN. BY:	ACAD FILE:
07217028.00	ATV	FIGURE 1.DWG
DSN. BY: ATV	CHK. BY: WBS	APP. BY: AJ

SHEET TITLE:
SURFACE EMISSIONS MONITORING GRID MAP

PROJECT TITLE:
VASCO ROAD LANDFILL
ALAMEDA COUNTY, CALIFORNIA

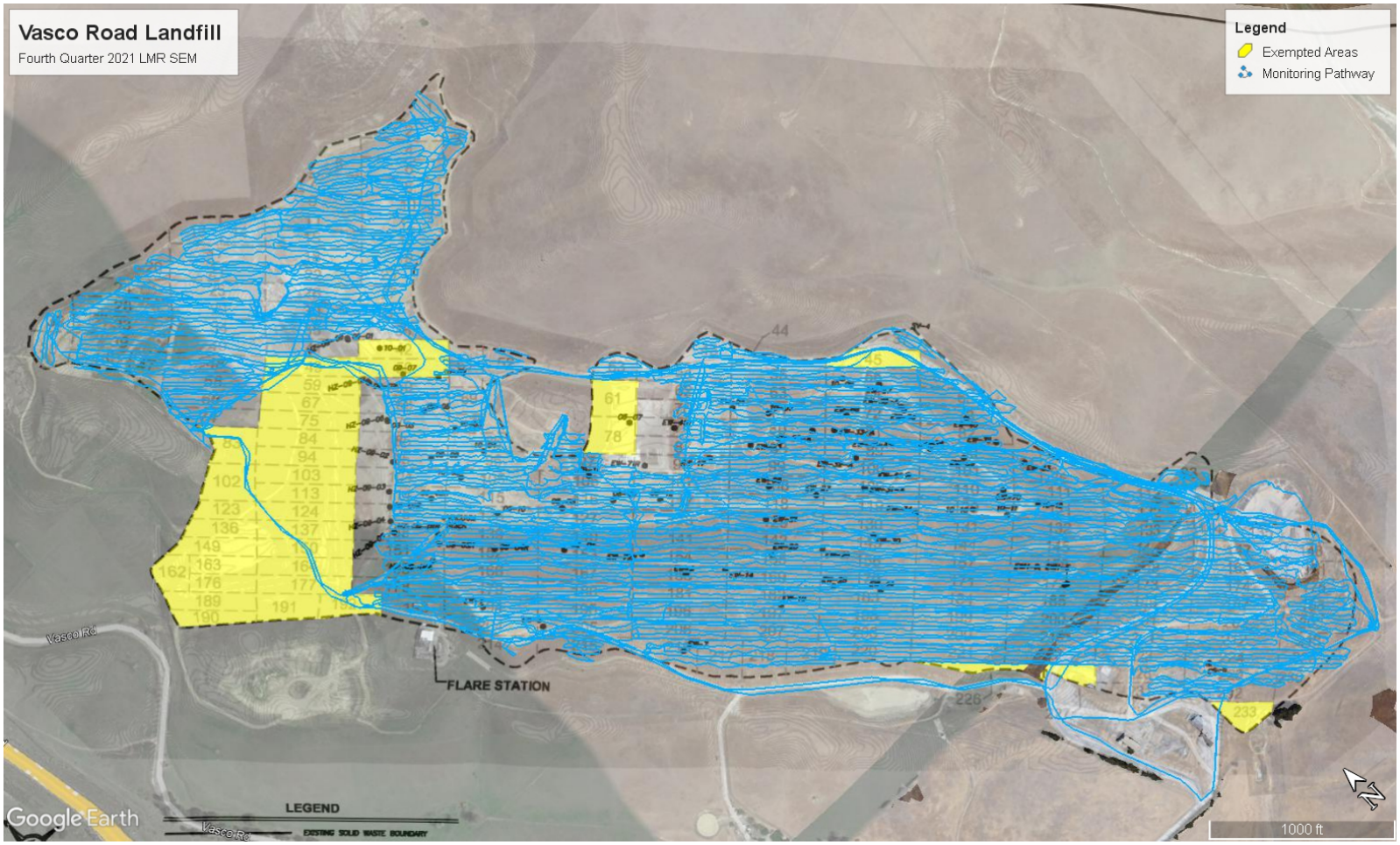
DATE: 3/14/17

SCALE: AS SHOWN

FIGURE: 1 – A

Attachment 2

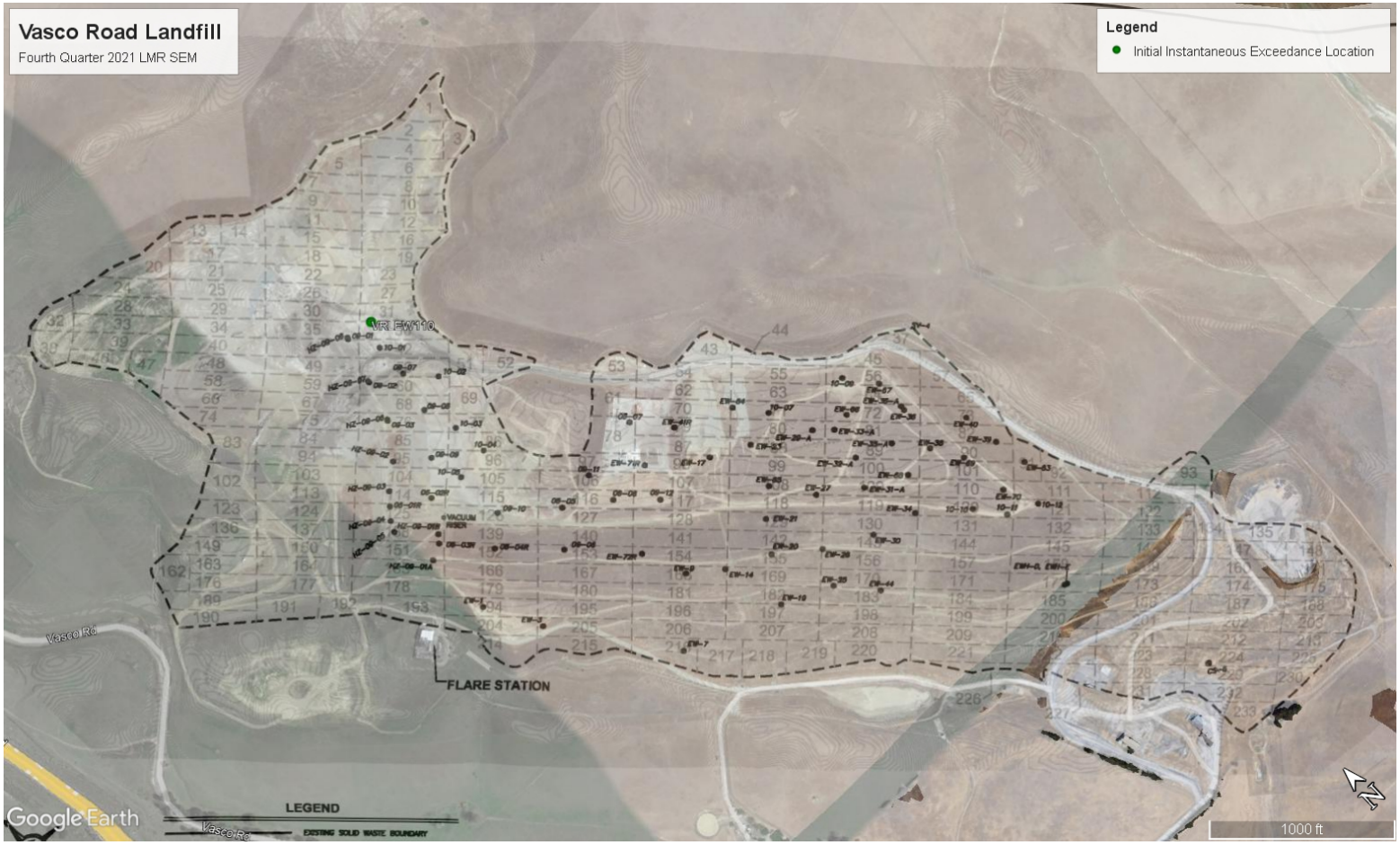
Surface Pathway



Fourth Quarter 2021
Initial LMR Surface Emissions Monitoring Pathway
Vasco Road Landfill, Livermore, California

Attachment 3

Instantaneous and Component Emissions Monitoring Results



Fourth Quarter 2021
Initial Instantaneous Emissions Monitoring Location Greater Than 500 ppmv
Vasco Road Landfill, Livermore, California

Fourth Quarter 2021

Table 1. Instantaneous Surface and Component Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Instantaneous Data Report for October 4, 5, 6, 7, and November 3, 2021

Location (Surface)	Initial Monitoring Results (ppmv) 10/4/2021	First 10-Day Follow Up Monitoring Results (ppmv) 10/5/2021	Second 10-Day Follow Up Monitoring Results (ppmv) NA	30-Day Follow Up Monitoring Results (ppmv) 11/3/2021	Latitude	Longitude
VRLEW110	1,708	5.4	--	392	37.758797°	-121.725637°

Pressurized Pipe and Component Results

Route	Date	Concentration (ppmv)
FLARE STATION	10/4/2021	2.9

No other exceedances of the 500 ppmv threshold were observed during the fourth quarter 2021 monitoring.

Attachment 4

Integrated Monitoring Results

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

Point Name	Record Date	FID Concentration (ppm)	Comments
VR 001	10/4/2021	1.43	
VR 002	10/4/2021	5.07	
VR 003	10/4/2021	3.07	
VR 004	10/4/2021	1.66	
VR 005	10/4/2021	1.71	
VR 006	10/4/2021	5.11	
VR 007	10/4/2021	3.10	
VR 008	10/4/2021	8.57	
VR 009	10/4/2021	5.39	
VR 010	10/4/2021	3.65	
VR 011	10/4/2021	6.20	
VR 012	10/4/2021	6.34	
VR 013	10/4/2021	10.82	
VR 014	10/4/2021	8.99	
VR 015	10/4/2021	1.37	
VR 016	10/4/2021	4.53	
VR 017	10/4/2021	6.59	
VR 018	10/4/2021	6.22	
VR 019	10/4/2021	8.32	
VR 020	10/4/2021	3.82	
VR 021	10/4/2021	3.77	
VR 022	10/4/2021	3.24	
VR 023	10/4/2021	8.31	
VR 024	10/4/2021	6.30	
VR 025	10/4/2021	5.90	
VR 026	10/4/2021	5.77	
VR 027	10/4/2021	9.41	
VR 028	10/4/2021	2.59	
VR 029	10/4/2021	2.71	
VR 030	10/4/2021	2.61	
VR 031	10/4/2021	7.07	
VR 032	10/5/2021	2.00	
VR 033	10/4/2021	3.67	
VR 034	10/4/2021	3.67	
VR 035	10/4/2021	3.87	
VR 036	10/4/2021	6.20	
VR 037	10/6/2021	1.15	
VR 038	10/5/2021	2.01	
VR 039	10/5/2021	1.64	
VR 040	10/5/2021	1.92	
VR 041	10/5/2021	3.07	
VR 042	--	--	Active

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

VR 043	10/6/2021	0.91	
VR 044	10/6/2021	0.89	
VR 045	--	--	Active
VR 046	10/5/2021	0.95	
VR 047	10/5/2021	0.97	
VR 048	10/5/2021	0.86	
VR 049	--	--	Active
VR 050	--	--	Active
VR 051	10/5/2021	2.31	
VR 052	10/5/2021	2.06	
VR 053	10/5/2021	3.00	
VR 054	10/5/2021	2.72	
VR 055	10/5/2021	2.61	
VR 056	10/5/2021	2.62	
VR 057	10/5/2021	2.79	
VR 058	10/5/2021	2.94	
VR 059	--	--	Active
VR 060	10/5/2021	2.27	
VR 061	--	--	Active
VR 062	10/5/2021	1.71	
VR 063	10/5/2021	1.69	
VR 064	10/5/2021	1.75	
VR 065	10/5/2021	2.04	
VR 066	10/5/2021	1.65	
VR 067	--	--	Active
VR 068	10/5/2021	3.09	
VR 069	10/5/2021	2.47	
VR 070	10/5/2021	1.56	
VR 071	10/5/2021	1.49	
VR 072	10/5/2021	1.55	
VR 073	10/5/2021	1.88	
VR 074	10/5/2021	1.32	
VR 075	--	--	Active
VR 076	10/5/2021	2.42	
VR 077	10/5/2021	1.80	
VR 078	--	--	Active
VR 079	10/5/2021	1.37	
VR 080	10/5/2021	1.37	
VR 081	10/5/2021	1.39	
VR 082	10/5/2021	1.78	
VR 083	--	--	Active
VR 084	--	--	Active
VR 085	10/5/2021	3.05	
VR 086	10/5/2021	2.47	

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

VR 087	10/6/2021	1.40	
VR 088	10/6/2021	1.47	
VR 089	10/6/2021	1.45	
VR 090	10/6/2021	1.99	
VR 091	10/6/2021	1.37	
VR 092	10/6/2021	1.52	
VR 093	10/6/2021	1.56	
VR 094	--	--	Native
VR 095	10/5/2021	3.92	
VR 096	10/5/2021	2.65	
VR 097	10/5/2021	1.54	
VR 098	10/6/2021	5.02	
VR 099	10/6/2021	5.00	
VR 100	10/6/2021	5.00	
VR 101	10/6/2021	5.10	
VR 102	--	--	Native
VR 103	--	--	Native
VR 104	10/5/2021	6.00	
VR 105	10/5/2021	5.25	
VR 106	10/5/2021	2.89	
VR 107	10/6/2021	1.76	
VR 108	10/6/2021	1.69	
VR 109	10/6/2021	1.74	
VR 110	10/6/2021	1.75	
VR 111	10/6/2021	2.85	
VR 112	10/6/2021	3.56	
VR 113	--	--	Native
VR 114	10/5/2021	5.08	
VR 115	10/5/2021	5.11	
VR 116	10/5/2021	2.27	
VR 117	10/6/2021	1.30	
VR 118	10/6/2021	1.34	
VR 119	10/6/2021	1.44	
VR 120	10/6/2021	1.70	
VR 121	10/6/2021	2.28	
VR 122	10/6/2021	3.86	
VR 123	--	--	Native
VR 124	--	--	Native
VR 125	10/5/2021	3.39	
VR 126	10/5/2021	1.67	
VR 127	10/5/2021	1.11	
VR 128	10/6/2021	4.58	
VR 129	10/6/2021	4.57	
VR 130	10/6/2021	4.57	

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

VR 131	10/6/2021	4.57	
VR 132	10/6/2021	4.59	
VR 133	10/6/2021	4.83	
VR 134	10/6/2021	5.77	
VR 135	10/6/2021	6.44	
VR 136	--	--	Native
VR 137	--	--	Native
VR 138	10/5/2021	3.16	
VR 139	10/5/2021	2.53	
VR 140	10/6/2021	2.83	
VR 141	10/6/2021	2.54	
VR 142	10/6/2021	2.49	
VR 143	10/6/2021	2.48	
VR 144	10/6/2021	2.53	
VR 145	10/6/2021	2.56	
VR 146	10/6/2021	3.17	
VR 147	10/6/2021	4.23	
VR 148	10/6/2021	2.44	
VR 149	--	--	Native
VR 150	--	--	Native
VR 151	10/5/2021	2.77	
VR 152	10/5/2021	2.69	
VR 153	10/5/2021	2.34	
VR 154	10/6/2021	2.77	
VR 155	10/6/2021	2.76	
VR 156	10/6/2021	2.73	
VR 157	10/6/2021	2.74	
VR 158	10/6/2021	2.95	
VR 159	10/6/2021	4.76	
VR 160	10/6/2021	6.60	
VR 161	10/6/2021	4.53	
VR 162	--	--	Native
VR 163	--	--	Native
VR 164	--	--	Native
VR 165	10/5/2021	1.87	
VR 166	10/5/2021	2.05	
VR 167	10/5/2021	1.74	
VR 168	10/7/2021	4.32	
VR 169	10/7/2021	4.39	
VR 170	10/7/2021	4.50	
VR 171	10/7/2021	4.44	
VR 172	10/7/2021	4.48	
VR 173	10/7/2021	4.56	
VR 174	10/7/2021	7.46	

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

VR 175	10/6/2021	5.86	
VR 176	--	--	Native
VR 177	--	--	Native
VR 178	10/5/2021	3.09	
VR 179	10/5/2021	3.20	
VR 180	10/5/2021	2.94	
VR 181	10/7/2021	4.03	
VR 182	10/7/2021	4.04	
VR 183	10/7/2021	4.01	
VR 184	10/7/2021	4.01	
VR 185	10/7/2021	4.07	
VR 186	10/7/2021	4.27	
VR 187	10/7/2021	6.75	
VR 188	10/6/2021	5.23	
VR 189	--	--	Native
VR 190	--	--	Native
VR 191	--	--	Native
VR 192	--	--	Native
VR 193	10/5/2021	3.15	
VR 194	10/5/2021	2.26	
VR 195	10/5/2021	1.99	
VR 196	10/7/2021	3.26	
VR 197	10/7/2021	3.14	
VR 198	10/7/2021	2.97	
VR 199	10/7/2021	3.04	
VR 200	10/7/2021	3.10	
VR 201	10/7/2021	3.49	
VR 202	10/7/2021	10.84	
VR 203	10/6/2021	4.72	
VR 204	10/5/2021	1.99	
VR 205	10/5/2021	1.91	
VR 206	10/7/2021	3.23	
VR 207	10/7/2021	3.26	
VR 208	10/7/2021	3.27	
VR 209	10/7/2021	3.26	
VR 210	10/7/2021	3.25	
VR 211	10/7/2021	3.36	
VR 212	10/7/2021	3.42	
VR 213	10/6/2021	5.15	
VR 214	10/5/2021	1.69	
VR 215	10/5/2021	1.73	
VR 216	10/7/2021	2.65	
VR 217	10/7/2021	2.89	
VR 218	10/7/2021	2.65	

Fourth Quarter 2021
Table 2. Integrated Surface Emissions Monitoring Results
Vasco Road Landfill, Livermore, California

VR 219	10/7/2021	2.59	
VR 220	10/7/2021	2.29	
VR 221	10/7/2021	2.28	
VR 222	10/7/2021	2.46	
VR 223	10/7/2021	2.56	
VR 224	10/7/2021	4.52	
VR 225	10/7/2021	3.93	
VR 226	--	--	Active
VR 227	--	--	Active
VR 228	10/7/2021	3.03	
VR 229	10/7/2021	3.14	
VR 230	10/7/2021	2.79	
VR 231	10/7/2021	2.86	
VR 232	10/7/2021	2.90	
VR 233	--	--	Pond

Attachment 5

Calibration Logs

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-04-21 Site Name: VaSCO

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: E Barometric Pressure: 30 "Hg

Air Temperature: 67 °F General Weather Conditions: Smokey

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	498	2	3
2	0	499	1	3
3	0	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 114648
Counters Observed for the Zero= 4971

Trial 2:
Counts Observed for the Span= 113180
Counters Observed for the Zero= 4870

Trial 3:
Counts Observed for the Span= 111860
Counters Observed for the Zero= 4761

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.2 ppm

Downwind Location Description: Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-04-21 Site Name: VaSCO

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: E Barometric Pressure: 30 "Hg

Air Temperature: 67 °F General Weather Conditions: Smokey

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.8	500	0	4
2	.8	500	0	4
3	.8	500	0	4

Average Difference: .7

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .7 /500 x 100%

= 99.9%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 125596
Counters Observed for the Zero= 2917

Trial 2:
Counts Observed for the Span= 126560
Counters Observed for the Zero= 2877

Trial 3:
Counts Observed for the Span= 122580
Counters Observed for the Zero= 2810

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Entrance Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-04-21 Site Name: Vasco

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: N Barometric Pressure: 30 "Hg

Air Temperature: 89 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5466 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	3
2	.1	502	2	3
3	.0	501	1	2

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 129368
Counters Observed for the Zero= 4632

Trial 2:
Counts Observed for the Span= 121867
Counters Observed for the Zero= 4620

Trial 3:
Counts Observed for the Span= 122093
Counters Observed for the Zero= 4655

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-04-21 Site Name: VaSCO

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: N Barometric Pressure: 30 "Hg

Air Temperature: 84 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	3
2	.1	499	1	3
3	.2	498	2	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 125927
Counters Observed for the Zero= 2677

Trial 2:
Counts Observed for the Span= 126889
Counters Observed for the Zero= 2662

Trial 3:
Counts Observed for the Span= 127634
Counters Observed for the Zero= 2654

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: flare Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-4-21 Site Name: VASCO

Inspector(s): Ron C Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: W Barometric Pressure: 29.97 "Hg

Air Temperature: 78 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	1	502	2	3
2	0	501	1	4
3	0	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 137824
Counters Observed for the Zero= 3592

Trial 2:
Counts Observed for the Span= 137996
Counters Observed for the Zero= 3627

Trial 3:
Counts Observed for the Span= 138292
Counters Observed for the Zero= 3648

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1.2 ppm

Downwind Location Description: GTB Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-4-21 Site Name: Vasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: W Barometric Pressure: 29.87 "Hg

Air Temperature: 78 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	3
2	.0	502	2	3
3	.2	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 128372
Counters Observed for the Zero= 2816

Trial 2:
Counts Observed for the Span= 128525
Counters Observed for the Zero= 2849

Trial 3:
Counts Observed for the Span= 128879
Counters Observed for the Zero= 2872

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1.3 ppm

Downwind Location Description: G61 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-4-21 Site Name: VASCO

Inspector(s): RON G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: NW Barometric Pressure: 29.94 "Hg

Air Temperature: 78 °F General Weather Conditions: SUNNY

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	500	0	3
2	.0	502	2	4
3	.2	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 135276
Counters Observed for the Zero= 3620

Trial 2:
Counts Observed for the Span= 135492
Counters Observed for the Zero= 3629

Trial 3:
Counts Observed for the Span= 135674
Counters Observed for the Zero= 3654

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1.3 ppm

Downwind Location Description: G61 Reading: 1.5 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Post

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-4-21 Site Name: Vasco

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: NW Barometric Pressure: 29.94 "Hg

Air Temperature: 78 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	500	0	3
2	.2	502	2	4
3	.1	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 127346
Counters Observed for the Zero= 2837

Trial 2:
Counts Observed for the Span= 127524
Counters Observed for the Zero= 2894

Trial 3:
Counts Observed for the Span= 127856
Counters Observed for the Zero= 2871

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 1.2 ppm

Downwind Location Description: G61 Reading: 1.3 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: Vasco

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	502	2	3
2	.0	501	1	4
3	.1	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 105208
Counters Observed for the Zero= 4516

Trial 2:
Counts Observed for the Span= 105492
Counters Observed for the Zero= 4550

Trial 3:
Counts Observed for the Span= 105629
Counters Observed for the Zero= 4526

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.2 ppm

Downwind Location Description: Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: Vasco

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	3
2	.1	500	0	4
3	.0	502	2	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 121812
Counters Observed for the Zero= 2615

Trial 2:
Counts Observed for the Span= 121976
Counters Observed for the Zero= 2639

Trial 3:
Counts Observed for the Span= 122302
Counters Observed for the Zero= 2654

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Front Entrance Reading: 4.2 ppm

Downwind Location Description: Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: Vasco

Inspector(s): Don G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	499	1	3
2	.0	502	2	4
3	.1	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 134516
Counters Observed for the Zero= 3568

Trial 2:
Counts Observed for the Span= 134819
Counters Observed for the Zero= 3579

Trial 3:
Counts Observed for the Span= 134972
Counters Observed for the Zero= 3614

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Entrance Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

Pre

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: VaSCO

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 6 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.0	502	2	4
2	.1	501	1	3
3	.0	501	1	4

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 117576
Counters Observed for the Zero= 2951

Trial 2:
Counts Observed for the Span= 118921
Counters Observed for the Zero= 3019

Trial 3:
Counts Observed for the Span= 119416
Counters Observed for the Zero= 3052

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.2 ppm

Downwind Location Description: Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: VCSCO

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 75 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	3
2	0	501	1	3
3	0	500	0	3

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 107905
Counters Observed for the Zero= 4416

Trial 2:
Counts Observed for the Span= 108273
Counters Observed for the Zero= 4410

Trial 3:
Counts Observed for the Span= 109180
Counters Observed for the Zero= 4404

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.1 ppm

Downwind Location Description: Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: VOSCO

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 75 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	3
2	0	501	1	3
3	0	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 123918
Counters Observed for the Zero= 2520

Trial 2:
Counts Observed for the Span= 124515
Counters Observed for the Zero= 2516

Trial 3:
Counts Observed for the Span= 125630
Counters Observed for the Zero= 2507

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 990 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: VOSCO

Inspector(s): Don G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 25 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5470 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.9	499	1	3
2	.1	501	1	4
3	.9	502	2	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 135713
Counters Observed for the Zero= 3427

Trial 2:
Counts Observed for the Span= 136863
Counters Observed for the Zero= 3420

Trial 3:
Counts Observed for the Span= 137124
Counters Observed for the Zero= 3416

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.1 ppm

Downwind Location Description: Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-05-21 Site Name: VoSCO

Inspector(s): Bryan O Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1265 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	501	1	4
2	.0	500	0	4
3	.1	501	1	3

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 120131
Counters Observed for the Zero= 3013

Trial 2:
Counts Observed for the Span= 121839
Counters Observed for the Zero= 3005

Trial 3:
Counts Observed for the Span= 122747
Counters Observed for the Zero= 2992

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.1 ppm

Downwind Location Description: Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-06-21 Site Name: Vasco

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 13 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 56 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.8	499	1	3
2	.0	500	0	4
3	.1	501	1	3

Average Difference: .7

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- .7 /500 x 100%

= 99.7 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 108408
Counters Observed for the Zero= 4748

Trial 2:
Counts Observed for the Span= 109607
Counters Observed for the Zero= 4732

Trial 3:
Counts Observed for the Span= 110326
Counters Observed for the Zero= 4728

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Entrance Reading: 1.2 ppm

Downwind Location Description: Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-[illegible]-21 Site Name: Vasco

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 13 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 56 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	501	1	3
2	.1	502	2	4
3	.0	501	1	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 127416
Counters Observed for the Zero= 2755

Trial 2:
Counts Observed for the Span= 128921
Counters Observed for the Zero= 2744

Trial 3:
Counts Observed for the Span= 129638
Counters Observed for the Zero= 2736

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Entrance Reading: 1.6 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-06-21 Site Name: VASCO

Inspector(s): DON G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 13 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 56 °F General Weather Conditions: CLEAR

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	498	2	3
2	0	499	1	3
3	1	501	1	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

= 99.7%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 144220
Counters Observed for the Zero= 3566

Trial 2:
Counts Observed for the Span= 145923
Counters Observed for the Zero= 3560

Trial 3:
Counts Observed for the Span= 146873
Counters Observed for the Zero= 3558

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.2 ppm

Downwind Location Description: Entrance Reading: 1.8 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-26-21 Site Name: VaSCO

Inspector(s): Michael M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 67 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5415 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.6	498	2	3
2	.6	499	1	3
3	.1	500	0	4

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 112462
Counters Observed for the Zero= 4630

Trial 2:
Counts Observed for the Span= 113492
Counters Observed for the Zero= 4622

Trial 3:
Counts Observed for the Span= 114724
Counters Observed for the Zero= 4615

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-06-21 Site Name: VASCO

Inspector(s): DAH G Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 67 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 5420 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.6	501	1	3
2	.6	501	1	4
3	.0	502	2	3

Average Difference: 1.3

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1.3 /500 x 100%

=99.7%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 147942
Counters Observed for the Zero= 3421

Trial 2:
Counts Observed for the Span= 148632
Counters Observed for the Zero= 3416

Trial 3:
Counts Observed for the Span= 149744
Counters Observed for the Zero= 3407

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.1 ppm

Downwind Location Description: Entrance Reading: 1.7 ppm

Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-06-21 Site Name: Vasco

Inspector(s): Liam M Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: WSW Barometric Pressure: 30 "Hg

Air Temperature: 67 °F General Weather Conditions: Clear

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument Serial Number: 1223 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	.1	499	1	3
2	.0	501	1	3
3	.1	501	1	3

Average Difference: 1

*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%

= 100%- 1 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 130410
Counters Observed for the Zero= 1623

Trial 2:
Counts Observed for the Span= 131931
Counters Observed for the Zero= 1617

Trial 3:
Counts Observed for the Span= 132940
Counters Observed for the Zero= 2613

Post Monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

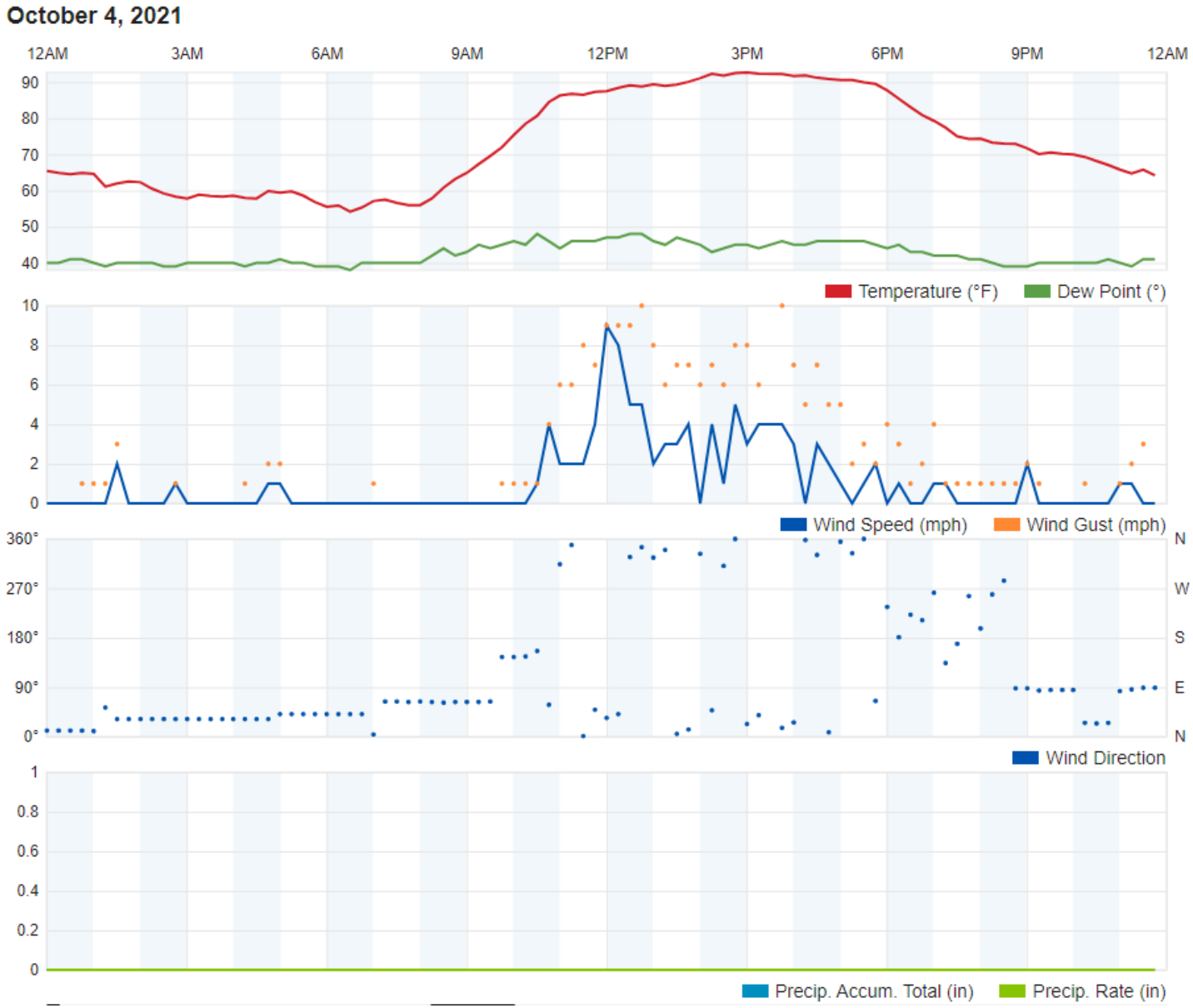
Upwind Location Description: Entrance Reading: 1.1 ppm

Downwind Location Description: Flare Reading: 1.2 ppm

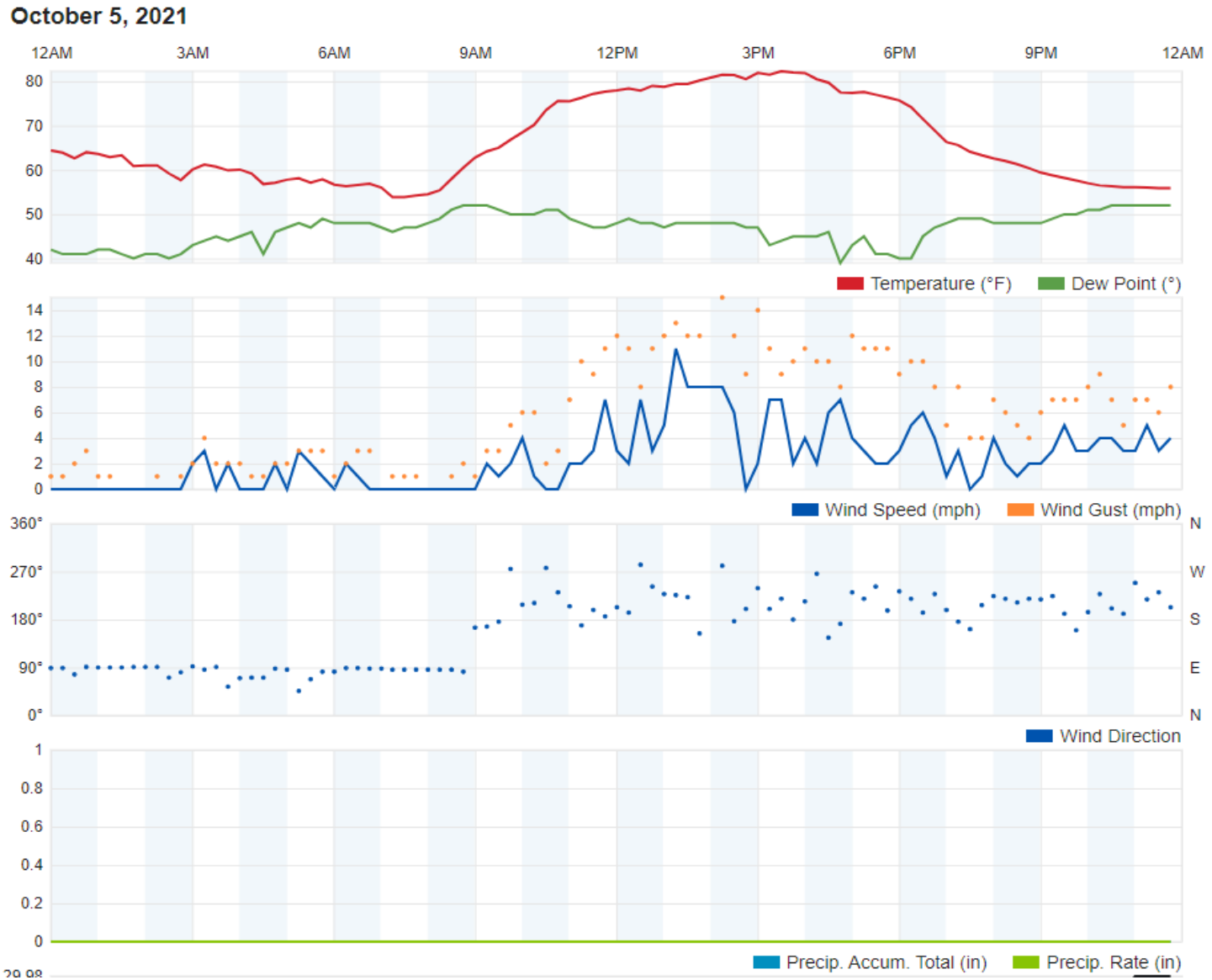
Notes: Wind speed averages were observed to remain below the alternative requested 10 miles per hour and no instantaneous speeds exceeded 20 miles per hour. No rainfall had occurred within the previous 24 hours of the monitoring event. Therefore, site meteorological conditions were within the requested alternatives of the LMR requirements on the above mentioned date.

Attachment 6

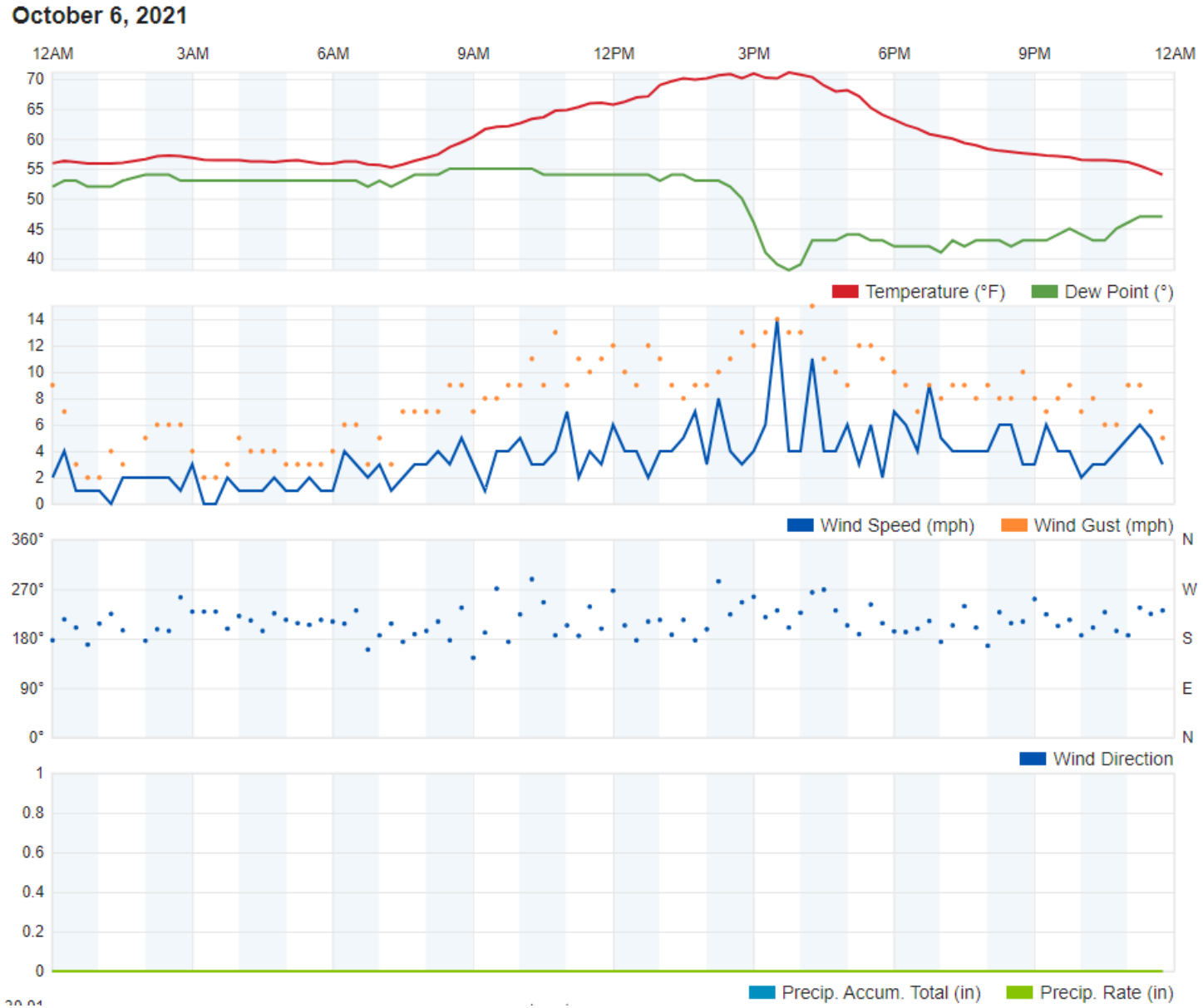
Weather Data



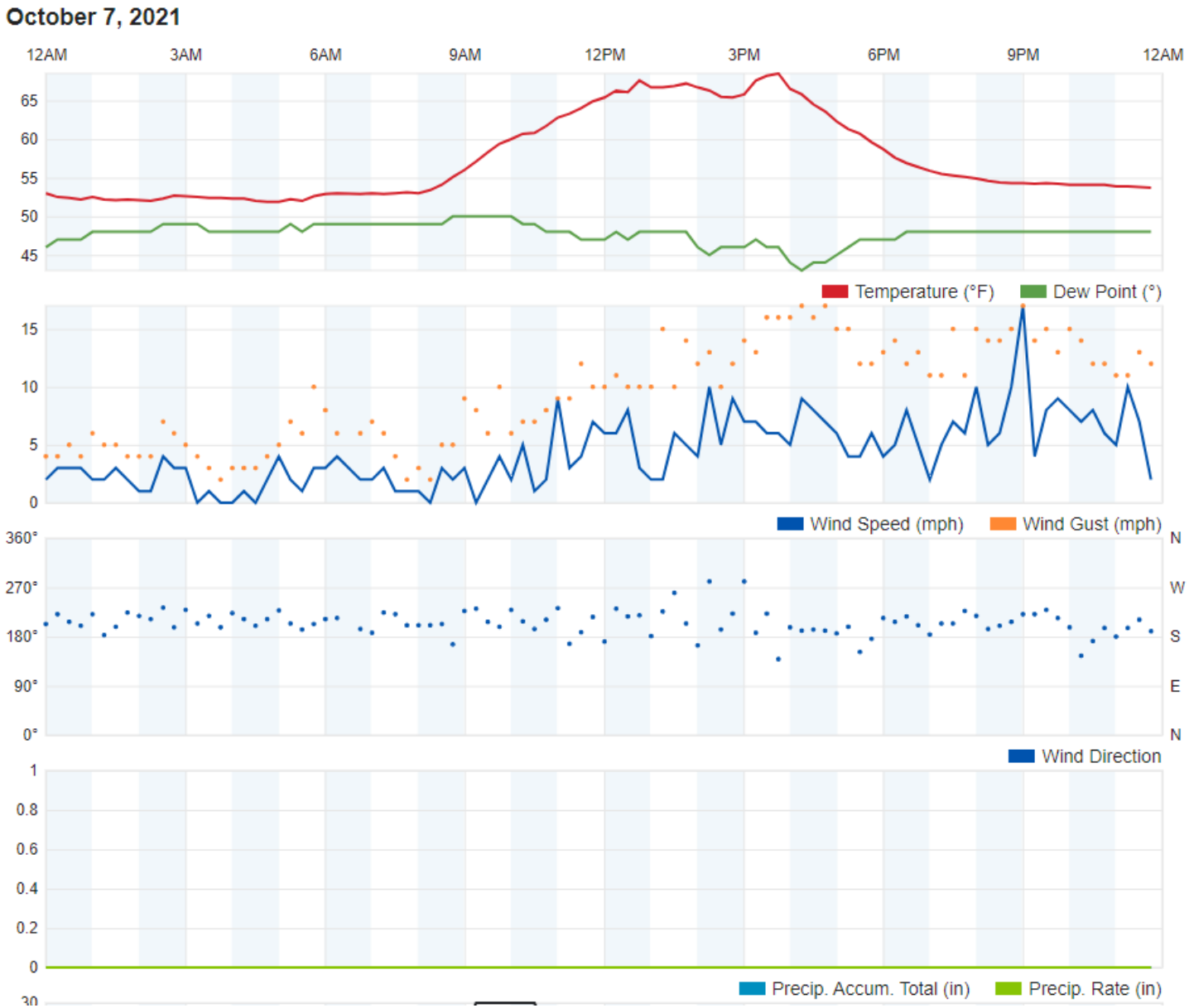
Fourth Quarter 2021
Weather Data for October 4, 2021
Vasco Road Landfill, Livermore, California



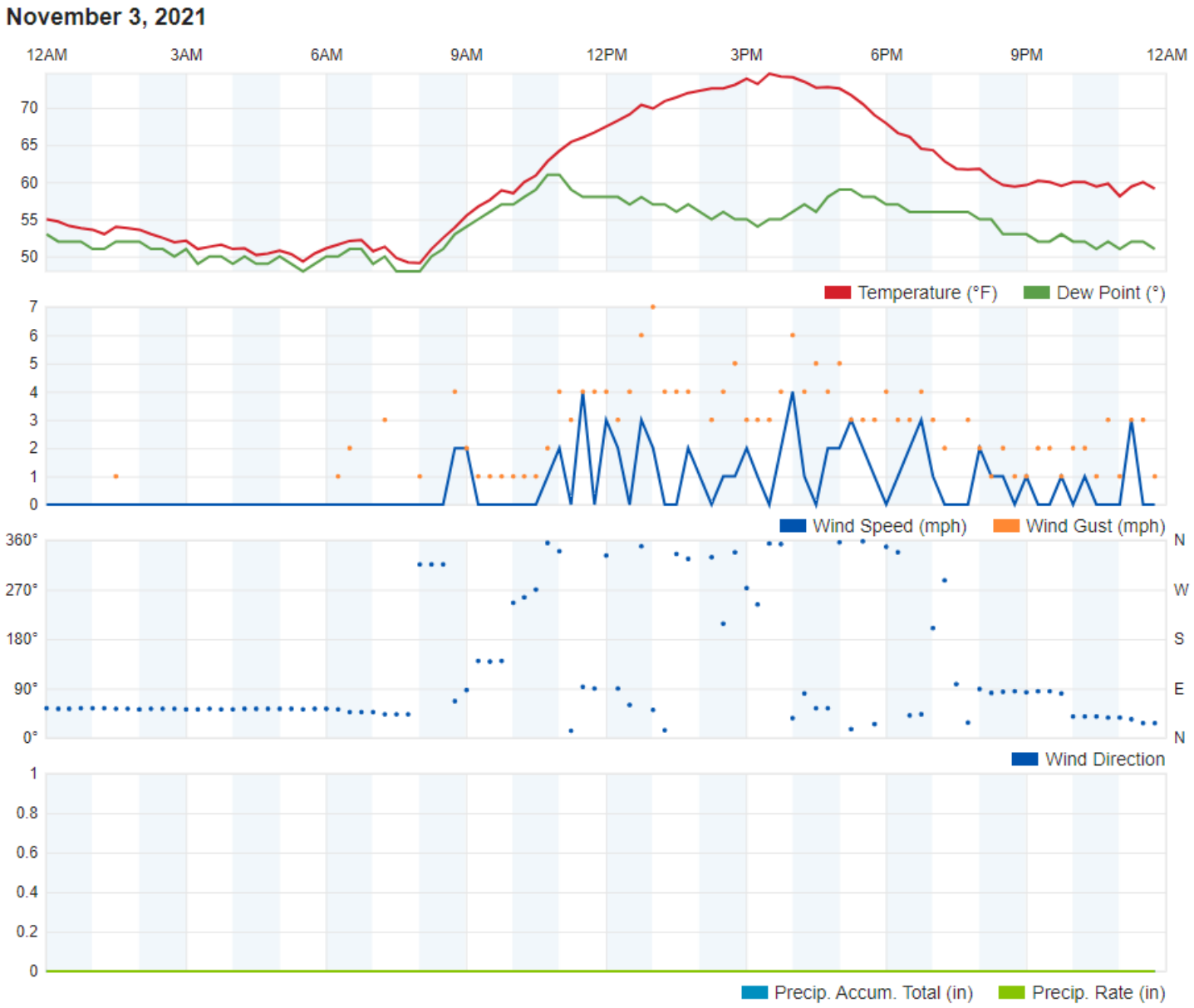
Fourth Quarter 2021
Weather Data for October 5, 2021
Vasco Road Landfill, Livermore, California



Fourth Quarter 2021
Weather Data for October 6, 2021
Vasco Road Landfill, Livermore, California



Fourth Quarter 2021
Weather Data for October 7, 2021
Vasco Road Landfill, Livermore, California



Fourth Quarter 2021
Weather Data for November 3, 2021
Vasco Road Landfill, Livermore, California

Appendix E – Title V Semi-Annual Report

VASCO ROAD LANDIFLL

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: VASCO ROAD LANDFILL	**FACILITY ID#:** A5095
REPORTING PERIOD: *from* 08/01/2021	*through* 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:

Matthew D Ketchem

Signature of Responsible Official

02/25/2022

Date

Matt Ketchem

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

VASCO ROAD LANDIFLL

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: VASCO ROAD LANDFILL	**FACILITY ID#:** A5095
REPORTING PERIOD: *from* 08/01/2021	*through* 01/31/2022

List of Permitted Sources and Abatement Device

Permit Unit Number	**Equipment Description**
S-#	**Description**
S-1	Vasco Road Landfill – Waste Decomposition Process; Equipped with Gas Collection System; Abated by A-4 Landfill Gas Flare
S-12	Vasco Road Landfill – Waste and Cover Material Dumping
S-203	Vasco Road Landfill – Excavating, Bulldozing and Compacting Activities
S-7	Non-retail Gasoline Dispensing Facility
S-14	Green Waste Processing Operation; A-14 Water Sprayer
S-15	Wood Waste Processing Operation; A-15 Water Sprayer
A-4	Landfill Gas Flare

Notes:

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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 # 818, Parts 22b-c and 22e-g	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 # 818, Parts 22a-c and 22e-g	Records	Periodic / On event basis	BAAQMD 8-34-304.2	For Active Areas: Collection system components must be installed and operating by 5 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 # 818, Parts 22a-c and 22e-g	Records	Periodic / On event basis	BAAQMD 8-34-304.3	For Any Uncontrolled Areas or Cells: collection system components must be installed and operating within 60 days after the uncontrolled area or cell accumulates 1,000,000 tons of decomposable waste	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Gas Flow	BAAQMD 8-34-501.10	Gas Flow Meter and Recorder (every 15 minutes)	Continuous	BAAQMD 8-34-301 and 301.1	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system	Intermittent	On September 19, 2021, the Vasco GCCS was shut down due to an instances of site-wide utility outages. On the same day, RCA notification form was submitted to the district. On September 29, 2021 a Combined 10/30-Day Title V Report was submitted to the BAAQMD for RCA IDs 08B86/08B87.

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Gas Flow	BAAQMD 8-34-404, 8-34-501.1, 8-34-501.2, 8-34-501.5, 8-34-501.10, 8-34-508, and BAAQMD Condition # 818, Part 22g	Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime, and Collection System Components	Periodic / Daily	BAAQMD Condition # 818, Parts 1-3	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system; Except That Flare A-4 May Operate Less Than Continuously If: LFG Flow to Energy Plant is > 1200 scfm AND Remaining LFG Flow Available for A-4 is < 800 scfm (< 24 MM BTU/hour)	Continuous	N/A
Collection and Control Systems Shutdown Time	BAAQMD 8-34-501.1	Operating Records	Periodic / Daily	BAAQMD 8-34-113.2	$\leq$ 240 hours per year and $\leq$ 5 consecutive days	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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 Inoperation for Parametric Monitors	BAAQMD 1-523.4	Operating Records for All Parametric Monitors	Periodic / Daily	BAAQMD 1-523.2	≤ 15 consecutive days per incident and ≤ 30 calendar days per 12-month period	Continuous	N/A
Continuous Monitors	40 CFR 60.7(b)	Operating Records for All Continuous Monitors	Periodic / Daily	40 CFR 60.13(e)	Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments	Continuous	N/A
Wellhead Pressure	BAAQMD 8-34-414, 501.9 and 505.1	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.1	< 0 psig	Continuous	N/A
Temperature of Gas at Wellhead	BAAQMD 8-34-414, 501.9 and 505.2	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.2	< 55 ^{o}C (< 131 ^{o}F), except for components identified in Condition # 818, Part 3b(i)	Continuous	N/A
Temperature of Gas at Specified Well-heads	BAAQMD 8-34-414, 501.9 and 505.2	Monthly Inspection and Records	Periodic / Monthly	BAAQMD Condition # 818, Part 3b(i)	< 140 ^{o}F	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Gas Concentrations in LFG at Wellhead	BAAQMD 8-34-414, 501.9 and 505.3 or 505.4	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.3 or 305.4	N_2 < 20% (by volume, dry basis) **OR** O_2 < 5% (by volume, dry basis), except for components identified in Condition # 818, Part 3b(ii)	Continuous	N/A
Gas Concentrations in LFG at Header	BAAQMD 8-34-414 and 8-34-501.4 and BAAQMD Condition # 818, Part 3b(ii)	Monthly Inspection and Records	Periodic / Monthly	BAAQMD Condition # 818, Part 3b(ii)	O2 < 5% (by volume, dry basis) and CH4 > 35% (by volume, dry basis)	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-116.5 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-116.2	< 5 wells at a time or < 10% of total collection system, whichever is less	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-116.5 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-116.3	< 24 hours per well	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-117.4	< 5 wells at a time or < 10% of total collection system, whichever is less	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-117.5	< 24 hours per well	Continuous	N/A
TOC (Total Organic Com-pounds Plus Methane)	BAAQMD 8-34-501.6 and 503 and BAAQMD Condition # 818, Part 3b(iii)	Quarterly Inspection of collection and control system components with OVA and Records	Periodic / Quarterly	BAAQMD 8-34-301.2	Component Leak Limit: < 1000 ppmv as methane	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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	BAAQMD 8-34-415, 416, 501.6, 506 and 510 and BAAQMD Condition # 818, Part 3b(iii)	Monthly Visual Inspection of Cover, Quarterly Inspection with OVA of Surface, Various Re-inspection Times for Leaking Areas, and Records	Periodic / Monthly, Quarterly, and on an Event Basis	TOC BAAQMD 8-34-303	Surface Leak Limit: < 500 ppmv as methane at 2 inches above surface	Continuous	N/A
Non-Methane Organic Com-pounds (NMOC)	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 818, Part 20	Annual Source Tests and Records	Periodic / Annual	BAAQMD 8-34-301.3	NMOC Destruction Efficiency: > 98% removal by weight OR NMOC Outlet Concentration: < 30 ppmv, dry basis @ 3% O2, expressed as methane (applies to flare only)	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Temperature of Combustion Zone (CT)	BAAQMD 8-34-501.3, and 507, and BAAQMD Condition # 818, Part 4	Temperature Sensor and Recorder (continuous)	Continuous	BAAQMD Condition # 818, Part 5	Flare CT > 1402 ^{o}F, averaged over any 3-hour period	Continuous	N/A
Opacity	BAAQMD Condition # 818, Part 22d	Records of all site watering and road cleaning events	Periodic / On event basis, Monthly	BAAQMD 6-1-301 and SIP 6-301	Ringelmann No. 1 for ≤ 3 minutes/hr (applies to active landfill operations)	Continuous	N/A
Opacity	None	N/A	None	BAAQMD 6-1-301 and SIP 6-301	Ringelmann No. 1 for < 3 minutes/hr (applies to flare)	Continuous	N/A
TSP	None	N/A	None	BAAQMD 6-1-310.1 and SIP 6-310	< 0.15 grains/dscf (applies to flare only)	Continuous	N/A
NO_x	BAAQMD Condition # 818, Part 20	Annual Source Test	Periodic / Annual	BAAQMD Condition # 818, Part 8	Flare Outlet Concentration: < 11 ppmv of NOx @ 15% O2, dry basis OR Flare Outlet Emission Rate: < 0.049 pounds of NO2 per MM BTU	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
CO	BAAQMD Condition # 818, Part 20	Annual Source Test	Periodic / Annual	BAAQMD Condition # 818, Part 10	Flare Outlet Concentration: < 73 ppmv of CO @ 15% O2, dry basis OR Flare Outlet Emission Rate: < 0.19 pounds of CO per MM BTU	Continuous	N/A
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: < 0.5 ppm for 3 minutes and < 0.25 ppm for 60 min. and <0.05 ppm for 24 hours (applies to flare only)	Continuous	N/A
SO_2	None	N/A	None	BAAQMD Regulation 9-1-302	≤ 300 ppm, (dry basis) (applies to flare only)	Continuous	N/A
Sulfur Content in Landfill Gas	BAAQMD Condition # 818, Parts 12, 21	Sulfur analysis of landfill gas	Periodic / Quarterly	BAAQMD Condition # 818, Part 12	Annual Average TRS < 320 ppmv, expressed as H2S (dry basis)	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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_2S	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
Heat Input	BAAQMD 8-34-501.10 and 508 and BAAQMD Condition # 818, Parts 3b(ii), 13 and 22g	Gas Flow Rate Meter, LFG Methane Analyses, Calculations and Records	Continuous, Periodic / Daily, and Periodic / Monthly	BAAQMD Condition # 818, Part 13	< 2880 MM BTU per day and < 1,051,200 MM BTU per 12-month period	Continuous	N/A
Vehicle Traffic	BAAQMD Condition # 818, Part 22a	Records	Periodic / Daily	BAAQMD Condition # 818, Part 14a	< 625 vehicles per day	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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 Material Accepted	BAAQMD Condition # 818, Part 22a	Records	Periodic / Daily	BAAQMD Condition # 818, Part 14	< 2518 tons per day of solid waste and < 23,800,000 tons (cumulative) of decomposable materials and < 31,650,000 yd3 (cumulative) amount of all wastes and cover materials	Continuous	N/A
Total Carbon Emissions	BAAQMD Condition # 818, Part 18	Records	Periodic / Daily	BAAQMD 8-2-301	< 15 pounds per day Or < 300 ppmv, dry basis (applies only to aeration of or use as cover soil of soil containing < 50 ppmw of volatile organic compounds)	Continuous	N/A
Organic Content of Soil	BAAQMD Condition # 818, Part 18	Records	Periodic / Daily	BAAQMD Condition # 818, Part 15	< 50 ppmw of VOC in soil or < 50 ppmv of VOC, expressed as C1, measured 3 inches above soil	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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 VOC Laden Soil Accepted	BAAQMD Condition # 818, Part 18	Records	Periodic / On event basis	BAAQMD Condition # 818, Part 16a-b	< 10,000 tons per consecutive 12-month period for soil with high chlorinated compound concentration and < 170,000 tons per consecutive 12-month period for other VOC laden soil	Continuous	N/A
TAC Concentration Limits for VOC-laden Soil	BAAQMD Condition # 818, Part 18	Records	Periodic / On event basis	BAAQMD Condition # 818, Part 16a-b	Compound < ppmw Benzene 0.50 Carbon Tetrachloride 0.50 Chloroform 6.00 1,4 Dichlorobenzene 7.50 1,2 Dichloroethane 0.50 Tetrachloroethylene 0.70 Trichloroethylene 0.50 Vinyl Chloride 0.20	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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 Metal Laden Soil Accepted	BAAQMD Condition # 818, Part 18	Records	Periodic / On event basis	BAAQMD Condition # 818, Part 16	< 180,000 tons per consecutive 12-month period	Continuous	N/A
TAC Concen-tration Limits for Metal-Laden Soil	BAAQMD Condition # 818, Part 18	Records	Periodic / On event basis	BAAQMD Condition # 818, Part 16	Arsenic < 130 ppmw Beryllium < 75 ppmw Cadmium < 100 ppmw Chromium VI < 7 ppmw Copper < 2500 ppmw Lead < 1000 ppmw Mercury < 20 ppmw Nickel < 2000 ppmw Selenium < 100ppmw Zinc < 5000 ppmw	Continuous	N/A
Startup Shutdown or Malfunction Procedures	40 CFR 63.1980(a-b)	Records (all occurrences, duration of each, corrective actions)	Periodic / On event basis	40 CFR 63.6(e)	Minimize Emissions by Implementing SSM Plan	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-1 VASCO ROAD LANDFILL, A-4 LANDFILL GAS FLARE; S-12 WASTE AND COVER MATERIAL DUMPING; S-13 EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES	**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
Trackout onto Paved Roadways	BAAQMD 6-6-501	Records	Periodic / Daily	BAAQMD 6-6-301	Trackout causing visible emissions: < 25 linear feet for no more than 4 hours; and Trackout remaining on adjacent paved public roadway or paved shoulder: < 1 quart at end of each workday	Continuous	N/A
Visible Emissions from Cleaning Trackout	BAAQMD 6-6-501	Records	Periodic / Daily	BAAQMD 6-6-302	< Ringelmann No. 1 Limitation for no more than 3 minutes in any 60-minute period	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-7 NON-RETAIL GASOLINE DISPENSING FACILITY #9551	**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
Gasoline Throughput	BAAQMD 8-7-503.1	Records	Periodic / Annual	BAAQMD Condition # 7523	< 400,000 gallons per 12-month period	Continuous	N/A
Exempt Throughput	BAAQMD 8-7-501 and 8-7-503.2	Records	Periodic / On event basis	BAAQMD 6-1-310	< 1000 gallons per facility for tank integrity leak checking	Continuous	N/A
Organic Compounds	CARB EO G-70-116-F, paragraph 19 and BAAQMD 8-7-301.13 and 8-7-407	Annual Check for Vapor Tightness and Proper Operation of Vapor Recovery System	Periodic / Annual	BAAQMD 8-7-301.6	All Phase I Equipment (except components with allowable leak rates) shall be leak free (<3 drops/minute) and vapor tight	Continuous	N/A
Organic Compounds	CARB EO G-70-116-F, paragraph 19 and BAAQMD 8-7-301.13 and 8-7-407	Annual Check for Vapor Tightness and Proper Operation of Vapor Recovery System	Periodic / Annual	BAAQMD 8-7-302.5	All Phase II Equipment (except components with allowable leak rates or at the nozzle/fill-pipe interface) Shall Be: leak free (<3 drops/minute) and vapor tight	Continuous	N/A
Organic Compounds	SIP 8-5-403 and 8-5-503	Annual Inspection with Portable Hydro-carbon Detector	Periodic / On event basis	SIP 8-5-303.2	Tank Pressure Vacuum Valve Shall Be: Gas Tight or < 500 ppmv (expressed as	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-7 NON-RETAIL GASOLINE DISPENSING FACILITY #9551	**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
					methane) above background for PRVs (as defined in SIP 8-5-206)		
Organic Compounds	CARB EO G-70-116-F, paragraph 19 and BAAQMD 8-7-301.13 and 8-7-407	Annual Check for Vapor Tightness and Proper Operation of Vapor Recovery System	Periodic / Annual	CARB EO G-70-116-F, paragraph 10	Any Emergency Vent or Manway Shall Be: leak free	Continuous	N/A
Defective Component Repair/ Replacement Time Limit	BAAQMD 8-7-503.2	Records	Periodic / On event basis	BAAQMD 8-7-302.4	≤ 7 days	Continuous	N/A
Liquid Removal Rate	CARB EO G-70-116-F	CARB Certification Procedures	Periodic / On event basis	BAAQMD 8-7-302.8	> 5 ml per gallon dispensed, when dispensing rate > 5 gallons/minute	Continuous	N/A
Liquid Retain from Nozzles	CARB EO G-70-116-F	CARB Certification Procedures	Periodic / On event basis	BAAQMD 8-7-302.12	≤ 100 ml per 1000 gallons dispensed	Continuous	N/A
Nozzle Spitting	CARB EO G-70-116-F	CARB Certification Procedures	Periodic / On event basis	BAAQMD 8-7-302.13	≤ 1.0 ml per nozzle per test	Continuous	N/A
Pressure-Vacuum Valve Settings	CARB EO G-70-116-F	CARB Certification Procedures	Periodic / On event basis	BAAQMD 8-7-316 and CARB EO G-70-116-F, paragraph 14	Pressure Setting: > 2.5 inches of water, gauge	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-7 NON-RETAIL GASOLINE DISPENSING FACILITY #9551	**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
Pressure-Vacuum Valve Settings	SIP 8-5-403 and CARB EO G-70-116-	Semi-Annual Inspection and CARB Certification Procedures	Periodic / On event basis	SIP 8-5-303.1	Pressure Setting: > 10% of maximum working pressure or > 0.5 psig	Continuous	N/A
Disconnection Liquid Leaks	CARB EO G-70-116-F, paragraph 19 and BAAQMD 8-7-301.13 and 8-7-407	Annual Check for Vapor Tightness and Proper Operation of Vapor Recovery System	Periodic / Annual	CARB EO G-70-116-F, paragraph 12	≤ 10 ml per disconnect, averaged over 3 disconnect operations	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-14 GREENWASTE PROCESSING OPERATION, A-14 WATER SPRAYER	**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
Waste Processing Limit	BAAQMD Condition # 25515 Part 1	Records	Periodic / Annual	BAAQMD Condition # 25515 Part 1	≤ 16,000 tons of green waste per 12-month period	Continuous	N/A
Opacity	BAAQMD Condition # 25515, Part 2	Observation of Source in Operation	Periodic / On event basis	BAAQMD 6-1-301 and SIP 6-301	< Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
TSP	None	N/A	None	BAAQMD 6-1-311.1 and SIP 6-311	$E = 4.10(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >55,116 lb/hr	Continuous	N/A
Total Carbon Emissions	None	N/A	None	BAAQMD 8-2-301	≤ 15 pounds/day or ≤ 300 ppm, dry basis and vapor tight	Continuous	N/A

VASCO ROAD LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Vasco Road Landfill	**Facility ID#:** A5095
Permitted Unit: S-15 WOODWASTE PROCESSING OPERATION, A-15 WATER SPRAYER	**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
Waste Processing Limit	BAAQMD Condition # 25516 Part 1	Records	Periodic / Annual	BAAQMD Condition # 25516 Part 1	≤ 5,000 tons of wood waste per 12-month period	Continuous	N/A
Opacity	BAAQMD Condition # 25516, Part 2	Observation of Source in Operation	Periodic / On event basis	BAAQMD 6-1-301 and SIP 6-301	< Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
TSP	None	N/A	None	BAAQMD 6-1-311.1 and SIP 6-311	$E = 4.10(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >55,116 lb/hr	Continuous	N/A

Appendix F – Title V Annual Compliance Certification

VASCO ROAD LANDIFLL

TITLE V ANNUAL CERTIFICATION

SITE: VASCO ROAD LANDFILL	**FACILITY ID#:** A5095
REPORTING PERIOD: *from* 02/01/2021	*through* 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:

Matthew D Ketchem
_____
Signature of Responsible Official

02/25/2022
_____
Date

Matt Ketchem
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

Compliance Certification Report

Site #: A5095 **Site Name:** Vasco Road Landfill **Reporting Period:** 02/1/2021 to 01/31/2022

Address: 4001 North Vasco Road **City:** Livermore, CA **Zip Code:** 94550

Source #: Facility **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)	N	C	
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y	C	
BAAQMD Regulation 2, Rule 1	Permits – General Requirements (12/6/17)	N	C	
BAAQMD 2-1-429	Permits – General Requirements: Federal Emissions Statement (12/21/04)	N	C	
SIP Regulation 2, Rule 1	Permits - General Requirements (8/1/16)	Y	C	
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 (12/7/16)	N	C	
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N	C	
SIP Regulation 4	Air Pollution Episode Plan (8/6/90)	Y	C	
BAAQMD Regulation 5	Open Burning (6/19/13)	N	C	
SIP Regulation 5	Open Burning (9/4/98)	Y	C	
BAAQMD Regulation 6, Rule 1	Particulate Matter – General Requirements (8/1/18)	N	C	
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y	C	
BAAQMD Regulation 6, Rule 6	Particulate Matter – Prohibition of Trackout	N		
BAAQMD Regulation 7	Odorous Substances (3/17/82)	N	C	
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y	C	
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	N	C	
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (3/22/95)	Y	C	
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (7/1/09)	N	C	
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (1/2/04)	Y	C	
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	C	
BAAQMD Regulation 8, Rule 16	Organic Compounds - Solvent Cleaning Operations (10/16/02)	Y	C	
BAAQMD Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	N	C	
BAAQMD Regulation 8-40-116	Exemption, Small Volume	Y	C	

Compliance Certification Report

Site #: A5095 **Site Name:** Vasco Road Landfill **Reporting Period:** 02/1/2021 to 01/31/2022

Address: 4001 North Vasco Road **City:** Livermore, CA **Zip Code:** 94550

Source #: Facility **Source Name:** Facility

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8-40-117	Exemption, Accidental Spills	Y	C	
SIP Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01)	Y	C	
BAAQMD Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (6/15/05)	N	C	
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	C	
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (3/22/95)	Y	C	
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (7/17/02)	N	C	
SIP Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (2/26/02)	Y	C	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)	N	C	
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/99)	Y	C	
BAAQMD Regulation 9, Rule 2	Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)	N	C	
BAAQMD Regulation 11, Rule 1	Hazardous Pollutants – Lead (3/17/82)	N	C	
SIP Regulation 11, Rule 1	Hazardous Pollutants – Lead (9/2/81)	Y	C	
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	N	C	
BAAQMD Regulation 11, Rule 14	Hazardous Pollutants - Asbestos Containing Serpentine (7/17/91)	N	C	
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	N	C	
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y	C	
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N	C	
California Health and Safety Code Section 44300 et seq.	Air Toxics “Hot Spots” Information and Assessment Act of 1987	N	C	
California Health and Safety Code Title 17, 93105	Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations (7/26/01)	N	C	
California Health and Safety Code Title 17, 93106	Asbestos Airborne Toxic Control Measure for Asbestos Containing Serpentine (7/20/00)	N	C	

Compliance Certification Report

Site #: A5095 **Site Name:** Vasco Road Landfill **Reporting Period:** 02/1/2021 to 01/31/2022

Address: 4001 North Vasco Road **City:** Livermore, CA **Zip Code:** 94550

Source #: Facility **Source Name:** Facility

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
California Health and Safety Code Title 17, 93116	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (2/19/11)	N	C	
40 CFR Part 61, Subpart A	National Emission Standards for Hazardous Air Pollutants – General Provisions (9/13/10)	Y	C	
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (7/20/04)	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

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)**			
1-523	Parametric Monitoring and Recordkeeping Procedures	N	C	
1-523.1	Parametric monitor periods of inoperation	Y	C	
1-523.2	Limit on duration of inoperation	Y	C	
1-523.3	Reporting requirement for violations of any applicable limits	N	C	
1-523.4	Records of inoperation, tests, calibrations, adjustments, & maintenance	Y	C	
1-523.5	Maintenance and calibration	N	C	
SIP Regulation 1	**General Provisions and Definitions (6/28/99)**			
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	C	
1-523.3	Reports of Violations	Y	C	
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (8/1/18)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-310	Particle Weight Limitation (applies to Flares only)	N	C	
6-1-401	Appearance of Emissions	N	C	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-301	Ringelmann No. 1 Limitation	Y	C	
6-305	Visible Particles	Y	C	
6-310	Particle Weight Limitation (applies to flare only)	Y	C	
6-401	Appearance of Emissions	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD Regulation 6, Rule 6	**Particulate Matter – Prohibition of Trackout (8/1/18)**			
6-6-301	Prohibition of Trackout onto Paved Road	N	C	
6-6-302	Prohibition of Visible Emissions During Cleanup Trackout	N	C	
6-6-501	Monitoring and Recordkeeping	N	C	
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	C	
BAAQMD Regulation 8, Rule 34	**Organic Compounds – Solid Waste Disposal Sites (6/15/05)**			
8-34-113	Limited Exemption, Inspection and Maintenance	Y	C	
8-34-113.1	Emission Minimization Requirement	Y	C	
8-34-113.2	Shutdown Time Limitation	Y	C	
8-34-113.3	Recordkeeping Requirement	Y	C	
8-34-116	Limited Exemption, Well Raising	Y	C	
8-34-116.1	New Fill	Y	C	
8-34-116.2	Limits on Number of Wells Shutdown	Y	C	
8-34-116.3	Shutdown Duration Limit	Y	C	
8-34-116.4	Capping Well Extensions	Y	C	
8-34-116.5	Well Disconnection Records	Y	C	
8-34-117	Limited Exemption, Gas Collection System Components	Y	C	
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-117.2	New Components are Described in Collection and Control System Design Plan	Y	C	
8-34-117.3	Meets Section 8-34-118 Requirements	Y	C	
8-34-117.4	Limits on Number of Wells Shutdown	Y	C	
8-34-117.5	Shutdown Duration Limit	Y	C	
8-34-117.6	Well Disconnection Records	Y	C	
8-34-118	Limited Exemption, Construction Activities	Y	C	
8-34-118.1	Construction Plan	Y	C	
8-34-118.2	Activity is Required to Maintain Compliance with this Rule	Y	C	
8-34-118.3	Required or Approved by Other Enforcement Agencies	Y	C	
8-34-118.4	Emission Minimization Requirement	Y	C	
8-34-118.5	Excavated Refuse Requirements	Y	C	
8-34-118.6	Covering Requirements for Exposed Refuse	Y	C	
8-34-118.7	Installation Time Limit	Y	C	
8-34-118.8	Capping Required for New Components	Y	C	
8-34-118.9	Construction Activity Records	Y	C	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	C	
8-34-301.1	Continuous Operation	Y	I (See Comment)	On February 2, 2021 from approximately 07:21 to 08:41, the Vasco GCCS was shut down due to a power outage caused by a nearby Pacific Gas and Electric (PG&E) pole being knocked down by a car. Vasco verbally reported the breakdown to the Bay Area Air Quality Management District (BAAQMD) via phone on the day of the event. Furthermore, an RCA form was submitted to the BAAQMD on February 3, 2021 to request breakdown relief

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
				and to report the parametric excursion. The BAAQMD issued RCA IDs 07Y14 and 07Y15 for the breakdown and excursion, respectively. On February 22, 2021, a Combined 10/30-Day Title V Report was submitted to the BAAQMD. Refer to the Combined 10/30-Day Title V Report for additional information, including corrective actions taken. On May 16, 2021 from approximately 14:53 to 17:35, the Vasco GCCS was shut down due to a bird making contact with Ameresco facility equipment which resulted in the re-closer breaker tripping and caused the Ameresco facility to shut down. Vasco reported the breakdown, via an RCA form that was submitted to the BAAQMD on May 17, 2021 to request breakdown relief and to report the parametric excursion. On the same day, the BAAQMD issued RCA IDs 07Z56 and 07Z57 for the breakdown and excursion, respectively. On May 24, 2021, a Combined 10/30-Day Title V Report was submitted to the BAAQMD. Refer to the Combined 10/30-Day Title V Report for additional information, including corrective actions taken. On September 19, 2021 from approximately 06:17 to 18:59, the Vasco GCCS was shut down due to an area-wide utility power outage.

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
				Vasco reported the breakdown, via an RCA form that was submitted to the BAAQMD on September 19, 2021 to request breakdown relief and to report the parametric excursion On the next day, the BAAQMD issued RCA IDs 08B86 and 08B87 for the breakdown and excursion, respectively. On September 29, 2021, a Combined 10/30-Day Title V Report was submitted to the BAAQMD. Refer to the Combined 10/30-Day Title V Report for additional information, including corrective actions taken.
8-34-301.2	Collection and Control Systems Leak Limitations	Y	C	
8-34-301.3	Limits for Enclosed Flares	Y	I (See Comment)	On April 28, 2021, the annual source test was conducted at the A-4 Flare. However, issues were discovered during the source test and prevented the flare from testing under the permitted pollution limits. On May 7, 2021, the A-4 Flare was re-tested and passed. On June 16, 2021, a Title V 10-Day Deviation Report and 30-Day Follow-Up Report was submitted to the BAAQMD.
8-34-303	Landfill Surface Requirements	Y	C	
8-34-304	Gas Collection System Installation Requirements	Y	C	
8-34-304.1	Based on Waste Age For Inactive or Closed Areas	Y	C	
8-34-304.2	Based on Waste Age For Active Areas	Y	C	
8-34-304.3	Based on Amount of Decomposable Waste Accepted	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-304.4	Based on NMOC Emission Rate	Y	C	
8-34-305	Wellhead Requirements	Y	C	
8-34-305.1	Wellhead Vacuum Requirements	Y	C	
8-34-305.2	Wellhead Temperature Limit	Y	C	
8-34-305.3	Nitrogen Concentration Limit for Wellhead Gas or	Y	C	
8-34-305.4	Oxygen Concentration Limit for Wellhead Gas	Y	C	
8-34-404	Less than Continuous Operation Petition	Y	C	
8-34-405	Design Capacity Reports	Y	C	
8-34-408	Collection and Control System Design Plans	Y	C	
8-34-408.2	Sites With Existing Collection and Control Systems	Y	C	
8-34-411	Annual Report	Y	C	
8-34-412	Compliance Demonstration Tests	Y	C	
8-34-413	Performance Test Report	Y	C	
8-34-414	Repair Schedule for Wellhead Excesses	Y	C	
8-34-414.1	Records of Excesses	Y	C	
8-34-414.2	Corrective Action	Y	C	
8-34-414.3	Collection System Expansion	Y	C	
8-34-414.4	Operational Due Date for Expansion	Y	C	
8-34-415	Repair Schedule for Surface Leak Excesses	Y	C	
8-34-415.1	Records of Excesses	Y	C	
8-34-415.2	Corrective Action	Y	C	
8-34-415.3	Re-monitor Excess Location Within 10 Days	Y	C	
8-34-415.4	Re-monitor Excess Location Within 1 Month	Y	C	
8-34-415.5	If No More Excesses, No Further Re-Monitoring	Y	C	
8-34-415.6	Additional Corrective Action	Y	C	
8-34-415.7	Re-monitor Second Excess Within 10 days	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
8-34-415.8	Re-monitor Second Excess Within 1 Month	Y	C	
8-34-415.9	If No More Excesses, No Further Re-monitoring	Y	C	
8-34-415.10	Collection System Expansion for Third Excess in a Quarter	Y	C	
8-34-415.11	Operational Due Date for Expansion	Y	C	
8-34-416	Cover Repairs	Y	C	
8-34-501	Operating Records	Y	C	
8-34-501.1	Collection System Downtime	Y	C	
8-34-501.2	Emission Control System Downtime	Y	C	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors	Y	C	
8-34-501.4	Testing	Y	C	
8-34-501.5	Landfill Gas Flow Rate and Well Concentration Records for Components Operating Less Than Continuously	Y	C	
8-34-501.6	Leak Discovery and Repair Records	Y	C	
8-34-501.7	Waste Acceptance Records	Y	C	
8-34-501.8	Non-decomposable Waste Records	Y	C	
8-34-501.9	Wellhead Excesses and Repair Records	Y	C	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	C	
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	Portable Hydrocarbon Detector	Y	C	
8-34-505	Well Head Monitoring	Y	C	
8-34-506	Landfill Surface Monitoring	Y	C	
8-34-507	Continuous Temperature Monitor and Recorder (applies to flare)	Y	C	
8-34-508	Gas Flow Meter	Y	C	
8-34-510	Cover Integrity Monitoring	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			
9-1-301	Limitations on Ground Level Concentrations (applies flare only)	Y	C	
9-1-302	General Emission Limitations (applies to flare only)	Y	C	
BAAQMD Regulation 9, Rule 2	**Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)**			
9-2-301	Limitations on Hydrogen Sulfide	N	C	
40 CFR Part 60, Subpart A	**Standards of Performance for New Stationary Sources – General Provisions (9/13/10)**			
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	C	
60.7	Notification and Record Keeping	Y	C	
60.8	Performance Tests	Y	C	
60.11	Compliance with Standards and Maintenance Requirements	Y	C	
60.11(a)	Compliance determined by performance tests	Y	C	
60.11(d)	Control devices operated using good air pollution control practice	Y	C	
60.12	Circumvention	Y	C	
60.13	Monitoring Requirements	Y	C	
60.13(a)	Applies to all continuous monitoring systems	Y	C	
60.13(b)	Monitors shall be installed and operational before performing performance tests	Y	C	
60.13(e)	Continuous monitors shall operate continuously	Y	C	
60.13(f)	Monitors shall be installed in proper locations	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
60.13(g)	Requires multiple monitors for multiple stacks	Y	C	
60.14	Modification	Y	C	
60.15	Reconstruction	Y	C	
60.19	General Notification and Reporting Requirements	Y	C	
40 CFR Part 60, Subpart Cc	**Standards of Performance for New Stationary Sources – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills (2/24/99)**			
60.36c(a)	Collection and Control Systems in Compliance by 30 months after Initial NMOC Emission Rate Report Shows NMOC Emissions $\geq$ 50 MG/year	Y	C	
40 CFR Part 60, Subpart Cf	**Standards of Performance for New Stationary Sources – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills (8/29/16)**			
60.32f	Collection and Control Systems in Compliance by 30 months after NMOC Emission Rate Report Shows NMOC Emissions > 50 MG/year	Y	C	
40 CFR Part 62, Subpart F	**Approval and Promulgation of State Plans for Designated Facilities and Pollutants (4/20/06)**			
62.1100	Identification of Plan	Y	C	
62.1115	Identification of Sources – Existing Municipal Solid Waste Landfills	Y	C	
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	C	
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	C	
63.6(e)	Operation and maintenance requirements and SSM Plan	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
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	C	
63.10(d)(5)	Startup, Shutdown, and Malfunction (SSM) Reports	Y	C	
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	C	
63.1945(b)	Compliance date for existing affected landfills	Y	C	
63.1955	What requirements must I meet?	Y	C	
63.1955(a)	Comply with either 63.1955(a)(1) or (a)(2)	Y	C	
63.1955(a)(2)	Comply with State Plan that implements 40 CFR Part 60, Subpart Cc	Y	C	
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	C	
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	C	
63.1960	How is compliance determined?	Y	C	
63.1965	What is a deviation?	Y	C	
63.1975	How do I calculate the 3-hour block average used to demonstrate compliance?	Y	C	
63.1980	What records and reports must I keep and submit?	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
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	C	
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	C	
BAAQMD Condition #818				
Part 1	Control requirements for collected landfill gas (Regulations 8-34-301 and 8-34-303)	Y	C	
Part 2	Landfill gas collection system description (Regulations 2-1-301, 8-34-301.1, 8-34-304, and 8-34-305)	Y	C	
Part 3	Landfill gas collection system operating requirements (Regulations 8-34-301.1, 8-34-301.2, 8-34-303, and 8-34-305)	Y	C	
Part 4	Combustion zone temperature monitoring (Regulations 8-34-501.3 and 8-34-507)	Y	C	
Part 5	Flare temperature limit (RACT for CO and Regulations 2-5-301 and 8-34-301.3)	Y	C	
Part 6	Flare equipment requirements (RACT for CO and Regulation 8-34-301)	Y	C	
Part 7	Flare fuel restrictions (Cumulative Increase)	Y	C	
Part 8	Outlet NOx concentration limit for flare (RACT)	Y	C	
Part 9	deleted	Y	C	
Part 10	Outlet CO concentration limit for flare (RACT)	Y	C	
Part 11	deleted	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-1, S-12, S-13

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: MSW Landfill - Waste Decomposition Process Equipped with LFG Collection System (S-1), abated Flare (A-4), Waste and Cover Material Dumping (S-12), Excavating, Bulldozing, and Compacting Activities (S-13)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Comments
Part 12	Landfill gas total reduced sulfur compounds concentration limit (RACT for SO2 and Regulation 9-1-302)	Y	C	
Part 13	Flare heat input limits and calculation procedures (Offsets, Cumulative Increase, and Regulation 2-1-301)	Y	C	
Part 14	Design capacity, waste acceptance, cumulative decomposable materials, and vehicle traffic limits (Regulations 2-1-301 and 2-1-234.3)	Y	C	
Part 15	Contaminated soil acceptance restrictions (Regulation 8-40-301)	Y	C	
Part 16	Usage limits for VOC-laden and metal-laden soils (Offsets and Regulations 2-5-302 and 8-2-301)	Y	C	
Part 17	deleted	Y	C	
Part 18	Record keeping requirements for VOC and metal laden soils (Offsets and Regulations 2-5-302 and 8-2-301)	Y	C	
Part 19	Particulate emission control measures (Regulations 2-1-403, 6-1-301, and 6-1-305)	Y	C	
Part 20	Flare source test requirements (RACT, Offsets, Cumulative Increase, and Regulations 2-5-301, 2-5-302, 8-34-301.3 and 8-34-412)	Y	C	
Part 21	Annual landfill gas characterization test (AB-2588 Air Toxic Hot Spots Act, RACT for SO2, and Regulations 2-5-302, 8-34-412, and 9-1-302)	Y	C	
Part 22	Record keeping requirements (RACT, Offsets, Cumulative Increase, and Regulations 2-1-301, 2-5-301, 2-5-302, 2-6-501, 6-1-301, 6-1-305, 8-2-301, 8-34-301, 8-34-304, and 8-34-501)	Y	C	
Part 23	Reporting periods and report submittal due dates for the Regulation 8, Rule 34 report (Regulation 8-34-411 and 40 CFR 63.1980(a))	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-7

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: Non-retail Gasoline Dispensing Facility

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids (10/18/06)**			
8-5-116	Exemption, Gasoline Storage Tanks at Gasoline Dispensing Facilities	N	C	
SIP Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids (6/5/03)**			
8-5-301	Storage Tank Control Requirements	Y	C	
8-5-303	Requirements for Pressure Vacuum Valves	Y	C	
8-5-501	Records	Y	C	
8-5-501.1	Types and amounts of materials stored	Y	C	
BAAQMD Regulation 8, Rule 7	**Organic Compounds – Gasoline Dispensing Facilities (11/6/02)**			
8-7-113	Tank Gauging and Inspection Exemption	Y	C	
8-7-114	Stationary Tank Testing Exemption	Y	C	
8-7-116	Periodic Testing Requirements Exemption	Y	C	
8-7-301	Phase I Requirements	Y	C	
8-7-301.1	Requirements for Transfers into Stationary Tanks, Cargo Tanks, and Mobile Refuelers	Y	C	
8-7-301.2	CARB Certification Requirements	Y	C	
8-7-301.3	Submerged Fill Pipe Requirement	Y	C	
8-7-301.5	Maintenance and Operating Requirement	Y	C	
8-7-301.6	Leak-Free and Vapor Tight Requirement for Components	Y	C	
8-7-301.7	Fitting Requirements for Vapor Return Line	Y	C	

Compliance Certification Report

Site #: A5095
Site Name: Vasco Road Landfill
Reporting Period: 02/1/2021 to 01/31/2022
Address: 4001 North Vasco Road
City: Livermore, CA
Zip Code: 94550
Source #: S-7
Source Name: Non-retail Gasoline Dispensing Facility

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
8-7-301.10	Vapor Recovery Efficiency Requirements for New and Modified Systems	Y	C	
8-7-301.13	Annual Vapor Tightness Test Requirement	Y	C	
8-7-302	Phase II Requirements	Y	C	
8-7-302.1	Requirements for Transfers into Motor Vehicle Fuel Tanks	Y	C	
8-7-302.2	Maintenance Requirement	Y	C	
8-7-302.3	Proper Operation and Free of Defects Requirements	Y	C	
8-7-302.4	Repair Time Limit for Defective Components	Y	C	
8-7-302.5	Leak-Free and Vapor Tight Requirement for Components	Y	C	
8-7-302.6	Requirements for Bellows Nozzles	Y	C	
8-7-302.7	Requirements for Vapor Recovery Nozzles on Balance Systems	Y	C	
8-7-302.8	Minimum Liquid Removal Rate	Y	C	
8-7-302.9	Coaxial Hose Requirement	Y	C	
8-7-302.10	Construction Materials Specifications	Y	C	
8-7-302.12	Liquid Retain Limitation	Y	C	
8-7-302.13	Nozzle Spitting Limitation	Y	C	
8-7-302.14	Annual Back Pressure Test Requirements for Balance Systems	Y	C	
8-7-303	Topping Off	Y	C	
8-7-304	Certification Requirements	Y	C	
8-7-306	Prohibition of Use	Y	C	
8-7-307	Posting of Operating Instructions	Y	C	
8-7-308	Operating Practices	Y	C	
8-7-309	Contingent Vapor Recovery Requirement	Y	C	
8-7-313	Requirements for New or Modified Phase II Installations	Y	C	
8-7-316	Pressure Vacuum Valve Requirements, Aboveground Storage Tanks and Vaulted Below Grade Storage Tanks	Y	C	
8-7-401	Equipment Installation and Modification	Y	C	
8-7-406	Testing Requirements, New and Modified Installations	Y	C	

Compliance Certification Report

Site #: A5095
Site Name: Vasco Road Landfill
Reporting Period: 02/1/2021 to 01/31/2022
Address: 4001 North Vasco Road
City: Livermore, CA
Zip Code: 94550
Source #: S-7
Source Name: Non-retail Gasoline Dispensing Facility

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
8-7-407	Periodic Testing Requirements	Y	C	
8-7-408	Periodic Testing Notification and Submission Requirements	Y	C	
8-7-501	Burden of Proof	Y	C	
8-7-502	Right of Access	Y	C	
8-7-503	Record Keeping Requirements	Y	C	
8-7-503.1	Gasoline Throughput Records	Y	C	
8-7-503.2	Maintenance Records	Y	C	
8-7-503.3	Records Retention Time	Y	C	
BAAQMD Condition # 7523	**Gasoline Throughput Limit (Regulation 2-5-302)**	N	C	
State of California, ARB, EO G-70-116-F	**Certification of ConVault, Inc. Aboveground Filling/Dispensing Vapor Recovery System (11/30/95)**		C	
Paragraph 9	Tank Design Configuration Limitations	N	C	
Paragraph 10	Emergency Vent and Manway Requirement	N	C	
Paragraph 11	Requirement to Use ARB Certified Phase I and Phase II Systems	N	C	
Paragraph 12	Requirements for Phase I Components and Piping Configurations	N	C	
Paragraph 13	Requirements for the Routing of the Coaxial Hose and for Liquid Traps	N	C	
Paragraph 14	P/V Valve Requirements	N	C	
Paragraph 15	Tank Insulation Requirements	N	C	
Paragraph 16	Tank Exterior Surface Requirements	N	C	
Paragraph 17	Requirement to Comply with Local Air District Rules	N	C	
Paragraph 18	Requirements for Deliveries from a Cargo Truck	N	C	
Paragraph 19	Leak Checking Requirements	N	C	
Paragraph 20	Requirement to Comply with Local Fire Official's Requirements	N	C	
Paragraph 21	Requirement to Comply with Other Specified Rules and Regulations	N	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-7

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: Non-retail Gasoline Dispensing Facility

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
Paragraph 22	Prohibition on Alteration of Equipment, Parts, Design, or Operation	N	C	
Paragraph 23	This Order Supersedes EO G-70-116-E (4/1/95)	N	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-14

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: Green Waste Processing Operations (S-14); Water Sprayer (A-14)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (8/1/18)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-311.1	Total Suspended Particulate (TSP) Weight Limits	N	C	
6-1-401	Appearance of Emissions	N	C	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-1-301	Ringelmann No. 1 Limitation	Y	C	
6-1-305	Visible Particles	Y	C	
6-1-311	Total Suspended Particulate (TSP) Weight Limits	Y	C	
6-1-401	Appearance of Emissions	Y	C	
BAAQMD Regulation 8, Rule 2	**Organic Compounds – Miscellaneous Operations (7/20/05)**			
8-2-301	Miscellaneous Operations	Y	C	
BAAQMD Condition # 25515				
Part 1	Waste Processing Limitations (Cumulative Increase)	Y	C	
Part 2	Operating requirements for water spray system (Cumulative Increase and Regulation 6-1-301)	Y	C	
Part 3 (a-b)	Record keeping requirements (Cumulative Increase and Regulations 1-441)	Y	C	

Compliance Certification Report

Site #: A5095
Address: 4001 North Vasco Road
Source #: S-15

Site Name: Vasco Road Landfill
City: Livermore, CA
Source Name: Wood Waste Processing Operations (S-15); Water Sprayer (A-15)

Reporting Period: 02/1/2021 to 01/31/2022
Zip Code: 94550

Applicable Requirement	Regulation Title or Description of Requirement	Compliance (Y/N)	Continuous or Intermittent	Days out of compliance / Comments
BAAQMD Regulation 6, Rule 1	**Particulate Matter – General Requirements (8/1/18)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-311.1	Total Suspended Particulate (TSP) Weight Limits	N	C	
6-1-401	Appearance of Emissions	N	C	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			
6-1-301	Ringelmann No. 1 Limitation	Y	C	
6-1-305	Visible Particles	Y	C	
6-1-311	Total Suspended Particulate (TSP) Weight Limits	Y	C	
6-1-401	Appearance of Emissions	Y	C	
BAAQMD Condition # 25516				
Part 1	Waste Processing Limitations (Cumulative Increase)	Y	C	
Part 2	Operating requirements for water spray system (Cumulative Increase and Regulation 6-1-301)	Y	C	
Part 3 (a-b)	Record keeping requirements (Cumulative Increase and Regulations 1-441)	Y	C	

Appendix G – CMS Summary Report

SUMMARY REPORT – GASEOUS AND OPACITY EXCESS EMISSION AND CONTINUOUS MONITORING SYSTEM PERFORMANCE

The National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) Rule for Landfills became effective on January 16, 2003; compliance with the MACT began on January 16, 2004. The Landfill NESHAP (40 CFR 63 Subpart AAAA) was amended in March 2020. These amendments because effective September 27, 2021 and include additional reporting requirements for continuous monitoring systems (CMS) per §63.10(e)(3)(vi).

A. The company name and address of the affected source:

   Vasco Road Landfill
   4001 N. Vasco Road
   Livermore, CA 94551

B. An identification of each hazardous air pollutant monitored at the affected source.

   N/A. Subpart AAAA establishes a relevant emission standard for total non-methane organic compounds (NMOCs) and does not require hazardous air pollutant monitoring.

C. The beginning and ending dates of the reporting period.

   The reporting period covers the period of September 27, 2021 – January 31, 2022.

D. A brief description of the process units.

   The landfill gas collection and control system (GCCS) CMS components which are subject to the QC program and additional reporting requirements are:

   - Enclosed flare with thermocouples to measure combustion temperature
   - Associated data recorder(s)

E. The emission and operating parameter limitations specified in the relevant standard(s).

   Subpart AAAA establishes a relevant emission standard for non-methane organic compound (NMOC) emissions from enclosed flares of 98 percent weight-reduction or 20 parts per million by volume (ppmv) dry basis, as hexane at 3 percent oxygen. The monitoring requirement associated with this emission standard is established in §63.1983(b)(2) and requires that the landfill maintain records of monitoring of average combustion temperature measured at least every 15 minutes. Exceedances are established in §63.1983(c)(1) as all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius below the average combustion temperature during the most recent performance test at which compliance with the relevant emission standard of §63.1959(b)(2)(iii) was determined.

F. The monitoring equipment manufacturer(s) and model number(s).

   - Thermocouples: Pyromation Type K
   - Data Recorder: Yokogawa DX 1000/Serial #S5T206807

G. The date of the latest CMS certification or audit.

N/A. Per Table 1 to Subpart AAAA of Part 63, the CMS performance evaluation requirements of §63.8(e) do not apply to municipal solid waste (MSW) landfills.

H. The total operating time of the affected source during the reporting period.

During the reporting period (9/27/2021 – 1/31/2022) the GCCS operated a total of 3,043.15 hours.

I. An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

- From September 27, 2021 through January 31, 2022 the minimum temperature above which Flare A-4 was required to operate was 1,451°F (source test results minus 28 °C (82 °F)), based on the source test results in the test report dated June 9, 2021. There were no instances during the reporting period during which the average operational combustion temperature of Flare A-4 was below the minimum temperature.

J. A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

During the reporting period, there were no instances where combustion temperature was not measured and recorded during flare operation.

K. A description of any changes in CMS, processes, or controls since the last reporting period.

No changes in applicable CMS, process, or controls occurred since the last reporting period.

L. The name, title, and signature of the responsible official who is certifying the accuracy of the report.

See Appendix A.

M. The date of the report.

See Cover Page.

Appendix H – Liquid Additions Report

Liquids Addition Initial Reporting

All MSW landfills that have initial or amended design capacity greater than 2.5 million Mg and 2.5 million M^3 must submit this report if leachate recirculation or liquids addition under a Research, Development, and Demonstration (RD&D) permit (issued through Resource Conservation and Recovery Act) has occurred within the last 10 years. Reporting include initial and annual reports per §60.767(k).

This initial report is due by June 21, 2022. This initial report must contain data for at least the first 12 months after August 29, 2016, as well as for each of the previous 10 years, to the extent historical data are available in on-site records.

Company Identifying Information	
Company Name: Republic Services, Inc.	
Site Information	
Site/Area Name: Vasco Road Landfill	
Delivery Address: 4001 N Vasco Road	
City: Livermore	County: Alameda
State: CA	Zip Code: 94551
Physical Location: 4001 N Vasco Road	
Nearest City: Livermore	County: Alameda
State: CA	Zip Code: 94551
Check each line in the appropriate boxes, as applicable	
Does the landfill have a design capacity equal to or greater than 2.5 million Mg and 2.5 million cubic meters?	☒ YES ☐ NO
Has leachate recirculation or addition of other liquids through an approved RD&D authorization occurred at the landfill over the past 10 years? Leachate recirculation is defined in (§60.761) as follows: *the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems.*	☒ YES ☐ NO

Liquids Addition Initial Reporting

Including the initial year (after August 29, 2016), and the prior 10 years, how many years are being reported	
Most Recent Year **January 1 – December 31, 2021**	☒ YES ☐ NO
Past Years - Year 1 **January 1 – December 31, 2020**	☒ YES ☐ NO
Past Years - Year 2 **January 1 – December 31, 2019**	☒ YES ☐ NO
Past Years - Year 3 **January 1 – December 31, 2018**	☒ YES ☐ NO
Past Years - Year 4 **January 1 – December 31, 2017**	☒ YES ☐ NO
Past Years - Year 5 **January 1 – December 31, 2016**	☒ YES ☐ NO
Past Years - Year 6 **January 1 – December 31, 2015**	☒ YES ☐ NO
Past Years - Year 7 **January 1 – December 31, 2014**	☒ YES ☐ NO
Past Years - Year 8 **January 1 – December 31, 2013**	☒ YES ☐ NO
Past Years - Year 9 **January 1 – December 31, 2012**	☒ YES ☐ NO
Past Years - Year 10 **January 1 – December 31, 2011**	☒ YES ☐ NO

Liquids Addition Initial Reporting

Most Recent Year January 1 – December 31, 2021

Leachate Recirculation Operations
Volume of Leachate Recirculated:_____1,211,621_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application:_____228.4_____ acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: __502,055_ Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added:_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application:_____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates:__502,055__ Mg/yr

Past Years - Year 1 January 1 – December 31, 2020

Leachate Recirculation Operations
Volume of Leachate Recirculated:_____2,196,243_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application:_____228.4_____ acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _446314__ Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added:_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application:_____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates:__446314__ Mg/yr

Liquids Addition Initial Reporting

Past Years - Year 2 January 1 – December 31, 2019

Leachate Recirculation Operations
Volume of Leachate Recirculated: 3,826,162 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 570875 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 570875 Mg/yr

Past Years - Year 3 January 1 – December 31, 2018

Leachate Recirculation Operations
Volume of Leachate Recirculated: 3,899,335 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 620412 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 620412 Mg/yr

Liquids Addition Initial Reporting

Past Years - Year 4 January 1 – December 31, 2017

Leachate Recirculation Operations
Volume of Leachate Recirculated: 3,899,335 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 702520 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 702520 Mg/yr

Past Years - Year 5 January 1 – December 31, 2016

Leachate Recirculation Operations
Volume of Leachate Recirculated: 3,819,875 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 609544 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 609544 Mg/yr

Liquids Addition Initial Reporting

Past Years - Year 6 January 1 – December 31, 2015

Leachate Recirculation Operations
Volume of Leachate Recirculated: 2,346,206 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 479323 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 479323 Mg/yr

Past Years - Year 7 January 1 – December 31, 2014

Leachate Recirculation Operations
Volume of Leachate Recirculated: 2,661,720 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 418307 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 418307 Mg/yr

Liquids Addition Initial Reporting

Past Years - Year 8 January 1 – December 31, 2013

Leachate Recirculation Operations
Volume of Leachate Recirculated: 2,346,206 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 447947 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 447947 Mg/yr

Past Years - Year 9 January 1 – December 31, 2012

Leachate Recirculation Operations
Volume of Leachate Recirculated: 2,101,698 gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application: 228.4 acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: 459905 Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added: _____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application: _____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates: 459905 Mg/yr

Liquids Addition Initial Reporting

Past Years - Year 10 January 1 – December 31, 2011

Leachate Recirculation Operations
Volume of Leachate Recirculated:_____1,583,120_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Leachate Application:_____228.4_____ acres
Total Waste Disposed of in Area of Leachate Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _ 450882 __ Mg
Liquids Addition Operations (Under Approved RD&D Authorization) – if applicable
Volume of Liquids Added:_____ gallons/year
Attach records or engineering estimates that support volume of leachate recirculation.
Surface Area of Liquids Application:_____ acres
Total Waste Disposed of in Area of Liquids Application based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates: _____ Mg
Annual Waste Acceptance
Annual Waste Acceptance Rate in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates:__ 450882 ___ Mg/yr

Appendix I – Well Exceedance Documentation

December 3, 2021

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

Re: 75-Day Notification of Temperature Exceedance
Vasco Road Landfill, Livermore, California
Facility Number A5095

Dear Ms. Chau,

On behalf of Vasco Road Landfill (Vasco), SCS Engineers (SCS) hereby provides the Bay Area Air Quality Management District (BAAQMD) with a 75-day notification pursuant to the compliance provisions identified in Title 40 of the Code of Federal Regulations (CFR) 62.16724(k)(1) for temperature exceedance. On June 21, 2021, Vasco became subject to the California Emissions Guidelines (EG) Rule, which 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 federal National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart AAAA rule came into effect on September 27, 2021, superseding the major compliance provisions of the California EG Rule. However, because Vasco is still subject to BAAQMD Regulation 8, Rule 34 as well as the site's permit to operate (PTO) which incorporate the outdated New Source Performance Standards (NSPS) wellhead requirements, the site must still operate wells below 131 degrees Fahrenheit (°F), and we are providing this notification out of an abundance of caution until the outdated requirements can be removed from the PTO.

Well VREW2106 had an initial temperature exceedance reading of 135.5 °F on September 21, 2021. Corrective actions were initiated within 5 days; however, the well could not be brought back into compliance within 15 days. As required under 40 CFR 62.16724(k)(1), a root cause analysis was completed within 60 days from the original exceedance. All the steps for compliance were conducted, however, the well will not be able to come back into compliance within the 120-day timeframe from the original exceedance (January 19, 2022). As such, this notification is required and Vasco Road requests an extended corrective action timeline beyond 120-days for well VREW2106. Additionally, SCS has performed carbon monoxide (CO) monitoring at the well, which showed normal landfill decomposition. This notification is being submitted due to the 131°F limit in the BAAQMD rules and because Subpart OOO requirements for wellhead temperature corrective action were in effect when the original exceedance occurred. As the wellhead temperature is under 145°F, Vasco is in compliance with the federal NESHAP Subpart AAAA rule, which allows for wellhead temperatures of up to 145°F.

Please note that a Request for Higher Operating Value for the aforementioned well was submitted to the BAAQMD for review and approval on September 1, 2021.

If you have any questions, please contact Cassandra Drotman of SCS at (562) 637-4486.

Sincerely,

Meng Yuan
Staff Professional
SCS Engineers

Cassandra Drotman
Project Manager
SCS Engineers

cc: Antonia Gunner, Vasco Road
Lochlin Caffey, Vasco Road
Art Jones, SCSFS
Michael Calmes, SCSFS
Administrator, U.S. EPA Region 9

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	9/21/2021
Collection Device ID:	VREW2106
Temperature Reading:	135.5

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled. HOV needed		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☐ Yes	☒ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	9/21/2021
Collection Device ID:	VREW2106
Temperature Reading:	135.5

Corrective Action Analysis
Describe the corrective actions taken to remediate exceedance.
Well has been adjusted and tested. It is in hot area that is showing signs of flipped reaction. All components have been tested and ground is secure.

Implementation Schedule	
Expected Start Date:	9/21/2021
Expected Completion Date:	TBD
Provide a description of proposed repairs and/or remedial action required and supporting information for implementation timeframe.	
HOV application was submitted September 1, 2021. Lab analysis does not indicate signs of SSO, continued adjustment and monitoring of well for CO	

Final Steps		
Determine the required next steps.		
Is the remediation expected to take **less than 120 days** since initial exceedance per implementation schedule?	☐ Yes	☒ No
• If YES, send notification to state agency within 75 days of initial exceedance. Include Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule in the next Annual Report. • If NO, send Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule to state agency within 75 days for approval and include in next Annual Report.		

January 10, 2022

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

Re: 75-Day Notification of Temperature Exceedance
Vasco Road Landfill, Livermore, California
Facility Number A5095

Dear Ms. Chau;

On behalf of Vasco Road Landfill (Vasco Road), SCS Engineers (SCS) hereby provides the Bay Area Air Quality Management District (BAAQMD) with a 75-day notification pursuant to the compliance provisions identified in Title 40 of the Code of Federal Regulations (CFR) 62.16724(k)(1) for temperature exceedance. On June 21, 2021, Vasco Road became subject to the California Emissions Guidelines (EG) Rule, which 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 federal National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart AAAA rule came into effect on September 27, 2021, superseding the major compliance provisions of the California EG Rule. However, because Vasco Road is still subject to BAAQMD Regulation 8, Rule 34 as well as the site's permit to operate (PTO) which incorporate the outdated New Source Performance Standards (NSPS) wellhead requirements, the site must still operate wells below 131 degrees Fahrenheit (°F). The Federal NESHAP Subpart AAAA rule allows for wellhead temperatures of up to 145°F. We are providing this notification due to the wellhead temperature exceedance being over the limits of 131°F and 145°F.

Well VREW2109 at Vasco Road had initial temperature exceedance reading of 156.7°F on October 27, 2021. Corrective actions were initiated within 5 days; however, the well could not be corrected within 15 days. As required under 40 CFR 62.16724(k)(1), a root cause analysis was completed within 60 days from the original exceedance date. All the steps for compliance were conducted, however, the well cannot be corrected within the 120-day timeframe from the original exceedance (February 24, 2022). As such, Vasco Road requests an extended corrective action timeline beyond 120-days for well VREW2109. Additionally, SCS has performed carbon monoxide (CO) monitoring at the well, which showed normal landfill decomposition. On November 1, 2021, SCS submitted a higher operating value (HOV) request to allow for the operation of well VREW2109 above the temperature limit specified in Regulation 8, Rule 34 and the PTO to the BAAQMD. At the time of this submittal, Vasco Road has still not received a response from the BAAQMD on the HOV request.

If you have any questions, please contact Cassandra Drotman of SCS at (562) 637-4486.

Sincerely,

Meng Yuan
Staff Professional
SCS Engineers

Cassandra Drotman
Project Manager
SCS Engineers

cc: Antonia Gunner, Vasco Road
Lochlin Caffey, Vasco Road
Kelly Mcdonnell, Vasco Road
Art Jones, SCSFS
Michael Calmes, SCSFS
Administrator, U.S. EPA Region 9

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	10/27/2021
Collection Device ID:	VREW2109
Temperature Reading:	156.7 degrees Fahrenheit

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
The well and surrounding areas		
Describe what was determined to be the root cause of the exceedance.		
Exothermic reaction based on hydrogen generation		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☐ Yes	☒ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	10/27/2021
Collection Device ID:	VREW2109
Temperature Reading:	156.7 degrees Fahrenheit

Corrective Action Analysis
Describe the corrective actions taken to remediate exceedance.
Well has been adjusted and tested. It is in hot area that is showing signs of flipped reaction. All components have been tested and ground is secure.

Implementation Schedule	
Expected Start Date:	9/21/2021
Expected Completion Date:	TBD
Provide a description of proposed repairs and/or remedial action required and supporting information for implementation timeframe.	
HOV application was submitted September 1, 2021. Lab analysis does not indicate signs of SSO, continued adjustment and monitoring of well for CO.	

Final Steps		
Determine the required next steps.		
Is the remediation expected to take **less than 120 days** since initial exceedance per implementation schedule?	☐ Yes	☒ No
• If YES, send notification to state agency within 75 days of initial exceedance. Include Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule in the next Annual Report. • If NO, send Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule to state agency within 75 days for approval and include in next Annual Report.		

September 3, 2021

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

Re: 75-Day Notification of Temperature Exceedance
Vasco Road Landfill, Livermore, California
Facility Number A5095

Dear Ms. Chau;

On behalf of Vasco Road Landfill (Vasco Road), SCS Engineers (SCS) hereby provides the Bay Area Air Quality Management District (BAAQMD) with a 75-day notification pursuant to the compliance provisions identified in Title 40 of the Code of Federal Regulations (CFR) 62.16724(k)(1) for temperature exceedance.

Wells VREW2108 and VREW2109 had initial temperature exceedance readings of 161.1 and 160.7 degrees Fahrenheit (°F), respectively, on June 23, 2021. Corrective actions were initiated within 5 days; however, the well could not be brought back into compliance within 15 days. As required under 40 CFR 62.16724(k)(1), a root cause analysis was completed within 60 days from the original exceedance for both wells. All the steps for compliance were conducted, however, the wells will not be able to come back into compliance within the 120-day timeframe from the original exceedance (October 21, 2021). As such, this notification is required and Vasco Road requests an extended corrective action timeline beyond 120-days for wells VREW2108 and VREW2109. Please note that a Request for Higher Operating Value for the aforementioned wells was submitted to the BAAQMD for review and approval on September 1, 2021.

If you have any questions, please contact Cassandra Drotman of SCS at (562) 637-4486.

Sincerely,

Meng Yuan
Staff Professional
SCS Engineers

Cassandra Drotman
Project Manager
SCS Engineers

cc: Antonia Gunner, Vasco Road
Lochlin Caffey, Vasco Road
Art Jones, SCSFS
Michael Calmes, SCSFS
Administrator, U.S. EPA Region 9

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	6/23/2021
Collection Device ID:	VREW2108
Temperature Reading:	161.4

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well being brought on line. All components tested. CO testing and lab data pulled. CO at 55.1 ppmv based on lab results. HOV needed.		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☐ Yes	☒ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	6/23/2021
Collection Device ID:	VREW2108
Temperature Reading:	161.4

Corrective Action Analysis
Describe the corrective actions taken to remediate exceedance.
Laboratory analysis was performed to confirm that the elevated temperatures were not due to a potential subsurface oxidation (SSO) event, but were due to a thermogenic reaction and hydrogen generation.

Implementation Schedule	
Expected Start Date:	9/1/2021
Expected Completion Date:	N/A
Provide a description of proposed repairs and/or remedial action required and supporting information for implementation timeframe.	
On September 1, 2021, a Request for Higher Operating Value (HOV) for VREW2108 and VREW2019 was submitted to the Bay Area Air Quality Management District (BAAQMD).	

Final Steps		
Determine the required next steps.		
Is the remediation expected to take **less than 120 days** since initial exceedance per implementation schedule?	☐ Yes	☒ No

- If YES, send notification to state agency within 75 days of initial exceedance. Include Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule in the next Annual Report.
- If NO, send Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule to state agency within 75 days for approval and include in next Annual Report.

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	6/23/2021
Collection Device ID:	VREW2109
Temperature Reading:	160.7

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well being brought on line. All components tested. CO testing and lab data pulled. CO at 20.3 ppmv based on lab results. HOV needed.		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☐ Yes	☒ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	6/23/2021
Collection Device ID:	VREW2109
Temperature Reading:	160.7

Corrective Action Analysis
Describe the corrective actions taken to remediate exceedance.
Laboratory analysis was performed to confirm that the elevated temperatures were not due to a potential subsurface oxidation (SSO) event, but were due to a thermogenic reaction and hydrogen generation.

Implementation Schedule	
Expected Start Date:	9/1/2021
Expected Completion Date:	N/A
Provide a description of proposed repairs and/or remedial action required and supporting information for implementation timeframe.	
On September 1, 2021, a Request for Higher Operating Value (HOV) for VREW2108 and VREW2019 was submitted to the Bay Area Air Quality Management District (BAAQMD).	

Final Steps		
Determine the required next steps.		
Is the remediation expected to take **less than 120 days** since initial exceedance per implementation schedule?	☐ Yes	☒ No
• If YES, send notification to state agency within 75 days of initial exceedance. Include Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule in the next Annual Report. • If NO, send Root Cause Analysis, Corrective Action Analysis, and Implementation Schedule to state agency within 75 days for approval and include in next Annual Report.		

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	8/31/2021
Collection Device ID:	VREW2103
Temperature Reading:	137.3

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled. HOV requested on 9/1/2021		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☒ Yes	☐ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	9/28/2021
Collection Device ID:	VREW2103
Temperature Reading:	131.3

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled. HOV requested on 9/1/2021		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☒ Yes	☐ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	9/21/2021
Collection Device ID:	VREW2104
Temperature Reading:	131.7

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled.		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☒ Yes	☐ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	12/22/2021
Collection Device ID:	VREW2104
Temperature Reading:	134.6

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled.		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☒ Yes	☐ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		

TEMPERATURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	12/22/2021
Collection Device ID:	VREW2106
Temperature Reading:	135.2

Root Cause Analysis		
Has the owner/operator received approval from the state agency to operate at a temperature higher than 55°C (131°F) for this well?	☐ Yes	☒ No
• If YES, exempt as per 40 CFR 62.16720(a)(4)(iii)/ 40 CFR 63.1958(c). • If NO, continue the form.		
Describe what was inspected.		
New well. All components tested. CO testing and lab data pulled. HOV requested on 9/1/21.		
Describe what was determined to be the root cause of the exceedance.		
New well start up excessive heat		
Determine the required next steps.		
Was the temperature exceedance remediated within 60 days since the initial exceedance?	☒ Yes	☐ No
• If YES, keep records of Root Cause Analysis. No reporting required. • If NO, continue with Corrective Action Analysis and Implementation Plan and submit Notification to state agency within 75 days of initial exceedance.		