West Contra Costa Sanitary Landfill 1 Parr Blvd.,
Richmond, CA 94801 o 510.970.7246 republicservic

TV Tracking #: 722 (Semi-Annual)
TV Tracking #: 725 (Annual)

1. ☐ RECEIVED IN ENFORCEMENT: 05/31/2023

May 31, 2023

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 8-34 Semi-Annual Report, 40 CFR Part 63 Subpart AAAA Semi-Annual Report, Title V Semi-Annual Monitoring Report, and Title V Annual Compliance Certification Report West Contra Costa Sanitary Landfill, Richmond, California (Title V Facility No. A1840)

Dear Sir or Madam:

The West Contra Costa Sanitary Landfill (WCCSL) is pleased to submit the enclosed combined Bay Area Air Quality Management District (BAAQMD), Regulation 8, Rule 34 Semi-Annual Report; Semi-Annual Startup, Shutdown and Malfunction (SSM) Plan Report, Title V Semi-Annual Monitoring Report, and the Title V Annual Compliance Certification (ACC) to the BAAQMD and the U.S. Environmental Protection Agency (EPA) Region IX for WCCSL.

The Title V Semi-Annual Monitoring Report, the BAAQMD Rule 8-34 Semi-Annual Report, and the SSM Plan Report cover the period from November 1, 2022 through April 30, 2023. The Title V ACC Report covers the period from May 1, 2022 through April 30, 2023.

The Title V reports meet the requirements specified in the Title V permit, BAAQMD guidance on Title V report submittals, and Regulation 2, Rule 6. The Rule 8-34 report includes the information required by BAAQMD Rule 8-34-411 and also satisfies the requirements under the New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP) for landfills.

Please note that as of June 21, 2021, the facility complies with the new Emissions 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 the AB 32 Landfill Methane Rule (LMR), and specific portions of 40 Code of Federal Regulations (CFR) Part 62 Subpart OOO. As of September 27, 2021, the federal NESHAP 40 CFR Part 63, Subpart AAAA rule came into effect, and WCCSL is complying with the major compliance provisions of subpart AAAA in lieu of the California EG Rule, as allowed by the regulations. The Title V reports and the SSM Plan report each includes a certification by the responsible official for WCCSL.

If you have any questions regarding this submittal, please do not hesitate to call me at (510) 970-7248 or email me at EBaquerizo@republicservices.com.

Sincerely,

Ed Baquerizo
Environmental Manager
West Contra Costa Sanitary Landfill

cc: Ken Lewis, West Contra Costa Sanitary Landfill
Maria Bowen, SCS Engineers
Hannah Morse, SCS Engineers

NESHAP/NSPS/BAAQMD Rule 8-34 Semi-Annual Report, SSM Plan Semi-Annual Report, Title V Semi-Annual Report and Title V Annual Certification
West Contra Costa Sanitary Landfill
Richmond, California (Title V Facility No. A1840)

Prepared for:

West Contra Costa Sanitary Landfill
1 Parr Blvd.
Richmond, CA 94109

For Submittal to:

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

SCS ENGINEERS

01204082.02 Task 1 | May 2023

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

This submittal, consisting of the National Emission Standards for Hazardous Air Pollutants (NESHAP)/New Source Performance Standards (NSPS)/Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report, the Semi-Annual Startup, Shutdown, and Malfunction Plan Report, Title V Semi-Annual Monitoring Report, and Title V Annual Compliance Certification for the West Contra Costa Sanitary Landfill in Richmond, California, dated May 2023, was prepared and reviewed by the following:

Hannah Morse
Associate Staff Professional
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. NESHAP/NSPS/BAAQMD RULE 8-34 SEMI-ANNUAL REPORT

1.0 INTRODUCTION

On behalf of West Contra Costa Sanitary Landfill, Inc. (WCCSL), SCS Engineers (SCS) prepared this combined this National Emission Standards for Hazardous Air Pollutants (NESHAP), New Source Performance Standard (NSPS), and Bay Area Air Quality Management District (BAAQMD or District) Rule 8-34 Semi-Annual Report (SAR), and Semi-Annual Startup, Shutdown and Malfunction (SSM) Plan Report pertaining to WCCSL for the period of November 1, 2022 through April 30, 2023 to the BAAQMD and the United States Environmental Protection Agency (EPA).

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 the 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 Code of Federal Regulations (CFR) 60, Subparts XXX (which were updated NSPS for Municipal Solid Waste (MSW) landfills promulgated in 2016) as well as removing the SSM Plan requirements. However, because the Title V Permit references Subpart WWW and SSM reporting, this semi-annual report will continue to include Subpart WWW and SSM requirements. References to Subpart WWW and SSM will be removed from all reports after a new Title V Permit is issued removing references to Subpart WWW and updating applicable regulations, or we otherwise obtain approval from the BAAQMD to only comply with the new requirements.

This Semi-Annual report meets the requirements of the revised federal NESHAP 40 CFR Part 63, Subpart AAAA rule for MSW landfills, which went into effect on September 27, 2021, and complies with the requirements specified in WCCSL's Title V permit. WCCSL chooses to comply with the revised NESHAP Rule in lieu of complying with the Subpart OOO provisions of the California EG Rule, which is allowed by the regulations.

Please note, the Initial NESHAP report was submitted on March 22, 2022, fulfilling the requirements under 40 CFR 63.1981(h).

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

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

- All collection system and/or component downtime and reasons for the shutdown (8-34-501.1).
- All emission control system downtime and reason for the shutdown (8-34-501.2).
- Continuous temperature monitoring and dates of any excesses (8-34-501.3 and 507).
- Testing performed to satisfy the requirements of this Rule (8-34-501.4).

- Monthly LFG flow rates and excesses (8-34-501.5).
- Collection and emission control system leak testing and any excesses, action taken to correct excesses, and re-monitored concentrations (8-34-501.6 and 503).
- Landfill surface monitoring, location of excesses, excess concentration, date discovered, actions taken to repair the excess, and re-monitored concentrations (8-34-501.6 and 506).
- Annual waste acceptance rate and the current amount of waste in-place (8-34-501.7).
- Records of non-degradable waste if area is excluded from LFG collection (8-34-501.8).
- Well head monitoring including gauge pressure, LFG temperature, and LFG oxygen concentration (8-34-501.9 and 505).
- Continuous flow monitoring (8-34-501.10).

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

2.0 SITE BACKGROUND INFORMATION

WCCSL is a closed combined municipal solid waste (MSW) (Class II) and hazardous waste landfill (Class I) located in Richmond, California. The Class II landfill accepted MSW, construction and demolition (C&D) debris, de-watered sludge, and a small (less than one [1] percent) quantity of Group 1 hazardous wastes, including asbestos and infectious wastes. The Class I Hazardous Waste Management Facility (HWMF) is adjacent to the Class II landfill. The Class I LFG GCCS was installed in 2004 and began operation in 2005. A layer of MSW was placed in the Class I landfill directly preceding closure; therefore, a GCCS was installed to control the LFG from the decomposing MSW. The Class II GCCS was originally installed in 1985 and was partially replaced in October 2008. The new system began full operation in March 2009. As of December 15, 2012, the GCCS for Class I and Class II have been combined.

2.1 EXISTING AIR PERMITS

WCCSL maintains a BAAQMD permit to operate (PTO) (Plant No. 1840). PTO Condition No. 25293 includes requirements for the closed Class I and II waste disposal areas and the associated wellfield, collection system, and flares A-161 (primary flare) and A-8 (backup flare). PTO Condition No. 20754 includes requirements for the HWMF and the associated wellfield components. WCCSL also maintains BAAQMD PTOs for three LFG-fired engines (S-5, S-6, and S-37). S-5 and S-6 are permitted under PTO Condition No. 5771 and S-37 is permitted under PTO Condition No. 17812.

WCCSL also maintains BAAQMD PTOs for a Leachate Treatment System (Condition No. 25004), a Solid Waste Transfer Station (Condition No. 22792), and an Authority to Construct (ATC) for a Covered Aerated Static Pile Composting (CASP) operation (Conditions No. 26086 through 26088), as well as PTOs for other various processing equipment.

Condition Nos. 25293 and 20754 incorporate all applicable requirements from NSPS Subpart WWW and from BAAQMD Rule 8-34, which are addressed in this report. WCCSL also maintains a Major Facility Review (MFR or Title V) Permit (Facility No. A1840), which expired on December 19, 2015. A timely and complete renewal application was completed and submitted to the BAAQMD prior to June 19, 2015, as required. The renewal application is still under review by the BAAQMD. As such, WCCSL is operating under a permit shield pending issuance of the new MFR Permit.

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

2.2 EXISTING LANDFILL GAS COLLECTION AND CONTROL SYSTEM

The GCCS at WCCSL consists of extraction wells used to collect the LFG from within the landfill (the "wellfield") and a piping system (the "collection system") used to convey the collected LFG to the control systems for destruction. The LFG is extracted from the landfill through a combination of vertical gas extraction wells and horizontal gas extraction trenches/pipes, as well as leachate collection system components.

The LFG is controlled by the emission control system. The emission control system consists of a LFG-to-energy (LFGTE) facility, which consists of three lean burn internal combustion (IC) engines (S-5, S-6, S-37), an enclosed flare (A-161), and a back-up flare (A-8). The S-5 engine has been out of service since December 2017, and the S-37 engine is no longer able to operate due to a catastrophic failure in March 2018. On January 21, 2021, the S-6 engine at WCCSL became inoperable due to a mechanical issue. For the duration of the reporting period, none of the engines where operational.

The A-161 Flare was installed in November 2017 and replaced the A-120 Flare. The A-8 Flare acts as a backup control device to the A-161 Flare.

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

3.0 REPORTING REQUIREMENTS

This report includes the following information as required by the updated rules, covering the reporting period of November 1, 2022 through April 30, 2023.

Reporting Requirements, Corresponding Regulatory References

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.757(f), (g)	**40 CFR 63.1981(h), (i), (j), (k), (l)**
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.
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 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.
All periods when the collection system was not operating in excess of 5 days.	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 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).
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).
--	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.
--	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

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.757(f), (g)	40 CFR 63.1981(h), (i), (j), (k), (l)
	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.
–	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.

3.1 MONITORED PARAMETERS

The following information is required to be monitored:

Monitored Parameters, Corresponding Regulatory References

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.756(a), (b), (c), (d)	40 CFR 63.1961(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).
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.
Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C	Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C (145

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.756(a), (b), (c), (d)	**40 CFR 63.1961(a), (b), (f)**
(131 degrees F) to comply with 40 CFR 60.753 (c).	degrees F) to comply with 40 CFR 63.1961(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)).
Landfill surface emissions monitoring was performed on a quarterly basis to measure 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).	Landfill surface emissions monitoring was performed on a quarterly basis to measure concentrations of TOC as 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)).
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).
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

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.756(a), (b), (c), (d)	40 CFR 63.1961(a), (b), (f)
	system quality assurance or quality control activities (in compliance with 40 CFR 63.1961(h)).

4.0 MONITORING AND RECORDS

4.1 CONTINUOUSLY MONITORED PARAMETERS

According to BAAQMD Rule 8-34-301.1, the GCCS must be operated continuously. To comply with this requirement, the landfill owner/operator is required to maintain full-time operation of the LFG collection system and control system, as well as individual extraction wells. Downtime for any of these components must be reported in the Rule 8-34 Semi-Annual Report. This information is summarized below and in the attached tables. Records of continuously monitored parameters are available for review at the site.

4.1.1 Gas Extraction System Downtime

During the reporting period, the LFG extraction system was off-line on twenty-four (24) occasions for a total of 89.03 hours. Shutdowns involved pre-programmed or manual system shutdowns for inspection, maintenance and/or repair of the GCCS, and thus meet the criteria for allowed GCCS downtime, as specified in Rule 8-34-113 and in accordance with the BAAQMD November 5, 2018 Compliance Advisory, with the exception of one event. This event was due to blower malfunction and auto valve failure, which resulted in shutdown of the GCCS that occurred on March 14-15, 2023 (RCA IDs 08R50 and 08R51).This event was reported to the BAAQMD as a reportable compliance activity (RCA) and breakdown relief was requested. Due to the short duration of this event, there is no reason to believe there were any excess LFG surface emissions during the GCCS downtime.

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

GCCS's are "closed" systems designed and constructed with mechanisms to prevent the uncontrolled release of LFG to the atmosphere. These automated mechanisms, as well additional manual shutdown procedures, are standard work practices that are implemented during all system shutdowns to minimize emissions of methane to the atmosphere. Collected LFG was at no time diverted from the flare nor engines during GCCS downtime, because the blowers automatically shut down whenever the flare or engines shut down. Thus, collected LFG was at no time diverted from the control devices during the reporting period.

4.1.2 Emission Control System Downtime

A-161 Flare

During the reporting period, the A-161 Flare was off-line on several occasions. A summary of the A-161 Flare downtime is provided in **Table 1b**, including the date, reason for the downtime, and the

total elapsed time for each event. During the reporting period, downtime for the A-161 Flare occurred over a cumulative period of approximately 89.03 hours. Emission control system downtime records are available for review at the site.

A-8 Backup Flare

During the reporting period, the A-8 Flare was off-line the entire reporting. A summary of the A-8 Flare downtime is provided in **Table 1c**, including the date, reason for the downtime, and the total elapsed time for each event. During the reporting period, downtime for the A-8 Flare occurred over a cumulative period of approximately 4,344 hours, reflecting its backup status. Emission control system downtime records are available for review at the site.

LFGTE Facility

The LFGTE facility was off-line the entirety of the reporting period. Please note that the S-5 engine has been out of service since December 2017, the S-37 engine is no longer able to operate due to a catastrophic failure which occurred in March 2018, and the S-6 engine became inoperable due to a mechanical issue in January 2022. Therefore, none of the engines remain operational.

During the reporting period, the entire LFGTE facility was offline for a total of 4,320 hours. Downtime logs are included in **Appendix C**.

4.1.3 Individual Well Downtime

Individual well downtime is permitted in accordance with Condition 20754, Part 2(c) of WCCSL's permit which states a minimum of eight (8) horizontal collectors within the Class I Landfill shall be operated at any one time. A horizontal collector or leachate/gas extraction well may be temporarily disconnected from the vacuum system if the methane concentration detected in the collector or well is less than 5% by volume and the oxygen concentration detected in the collector or well is 15% by volume or more. There are no limits for how long the horizontal collectors can remain offline as long as the methane content does not exceed 5%.

In addition, well downtime is permitted in accordance with Condition 25293(7)(a) through (c) of WCCSL's for the wells located in the Class II Landfill. Condition 25293(7)(a) allows an unspecified number of leachate collection and recovery system (LCRS) components to be disconnected from the vacuum system when methane concentration in the component is less than 5% by volume, or when oxygen concentration in the component is 15% by volume or more, or when abatement is no longer necessary to maintain compliance with applicable component and surface leak limits. Condition 25293(7)(b) allows no more than five (5) vertical wells be temporarily disconnected from the vacuum system as long as the total vacuum system disconnection time does not exceed 120 days during any 12-month period. Condition 25293(7)(c) states that an unspecified number of horizontal collectors can be temporarily disconnected from the vacuum system when methane concentration in the component is less than 5% by volume, or when oxygen concentration is the component is 15% by volume or more. There are no limits for how long the LCRS components or horizontal collectors can remain offline as long as the methane content does not exceed 5%.

As required per Condition 20754, Part 2(v)(5) and Condition 25293(7)(c)(iv), collection system components that are temporarily disconnected from the vacuum system are required to be monitored for component leaks: within seven days after being disconnected for Class I Landfill components and within ten days after being disconnected for Class II Landfill component. In

addition, follow-up component leak testing is required within 30 days of disconnecting both Class I and Class II Landfill components from vacuum. If a component leak is detected at a component, all necessary steps to reduce the leak below the 8-34 1,000 parts per million by volume (ppm_v) leak limit is required, which typically consists of bringing the well back online. During the reporting period, component leak monitoring was conducted in accordance with these permit conditions.

All well disconnections were in compliance with the conditions specified above.

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

4.1.4 Flow Meter and Temperature Gauge Downtime

The continuous operation of the GCCS is measured through the continuous monitoring of LFG flow to each flare and flare combustion temperature. As required by Rule 8-34 and the updated NESHAP rule, the A-161 and A-8 Flares at WCCSL are equipped with flow measuring devices and temperature gauges that provide continuous readout displays using digital chart recorders. During the reporting period, the flow meter(s) and temperature gauge(s)/recorders at the flare station did not go out of operation due to malfunction or other breakdown conditions.

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

4.1.5 Flare Combustion Zone Temperature

WCCSL is required by permit condition No. 25293, Part 9 to operate the A-161 and A-8 Flares in such a manner that the combustion zone temperature within the flare does not drop below the permitted limit of 1,400 degrees Fahrenheit (°F) (averaged over a 3-hour period), or a higher temperature based on the most recent source test.

From November 1, 2022 through January 26, 2023, the minimum temperature above which the A-161 Flare was required to operate was 1,452°F (source test results minus 50°F), based on the December 17, 2021 source test (test report dated January 27, 2022). From January 27, 2023 through April 30, 2023, the minimum temperature above which the A-161 Flare was required to operate was 1,446°F (source test results 1,496 minus 50°F), based on the December 16, 2022 source test (test report dated January 27, 2023).

From November 1, 2022 through April 30, 2023, the minimum temperature above which the A-8 Flare was required to operate was 1,575°F (source test results minus 50°F), based on the December 28, 2020 source test (test report dated February 10, 2021). The A-8 Flare did not operate during the reporting period.

Please note, under the updated NESHAP AAAA rule, the minimum combustion temperature limit is the source test temperature minus 82°F.

During the reporting period, the A-161 and A-8 Flares operated above the minimum established temperatures at all times when the flares were operational.

Flare temperature records are available for review at the site. Excerpts from the January 27, 2023 source test report, summarizing the test results for the flares, is included in **Appendix D**.

4.2 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 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 are provided in **Appendix E** and are available for review at the site.

4.2.1 Fourth Quarter 2022 Monitoring

SCS Field Services (SCSFS) personnel conducted the component leak monitoring of the flare station, LFGTE Plant, waste water treatment plant, and wellfield in conjunction with quarterly SEM on October 4, 2022. No component leaks above 1,000 ppm_v were detected at the flare station, wellfield, or LFGTE facility during fourth quarter 2022 monitoring event. These results are included in **Appendix E**.

4.2.2 First Quarter 2023 Monitoring

SCSFS personnel conducted the component leak monitoring of flare station, LFGTE Plant, waste water treatment plant, and wellfield in conjunction with quarterly SEM on January 19, 2023. No component leaks above 1,000 ppm_v were detected at the flare station, wellfield, or LFGTE facility during first quarter 2023 monitoring event. These results are included in **Appendix E**.

4.3 CONTROL EFFICIENCY

Flare A-8

LFG Flare A-8 was tested on December 28, 2020 to demonstrate compliance with the control efficiency standard of 98 percent non-methane organic compound (NMOC) destruction efficiency or outlet concentration of 30 ppm_v of NMOC as methane, corrected to 3% oxygen (for flares) as required by §63.1959(b)(2)(iii) and BAAQMD Rules 8-34-301.3, 8-34-412, and 8-34-501.4. The NMOC destruction efficiency for the A-8 Flare during the December 2020 source test was measured to be 99.46 percent by weight, and the NMOC as methane concentration in the flare outlet was <1.4 ppm_v. As such, Flare A-8 is in compliance with the aforementioned rules. Flare A-8 is only due for source testing every three (3) years and will be required to test again in December of 2023.

Excerpts from the December 2020 source test report dated February 10, 2021, summarizing the test results, were included in a previous report.

Flare A-161

LFG Flare A-161 was tested on December 16, 2022 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, corrected to 3% oxygen (for flares) as required by §63.1959(b)(2)(iii) and BAAQMD Rules 8-34-301.3, 8-34-412, and 8-34-501.4. The NMOC destruction efficiency for the A-161 Flare during the December 2022 source test was measured to be 98.43 percent by weight, and the NMOC as methane concentration in the flare outlet was <2.5 ppm_v. As such, Flare A-161 is in compliance with the aforementioned rules.

Excerpts from the A-161 Flare December 2022 source test report dated January 27, 2023, summarizing the test results, are included as **Appendix D**. The next test will be conducted in December 2023.

IC Engines (S-5, S-6, and S-37)

The IC engines are required to demonstrate compliance with the control efficiency standard of 97 percent NMOC destruction efficiency or outlet concentration of 120 ppm_v of NMOC as methane, corrected to 3% oxygen (for energy recovery devices) as required by §63.1959(b)(2)(iii) and BAAQMD Rules 8-34-301.4, 8-34-412, and 8-34-501.4. However, during the reporting period none of the engines were in operation. The S-5 engine has been out of service since December 2017, the S-37 engine is no longer able to operate due to catastrophic failure in March 2018, and the S-6 engine became inoperable due to a mechanical issue in January 2022.WCCSL is currently evaluating the feasibility of repairing the S-6 engine so that it can return to operation in the gas plant as a secondary gas abatement mechanism. An excerpt of the most recent S-6 engine source test report was included in the previous report.

As none of the engines were operational during the reporting period, source testing results will only be updated when the engines are once again operational.

4.4 LANDFILL SURFACE EMISSIONS MONITORING

Surface emissions monitoring (SEM) was conducted at WCCSL on a quarterly basis during the reporting period, in accordance with §63.1961(f) and BAAQMD Rule 8-34-303 and 8-34-506. Moreover, SEM was conducted in accordance with Section § 95465 under the LMR rule, satisfying the monitoring requirements under the EG rule in California.

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 E**.

4.4.1 Fourth Quarter 2022 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 500 ppm_v above background on October 3 and 4, 2022. During the fourth quarter 2022 monitoring event, four (4) locations exceeded the 500 ppm_v surface emissions maximum concentration. The locations had returned to compliance by the required first 10-Day and 1-month follow-up monitoring that was performed on October 13, and November 3, 2022, respectively. As all locations return to compliance, subsequent re-monitoring was not required.

The results of the fourth quarter 2022 monitoring event is provided in **Appendix E.**

4.4.2 First Quarter 2023 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 500 ppm_v on January 19, 2023. No surface emissions in excess of 500 ppm_v were detected during the first quarter 2023 monitoring event. As there was no surface emissions in excess of 500 ppm_v during the quarter, subsequent re-monitoring was not required.

The results of the first quarter 2023 monitoring event is provided in **Appendix E**.

4.5 WELLHEAD MONTHLY MONITORING

Monthly wellhead monitoring for pressure, temperature, and oxygen content was conducted by SCS personnel during the reporting period to comply with § 63.1981(h)(1)(i) and (ii) and BAAQMD Rule 8-34-305 and 9-34-414. Please note the updated NESHAP rule does not have an oxygen limit.

The results of this monitoring are summarized below.

4.5.1 Pressure

The majority of the operational extraction wells were under negative pressure during the monitoring events conducted during the reporting period, in accordance with BAAQMD Rule 8-34-305 and 8-34-414. For any wells that exhibited positive pressure during this reporting period, the identification number and dates on which each well was operating with positive pressure are provided in Table 3. The table also includes corrective action and re-monitoring results. In all instances, corrective action and re-monitoring were performed in accordance with the 5- and 15-day requirements specified in the NESHAP and LMR regulations and in Rule 8-34. Root cause analysis forms were completed for wells that had pressure exceedances that exceeded 15 days per NESHAP requirements. Refer to Appendix F for the root cause analysis forms. There were no instances where pressure exceedances exceeded 60 days.

Well WCLF0842 demonstrated a positive pressure reading during the final monitoring event of the previous reporting period. This well was brought back into compliance during the reporting period.

4.5.2 Oxygen

WCCSL has elected to use oxygen as its compliance standard under Rule 8-34-305, rather than nitrogen.

Note that 40 CFR 62.16716, which the site became subject to on June 21, 2021, and 40 CFR 63.1961, which the site became subject to on September 27, 2021, do not have an oxygen limit requirement. The site will continue to follow 40 CFR 60.753(c) until the Title V Permit is updated to reflect these changes. After that, the site will comply with the oxygen limit in BAAQMD Rule 8-34 only.

As of October 31, 2020, the following wells are approved to operate under at a higher operating value (HOV) of 15 percent (%) oxygen by volume pursuant to Permit Condition Number 20754 Part 2(c)(ii) and Condition Number 25293 Part 7(d)(iii):

- WCLFH01A, WCLFH01B, WCLFH02A, WCLFH02B, WCLFH03A, WCLFH03B, WCLFH04A, WCLFH04B, WCLFH05A, WCLFH05B, WCLFH06B, WCLFH07A, WCLFH08A, WCLFH08B, WCLFH09B, WCLFH10A, WCLFH10B, WCLFR001, WCLFR002, WCLFR003, WCLFR004, WCLFR005, WCLFR006, WCLFR007, WCLFR008, WCLFR009, WCLFR010, WCLFR011, WCLFR012, WCLFR013, WCLFR014, WCLFR015, and WCLFR016.

The majority of the wells were operating within their respective regulatory limits of 5% or 15% 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 4.

As of the end of the reporting period, all of the operating wells were operating with an oxygen concentration below their respective 5% or 15% limits except for wells WCLF0601, WCLF0602, WCLF0807, WCLF0815, WCLF0822, WCLF0832, WCLF0839, WCLF0844, WCLF0850, WCLF601D,

WCLFH01A, WCLFH01B, WCLFH02B, WCLFH03A, WCLFH03B, WCLFH04A, WCLFH04B, WCLFH06A, WCLFH06B, WCLFH07B, WCLFH08A, WCLFH08B, WCLFH09A, WCLFR003, WCLFR008, WCLFR015 and WCLFR016.These wells will be returned to below their respective 5% or 15% limit by the applicable compliance dates, as specified in BAAQMD Rule 8-34-414, and compliance will be documented in the next semi-annual report. Alternatively, if these wells continue to demonstrate high oxygen readings and low methane concentrations (less than 5%), they may be temporarily taken offline prior to the 120-day deadline pursuant to Condition Numbers 20754 Part 2(c)(iii), 25293 Part 7(b)(iii) and 25293 Part 7(c)(ii). Note, wells were subject to the oxygen exceedance level of 5 percent until June 21, 2021 and September 27, 2021 under the NSPS Subpart WWW, after this date the Landfill was subject to the California state plan/Subpart OOO and the updated NESHAP AAAA which requires monthly monitoring of oxygen but oxygen in excess of 5% is no longer is an exceedance, therefore the oxygen requirement after June 21, 2021 is a District only requirement, not federally enforceable.

As of the end of the previous reporting period, wells WCLF601D, WCLF0807, WCLF082, WCLF0832, WCLFH01A, WCLFH02A, WCLFH04B, WCLFH05A, WCLFH08B, WCLFH09B, and WCLFR006 were operating with an oxygen concentration above their respective 5% or 15% limits. All of these wells were back in compliance or taken offline within the timeline specified in 8-34-414 or were taken offline pursuant to Condition Numbers 20754 Part 2(c)(iii), 25293 Part 7(b)(iii) and 25293 Part 7(c)(ii).

4.5.3 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.

All wells were operating under the temperature limit of 131°F during the monitoring events conducted during the reporting period.

4.5.4 Root Cause/Corrective Action Analysis

40 CFR 63.1981(j) and the 40 CFR 62.16724(k) require notifications for corrective action that will exceed 60 days to implement. Such corrective actions also require a "root cause analysis" 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.

Root cause analysis forms were completed for wells that had pressure exceedances that exceeded 15 days. Refer to **Appendix F** for the root cause analysis forms. There were no instances where pressure exceedances exceeded 60 days.

4.6 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 personnel in conjunction with the wellhead monitoring on the following dates:

- November 1, 3, 7, 8, 17, 22, 23, 29, and 30;
- December 2, 5, 6, 8, 12, 14, 15, 16, 19, 20, 28, and 29, 2022;
- January 5, 12, 18, 19, 20, 24, 26, and 31;
- February 3, 6, 7, 8, 13, 14, 15, 21, and 27;
- March 3, 7, 16, 23, 24, 28, 28, and 31; and
- April 3, 4, 6, 7, 11, 13, 14, 18, 20, 25, 27 and 29, 2023

During the reporting period, the observations during these monthly monitoring events indicated the landfill surface was in good condition. In the event visual evidence suggested otherwise, the surface was promptly repaired.

4.7 GAS GENERATION ESTIMATE AND MONTHLY LANDFILL GAS FLOW RATES

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

4.8 ANNUAL WASTE ACCEPTANCE RATE AND REFUSE IN PLACE

As of 2010, the WCCSL Class I and Class II Landfills are closed and no longer accept waste. The waste in place in each landfill as of closure is approximately 376,110 tons and 12,330,387 tons, respectively.

4.8.1 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. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable. A layer of MSW was placed in the Class I Hazardous Waste Material Facility (HWMF) landfill directly preceding closure in which the GCCS was installed; however, the waste below is generally considered non-degradable waste.

4.9 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.

4.10 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. Republic 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 Republic, there were no parameter exceedances of the Treatment System Monitoring Plan.

The LFGTE facility at WCCSL is not equipped with a bypass line.

SECTION II. SSM PLAN REPORT

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

WCCSL maintains a SSM Plan which describes the procedures for operating and maintaining the affected elements of the GCCS during startup, shutdown, and malfunction (SSM). Please note on September 27, 2021, the updated NESHAP took effect and SSM recordkeeping and reporting requirements were no longer applicable after that. However, because SSM reporting requirements are still in the Title V permit, we will continue to report until the conditions are removed.

The SSM events that occurred during this reporting period of November 1, 2022 through April 30, 2023 are documented below.

- During the reporting period, the GCCS had twenty-four (24) SSM events. Details of these events are included in **Table 1a**.
- During the reporting period, A-161 Flare had twenty-four (24) SSM events. Details of these events are included in **Table 1b**.
- During the reporting period, A-8 Flare did not operat during the reporting period, therefore, had no SSM events. Details are included in **Table 1c**.
- The S-6, S-5 and S-37 Engines did not operate during the reporting period, therefore the engines did not have SSM events. Details are included in **Appendix C**.
- During the reporting period, twelve (12) wellfield SSM events occurred. In addition, there were seven (7) wells that remained offline as of the end of the reporting period. Details are included **Table 2**.
- During the reporting period, there were no SSM events associated with the LFG monitoring equipment (e.g. flow measuring/recording device, temperature measuring/recording device).
- In all events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan. There were no deviations from the SSM plan.
- Exceedances were not identified during the reporting period for any applicable emission limitation in the landfills NESHAP (§63.10(d)(5)(i)).
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)(3)(viii)).
- A copy of the SSM Plan and all revisions/addenda are kept on file at the facility for at least five (5) years and are available to appropriate regulatory agency personnel for inspection.

SECTION III. TITLE V SEMI-ANNUAL REPORT

As specified in 40 Code of Federal Regulation (CFR) Part 70, reports of any required monitoring must be submitted at least every 6 months. All instances of deviations from permit requirements for the semi-annual reporting period, specified in the Landfill's Title V Permit as November 1 through April 30 and May 1 through October 31, must be clearly identified in each report. This Title V Report covers the November 1, 2022 through April 30, 2023 reporting period.

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

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

SECTION IV. TITLE V ANNUAL COMPLIANCE CERTIFICATION

A Title V Annual Compliance Certification has been prepared for the annual period specified in the Title V permit. The annual certification period for this report extends from May 1, 2022 to April 30, 2023.

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

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

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

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

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

Tables

Table 1a. GCCS Downtime
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

GCCS Shutdown	Restarted	Downtime Hours	Reason for Downtime	Corrective Actions Taken
There were no GCCS downtime events in November 2022				
12/6/22 13:22	12/6/22 14:08	0.8	Maintenance/Rotating Primary Blower (113 down time)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
12/8/22 10:28	12/8/22 11:38	1.2	Manual Shutdown for Flow Meter Calibration (113 downtime)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
12/15/22 9:22	12/15/22 10:08	0.8	Maintenance on Pumping System (113 down time)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
12/16/22 10:46	12/16/22 11:04	0.3	Maintenance on Pumping System (113 down time)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
12/22/22 14:48	12/22/22 16:44	1.9	Maintenance on Pumping System (113 down time)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
1/4/23 18:00	1/4/23 19:58	2.0	Preprogrammed Parametric Shut Down Triggered by the VFD (113 down time)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
1/7/23 16:48	1/7/23 18:36	1.8	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
1/10/23 2:12	1/10/23 10:48	8.6	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
1/24/23 20:02	1/25/23 1:14	5.2	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
2/3/23 13:34	2/3/23 13:40	0.1	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
2/10/23 17:02	2/10/23 21:48	4.8	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
2/11/23 13:32	2/11/23 13:38	0.1	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
2/11/23 23:26	2/12/23 1:38	2.2	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
2/18/23 18:02	2/18/23 21:08	3.1	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/14/23 11:42	**3/15/23 18:20**	**30.6**	**Maintenance on Control System**	**Flare was inspected and adjusted before the technician manually re-started the flare.**
3/15/23 18:26	3/15/23 18:30	0.1	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/21/23 14:24	3/21/23 18:20	3.9	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/22/23 12:52	3/22/23 20:14	7.4	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/23/23 8:44	3/23/23 12:30	3.8	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/23/23 15:22	3/23/23 15:52	0.5	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/23/23 18:18	3/23/23 18:38	0.3	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
3/23/23 18:46	3/23/23 20:14	1.5	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
4/27/23 12:44	4/27/23 17:05	4.4	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
4/28/23 9:04	4/28/23 12:55	3.8	Air Compressor Troubleshooting and Service (113)	Shutdown was pre-programmed to avoid non-compliance with temperature limit. Flare was inspected and adjusted before returning to service and was restarted.
	Total:	**89.03**		

Notes:

Events in bold type denotes malfunctions as defined in the SSM Plan/NESHAP Regulation.

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

All events listed involved inspection and/or maintenance activities prior to startup (or as soon as feasible following programmed startups) in accordance with Rule 8-34-113 requirements and the BAAQMD Compliance Advisory for Municipal Solid Waste Landfills, dated November 5, 2018, with the exception of the event that occurred on 3/14/23 which involved air compressor malfunctions and auto valve failure. These events were considered reportable compliance activity (RCA) and breakdown relief was requested.

Table 1b. Flare (A-161) Downtime
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Shutdown	Startup	Downtime Hours	Reason for Downtime
There were no A-161 flare downtime events in November.			
12/6/22 13:22	12/6/22 14:08	0.8	Maintenance/Rotating Primary Blower (113)
12/8/22 10:28	12/8/22 11:38	1.2	Manual Shutdown for Flow Meter Calibration (113)
12/15/22 9:22	12/15/22 10:08	0.8	Maintenance on Pumping System (113)
12/16/22 10:46	12/16/22 11:04	0.3	Maintenance on Pumping System (113)
12/22/22 14:48	12/22/22 16:44	1.9	Maintenance on Pumping System (113)
1/4/23 18:00	1/4/23 19:58	2.0	Preprogrammed Parametric Shut Down Triggered by the VFD (113
1/7/23 16:48	1/7/23 18:36	1.8	Air Compressor Troubleshooting and Service (113)
1/10/23 2:12	1/10/23 10:48	8.6	Air Compressor Troubleshooting and Service (113)
1/24/23 20:02	1/25/23 1:14	5.2	Air Compressor Troubleshooting and Service (113)
2/3/23 13:34	2/3/23 13:40	0.1	Air Compressor Troubleshooting and Service (113)
2/10/23 17:02	2/10/23 21:48	4.8	Air Compressor Troubleshooting and Service (113)
2/11/23 13:32	2/11/23 13:38	0.1	Air Compressor Troubleshooting and Service (113)
2/11/23 23:26	2/12/23 1:38	2.2	Air Compressor Troubleshooting and Service (113)
2/18/23 18:02	2/18/23 21:08	3.1	Air Compressor Troubleshooting and Service (113)
3/14/23 11:42	**3/15/23 18:20**	**30.6**	**Maintenance on Control System (113)**
3/15/23 18:26	3/15/23 18:30	0.1	Air Compressor Troubleshooting and Service (113)
3/21/23 14:24	3/21/23 18:20	3.9	Air Compressor Troubleshooting and Service (113)
3/22/23 12:52	3/22/23 20:14	7.4	Air Compressor Troubleshooting and Service (113)
3/23/23 8:44	3/23/23 12:30	3.8	Air Compressor Troubleshooting and Service (113)
3/23/23 15:22	3/23/23 15:52	0.5	Air Compressor Troubleshooting and Service (113)
3/23/23 18:18	3/23/23 18:38	0.3	Air Compressor Troubleshooting and Service (113)
3/23/23 18:46	3/23/23 20:14	1.5	Air Compressor Troubleshooting and Service (113)
4/27/23 12:44	4/27/23 17:05	4.4	Air Compressor Troubleshooting and Service (113)
4/28/23 9:04	4/28/23 12:55	3.8	Air Compressor Troubleshooting and Service (113)
Total		**89.03**	

Notes:

Events in bold type denotes malfunctions as defined in the SSM Plan/NESHAP Regulation.

All events listed involved inspection and/or maintenance activities prior to startup (or as soon as feasible following programmed startups) in accordance with Rule 8-34-113 requirements and the BAAQMD Compliance Advisory for Municipal Solid Waste Landfills, dated November 5, 2018, with the exception of the events that occurred on 3/14/23 which involved air compressor malfunctions and auto valve failure. These events were considered reportable compliance activity (RCA) and breakdown relief was requested.

Table 1c. Backup Flare (A-8) Downtime
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Shutdown*	Startup*	Downtime Hours	Reason for Downtime
11/1/2022 0:00	5/1/2023 0:00	4344.00	Flare shutdown to remain as backup control device
Total		**4344.00**	

Notes:

Events in bold type denotes malfunctions as defined in the SSM Plan/NESHAP Regulation (none occurred during the reporting period).

All events listed involved inspection and/or maintenance activities prior to startup (or as soon as feasible following programmed startups) in accordance with Rule 8-34-113 requirements and the BAAQMD Compliance Advisory for Municipal Solid Waste Landfills, dated November 5, 2018.

*The A-8 backup flare was offline at the beginning and end of the reporting period. For reporting purposes, the shutdown is calculated as beginning on November 1, 2022 at 00:00 and ending on May 1, 2023 at 00:00, respectively.

Table 2. Individual Well Startups, Shutdowns and Decommissions
West Contra Costa Sanitary Landfill
November 1, 2022 through April 30, 2023

Well ID	Shutdown	Start-up	Days Offline	Reason for Shutdown/Startup
Wells in Class I Landfill Wellfield				
WCLFR006	4/26/22 14:55	2/13/23 15:26	293	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLFR016	1/19/2023 13:25	3/16/23 14:28	56.04	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLF0807	12/8/2022 15:04	2/21/2023 14:09	74.96	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLF0603	2/27/2023 16:34	4/18/2023 17:45	50.05	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLF0832	11/3/2022 11:30	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
Wells in Class II Landfill Wellfield				
WCLFH02A	10/25/2022 14:07	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH04A	3/31/2023 15:36	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH04B	2/21/2023 17:46	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH05B	11/8/2021 10:08	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH08B	12/16/2022 13:50	3/31/23 13:27	105	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH09B	10/29/2019 08:47	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFR006	8/29/2022 00:00	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)

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

Table 3. Wells with Positive Pressure
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Init Static Press ["H2O]	5-Day Corrective Action Date	Corrective Action	15-Day Follow-Up Pressure ["H2O]	15-Day Follow-Up Date	Comments	Additional Corrective Action
WCLF0842	10/5/2022	0.04	10/5/2022	Valve Adjustment	0.18	10/20/2022*	Compliant reading (-0.25 "H2O) on 12/15/22	RCA/CAA/75-Day
WCLF0842	1/13/2023	0.18	1/13/2023	Valve Adjustment	-1.35	1/20/2023		
WCLFH01A	1/26/2023	0.02	1/26/2023	Valve Adjustment	-0.37	2/15/2023*		RCA
WCLFH07A	12/16/2022	0.12	12/16/2022	Valve Adjustment	-1.12	12/16/2022		
WCLFH07A	2/27/2023	0.21	2/27/2023	Valve Adjustment	-0.21	2/27/2023		
WCLFH07A	3/31/2023	1.00	3/31/2023	Valve Adjustment	-10.44	3/31/2023		
WCLFH10B	12/12/2022	1.27	12/12/2022	Valve Adjustment	-0.07	12/12/2023		
WCLFR003	2/13/2023	0.03	2/13/2023	Valve Adjustment	-0.11	3/3/2023		
WCLFR004	2/13/2023	0.07	2/13/2023	Valve Adjustment	-0.02	3/3/2023		
WCLFR016	12/29/2022	0.05	12/29/2022	Valve Adjustment	-0.26	1/5/2023		
WCLFR015	2/3/2023	0.00	2/8/2023	Valve Adjustment	-2.84	2/8/2023		
WCLFR009	2/13/2023	0.00	2/9/2023	Valve Adjustment	-0.01	2/13/2023		
WCLFR002	3/24/2023	0.00	2/10/2023	Valve Adjustment	-0.01	3/24/2023		
WCLFR001	2/13/2023	0.00	2/11/2023	Valve Adjustment	-0.11	3/3/2023*		RCA

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

*Exceedance not corrected within 15 days. Compliance will be achieved by the 60 or 120-day compliance dates specified above.

RCA = Root Cause Analysis, CAA = Corrective Action Analysis, 75-day = 75-Day Notification or request for additional time.

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLF042R	10/28/2022	20.7	10/28/2022	Adjusted Valve	0.4	11/8/2022	
WCLF0501	11/3/2022	7.6	11/3/2022	Adjusted Valve	0.3	11/8/2022	
WCLF0501	4/11/2023	7.4	4/11/2023	Adjusted Valve	3.8	4/11/2023	
WCLF0510	11/30/2022	19.3	11/30/2022	Adjusted Valve	7.6	12/14/2022	Compliant reading (3.3%) on 2/21/23
WCLF0519	1/18/2023	17.6	1/18/2023	Adjusted Valve	20.8	1/18/2023	Compliant reading (0.0%) on 2/6/23
WCLF0520	12/15/2022	6.5	12/15/2022	Adjusted Valve	1.5	12/15/2023	
WCLF0601	4/25/2023	19.5	4/25/2023	Adjusted Valve	20.2	4/25/23*	
WCLF0602	11/30/2022	20.7	11/30/2022	Adjusted Valve	20.2	11/30/2022	Compliant reading (2.1%) on 1/26/23
WCLF0602	3/31/2023	18.9	3/31/2023	Adjusted Valve	19.0	3/31/2023*	
WCLF0603	11/30/2022	18.9	11/30/2022	Adjusted Valve	7.8	11/30/2022	Compliant reading (0.7%) on 4/18/23. See note
WCLF0803	4/18/2023	6.5	4/18/2023	Adjusted Valve	4.8	4/18/2023	
WCLF0806	10/28/2022	20.0	10/28/2022	Adjusted Valve	0.3	11/8/2022	
WCLF0807	9/19/2022	7.7	9/19/2022	Adjusted Valve	20.2	9/29/2022	Compliant reading (0.1%) on 2/21/23. See note
WCLF0807	3/28/2023	14.2	3/28/2023	Adjusted Valve	18.6	4/11/2023*	
WCLF0815	4/18/2023	12.7	4/18/2023	Adjusted Valve	6.2	4/18/23*	
WCLF0816	11/30/2022	17.4	11/30/2022	Adjusted Valve	0.0	12/8/2022	
WCLF0818	11/30/2022	20.5	11/30/2022	Adjusted Valve	0.1	12/5/2022	
WCLF0819	11/30/2022	14.6	11/30/2022	Adjusted Valve	0.7	12/12/2022	
WCLF0822	12/15/2022	5.9	12/15/2022	Adjusted Valve	1.8	12/15/2022	
WCLF0822	4/25/2023	20.6	4/25/2023	Adjusted Valve	18.3	4/25/2023*	
WCLF0824	10/6/2022	12.0	10/6/2022	Adjusted Valve	11.2	10/19/2022	Compliant reading (3.2%) on 1/26/23
WCLF0825	10/28/2022	6.3	10/28/2022	Adjusted Valve	0.2	11/8/2022	
WCLF0827	12/15/2022	19.5	12/15/2022	Adjusted Valve	0.5	12/28/2022	
WCLF0827	3/31/2023	20.9	3/31/2023	Adjusted Valve	0.0	4/11/2023	
WCLF0829	10/28/2022	6.6	10/28/2022	Adjusted Valve	0.2	11/8/2022	
WCLF0829	4/25/2023	6.0	4/25/2023	Adjusted Valve	3.7	4/25/2023	
WCLF0832	7/8/2022	19.1	7/8/2022	Adjusted Valve	17.6	7/22/2022*	See note
WCLF0833	10/28/2022	10.2	10/28/2022	Adjusted Valve	0.0	11/8/2022	
WCLF0833	1/26/2023	10.8	1/26/2023	Adjusted Valve	11.6	1/26/2023	Compliant reading (3.7%) on 2/14/23
WCLF0833	3/31/2023	10.4	3/31/2023	Adjusted Valve	0.9	4/14/2023	
WCLF0834	11/30/2022	20.8	11/30/2022	Adjusted Valve	0.4	12/12/2022	
WCLF0839	3/24/2023	20.9	3/24/2023	Adjusted Valve	19.5	4/7/2023*	
WCLF0842	11/3/2022	18.9	11/3/2022	Adjusted Valve	18.8	11/3/2022	Compliant reading (0.0%) on 12/15/22
WCLF0842	1/20/2023	23.5	1/20/2023	Adjusted Valve	23.4	1/20/2023	Compliant reading (0.0%) on 2/27/23
WCLF0844	3/24/2023	21.0	3/24/2023	Adjusted Valve	19.7	4/7/23*	
WCLF0850	1/18/2023	20.8	1/18/2023	Adjusted Valve	20.7	1/18/23*	
WCLF0854	4/7/2023	12.6	4/7/2023	Adjusted Valve	0.0	4/11/2023	
WCLF0860	1/18/2023	11.4	1/18/2023	Adjusted Valve	11.7	1/18/2023	Compliant reading (1.2%) on 2/6/23

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLF40AD	1/18/2023	9.7	1/18/2023	Adjusted Valve	8.6	1/18/2023	Compliant reading (0.0%) on 2/6/23
WCLF601D	10/6/2022	20.0	10/6/2022	Adjusted Valve	16.7	10/19/2022	Compliant reading (0.0%) on 12/16/22
WCLF601D	4/25/2023	20.8	4/25/2023	Adjusted Valve	19.4	4/25/2023*	
WCLFH01A	10/6/2022	18.8	10/6/2022	Adjusted Valve	16.5	10/19/2022	Compliant reading (9.9%) on 11/30/22
WCLFH01A	1/26/2023	22.3	1/26/2023	Adjusted Valve	22.2	1/26/2023*	
WCLFH01A	12/15/2022	16.2	12/15/2022	Adjusted Valve	14.5	12/15/2022	
WCLFH01B	10/28/2022	20.1	10/28/2022	Adjusted Valve	0.8	11/8/2022	
WCLFH01B	1/26/2023	19.0	1/26/2023	Adjusted Valve	19.7	1/26/2023*	
WCLFH02B	1/26/2023	21.5	1/26/2023	Adjusted Valve	19.7	1/26/2023*	
WCLFH03A	1/26/2023	22.6	1/26/2023	Adjusted Valve	22.6	1/26/2023*	
WCLFH03B	10/28/2022	17.3	10/28/2022	Adjusted Valve	8.8	11/8/2022	
WCLFH03B	12/5/2022	20.7	12/5/2022	Adjusted Valve	13.3	12/19/2022	
WCLFH03B	4/18/2023	19.0	4/18/2023	Adjusted Valve	19.9	4/18/2023*	
WCLFH04A	10/28/2022	20.8	10/28/2022	Adjusted Valve	12.3	11/8/2022	
WCLFH04A	12/14/2022	20.2	12/14/2022	Adjusted Valve	20.7	12/28/2022*	See note
WCLFH04B	10/28/2022	18.5	10/28/2022	Adjusted Valve	20.7	11/8/2022*	See note
WCLFH05A	10/28/2022	20.6	10/28/2022	Adjusted Valve	17.4	11/8/2022	Compliant reading (7.8%) on 1/26/23
WCLFH06A	1/26/2023	22.4	1/26/2023	Adjusted Valve	22.4	1/26/2023	Compliant reading (3.0%) on 2/14/23
WCLFH06A	3/31/2023	18.4	3/31/2023	Adjusted Valve	15.3	4/14/2023*	
WCLFH06B	10/20/2022	20.4	10/20/2022	Adjusted Valve	0.0	11/8/2022	
WCLFH06B	1/31/2023	20.6	1/31/2023	Adjusted Valve	20.3	2/14/2023*	
WCLFH07A	2/27/2023	17.4	2/27/2023	Adjusted Valve	18.4	2/27/2023	Compliant reading (7.6%) on 3/31/23
WCLFH07B	1/26/2023	22.3	1/26/2023	Adjusted Valve	22.4	1/26/2023*	
WCLFH08A	1/26/2023	16.8	1/26/2023	Adjusted Valve	16.8	1/26/2023*	
WCLFH08B	8/31/2022	20.8	8/31/2022	Adjusted Valve	18.6	9/12/2022	Compliant reading (14.2%) on 3/31/23. See note
WCLFH08B	4/18/2023	20.5	4/18/2023	Adjusted Valve	19.7	4/18/2023*	
WCLFH09A	1/26/2023	18.2	1/26/2023	Adjusted Valve	19.9	2/14/2023*	
WCLFH10A	12/16/2022	18.5	12/16/2022	Adjusted Valve	0.7	12/28/2022	
WCLFH10A	4/14/2023	15.5	4/14/2023	Adjusted Valve	14.9	4/14/2023	
WCLFH10B	12/2/2022	20.7	12/2/2022	Adjusted Valve	8.6	12/12/2022	
WCLFH10B	12/19/2022	16.5	12/19/2022	Adjusted Valve	10.5	12/28/2022	
WCLFR001	11/7/2022	18.4	11/7/2022	Adjusted Valve	15.1	11/17/2022	Compliant reading (10.7%) on 2/8/23
WCLFR001	3/7/2023	15.0	3/7/2023	Adjusted Valve	18.3	3/24/2023	Compliant reading (3.3%) on 4/6/23
WCLFR002	11/7/2022	19.1	11/7/2022	Adjusted Valve	14.8	11/17/2022	
WCLFR002	11/22/2022	18.5	11/22/2022	Adjusted Valve	20.0	12/6/2022	Compliant reading (14.4%) on 2/3/23
WCLFR002	3/7/2023	15.3	3/7/2023	Adjusted Valve	18.5	3/24/2023	Compliant reading (0.3%) on 4/6/23
WCLFR003	11/7/2022	20.0	11/7/2022	Adjusted Valve	19.7	11/22/2022	Compliant reading (10.2%) on 2/3/23
WCLFR003	3/24/2023	18.6	3/24/2023	Adjusted Valve	0.0	4/6/2023	

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLFR003	4/20/2023	18.7	4/20/2023	Adjusted Valve	18.8	4/20/2023*	
WCLFR004	11/7/2022	17.1	11/7/2022	Adjusted Valve	16.4	11/22/2022	Compliant reading (9.4%) on 12/12/22
WCLFR004	12/20/2022	20.7	12/20/2022	Adjusted Valve	0.4	12/28/2022	
WCLFR004	1/5/2023	21.4	1/5/2023	Adjusted Valve	12.7	1/19/2023	
WCLFR004	1/24/2023	18.0	1/24/2023	Adjusted Valve	13.1	2/3/2023	
WCLFR004	3/24/2023	18.6	3/24/2023	Adjusted Valve	0.0	4/6/2023	
WCLFR005	11/17/2022	15.7	11/17/2022	Adjusted Valve	9.4	11/22/2022	
WCLFR005	12/20/2022	21.0	12/20/2022	Adjusted Valve	4.7	12/28/2022	
WCLFR005	1/19/2023	20.6	1/19/2023	Adjusted Valve	3.0	1/24/2023	
WCLFR005	3/24/2023	18.8	3/24/2023	Adjusted Valve	0.8	4/6/2023	
WCLFR007	12/6/2022	18.6	12/6/2022	Adjusted Valve	11.7	12/6/2022	
WCLFR007	3/31/2023	18.4	3/31/2023	Adjusted Valve	0.4	4/6/2023	
WCLFR008	2/3/2023	19.3	2/3/2023	Adjusted Valve	5.0	2/13/2023	
WCLFR008	2/15/2023	20.8	2/15/2023	Adjusted Valve	0.1	3/3/2023	
WCLFR008	4/20/2023	18.7	4/20/2023	Adjusted Valve	18.9	4/20/2023*	
WCLFR009	11/7/2022	19.9	11/7/2022	Adjusted Valve	12.3	11/17/2022	
WCLFR009	11/22/2022	19.1	11/22/2022	Adjusted Valve	14.9	12/6/2022	
WCLFR009	12/12/2022	15.7	12/12/2022	Adjusted Valve	12.8	12/12/2022	
WCLFR009	1/19/2023	15.0	1/19/2023	Adjusted Valve	12.8	1/24/2023	
WCLFR009	3/24/2023	18.5	3/24/2023	Adjusted Valve	5.6	4/6/2023	
WCLFR010	11/29/2022	16.5	11/29/2022	Adjusted Valve	15.4	12/6/2022	Compliant reading (13.5%) on 12/29/22
WCLFR010	1/19/2023	16.1	1/19/2023	Adjusted Valve	11.6	2/3/2023	
WCLFR010	3/24/2023	18.4	3/24/2023	Adjusted Valve	3.9	4/6/2023	
WCLFR011	12/20/2022	20.4	12/20/2022	Adjusted Valve	11.5	12/20/2022	
WCLFR012	11/7/2022	18.9	11/7/2022	Adjusted Valve	10.3	11/17/2022	
WCLFR012	1/24/2023	18.0	1/24/2023	Adjusted Valve	6.6	2/3/2023	
WCLFR012	2/8/2023	17.7	2/8/2023	Adjusted Valve	10.9	2/13/2023	
WCLFR012	2/21/2023	16.0	2/21/2023	Adjusted Valve	8.2	2/21/2023	
WCLFR012	4/6/2023	16.7	4/6/2023	Adjusted Valve	12.3	4/13/2023	
WCLFR013	11/22/2022	20.2	11/22/2022	Adjusted Valve	8.6	11/29/2022	
WCLFR013	12/6/2022	20.4	12/6/2022	Adjusted Valve	14.1	12/12/2022	
WCLFR013	12/20/2022	20.9	12/20/2022	Adjusted Valve	19.9	12/28/2022	Compliant reading (13.4%) on 1/19/23
WCLFR013	3/3/2023	16.4	3/3/2023	Adjusted Valve	2.6	3/7/2023	
WCLFR014	11/17/2022	19.4	11/17/2022	Adjusted Valve	18.8	11/22/2022	Compliant reading (13.0%) on 12/12/22
WCLFR014	12/20/2022	20.1	12/20/2022	Adjusted Valve	19.9	12/28/2022	Compliant reading (13.3%) on 1/19/23
WCLFR014	2/8/2023	15.9	2/8/2023	Adjusted Valve	11.2	2/13/2023	
WCLFR014	2/21/2023	20.8	2/21/2023	Adjusted Valve	12.3	3/3/2023	
WCLFR014	3/7/2023	16.7	3/7/2023	Adjusted Valve	18.8	3/16/2023	Compliant reading (14.1%) on 3/31/23

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLFR015	12/12/2022	16.6	12/12/2022	Adjusted Valve	20.6	12/20/2022	Compliant reading (12.3%) on 1/24/23
WCLFR015	3/3/2023	17.3	3/3/2023	Adjusted Valve	9.8	3/16/2023	
WCLFR015	4/6/2023	17.3	4/6/2023	Adjusted Valve	4.0	4/13/2023	
WCLFR015	4/20/2023	16.2	4/20/2023	Adjusted Valve	16.2	4/20/2023*	
WCLFR016	11/7/2022	17.9	11/7/2022	Adjusted Valve	20.2	11/17/2022	Compliant reading (14.8%) on 1/19/23
WCLFR016	4/20/2023	19.3	4/20/2023	Adjusted Valve	19.4	4/20/2023*	

Note: All required corrective action and remonitoring was completed in accordance with Rule 8-34 and NSPS/NESHAP timelines.
*Exceedance remains at end of reporting period. Compliance will be achieved by the 120-day compliance dates specified above.

Wells in bold italics indicate wells with a 15% higher operating value (HOV) for oxygen pursuant to Permit Condition Number 20754 Part 2(c)(ii) and Condition Number 25293 Part 7(d)(iii)
Wells underlined indicate wells that were temporarily taken offline in accordance with section 6.2 of the site's Gas Collection and Control System (GCCS) Design Plan.
Refer to Table 2 for dates and times individual wells were offline.

Table 5. Wells with Temperature Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(November 1, 2022 through April 30, 2023)

Well ID	Date	Initial Temperature [°F]	Adjusted Temperature [°F]	5-Day Corrective Action Date	Corrective Action	15-Day Follow-Up Temperature [°F]	15-Day Follow-Up Date	Comments	Additional Corrective Action
There were no temperature exceedances during this reporting period.									

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:

5-30-23

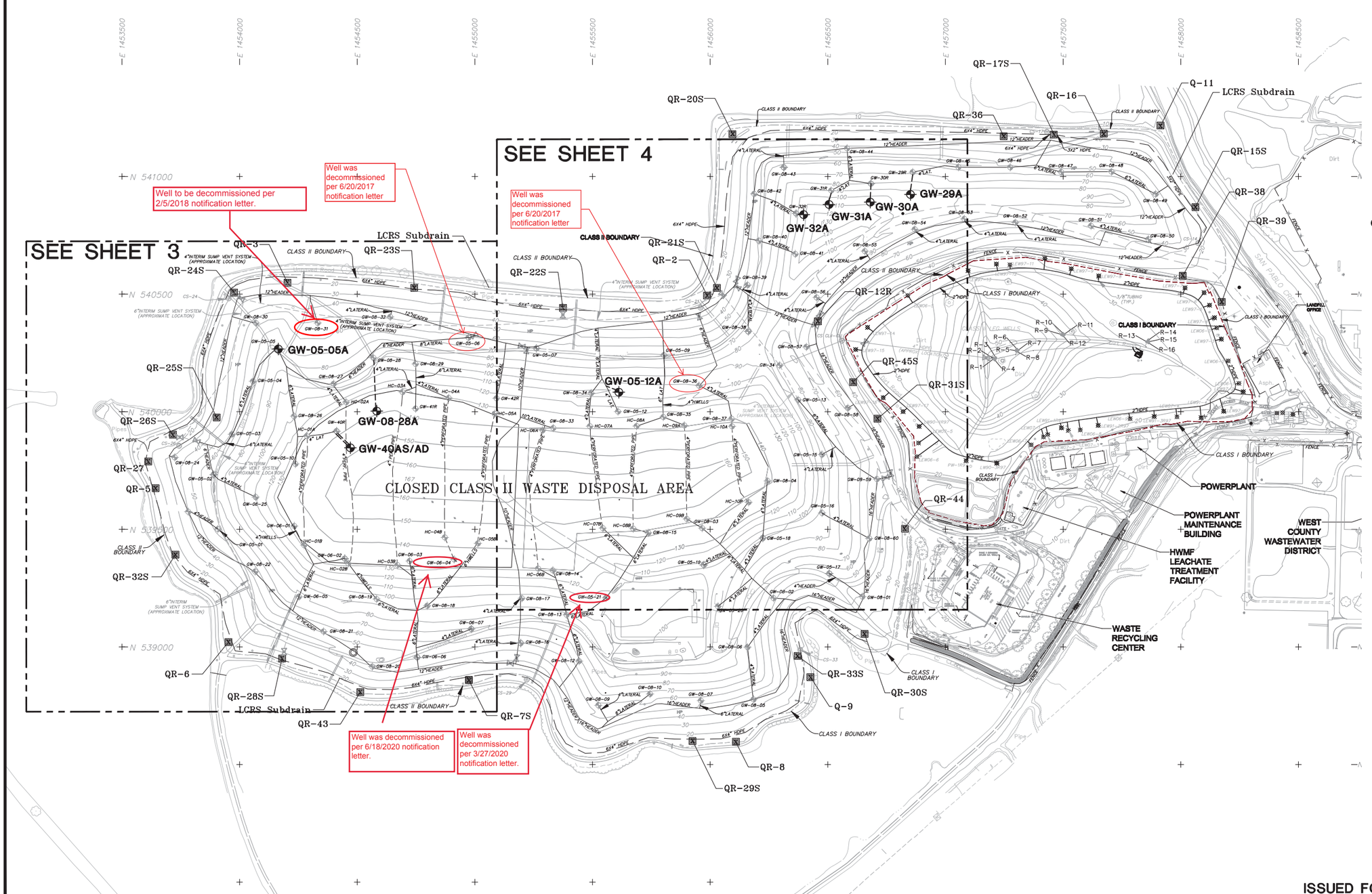
Signature of Responsible Official

Date

Ken Lewis

Name of Responsible Official

Appendix B – Existing GCCS Layout



NOTES:

1. EXISTING TOPOGRAPHY SHOWN OUTSIDE CLASS II WASTE LIMITS PREPARED BY HJW GEOSPATIAL, INC., OAKLAND, CALIFORNIA, APRIL 16, 2007.
2. PROPOSED FINAL GRADES INSIDE CLASS II LANDFILL FROM FINAL CAP ID MAP, DATED JUNE 2007.
3. PROPOSED LOCATIONS FOR THE VERTICAL LFG EXTRACTION WELLS, HORIZONTAL TRENCH COLLECTORS AND GCCS COLLECTION PIPING ARE ONLY APPROXIMATE AND MAY CHANGE BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION.

ISSUED FOR CONSTRUCTION (10-31-14)

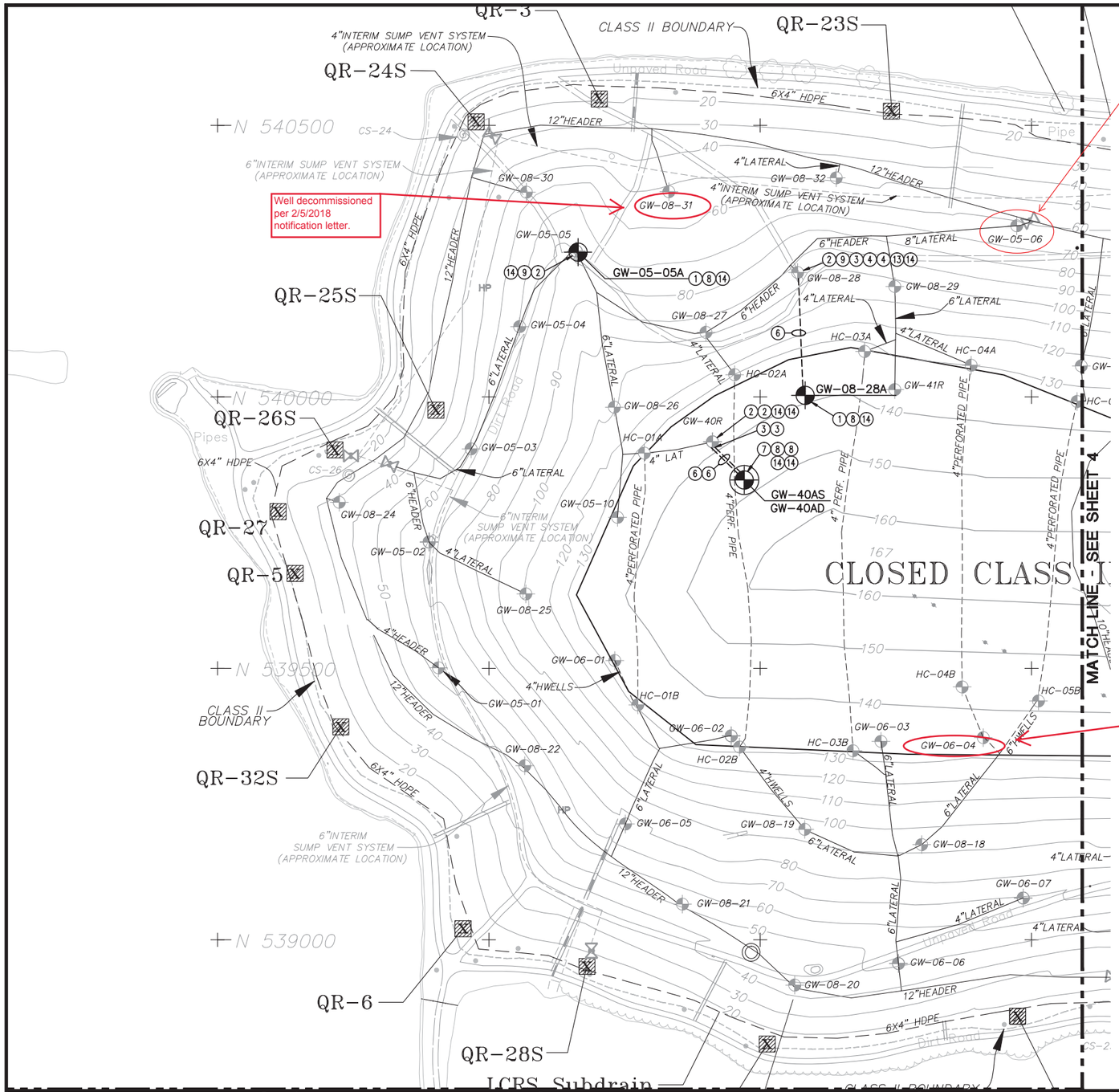
NO.	REVISION DESCRIPTION	BY:

REPUBLIC SERVICES, INC.
WASTE COLLECTION • RECYCLING • TRANSFER • DISPOSAL

TETRA TECH BAS
1360 Valley Vista Drive, Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017

WEST CONTRA COSTA COUNTY LANDFILL
2014 GAS SYSTEM IMPROVEMENTS
SITE PLAN AND INDEX TO PLAN SHEETS

DESIGNED BY : RSI/SNA	SCALE : AS SHOWN		
DRAWN BY : S. ANGUS	DATE : 10/31/14	FILE NO.: 02-02-0131IXM	
CHECKED BY : E. TJENSVOLD	DATE : 10/31/14		
APPROVED BY : G. GLASSER	DATE : 10/31/14	SHEET 2 OF 7	



GRAPHIC SCALE

100 50 0 100 200

(IN FEET)

CONSTRUCTION NOTES

1. INSTALL VERTICAL GAS EXTRACTION WELL PER DETAIL 1, SHEET 5
2. ABANDON VERTICAL GAS EXTRACTION WELL PER DETAIL 2, SHEET 7
3. JOIN EXISTING HDPE PIPING (GAS, AIR, OR CONDENSATE)
4. INSTALL 2" HDPE CAP (AIR & LIQUID LINES)
5. –
6. INSTALL 4" SDR 17 HDPE PIPE BELOW GRADE, PER DETAIL 1, SHEET 7
7. INSTALL DUAL COMPLETION VERTICAL GAS EXTRACTION WELL PER DETAIL 1, SHEET 6
8. INSTALL 2" QED (OR LANDTEC) WELLHEAD ASSEMBLY PER DETAIL 3, SHEET 7
9. SALVAGE EXISTING 48" CORRUGATED HDPE WELL PROTECTION PIPE AND INSTALL AT NEW WELL LOCATION
10. INSTALL 10' X 10' LANDTEC WELLBORE SEAL (2' X 2' AT DUAL COMPLETION WELL)
11. INSTALL WELLBORE REINFORCEMENT GRATE
12. INSTALL WELL I.D. TAG PER DETAIL 4, SHEET 7
13. REMOVE PUMP ASSEMBLY & APPURTENANCES
14. INSTALL 4" SDR 17 HDPE 90° ELBOW, MOLDED
15. INSTALL 4" SDR 17 HDPE TEE
16. INSTALL 4" HDPE ELECTRO–FUSION COUPLING
17. INSTALL 6" HDPE OR PVC CAP

Text and Graphics shown in red added by Cornerstone Environmental Group, a Tetra Tech Company.

LEGEND

- PROPOSED SINGLE COMPLETION VERTICAL GAS EXTRACTION WELL
- PROPOSED DUAL COMPLETION VERTICAL GAS EXTRACTION WELL
- PROPOSED 4" SDR 17 HDPE GAS LATERAL, BELOW GRADE
- (1) CONSTRUCTION NOTE

ISSUED FOR CONSTRUCTION (10-31-14)

NO.	REVISION DESCRIPTION	BY:

REPUBLIC SERVICES, INC.
WASTE COLLECTION • RECYCLING • TRANSFER • DISPOSAL

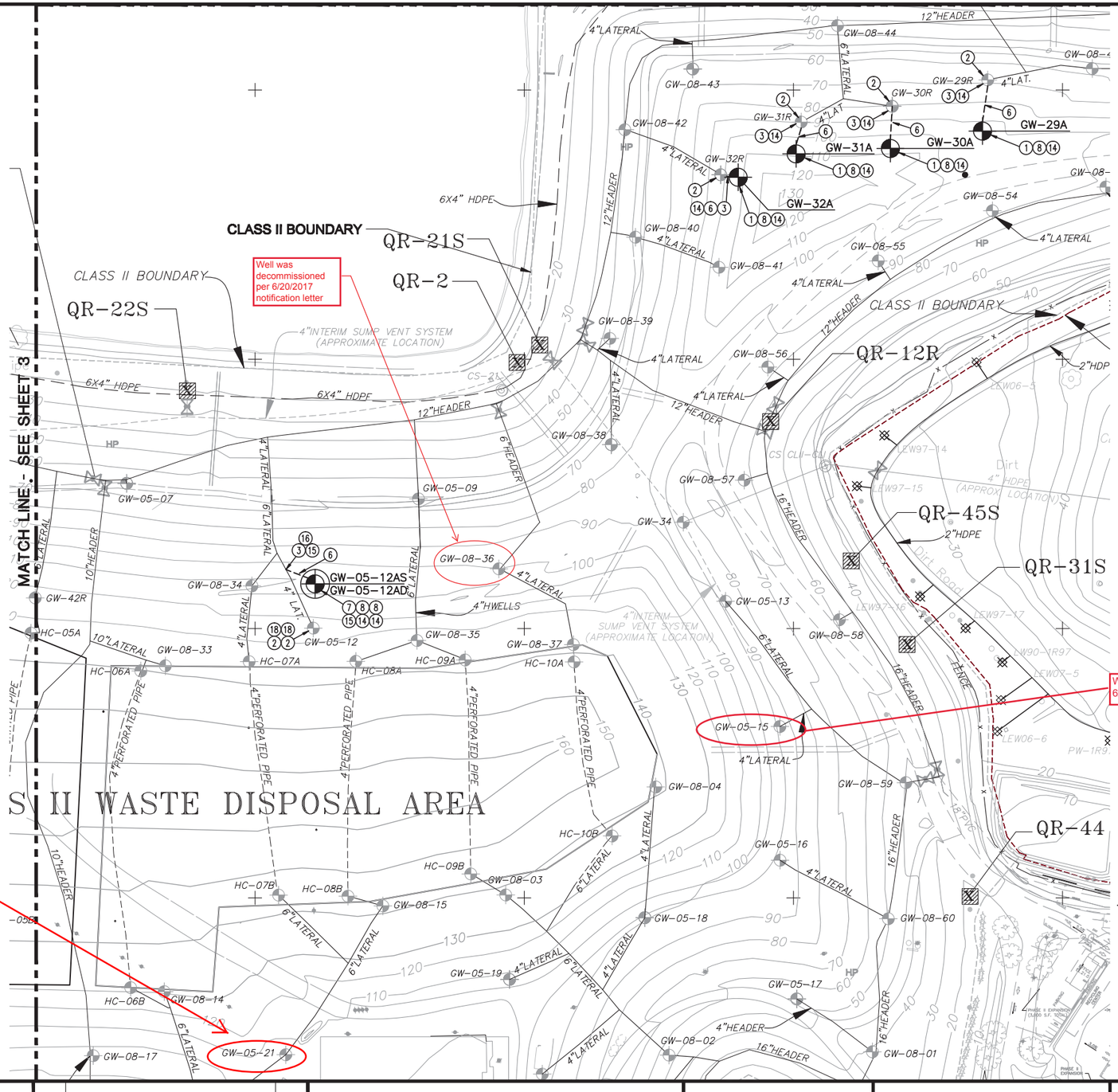
TETRA TECH BAS
1360 Valley Vista Drive, Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017

WEST CONTRA COSTA COUNTY LANDFILL

2014 GAS SYSTEM IMPROVEMENTS

GAS SYSTEM IMPROVEMENT PLAN

DESIGNED BY : RSI/SNA	SCALE : AS SHOWN		
DRAWN BY : S. ANGUS	DATE : 10/31/14	FILE NO.: 03–86–0141GSP	
CHECKED BY : E. TJENSVOLD	DATE : 10/31/14	SHEET 3 OF 7	
APPROVED BY : G. GLASSER	DATE : 10/31/14		



CONSTRUCTION NOTES

1. INSTALL VERTICAL GAS EXTRACTION WELL PER DETAIL 1, SHEET 5
2. ABANDON VERTICAL GAS EXTRACTION WELL PER DETAIL 2, SHEET 7
3. JOIN EXISTING HDPE PIPING (GAS, AIR, OR CONDENSATE)
4. INSTALL 2" HDPE CAP (AIR & LIQUID LINES)
5. –
6. INSTALL 4" SDR 17 HDPE PIPE BELOW GRADE, PER DETAIL 1, SHEET 7
7. INSTALL DUAL COMPLETION VERTICAL GAS EXTRACTION WELL PER DETAIL 1, SHEET 6
8. INSTALL 2" QED (OR LANDTEC) WELLHEAD ASSEMBLY PER DETAIL 3, SHEET 7
9. SALVAGE EXISTING 48" CORRUGATED HDPE WELL PROTECTION PIPE AND INSTALL AT NEW WELL LOCATION
10. INSTALL 10' X 10' LANDTEC WELLBORE SEAL (2' X 2' AT DUAL COMPLETION WELL)
11. INSTALL WELLBORE REINFORCEMENT GRATE
12. INSTALL WELL I.D. TAG PER DETAIL 4, SHEET 7
13. REMOVE PUMP ASSEMBLY & APPURTENANCES
14. INSTALL 4" SDR 17 HDPE 90° ELBOW, MOLDED
15. INSTALL 4" SDR 17 HDPE TEE
16. INSTALL 4" HDPE ELECTRO-FUSION COUPLING
17. INSTALL 6" HDPE OR PVC CAP

Text and Graphics shown in red added by Cornerstone Environmental Group, a Tetra Tech Company.

LEGEND

- PROPOSED SINGLE COMPLETION VERTICAL GAS EXTRACTION WELL
- PROPOSED DUAL COMPLETION VERTICAL GAS EXTRACTION WELL
- PROPOSED 4" SDR 17 HDPE GAS LATERAL, BELOW GRADE
- (1) CONSTRUCTION NOTE

ISSUED FOR CONSTRUCTION (10-31-14)

NO.	REVISION DESCRIPTION	BY:

REPUBLIC SERVICES, INC.
WASTE COLLECTION · RECYCLING · TRANSFER · DISPOSAL

TETRA TECH BAS
1360 Valley Vista Drive, Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017

WEST CONTRA COSTA COUNTY LANDFILL
2014 GAS SYSTEM IMPROVEMENTS
GAS SYSTEM IMPROVEMENT PLAN

DESIGNED BY : RSI/SNA	SCALE : AS SHOWN		
DRAWN BY : S. ANGUS	DATE : 10/31/14	FILE NO.: 85-0142GSP	
CHECKED BY : E. TJENSVOLD	DATE : 10/31/14		
APPROVED BY : G. GLASSER	DATE : 10/31/14	SHEET 4 OF 7	

Appendix C – LFGTE Facility Downtime Logs

S-6 Engine Downtime
West Contra Costa Sanitary Landfill
(November 1, 2022 through April 30, 2023)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
11/1/2022 0:00	5/1/2023 0:00	4344.00	See note below
TOTAL DOWNTIME (HOURS):		**4344.00**	

*The S-6 engine has been out of service since January 2022; and therefore, did not operate during the reporting period.

S-5 Engine Downtime
West Contra Costa Sanitary Landfill
(November 1, 2022 through April 30, 2023)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
11/1/2022 0:00	5/1/2023 0:00	4344.00	See note below
TOTAL DOWNTIME (HOURS):		**4344.00**	

*The S-5 engine has been out of service since December 2017; and therefore, did not operate during the reporting period.

S-37 Engine Downtime
West Contra Costa Sanitary Landfill
(November 1, 2022 through April 30, 2023)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
11/1/2022 0:00	5/1/2023 0:00	4344.00	See note below
TOTAL DOWNTIME (HOURS):		**4344.00**	

*The S-37 engine engine is no longer able to operate due to a catastrophic failure which occurred in March 2018; and therefore, did not operate during the reporting period.

Appendix D – A-161 Flare Source Test Results (January 27, 2023 Report)

Republic Services
West Contra Costa Sanitary Landfill

BAAQMD Plant No: 1840

Compliance Emissions Test Report #22391

Enclosed Landfill Gas Flare A-161

Located at:
West Contra Costa Sanitary Landfill
1 Parr Blvd
Richmond, CA 94801

Prepared for:
Republic Services
West Contra Costa Sanitary Landfill
3260 Blume Drive, Suite 200
Richmond, CA 94806

Attn: Ed Baquerizo
ebaquerizo@republicservices.com

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

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

Testing Performed on:
December 16, 2022

Final Report Submitted on:
January 27, 2023

Performed and Reported by:
Blue Sky Environmental, Inc.
2273 Lobert Street
Castro Valley, CA 94546

bluesky@blueskyenvironmental.com
Office (510) 525-1261/Mobile (810) 923-3181

Blue Sky Environmental, Inc
2273 Lobert Street
Castro Valley, CA 94546
Office (510) 525 1261
Cell (810) 923 3181
bluesky@blueskyenvironmental.com

January 27, 2023

Republic Services
West Contra Costa Sanitary Landfill
3260 Blume Drive, Suite 200
Richmond, CA 94806

Attn: Ed Baquerizo

Subject: Source emissions test report for Flare A-161 located at the West Contra Costa Sanitary Landfill in Richmond, California, to determine compliance with condition 25293 of Bay Area Air Quality Management District (BAAQMD) permit to operate for Plant 1840.

Test Date: Testing was performed on December 16, 2022.

Sampling Location: Sampling was conducted at the 35-foot exhaust stack of the flare through ports that were accessible using a 40-foot boom lift. Sampling port locations met EPA Method 1 minimum criteria of two stack diameters downstream from the nearest disturbance and 0.5 stack diameters upstream from the nearest disturbance or exhaust.

Blue Sky Environmental conducted a 16-point traverse of the 8-foot diameter stack with 4-inch ports (eight points at each port 90° apart) to check for the presence of stratification. Stratification was greater than 10%; therefore, subsequent CEM sampling was conducted using the same traverse points.

Sampling Personnel: Sampling was performed by Jeramie Richardson and Timothy Eandi of Blue Sky Environmental, Inc.

Observing Personnel: BAAQMD was notified of the scheduled source test in a Source Test Protocol submitted on December 13, 2022 (NST-8005). No agency observers from BAAQMD were present during the test program. Mike Flanagan of SCS Engineers was on-site to assist with flare operations.

Process Description: West Contra Costa Sanitary Landfill is a closed multi-material landfill with a gas collection system abated by two industrial landfill gas flares. Flare A-161 is a 46-MMBtu/hr flare used to burn excess landfill gas that is not being consumed by the facility's three IC engines (S-5, S-6 and S-37) to generate power. The flare is maintained at a set point of 1,500°F. Flare A-8 is used as a back-up to Flare A-161. The flares are not operated concurrently.

Test Program: Three consecutive 40-minute gaseous emissions tests were performed for oxides of nitrogen (NO_X), carbon monoxide (CO), carbon dioxide (CO_2), oxygen (O_2), methane (CH_4) and non-methane organic compounds (NMOC) at the exhaust stack of the flare. The sampling system was checked for leaks before the start of the testing, by plugging the sample probe and observing the sample rotameter flow drop to zero. Instrument linearity and system bias were checked. The

system response time for each analyzer was recorded. The temperatures of the heated sample line between the probe and sample conditioner/condenser, and the condenser exhaust temperatures were maintained within limits during each test run. Analyzer external calibrations were performed before and after each run using EPA protocol certified gas standards. Calibration gases were introduced to the sample manifold at the same flow rate as the sample. Any drift or bias was corrected using equation 100-3 from CARB Method 100. A NOx analyzer converter efficiency check was performed before the first test run and achieved an efficiency greater than 90%.

Concurrent with the emissions testing, Blue Sky Environmental collected a total of three LFG fuel samples for C_1 to C_{6+} hydrocarbons, $\%CO_2$, $\%N_2$, BTU and F-factor by ASTM D-1945, NMOC by EPA Method 25C, and volatile organic compounds by EPA Method TO-15. The samples were collected in 6-liter Silonite SUMMA cannisters and analyzed by Atmospheric Analysis & Consulting, Inc (AAC) in Ventura, CA.

Three LFG samples were collected by SCS Engineers on Draeger tubes for H_2S analysis. Total reduced sulfur (TRS) was calculated by multiplying the H_2S results by 1.2 in accordance with the permit. Results were used to calculate the SO_2 emission concentration of the stack gas.

Sampling and Analysis Methods: The following Bay Area Air Quality Management District (BAAQMD), U.S. Environmental Protection Agency (EPA), and ASTM International sampling and analytical methods were used:

EPA Method 1	Sample Traverse Points
EPA Method 3A	O_2, CO_2 Emissions
EPA Method 10	CO Emissions
EPA Method 7E	NO_X Emissions
EPA Method ALT-097	CH_4 and NMOC Emissions
EPA Method 4	Moisture Calculation
EPA Method 25C	LFG Gas analysis for NMOC by GC
EPA Method 19	Flow Rate from Fuel Btu, Fd-Factor, and Stack % O_2
ASTM D-1945/3588	Gas analysis for BTU and F-Factor
EPA Method TO-15	Toxic Air Contaminants

The sampling and analysis methods are summarized below:

EPA Method 1 – Sample and Velocity Traverses for Stationary Sources
This method is used to determine the duct or stack area and appropriate traverse points that represent equal areas of the duct for sampling and velocity measurements.

EPA Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)
This method is used to measure oxygen and carbon dioxide in stationary source emissions using a continuous instrumental analyzer to determine the molecular weight of the stack gas. A continuous representative gas sample is extracted from the sampling point and conditioned to remove water and particulate material. A small portion of the sample is passed through a fuel cell type paramagnetic oxygen analyzer which measures the electrical current generated by the oxidation reaction at the gas/fuel cell interface. Carbon dioxide is determined by passing the sample through a non-dispersive infrared analyzer (NDIR) tuned to a frequency at which carbon dioxide absorbs infrared radiation.

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

This method is used to measure nitrogen oxides in stationary source emissions using a continuous instrumental analyzer. A continuous representative gas sample is extracted from the sampling point and conditioned to remove water and particulate material. Nitric oxide is determined by passing the sample through a chemiluminescent analyzer. The chemiluminescent process is based on the light given off when nitric oxide and ozone react. Nitrogen dioxide (NO_2) concentrations are determined by passing the sample through a catalyst which reduces the NO_2 to NO. The total oxides of nitrogen concentration (NO_2 + NO) is then determined by chemiluminescence.

Section 16.2.2 of the method is used to determine the NO_X analyzer NO_2 to NO conversion efficiency.

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

This method is used to measure carbon monoxide from integrated or continuous gas samples extracted from a sampling point. A continuous representative gas sample is extracted from the sampling point and conditioned to remove water and particulate material. Carbon monoxide is determined by passing the sample through a non-dispersive infrared analyzer (NDIR) tuned to a frequency at which carbon monoxide absorbs infrared radiation.

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

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

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of a Honeywell DPR3000 strip chart recorder supported by a Data Acquisition System (DAS).

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

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

multiplied by the F-factor (DSCF/MMBtu) and adjusted for the measured oxygen content of the source to determine volumetric flow rate. The flow rates are used to determine emission rates.

EPA Method ALT-097 Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

This is an acceptable alternative to EPA Method 25A for the determination of total hydrocarbons, methane, and non-methane organic compounds in stationary source emissions. The test uses TECO 55C GC/FID methane/non-methane analyzer. Heated Teflon sample gas transfer lines are used to provide a continuous sample to the analyzer. Heated lines are used to avoid moisture or hydrocarbon condensation.

The sampling and analytical system is checked for linearity with zero, low (25-35%), mid (45-55%), and high (80-90%) span calibrations. All calibrations during testing are performed externally to incorporate any system bias that may exist. A system linearity check is performed prior to testing and during testing and calibration drift checks are performed after every run. All data is corrected according to EPA Method 25A.

EPA Method 4 – Determination of Moisture Content in Stack Gas

This method is used to determine the moisture content of stack gas. The sample is extracted and condensed in Greenburg-Smith impingers immersed in an ice bath and in a final impinger silica gel trap. The moisture is condensed in a solution of de-ionized water, or solutions of another type of sampling train if the moisture is being determined as part of another sampling method, such as EPA Method 5, SCAQMD Method 201.7 or BAAQMD ST-32. The moisture gain in the impinger solutions and silica gel is determined volumetrically and gravimetrically respectively. QA/QC procedures require that a minimum of 21 cubic feet of sample is pulled using a leak tight pump. The sample volume is measured with a calibrated dry gas meter. The impingers are immersed in an ice bath to maintain a gas outlet temperature of less than 68°F. Pre-test leak checks are performed for each run using a minimum 15 inches of mercury vacuum. Post-test leak checks are performed at the highest sample vacuum or greater. The leak test is acceptable if the leak rate is less than 0.02 cubic feet per minute or 4% of the average sampling rate, whichever is less. If the final leak check exceeds the criteria, either the volume is corrected based on the leak rate or the run is voided and repeated.

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

This method is used to sample and measure NMOC in landfill gases. Gases are collected in a pre-evacuated 6-Liter SUMMA canister with pre-set flow controller set to integrate over the desired test duration. The SUMMA® passivated canisters allow holding times up to 14 days. The sample gas is drawn by the canister vacuum through a micro-filter, pre-set orifice flow controller and on/off valve into the canister. The canister vacuum is monitored with a vacuum gauge to verify sample collection. The flow controller consists of capillary orifice tubing designed to sample for a pre-set duration of 0.5 hrs. The sample is injected into a GC column where the methane and CO_2 are flushed through and removed then the NMOC (ROC) fraction is oxidized to form CO_2 then reduced to methane and analyzed.

ASTM D-1945 – Analysis of Natural Gas by Gas Chromatography

This method is used to measure fixed gases (such as oxygen, nitrogen, carbon monoxide, and carbon dioxide) and methane by gas chromatography (GC/TCD). Light hydrocarbons, including C1-C7, are analyzed by GC/FID. Samples are collected in pre-evacuated 6-Liter SUMMA canisters with pre-set flow controllers set to integrate over the desired test duration. The SUMMA® passivated canisters

allow holding times up to 14 days for the TO-15 Method list of volatile organics. The sample gas is drawn by the canister vacuum through a micro-filter, pre-set orifice flow controller and on/off valve into the canister. The canister vacuum is monitored with a vacuum gauge to verify sample collection. The flow controller consisted of capillary orifice tubing designed to sample for a pre-set duration of 0.75hrs.

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

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

EPA Compendium Method TO-15 – Determination of Toxic Organic Compounds in Ambient Air

This method is used to measure volatile organic compounds that are included in the hazardous air pollutants (HAPs) listed in Title III of the Clean Air Act Amendments of 1990 by GC/MS (gas chromatography/mass spectroscopy). Samples are collected in pre-evacuated 6-Liter SUMMA canisters with pre-set flow controllers set to integrate over the desired test duration. The SUMMA® passivated canisters allow holding times up to 14 days for the TO-15 Method list of volatile organics. The sample gas is drawn by the canister vacuum through a micro-filter, pre-set orifice flow controller and on/off valve into the canister. The canister vacuum is monitored with a vacuum gauge to verify sample collection. The flow controller consisted of capillary orifice tubing designed to sample for a pre-set duration of 0.75hrs.

Instrumentation: The following continuous emissions analyzers were used:

Instrument	Analyte	Principle
Servomex Model 1440	O_2	Paramagnetic
Servomex Model 1440	CO_2	Infrared (IR)
TECO Model 42C	$NO_X/NO/NO_2$	Chemiluminescence
TECO Model 48C	CO	Gas Filter Correlation/IR
TECO Model 55C	CH_4/NMOC	Flame Ionization (GC/FID)

Test Results: The compliance summary is presented below. Detailed source test emission results including the list of toxic air contaminants are provided in Tables 1 and 2. The flare met all compliance criteria.

Emission Parameter	Average Results Flare (A-161)	Permit Limit	Compliance Status
Total Reduced Sulfur (TRS), ppmvd in LFG	<20	300	In Compliance
NMOC, ppmvd in LFG as hexane	106	392	In Compliance
NO_X, lb/MMBtu	0.0438	0.05	In Compliance
CO, lb/MMBtu	<0.0020	0.20	In Compliance
SO_2 ppmvd *(calculated)*	<2.2	--	--
NMOC, ppmvd @ 3% O_2 as CH_4	<2.5	30	In Compliance
NMOC Destruction Efficiency, %	>98.43%	>98%	In Compliance
CH_4 Destruction Efficiency, %	>99.97%	>99%	In Compliance

The appendices are organized as follows:

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

Laboratory Reports
: All laboratory reports and chain of custody documents.

Field Data Sheets
: CEMS data and any transcribed data from the strip charts.

Process Information
: Relevant and available facility process operating documentation.

Calibration Gas Certificates
: Certificates for the calibration gas standards.

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

Stack Diagram
: Sketch or photograph of the stack.

Sample System Diagram
: Schematic of the sampling system configuration.

Permit / Authority to Construct
: Facility permits to operate or authority to construct.

Source Test Plan
: Sampling protocols submitted to BAAQMD prior to testing.

Comments: This source test was performed in accordance with the protocol submitted to BAAQMD. No deviations from the protocol or anomalies were observed during testing. The flare met all emissions compliance criteria.

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

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

If there are any questions concerning this report, please contact Jeramie Richardson at (810) 923-3181.

Prepared by,

Anne Richardson

Reviewed by,

Julie Wose Jennings

TABLE #1

RS-West Contra Costa Sanitary Landfill
Flare A-161

Parameter	Run 1	Run 2	Run 3	Average Results	Permit Limits
Test Date	12/16/22	12/16/22	12/16/22		
Test Time	0939-1028	1120-1208	1234-1322		
Standard Temperature, °F	70	70	70		
Process Parameters:					
Flare Temperature, °F Average	1,497	1,495	1,497	1,496	>1,417
Fuel:					
Fuel Flow Rate, SCFM	377.4	385.7	393.3	385.5	
Fuel Heat Input, MMBtu/hr	7.72	7.89	8.04	7.88	
NMOC, ppmvd *(EPA Method 25C)*	609	667	625	634	
NMOC, ppmv as Hexane	102	111	104	106	392
NMOC, lb/hr	0.571	0.639	0.610	0.606	
CH_4, ppmvd *(EPA Method 25C/ASTM 1945)*	343,000	343,000	343,000	343,000	
CH_4, lb/hr	321	328	335	328	
TRS as H_2S, ppmvd in Fuel *(Draeger Tubes)*	<20	<20	<20	<20	300
Stack Gas:					
Exhaust Flow Rate, DSCFM *(EPA Method 19)*	3,297	3,608	3,828	3,578	
Oxygen (O_2), % volume dry	12.9	13.4	13.7	13.3	
Carbon Dioxide (CO_2), % volume dry	6.8	6.6	6.5	6.6	
Water Vapor (H_2O), %	8.4	6.1	6.4	7.0	
NO_X Emissions (reported as NO_2):					
NOx, ppmvd	13.6	13.0	13.9	13.5	
NOx, ppmvd @ 15% O_2	10.0	10.3	11.4	10.6	
NOx, lb/hr	0.319	0.335	0.381	0.345	
NOx, lb/day	7.67	8.05	9.14	8.29	
NOx, lb/MMBtu	0.0414	0.0425	0.0474	0.0438	0.05
CO Emissions:					
CO, ppmvd	<1.0	<1.0	<1.0	<1.0	
CO, ppmvd @ 15% O_2	<0.74	<0.79	<0.82	<0.78	
CO, lb/hr	<0.014	<0.016	<0.017	<0.016	
CO, lb/day	<0.34	<0.38	<0.40	<0.37	
CO, lb/MMBtu	<0.0019	<0.0020	<0.0021	<0.0020	0.20
SO_2 Emissions:					
SO_2, ppmvd *(calculated emission concentration)*	<2.3	<2.1	<2.1	<2.2	
SO_2, ppmvd @ 15% O_2	<1.7	<1.7	<1.7	<1.7	
SO_2, ppmvd @ 3% O_2	<5.1	<5.1	<5.1	<5.11	
SO_2, lb/hr	<0.075	<0.077	<0.078	<0.077	
SO_2, lb/day	<1.8	<1.8	<1.9	<1.8	
Methane (CH_4) Emissions:					
CH_4, ppmv wet *(EPA Method 25A/ALT-078)*	<10.0	<10.0	<10.0	<10.0	
CH_4, ppmvd	<10.9	<10.7	<10.7	<10.8	
CH_4, lb/hr	<0.089	<0.095	<0.10	<0.095	
CH_4 Destruction Efficiency, %	>99.97%	>99.97%	>99.97%	>99.97%	>99%
NMOC Emissions (reported as CH_4):					
NMOC, ppmv wet *(EPA Method 25A/ALT-078)*	<1.0	<1.0	<1.0	<1.0	
NMOC, ppmvd	<1.1	<1.1	<1.1	<1.1	
NMOC, ppmvd @ 3% O_2	<2.4	<2.5	<2.7	<2.5	30*
NMOC, lb/hr	<0.0089	<0.010	<0.010	<0.010	
NMOC Destruction Efficiency, %	>98.43%	>98.51%	>98.34%	>98.43%	>98%*

* Permit requirements are 30 ppmv NMOC @ 3% O_2 or >98% destruction efficiency

WHERE,

ppmvd = parts per million concentration by volume expressed on a dry gas basis
lb/hr = pound per hour emission rate
Tstd. = standard temperature (°R = °F + 460)
MW = molecular weight
DSCFM = dry standard cubic feet per minute
NO_X = oxides of nitrogen, reported as NO_2 (MW = 46)
CO = carbon monoxide (MW = 28)
CH_4 = Methane (MW = 16)
NMOC = non-methane organic compounds, reported as CH_4 (MW = 16)
NMOC as Hexane = non-methane organic compounds as CH_4 ÷ 6
TRS = total reduced sulfur

CALCULATIONS,

15% O_2 correction = ppm (NOx, CO) · 5.9 / (20.9 - %O_2)
3% O_2 correction = ppm (NOx, CO) · 17.9 / (20.9 - %O_2)
lb/hr = ppm · 8.223 E-5 · dscfm · MW of pollutant / Tstd. °R
lb/day = lb/hr · 24
Destruction Efficiency = (inlet lbs/hr- outlet lbs/hr) / inlet lbs/hr
SO_2 emission ppm = H_2S in fuel · fuel flow/stack gas flow

< Value = 2% of Analyzer Range

TABLE # 2

Landfill Gas Toxic Air Contaminants

RS-West Contra Costa Sanitary Landfill

Flare A-161

Parmeter	WCCSL R1	WCCSL R2	WCCSL R3	Average Results (ppbv)	Permit Limits (ppbv)
Test Date	12/16/22	12/16/22	12/16/22		
Test Time	0939-1028	1120-1208	1234-1322		
Acrylonitrile (limit 10 ppmv)	<37.3	<40.6	<38.2	<38.7	10,000
Benzene (limit 8.9 ppmv)	1,110	1,090	1,120	1,107	8,900
Benzyl Chloride	<37.3	<40.6	<38.2	<38.7	
1,3 Butadiene	<37.3	<40.6	<38.2	<38.7	
Carbon Tetrachloride	<37.3	<40.6	<38.2	<38.7	
Chlorobenzene (limit 1.5 ppmv)	85.8	90.1	95.4	90.4	1,500
Chlorodifluoromethane	298	275	280	284	
Chloroform	<37.3	<40.6	<38.2	<38.7	
1,1 Dichloroethane	386	391	388	388	
1,1 Dichloroethene	<37.3	<40.6	<38.2	<38.7	
Ethylene Chloride (1,2-dichloroethane) (limit 350 ppmv)	55.2	57.7	51.1	54.7	350,000
1,4 Dichlorobenzene	237	205	245	229	
Dichlorodifluoromethane	203	199	188	197	
Dichlorofluoromethane	61.2	61.7	56.5	59.8	
1,4 Dioxane	<74.6	<81.2	<76.3	<77.4	
Ethylbenzene (limit 41 ppmv)	1,800	1,710	1,800	1,770	41,000
Ethlyene Dibromide(1,2 Dibromoethane)	<37.3	<40.6	<38.2	<38.7	
Fluorotrichloromethane(Trichlorofluoromethane)	<37.3	<40.6	<38.2	<38.7	
Hexane	1,710	1,730	1,720	1,720	
Isopropyl Alcohol	<149	<162	<153	<155	
Methylene Chloride	1,420	1,490	1,430	1,447	
Methyl Ethyl Ketone	107	153	105	122	
Methyl Tert Butyl Ether	<37.3	<40.6	<38.2	<38.7	
Perchloroethylene (limit 4 ppmv)	204	221	215	213	4,000
Styrene	40.3	42.2	42.7	41.7	
Toluene (limit 110 ppmv)	2,240	2,220	2,270	2,243	110,000
1,1,1 Trichloroethane	<37.3	<40.6	<38.2	<38.7	
1,1,2,2 Tetrachloroethane	<37.3	<40.6	<38.2	<38.7	
Trichloroethylene (limit 0.873 ppmv)	97.0	99.1	96.9	97.7	873
Vinyl Chloride (limit 6.4 ppmv)	618	657	620	632	6,400
Xylene (limit 78 ppmv)	2,269	2,216	2,357	2,281	78,000

APPENDICES

Calculations

Laboratory Reports

Field Data Sheets

Process Information

Calibration Gas Certificates

QC Equipment Calibrations

Stack Diagram

Sample System Diagram

Permit/Authority to Construct

Source Test Plan

Calculations

BLUE SKY ENVIRONMENTAL, INC

Preliminary CEM System QA/QC Summary Sheet

Facility: RS-West Contra Costa Sanitary Landfill Date: 12/16/22

Location: Flare A-161 Personnel: JR/TJ

Parameter	O2	CO2	NOx	CO			Comments
Analyzer	1440	1440	42C	48C			
Instrument Range	25	25	50	50			
Units	%	%	ppm	ppm			
EPA Range (high span)	20.54	22.48	45.45	45.02			
Low Cal Value	0	0	0	0			EPA 20 & 25A only
Cylinder #	-	-	-	-			
Mid Cal Value	10.50	12.26	22.93	22.52			
Cylinder #	CC511111	CC741522	EB0141819	EB0141819			
High Cal Value	20.54	22.48	45.45	45.02			
Cylinder #	CC741522	CC511111	EB0063409	EB0063409			

LINEARITY

Low Cal (int)	0.04	0.02	0.06	-0.03			zero gas
Abs. Difference	0.04	0.02	0.06	-0.03			
% Linearity	**0.19**	**0.09**	**0.13**	**-0.07**			**<2%**
Mid Cal (int)	10.46	12.21	22.80	22.67			
Abs. Difference	-0.04	-0.05	-0.13	0.15			
% Linearity	**-0.19**	**-0.22**	**-0.29**	**0.33**			**<2%**
High Cal (int)	20.47	22.41	45.46	44.79			
Abs. Difference	-0.07	-0.07	0.01	-0.23			
% Linearity	**-0.34**	**-0.31**	**0.02**	**-0.51**			**<2%**

Initial SYSTEM BIAS Check

Zero (int)	0.04	0.02	0.06	-0.03			
Zero (ext)	0.11	0.01	0.26	-0.21			
Abs. Difference	0.07	-0.01	0.20	-0.18			
bias, % range	**0.34**	**-0.04**	**0.44**	**-0.40**			EPA 20/6C/7E (±5%)
Cal (int)	20.47	12.21	22.80	22.67			
Cal (ext)	20.42	12.19	22.74	22.61			
Abs. Difference	-0.05	-0.02	-0.06	-0.06			
bias, % range	**-0.24**	**-0.09**	**-0.13**	**-0.13**			EPA 20/6C/7E (±5%)

SYSTEM RESPONSE TIME (secs) - time from ext. zero to ext. cal, or ext. cal to ext. zero (95% response) -

Zero to Cal	60	60	60	60			
Cal to Zero	60	60	60	60			

System Cal. Bias (Limit ± 5%) = $\frac{100 \cdot (\text{External cal - Internal cal})}{\text{Span Range}}$

% Linearity (Limit ± 2%) = $\frac{100 \cdot (\text{Cal Gas Value - Internal cal})}{\text{Span Range}}$

% Efficiency (Limit >90%) = $\frac{100 \cdot NO_2 \text{ response}}{NO_2 \text{ cal gas value}}$

If NO_2 % > 5% of NOx then run converter test.

Stack Gas NOx =	
Stack Gas NO =	
Stack Gas NO_2 =	
NO_2 %=	

NO_2 Converter Test

NO_2 cal gas value =	12.59 ppm
Analyzer NOx Response =	11.94 ppm
Efficiency % =	94.8%

CEM Bias Correction Summary

Facility:	RS-West Contra Costa Sanitary Landfill	Barometric Pressure:	30.2
Unit:	Flare A-161	Leak Check:	OK
Condition:	1,496°F	Stratification Check:	Stratified
Date:	12/16/22	Personnel:	JR/TJ

	O_2	CO_2	NOx	CO			
Analyzer	1440	1440	42C	48C			
Range, r	25	25	50	50			r
EPA Span	20.54	22.48	45.45	45.02			
Units, ppm or %	%	%	ppm	ppm			
Span Gas Value-1, sgv	**20.54**	**12.26**	**22.93**	**22.52**			**Ccal Primary**
Span Gas Value-2	10.50	22.48	45.45	45.02			Ccal Secondary
Initial (int. zero)	0.04	0.02	0.06	-0.03			Analyzer Response, Ca
Initial (int. cal) high	20.47	22.41	45.46	44.79			Analyzer Response, Ca
Initial (int. cal) mid	10.46	12.21	22.80	22.67			Analyzer Response, Ca
Initial (int. cal) run	20.47	12.21	22.80	22.67			Analyzer Response, Ca
Run 1	0.11	0.01	0.26	-0.21			zero (initial), Cib
Test Time:	20.42	12.19	22.74	22.61			cal (initial), Cib
0939-1028	12.87	6.76	13.70	0.11			TEST AVG, Cavg
	0.09	-0.02	0.31	-0.31			zero (final), Cfb
	20.39	12.24	22.87	22.54			cal (final), Cfb
EPA 3%	*-0.1%*	*-0.1%*	*0.1%*	*-0.2%*			% zero drift
EPA 3%	*-0.1%*	*0.2%*	*0.3%*	*-0.2%*			% cal drift
EPA 5%	*0.2%*	*-0.2%*	*0.6%*	*-0.6%*			% zero bias
EPA 5%	*-0.4%*	*0.1%*	*0.2%*	*-0.3%*			% cal bias
	12.88	**6.76**	**13.58**	**0.37**			**Cgas**
Run 2	0.09	-0.02	0.31	-0.31			zero (initial), Cib
Test Time:	20.39	12.24	22.87	22.54			cal (initial), Cib
1120-1208	13.38	6.55	13.22	-0.21			TEST AVG, Cavg
	0.10	-0.04	0.34	-0.34			zero (final), Cfb
	20.32	12.19	22.92	22.43			cal (final), Cfb
EPA 3%	*0.0%*	*-0.1%*	*0.1%*	*-0.1%*			% zero drift
EPA 3%	*-0.3%*	*-0.2%*	*0.1%*	*-0.2%*			% cal drift
EPA 5%	*0.3%*	*-0.3%*	*0.6%*	*-0.7%*			% zero bias
EPA 5%	*-0.7%*	*-0.1%*	*0.3%*	*-0.5%*			% cal bias
	13.42	**6.57**	**13.03**	**0.12**			**Cgas**
Run 3	0.10	-0.04	0.34	-0.34			zero (initial), Cib
Test Time:	20.32	12.19	22.92	22.43			cal (initial), Cib
1234-1322	13.62	6.45	14.17	-0.34			TEST AVG, Cavg
	0.12	-0.03	0.27	-0.56			zero (final), Cfb
	20.28	12.17	23.03	22.38			cal (final), Cfb
EPA 3%	*0.1%*	*0.0%*	*-0.2%*	*-0.5%*			% zero drift
EPA 3%	*-0.2%*	*-0.1%*	*0.2%*	*-0.1%*			% cal drift
EPA 5%	*0.4%*	*-0.2%*	*0.5%*	*-1.2%*			% zero bias
EPA 5%	*-0.9%*	*-0.2%*	*0.5%*	*-0.6%*			% cal bias
	13.70	**6.48**	**13.94**	**0.11**			**Cgas**

Pollutant Concentration (Cgas) = (Cavg - Co) · Ccal / (Cbcal - Co)
Zero and Calibration Drift = 100 · (Cfb - Cib) / r
Bias = 100 · (Cfb - Ca) / r

Co = (Cib + Cfb) / 2 for zero gas
Cbcal = (Cib + Cfb) / 2 for cal gas
Cib (CARB=Pre-first run) (EPA=Pre-run)

BLUE SKY ENVIRONMENTAL

CEM Summary

Facility:	RS-West Contra Costa Sanitary Landfill	Barometric Pressure:	30.20
Unit:	Flare A-161	Leak Check:	OK
Condition:	1,496°F	Stratification Check:	Stratified
Date:	12/16/22	Personnel:	JR/TJ

	NMOC	Linearity	Error	CH_4	Linearity	Error	Comments
Analyzer	55C			55C			
Range	50			500			
Units, ppm or %	ppm	ppm	%	ppm	ppm	%	
Span High Value	44.55	44.89	*0.76*	444.6	445.4	*0.17*	*< 5%*
Cylinder #	CC408135	-		CC408135			
Span Mid Value	24.945	25.22	*1.10*	249.6	246.5	*-1.25*	*< 5%*
Cylinder #	CC505102	-		CC505102			
Span Low Value	14.874	14.77	*-0.70*	151.4	150.6	*-0.52*	*< 5%*
Cylinder #	CC250383	-		CC250383			
Run 1	0.02			-0.39			zero (initial), Zi
Test Time:	14.77			150.6			upscale cal (initial), Si
0939-1028	-0.05			-0.41			TEST AVG
	-0.04			-0.56			zero (final), Zf
	14.84			149.7			upscale cal (final), Sf
EPA 3%	*-0.1%*			*0.0%*			zero drift
EPA 3%	*0.2%*			*-0.2%*			cal drift
Run 2	-0.04			-0.56			zero (initial), Zi
Test Time:	14.84			149.7			upscale cal (initial), Si
1120-1208	-0.05			-0.49			TEST AVG
	-0.07			-0.34			zero (final), Zf
	14.95			151.3			upscale cal (final), Sf
EPA 3%	*-0.1%*			*0.0%*			zero drift
EPA 3%	*0.2%*			*0.4%*			cal drift
Run 3	-0.07			-0.34			zero (initial), Zi
Test Time:	14.95			151.3			upscale cal (initial), Si
1234-1322	-0.03			-0.47			TEST AVG
	-0.05			-0.59			zero (final), Zf
	15.08			153.6			upscale cal (final), Sf
EPA 3%	*0.0%*			*-0.1%*			zero drift
EPA 3%	*0.3%*			*0.5%*			cal drift

CALIBRATION ERROR (Linearity) = 100 · (Measured Response - Span Gas Value) / Span Gas Value *LIMIT 5%*

ZERO DRIFT % = 100 · (Zf - Zi) / Instrument Range *LIMIT 3%*

SPAN DRIFT % = 100 · (Sf - Si) / Instrument Range *LIMIT 3%*

CORRECTED VALUE = [Test Avg. - ((Zi + Zf) / 2)] · Span Gas Value / [((Si + Sf) / 2) - ((Zi + Zf) / 2)]

BLUE SKY ENVIRONMENTAL, INC

Stack Moisture Determination
EPA Method 4

Facility: RS-West Contra Costa Sanitary Landfill
Unit: Flare A-161
Condition: 1,496°F
Date: 12/16/22

	Run 1	**Run 2**	Run 3	
Time	0940-1020	1120-1200	1235-1315	
Uncorrected Meter Volume (Vm)	26.700	28.304	28.728	ft^3
Meter Factor (Yd)	1.0280	1.0280	1.0280	
Barometric Pressure (Pb)	30.20	30.20	30.20	"Hg
Meter Pressure (ΔH)	1.7	1.7	1.7	"H_2O
Meter Temperature (Tm)	67.4	74.5	76.9	°F
Standard Temperature (Tstd)	70	70	70	°F
Impinger H_2O Gain (Vw imp)	48.1	34.0	36.9	g
Silica Gel Weight Gain (Vw sg)	6.4	6.5	5.6	g
Total H_2O Gain (Vw)	54.5	40.5	42.5	g
Moisture Vapor (Vw std)	2.578	1.915	2.010	ft^3
Standard Meter Volume (Vm std)	**27.958**	**29.242**	**29.549**	**DSCF**
Percent of H_2O in Stack	**8.44**	**6.15**	**6.37**	**%**

DEFINITIONS:
ft^3 = cubic foot
"H_2O = inches of water
"Hg = inches of mercury
°F = Fahrenheit
ml = milliliter
g = gram
% = percent

CALCULATIONS:
Vw std = 0.00267 · Vw · (Tstd + 460) / 29.92
Vm std = Vm · Yd · (Tstd + 460) · (Pb + (ΔH/13.6)) / (Tm + 460) / 29.92
Stack moisture H_2O % = 100 · Vw std / (Vw std + Vm std)

Stack Gas Flow Rate Determination
EPA Method 19

Facility: RS-West Contra Costa Sanitary Landfill
Unit: Flare A-161
Condition: 1,496°F
Date: 12/16/22

	Run 1	Run 2	Run 3	
Test Time	0939-1028	1120-1208	1234-1322	
# cubic feet/rev	377.4	385.7	393.3	ft^3
# of seconds/rev	60	60	60	seconds
Gas Line Pressure (PSIG)	0.0	0.0	0.0	PSI Gauge
Gas Line Pressure (PSIA)	14.7	14.7	14.7	PSI Absolute
Gross Calorific Value @ 60°F	347.3	347.3	347.3	Btu / ft^3
Stack Oxygen	12.9	13.4	13.7	%
Gas Fd-Factor @ 60°F	9,657	9,643	9,657	DSCF/MMBtu
Gas Temperature	70	70	70	°F
Standard Temperature (Tstd)	70	70	70	°F
Realtime Fuel Rate	377.4	385.7	393.3	CFM
Corrected Fuel Rate @ Tstd	377.4	385.7	393.3	SCFM
Fuel Flowrate	22,647	23,143	23,595	SCFH
Million Btu per minute	0.129	0.131	0.134	MMBtu/min
Heat Input	7.7	7.9	8.0	MMBtu/hr
Stack Gas Flow Rate @ Tstd	**3,297**	**3,608**	**3,828**	**DSCFM**

DEFINITIONS:

Gas Fd-Factor = Fuel conversion factor (ratio of combustion gas volumes to heat inputs)
MMBtu = Million Btu

CALCULATIONS:

SCFM = CFM · 528 · (PSIA) / 14.7 / (gas°F + 460)

SCFH = SCFM · 60

MMBtu/min = (SCFM · Btu/ft^3) / 1,000,000

MMBtu/hr heat input = MMBtu/min · 60

DSCFM = Gas Fd-Factor · MMBtu/min · 20.9/ (20.9 - O_2%)

Fd-Factor Calculation

Landfill Gas

Facility: RS-West Contra Costa Sanitary Landfill
Unit: Flare A-161
Sample ID: WCCSL R1
Date: 12/16/2022

	Molecular Weight	Ideal Gas Specific Gravity, G_i	Ideal Gas Total Calorific Value, H_i	Compressibility Summation Factor, $\sum bi$	Specific Volume, ft^3/lb	PPM %	Composition Mole Fraction, x_i	Specific Gravity Fraction, x_iG_i	Calorific Value Fraction, x_iH_i	Compressibility Fraction, $x_i\sqrt{bi}$	x_iMW	Weight Fraction, $\xi_iMW / \sum xiMW$	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume, ft^3/lb
Helium‡	4.00	0.1382	0.0	-0.0170			**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000							
Hydrogen (H_2) ‡	2.02	0.0696	324.9		187.723	**<1.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000		0.0000				0.0000	0.0000
Nitrogen	28.01	0.9672	0.0	0.0164	13.443	**34.8**	**0.3480**	0.3366	0.0	0.0057	9.7475	0.3457				0.3457		0.3457	4.6467
Oxygen	32.00	1.1053	0.0		11.819	**5.4**	**0.0540**	0.0597	0.0	0.0000	1.7280	0.0613			0.0613			0.0613	0.7242
Carbon Monoxide	28.01	0.9671	321.3	0.0217	13.506	**<0.1**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Carbon Dioxide‡	44.01	1.5194	0.0	0.0640	8.548	**25.5**	**0.2550**	0.3874	0.0	0.0163	11.2226	0.3980	0.1086	0.0000	0.2894			0.3980	3.4018
Methane	16.04	0.5539	1012.0	0.0436	23.565	**34.3**	**0.3430**	0.1900	347.1	0.0150	5.5017	0.1951	0.1461	0.0490				0.1951	4.5975
Ethane (C_2)	30.01	1.0382	1772.9	0.0917	12.455	**17.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Propane (C_3)	44.09	1.5224		0.1342	8.365	**12.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isobutane	58.12	2.0067	3260.1	0.1744	6.321		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Butane (C_4)	58.12	2.0067	3269.6	0.1825	6.321	**4.7**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isopentane	72.14	2.4910	4009.4	0.2276	5.252		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Pentane (C_5)	72.14	2.4910	4018.5	0.2377	5.252	**1.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Hexanes (C_6)	86.17	2.9753	4758.0	0.2830	4.398	**3.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
C_{6+} (as hexane)	86.17	2.9753	4758.0	0.2830	4.398	**106.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Total							1.0000	**0.974 SG**	**347.1 Btu/ft³**	0.0207 **$\sum x_i\sqrt{b_i}$**	28.1998 **$\sum xiMW$**	1.0000	0.2547 **25.47%**	0.0490 **4.90%**	0.3506 **35.06%**	0.3457 **34.56%**	0.0000 **0.00%**	1.0000	**13.37 ft³/lb**

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *(Air = 1.000 @ 760mm Hg, 60°F)* **0.9737**

Compressibility Factor (Z) **0.9996**

$Z = 1 - [(\sum x_i \ddot{O} b_i)^2 + (2 x_H \cdot x_H^2)\ (0.0005)]$

Specific Gravity (corrected) **0.9741**

Specific Volume, (SV) ft^3/lb **13.37** ft^3/lb

Gross Calorific Value (GCV) **347.3** **Btu/ft³ Gross @ 60°F**
342.0 **Btu/ft³ Gross @ 68°F**

Gross Calorific Value (GCV) $Btu/lb = Btu/ft^3 \cdot ft^3/lb$ **4,643** **Btu/lb @ 60°F**

** Based on High Heat Values (HHV)*

Gas Fd-Factor
$DSCF/MMBtu = 10^6 \cdot ((3.64 \cdot \%H_2) + (1.53 \cdot \%C) + (0.57 \cdot \%S) + (0.14 \cdot \%N_2) - (0.46 \cdot \%O_2)) / Btu/lb$
9,657 **DSCF/MMBtu @ 60°F**
9,805 **DSCF/MMBtu @ 68°F**

Fd-Factor Calculation

Landfill Gas

Facility: RS-West Contra Costa Sanitary Landfill
Unit: Flare A-161
Sample ID: WCCSL R2
Date: 12/16/2022

	Molecular Weight	Ideal Gas Specific Gravity, G_i	Ideal Gas Total Calorific Value, H_i	Compressibility Summation Factor, $\sum bi$	Specific Volume, ft^3/lb	PPM %	Composition Mole Fraction, x_i	Specific Gravity Fraction, x_iG_i	Calorific Value Fraction, x_iH_i	Compressibility Fraction, $x_i\sqrt{bi}$	x_iMW	Weight Fraction, $\xi_iMW / \sum xiMW$	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume, ft^3/lb
Helium‡	4.00	0.1382	0.0	-0.0170			**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000							
Hydrogen (H_2) ‡	2.02	0.0696	324.9		187.723	**<1.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000		0.0000				0.0000	0.0000
Nitrogen	28.01	0.9672	0.0	0.0164	13.443	**34.8**	**0.3480**	0.3366	0.0	0.0057	9.7475	0.3458				0.3458		0.3458	4.6487
Oxygen	32.00	1.1053	0.0		11.819	**5.5**	**0.0550**	0.0608	0.0	0.0000	1.7600	0.0624			0.0624			0.0624	0.7380
Carbon Monoxide	28.01	0.9671	321.3	0.0217	13.506	**<0.2**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Carbon Dioxide‡	44.01	1.5194	0.0	0.0640	8.548	**25.4**	**0.2540**	0.3859	0.0	0.0163	11.1785	0.3966	0.1082	0.0000	0.2884			0.3966	3.3899
Methane	16.04	0.5539	1012.0	0.0436	23.565	**34.3**	**0.3430**	0.1900	347.1	0.0150	5.5017	0.1952	0.1461	0.0491				0.1952	4.5994
Ethane (C_2)	30.01	1.0382	1772.9	0.0917	12.455	**19.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Propane (C_3)	44.09	1.5224		0.1342	8.365	**11.4**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isobutane	58.12	2.0067	3260.1	0.1744	6.321		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Butane (C_4)	58.12	2.0067	3269.6	0.1825	6.321	**4.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isopentane	72.14	2.4910	4009.4	0.2276	5.252		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Pentane (C_5)	72.14	2.4910	4018.5	0.2377	5.252	**2.9**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Hexanes (C_6)	86.17	2.9753	4758.0	0.2830	4.398	**4.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
C_{6+} (as hexane)	86.17	2.9753	4758.0	0.2830	4.398	**118.4**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Total							1.0000	**0.973 SG**	**347.1 Btu/ft³**	0.0207 **$\sum x_i\sqrt{b_i}$**	28.1877 **$\sum xiMW$**	1.0000	0.2544 **25.44%**	0.0491 **4.91%**	0.3508 **35.08%**	0.3458 **34.58%**	0.0000 **0.00%**	1.0000	**13.38 ft³/lb**

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *(Air = 1.000 @ 760mm Hg, 60°F)* **0.9733**

Compressibility Factor (Z) **0.9996**

$Z = 1 - [(\sum x_i \sqrt{b_i})^2 + (2x_H \cdot x_H^2)\ (0.0005)]$

Specific Gravity (corrected) **0.9737**

Specific Volume, (SV) ft^3/lb **13.38** ft^3/lb

Gross Calorific Value (GCV) **347.3** **Btu/ft³ Gross @ 60°F**
342.0 **Btu/ft³ Gross @ 68°F**

Gross Calorific Value (GCV) $Btu/lb = Btu/ft^3 \cdot ft^3/lb$ **4,645** **Btu/lb @ 60°F**

** Based on High Heat Values (HHV)*

Gas Fd-Factor **9,643** **DSCF/MMBtu @ 60°F**

$DSCF/MMBtu = 10^6 \cdot ((3.64 \cdot \%H_2) + (1.53 \cdot \%C) + (0.57 \cdot \%S) + (0.14 \cdot \%N_2) - (0.46 \cdot \%O_2)) / Btu/lb$ **9,791** **DSCF/MMBtu @ 68°F**

Fd-Factor Calculation

Landfill Gas

Facility: RS-West Contra Costa Sanitary Landfill
Unit: Flare A-161
Sample ID: WCCSL R3
Date: 12/16/2022

	Molecular Weight	Ideal Gas Specific Gravity, G_i	Ideal Gas Total Calorific Value, H_i	Compressibility Summation Factor, $\sum bi$	Specific Volume, ft^3/lb	PPM %	Composition Mole Fraction, x_i	Specific Gravity Fraction, $x_i G_i$	Calorific Value Fraction, $x_i H_i$	Compressibility Fraction, $x_i \sqrt{bi}$	$x_i MW$	Weight Fraction, $\xi MW / \sum xiMW$	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume, ft^3/lb
Helium‡	4.00	0.1382	0.0	-0.0170			**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000							
Hydrogen (H_2) ‡	2.02	0.0696	324.9		187.723	**<1.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000		0.0000				0.0000	0.0000
Nitrogen	28.01	0.9672	0.0	0.0164	13.443	**34.8**	**0.3480**	0.3366	0.0	0.0057	9.7475	0.3457				0.3457		0.3457	4.6467
Oxygen	32.00	1.1053	0.0		11.819	**5.4**	**0.0540**	0.0597	0.0	0.0000	1.7280	0.0613			0.0613			0.0613	0.7242
Carbon Monoxide	28.01	0.9671	321.3	0.0217	13.506	**<0.2**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Carbon Dioxide‡	44.01	1.5194	0.0	0.0640	8.548	**25.5**	**0.2550**	0.3874	0.0	0.0163	11.2226	0.3980	0.1086	0.0000	0.2894			0.3980	3.4018
Methane	16.04	0.5539	1012.0	0.0436	23.565	**34.3**	**0.3430**	0.1900	347.1	0.0150	5.5017	0.1951	0.1461	0.0490				0.1951	4.5975
Ethane (C_2)	30.01	1.0382	1772.9	0.0917	12.455	**11.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Propane (C_3)	44.09	1.5224		0.1342	8.365	**11.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isobutane	58.12	2.0067	3260.1	0.1744	6.321		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Butane (C_4)	58.12	2.0067	3269.6	0.1825	6.321	**4.9**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isopentane	72.14	2.4910	4009.4	0.2276	5.252		**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Pentane (C_5)	72.14	2.4910	4018.5	0.2377	5.252	**1.5**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Hexanes (C_6)	86.17	2.9753	4758.0	0.2830	4.398	**5.2**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
C_{6+} (as hexane)	86.17	2.9753	4758.0	0.2830	4.398	**115.6**	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Total							1.0000	**0.974** SG	**347.1** Btu/ft^3	0.0207 $\sum x_i \sqrt{b_i}$	28.1998 **∑xiMW**	1.0000	0.2547 **25.47%**	0.0490 **4.90%**	0.3506 **35.06%**	0.3457 **34.56%**	0.0000 **0.00%**	1.0000	**13.37** ft^3/lb

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *(Air = 1.000 @ 760mm Hg, 60°F)* **0.9737**

Compressibility Factor (Z) **0.9996**

$Z = 1 - [(\partial x_i \ddot{O} b_i)^2 + (2x_H \cdot x_H^2)\ (0.0005)]$

Specific Gravity (corrected) **0.9741**

Specific Volume, (SV) ft^3/lb **13.37** ft^3/lb

Gross Calorific Value (GCV) **347.3** **Btu/ft^3 Gross @ 60°F**
342.0 **Btu/ft^3 Gross @ 68°F**

Gross Calorific Value (GCV) $Btu/lb = Btu/ft^3 \cdot ft^3/lb$ **4,643** **Btu/lb @ 60°F**

** Based on High Heat Values (HHV)*

Gas Fd-Factor **9,657** **DSCF/MMBtu @ 60°F**

$DSCF/MMBtu = 10^6 \cdot ((3.64 \cdot \%H_2) + (1.53 \cdot \%C) + (0.57 \cdot \%S) + (0.14 \cdot \%N_2) - (0.46 \cdot \%O_2)) / Btu/lb$ **9,805** **DSCF/MMBtu @ 68°F**

Laboratory Reports

Atmospheric Analysis & Consulting, Inc

CLIENT	: Blue Sky Environmental, INC
PROJECT NAME	: WCCSL
AAC PROJECT NO.	: 222626
REPORT DATE	: 01/05/2023

On December 20th 2022, Atmospheric Analysis & Consulting, Inc. received three (3) Six-Liter Summa Canisters for ASTM D-1945 analysis and TNMOC analysis by EPA 25C. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab No.	Return Pressure (mmHg)
WCCSL R1	222626-39399	687.6
WCCSL R2	222626-39400	629.7
WCCSL R3	222626-39401	671.1

This analysis is performed in accordance with AAC's Quality Manual. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples. The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

This report consists of 7 pages.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Atmospheric Analysis & Consulting, Inc

Laboratory Analysis Report

CLIENT : Blue Sky Environmenta, INC
PROJECT NO. : 222626
MATRIX : Air

SAMPLING DATE : 12/16/2022
RECEIVING DATE : 12/20/2022
ANALYSIS DATE : 01/03/2023
REPORT DATE : 01/05/2023

ASTM D-1945

Client ID	WCCSL R1	WCCSL R2	WCCSL R3
AAC ID	222626-39399	222626-39400	222626-39401
Can Dilution Factor	1.49	1.62	1.53
Analyte	Result	Result	Result
H_2	< 1.5 %	< 1.6 %	< 1.5 %
O_2	5.4 %	5.5 %	5.4 %
N_2	34.8 %	34.8 %	34.8 %
CO	< 0.1 %	< 0.2 %	< 0.2 %
CO_2	25.5 %	25.4 %	25.5 %
CH_4	34.3 %	34.3 %	34.3 %
C_2 (as Ethane)	17.5 ppmV	19.5 ppmV	11.6 ppmV
C_3 (as Propane)	12.6 ppmV	11.4 ppmV	11.6 ppmV
C_4 (as Butane)	4.7 ppmV	4.6 ppmV	4.9 ppmV
C_5 (as Pentane)	1.5 ppmV	2.9 ppmV	1.5 ppmV
C_6 (as Hexane)	3.6 ppmV	4.5 ppmV	5.2 ppmV
C_6+ (as Hexane)	106.6 ppmV	118.4 ppmV	115.6 ppmV

All fixed gases have been normalized to 100% on a dry basis

Sample Reporting Limit (SRL) is equal to Reporting Limit x Analysis Dil. Fac x Canister Dil. Fac (if applicable)

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Laboratory Analysis Report

Client : Blue Sky Environmenta, INC
Project No. : 222626
Matrix : AIR
Units : ppmC

Sampling Date : 12/16/2022
Receiving Date : 12/20/2022
Analysis Date : 01/03/2023
Report Date : 01/05/2023

EPA 25C

Reporting Limit: 3.0 ppmC		*Canister Dilution Factor*	*Analysis Dilution Factor*	TNMOC*	SRL (RL x DF's)
Client Sample ID	AAC ID				
WCCSL R1	222626-39399	1.5	1.0	609	4.5
WCCSL R2	222626-39400	1.6	1.0	667	4.9
WCCSL R3	222626-39401	1.5	1.0	625	4.6

Sample Reporting Limit (SRL) is equal to Reporting Limit x Analysis Dil. Fac x Canister Dil. Fac.

**Total Non-Methane Organic Carbon*

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed : 01/03/2023
Analyst : CM
Units : %

Instrument ID : GC-TCA #2
Calb Date : 01/17/2022
Reporting Limit : 0.1%

I - Opening Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	H2	O2	N2	CH4	CO	CO2
CCV	Spike Conc	9.9	10.3	20.7	10.0	10.0	10.0
	Result	10.4	10.7	21.8	10.0	9.8	9.8
	% Rec *	104.8	103.5	105.6	99.9	98.3	98.6

II - Method Blank - BTU/ASTM D-1945

AAC ID	Analyte	H2	O2	N2	CH4	CO	CO2
MB	Concentration	ND	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	H2	O2	N2	CH4	CO	CO2
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	9.8	11.0	21.1	9.5	9.5	9.6
	LCS Result	10.9	10.5	22.1	10.0	10.0	9.9
	LCSD Result	9.5	10.8	23.0	9.8	9.8	9.9
	LCS % Rec *	111.8	96.0	104.5	105.1	105.4	103.5
	LCSD % Rec *	97.9	98.1	109.0	103.0	103.9	103.0
	% RPD ***	13.3	2.1	4.2	2.0	1.5	0.5

IV -Sample & Sample Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	H2	O2	N2	CH4	CO	CO2
220954-30872	Sample	0.0	3.6	23.0	22.7	0.0	16.8
	Sample Dup	0.0	3.6	23.1	22.7	0.0	16.8
	Mean	0.0	3.6	23.0	22.7	0.0	16.8
	% RPD ***	0.0	0.5	0.4	0.2	0.0	0.0

V - Matrix Spike & Duplicate- BTU/ASTM D-1945

AAC ID	Analyte	H2	N2	CH4	CO	CO2
220954-30872	Sample Conc	0.0	11.5	11.3	0.0	8.4
	Spike Conc	9.9	10.1	10.0	10.0	10.0
	MS Result	10.0	21.8	21.3	10.0	18.3
	MSD Result	10.0	21.4	21.4	10.1	18.5
	MS % Rec **	100.9	101.3	99.2	99.7	99.0
	MSD % Rec **	101.3	97.9	100.9	100.8	100.8
	% RPD ***	0.4	3.3	1.7	1.1	1.8

VI - Closing Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	H2	O2	N2	CH4	CO	CO2
CCV	Spike Conc	9.9	10.3	20.7	10.0	10.0	10.0
	Result	10.0	10.4	20.3	9.6	9.6	9.6
	% Rec *	101.2	100.6	98.3	96.6	96.0	96.5

** Must be 85-115%*

*** Must be 75-125%*

**** Must be < 25%*

ND = Not Detected

<RL = less than Reporting Limit

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Quality Control/Quality Assurance Report

Analysis Date : 01/03/2023
Analyst : CM
Units : ppmv

Instrument ID: : GCTCA#2-FID
Calibration Date: : 09/12/2022

I - Opening Calibration Verification Standard - Method 25C

Analyte	xRF	DRF	%RPD*
Propane	123799	124502	0.6

II - TNMOC Response Factor - Method 25C

Analyte	xRF	CV RF	CV dp RF	CV tp RF	Average RF	% RPD***
Propane	123799	124502	118635	117695	120277	2.9

III - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	TNMOC	0.00

IV - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS	LCSD	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	Propane	50.6	47.49	47.11	93.9	93.2	0.8

V - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
Propane	123799	120954	2.3

xCF - Average Calibration Factor from Initial Calibration Curve
dCF - Daily Calibration Factor
* Must be <15%
** Must be 90-110 %
*** Must be <20%

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Atmospheric Analysis & Consulting, Inc

Quality Control/Quality Assurance Report

Date Analyzed : 01/02/2023
Analyst : CM/KM
Units : ppmv

Instrument ID : FID #3
Calb Date : 02/01/22
Reporting Limit : 0.5 ppmv

I - Opening Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
CCV	Spike Conc	98.9	99.1	98.7	98.1	98.1	99.7
	Result	91.5	91.5	89.7	93.9	99.2	106.0
	% Rec *	92.5	92.3	90.8	95.8	101.1	106.3

II - Method Blank - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
MB	Concentration	ND	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	98.9	99.1	98.7	98.1	98.1	99.7
	LCS Result	99.3	99.1	98.2	102.5	107.1	112.4
	LCSD Result	97.8	97.6	96.8	100.1	103.4	108.3
	LCS % Rec *	100.4	100.0	99.5	104.5	109.1	112.7
	LCSD % Rec *	98.9	98.5	98.1	102.1	105.4	108.6
	% RPD ***	1.5	1.5	1.4	2.3	3.5	3.7

IV - Sample & Sample Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
220629-29436	Sample	0.0	0.0	0.0	0.0	0.0	0.0
	Sample Dup	0.0	0.0	0.0	0.0	0.0	0.0
	Mean	0.0	0.0	0.0	0.0	0.0	0.0
	% RPD ***	0.0	0.0	0.0	0.0	0.0	0.0

V - Matrix Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
220629-29436	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	49.4	49.6	49.4	49.0	49.1	49.9
	MS Result	51.6	50.3	50.4	51.3	53.6	54.8
	MSD Result	47.9	46.6	46.0	47.5	48.9	50.1
	MS % Rec **	104.3	101.4	102.1	104.6	109.2	109.9
	MSD % Rec **	97.0	94.0	93.1	96.8	99.6	100.4
	% RPD ***	7.3	7.6	9.2	7.8	9.2	9.0

VI - Closing Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
CCV	Spike Conc	98.9	99.1	98.7	98.1	98.1	99.7
	Result	92.6	91.4	90.5	93.0	95.9	98.4
	% Rec *	93.7	92.2	91.7	94.8	97.8	98.6

** Must be 85-115%*

*** Must be 75-125%*

**** Must be < 25%*

ND = Not Detected

<RL = less than Reporting Limit

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

BLUE SKY ENVIRONMENTAL, INC
624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph
Contact: *Jeramie Richardson (810) 923-3181*
E.Mail jrichardson@blueskyenvironmental.com

LAB: AAC
ADDRESS: 2225 Sperry Avenue
Ventura, CA 93003
ph/fax 805 650 1642, fax -1644
Contact: John Yokoyama
E.Mail jyokoyama@aaclab.com

CHAIN OF CUSTODY RECORD

Project Name: WCCSL

Project #: 22626

SAMPLE Date	SAMPLE Time	Sample ID (Method-Run-Fraction)	CANISTER NUMBER	Type/Size of container	Analysis Requested: 1945	25C	TO-15			/	FINAL VAC
12/16/22		WCCSL R1 39399	2591	SUMMA	X	X	X				-3.3
12/16/22		WCCSL R2 39400	2802	SUMMA	X	X	X				-5.6
12/16/22		WCCSL R3 39401	2810	SUMMA	X	X	X				-3.8

All samples submitted to laboratories are accepted on a custodial basis only. Ownership of sample remains with the client submitting the sample. Samples should be held for 90+ days. The laboratory reserves the right to return unused sample portions.

COMMENTS:

Email results to bluesky@blueskyenvironmental.com

Relinquished by:	Date: 12-19-22	Time: 0800	Received by:	Date: 12/20/22	Time: 1339
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Atmospheric Analysis & Consulting, Inc.

CLIENT : Blue Sky Environmental
PROJECT NAME : WCCSL
AAC PROJECT NO. : 222626
REPORT DATE : 01/03/2023

On December 20, 2022, Atmospheric Analysis & Consulting, Inc. received three (3) Six-Liter Silonite Canisters for Volatile Organic Compounds analysis by EPA Method TO-15. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab ID	Return Pressure (mmHga)
WCCSL R1	222626-39399	687.6
WCCSL R2	222626-39400	629.7
WCCSL R3	222626-39401	671.1

This analysis is accredited under the laboratory's ISO/IEC 17025:2017 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1908. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples.

The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

This report consists of 10 pages.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com • (805) 650-1642

Laboratory Analysis Report

CLIENT : Blue Sky Environmental
PROJECT NO : 222626
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/20/2022
DATE REPORTED : 01/03/2023
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	WCCSL R1			Sample Reporting Limit (SRL) (MRLxDF's)	WCCSL R2			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	222626-39399				222626-39400				
Date Sampled	12/16/2022				12/16/2022				
Date Analyzed	12/21/2022				12/21/2022				
Can Dilution Factor	1.49				1.62				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	298		50	37.3	275		50	40.6	0.50
Propene	3430		50	74.6	3560		50	81.2	1.00
Dichlorodifluoromethane	203		50	37.3	199		50	40.6	0.50
Chloromethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Dichlorotetrafluoroethane	37.3		50	37.3	<SRL	U	50	40.6	0.50
Vinyl Chloride	618		50	37.3	657		50	40.6	0.50
Methanol	<SRL	U	50	373	<SRL	U	50	406	5.00
1,3-Butadiene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Bromomethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Chloroethane	85.0		50	37.3	89.3		50	40.6	0.50
Dichlorofluoromethane	61.2		50	37.3	61.7		50	40.6	0.50
Ethanol	248		50	149	502		50	162	2.00
Vinyl Bromide	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Acetone	<SRL	U	50	149	<SRL	U	50	162	2.00
Trichlorofluoromethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
2-Propanol (IPA)	<SRL	U	50	149	186		50	162	2.00
Acrylonitrile	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,1-Dichloroethene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Methylene Chloride (DCM)	1420		50	74.6	1490		50	81.2	1.00
Allyl Chloride	<SRL	U	50	74.6	<SRL	U	50	81.2	1.00
Carbon Disulfide	<SRL	U	50	149	<SRL	U	50	162	2.00
Trichlorotrifluoroethane	56.0		50	37.3	56.0		50	40.6	0.50
trans-1,2-Dichloroethene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,1-Dichloroethane	386		50	37.3	391		50	40.6	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Vinyl Acetate	<SRL	U	50	74.6	<SRL	U	50	81.2	1.00
2-Butanone (MEK)	107		50	74.6	153		50	81.2	1.00
cis-1,2-Dichloroethene	184		50	37.3	181		50	40.6	0.50
Hexane	1710		50	37.3	1730		50	40.6	0.50
Chloroform	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Ethyl Acetate	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Tetrahydrofuran	343		50	37.3	368		50	40.6	0.50
1,2-Dichloroethane	55.2		50	37.3	57.7		50	40.6	0.50
1,1,1-Trichloroethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Benzene	1110		50	37.3	1090		50	40.6	0.50

Laboratory Analysis Report

CLIENT : Blue Sky Environmental
PROJECT NO : 222626
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/20/2022
DATE REPORTED : 01/03/2023
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	WCCSL R1			Sample Reporting Limit (SRL) (MRLxDF's)	WCCSL R2			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	222626-39399				222626-39400				
Date Sampled	12/16/2022				12/16/2022				
Date Analyzed	12/21/2022				12/21/2022				
Can Dilution Factor	1.49				1.62				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Cyclohexane	3300		50	37.3	3260		50	40.6	0.50
1,2-Dichloropropane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Bromodichloromethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,4-Dioxane	<SRL	U	50	74.6	<SRL	U	50	81.2	1.00
Trichloroethene (TCE)	97.0		50	37.3	99.1		50	40.6	0.50
2,2,4-Trimethylpentane	236		50	37.3	233		50	40.6	0.50
Heptane	1130		50	37.3	1110		50	40.6	0.50
cis-1,3-Dichloropropene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
4-Methyl-2-pentanone (MiBK)	54.5		50	37.3	50.3		50	40.6	0.50
trans-1,3-Dichloropropene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,1,2-Trichloroethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Toluene	2240		50	37.3	2220		50	40.6	0.50
2-Hexanone (MBK)	<SRL	U	50	74.6	<SRL	U	50	81.2	1.00
Dibromochloromethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,2-Dibromoethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Tetrachloroethene (PCE)	204		50	37.3	221		50	40.6	0.50
Chlorobenzene	85.8		50	37.3	90.1		50	40.6	0.50
Ethylbenzene	1800		50	37.3	1710		50	40.6	0.50
m & p-Xylene	1540		50	74.6	1510		50	81.2	1.00
Bromoform	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Styrene	40.3		50	37.3	42.2		50	40.6	0.50
1,1,2,2-Tetrachloroethane	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
o-Xylene	729		50	37.3	706		50	40.6	0.50
4-Ethyltoluene	384		50	37.3	361		50	40.6	0.50
1,3,5-Trimethylbenzene	251		50	37.3	235		50	40.6	0.50
1,2,4-Trimethylbenzene	648		50	37.3	584		50	40.6	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,3-Dichlorobenzene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,4-Dichlorobenzene	237		50	37.3	205		50	40.6	0.50
1,2-Dichlorobenzene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
1,2,4-Trichlorobenzene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
Hexachlorobutadiene	<SRL	U	50	37.3	<SRL	U	50	40.6	0.50
BFB-Surrogate Std. % Recovery		90%				92%			70-130%

U - Compound was not detected at or above the SRL.

Laboratory Analysis Report

CLIENT : Blue Sky Environmental
PROJECT NO : 222626
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/20/2022
DATE REPORTED : 01/03/2023
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	WCCSL R3			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	222626-39401				
Date Sampled	12/16/2022				
Date Analyzed	12/21/2022				
Can Dilution Factor	1.53				
Compound	Result	Qualifier	Analysis DF		
Chlorodifluoromethane	280		50	38.2	0.50
Propene	3580		50	76.3	1.00
Dichlorodifluoromethane	188		50	38.2	0.50
Chloromethane	<SRL	U	50	38.2	0.50
Dichlorotetrafluoroethane	<SRL	U	50	38.2	0.50
Vinyl Chloride	620		50	38.2	0.50
Methanol	<SRL	U	50	382	5.00
1,3-Butadiene	<SRL	U	50	38.2	0.50
Bromomethane	<SRL	U	50	38.2	0.50
Chloroethane	85.5		50	38.2	0.50
Dichlorofluoromethane	56.5		50	38.2	0.50
Ethanol	254		50	153	2.00
Vinyl Bromide	<SRL	U	50	38.2	0.50
Acetone	<SRL	U	50	153	2.00
Trichlorofluoromethane	<SRL	U	50	38.2	0.50
2-Propanol (IPA)	<SRL	U	50	153	2.00
Acrylonitrile	<SRL	U	50	38.2	0.50
1,1-Dichloroethene	<SRL	U	50	38.2	0.50
Methylene Chloride (DCM)	1430		50	76.3	1.00
Allyl Chloride	<SRL	U	50	76.3	1.00
Carbon Disulfide	<SRL	U	50	153	2.00
Trichlorotrifluoroethane	56.5		50	38.2	0.50
trans-1,2-Dichloroethene	<SRL	U	50	38.2	0.50
1,1-Dichloroethane	388		50	38.2	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	50	38.2	0.50
Vinyl Acetate	<SRL	U	50	76.3	1.00
2-Butanone (MEK)	105		50	76.3	1.00
cis-1,2-Dichloroethene	179		50	38.2	0.50
Hexane	1720		50	38.2	0.50
Chloroform	<SRL	U	50	38.2	0.50
Ethyl Acetate	<SRL	U	50	38.2	0.50
Tetrahydrofuran	347		50	38.2	0.50
1,2-Dichloroethane	51.1		50	38.2	0.50
1,1,1-Trichloroethane	<SRL	U	50	38.2	0.50
Benzene	1120		50	38.2	0.50

Laboratory Analysis Report

CLIENT : Blue Sky Environmental
PROJECT NO : 222626
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/20/2022
DATE REPORTED : 01/03/2023
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	WCCSL R3			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	222626-39401				
Date Sampled	12/16/2022				
Date Analyzed	12/21/2022				
Can Dilution Factor	1.53				
Compound	Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	50	38.2	0.50
Cyclohexane	3390		50	38.2	0.50
1,2-Dichloropropane	<SRL	U	50	38.2	0.50
Bromodichloromethane	<SRL	U	50	38.2	0.50
1,4-Dioxane	<SRL	U	50	76.3	1.00
Trichloroethene (TCE)	96.9		50	38.2	0.50
2,2,4-Trimethylpentane	234		50	38.2	0.50
Heptane	1130		50	38.2	0.50
cis-1,3-Dichloropropene	<SRL	U	50	38.2	0.50
4-Methyl-2-pentanone (MiBK)	54.2		50	38.2	0.50
trans-1,3-Dichloropropene	<SRL	U	50	38.2	0.50
1,1,2-Trichloroethane	<SRL	U	50	38.2	0.50
Toluene	2270		50	38.2	0.50
2-Hexanone (MBK)	<SRL	U	50	76.3	1.00
Dibromochloromethane	<SRL	U	50	38.2	0.50
1,2-Dibromoethane	<SRL	U	50	38.2	0.50
Tetrachloroethene (PCE)	215		50	38.2	0.50
Chlorobenzene	95.4		50	38.2	0.50
Ethylbenzene	1800		50	38.2	0.50
m & p-Xylene	1590		50	76.3	1.00
Bromoform	<SRL	U	50	38.2	0.50
Styrene	42.7		50	38.2	0.50
1,1,2,2-Tetrachloroethane	<SRL	U	50	38.2	0.50
o-Xylene	767		50	38.2	0.50
4-Ethyltoluene	411		50	38.2	0.50
1,3,5-Trimethylbenzene	264		50	38.2	0.50
1,2,4-Trimethylbenzene	660		50	38.2	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	50	38.2	0.50
1,3-Dichlorobenzene	<SRL	U	50	38.2	0.50
1,4-Dichlorobenzene	245		50	38.2	0.50
1,2-Dichlorobenzene	<SRL	U	50	38.2	0.50
1,2,4-Trichlorobenzene	<SRL	U	50	38.2	0.50
Hexachlorobutadiene	<SRL	U	50	38.2	0.50
BFB-Surrogate Std. % Recovery		91%			70-130%

U - Compound was not detected at or above the SRL.

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/21/2022
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
CALIBRATION STD ID : MS1-111822-01
ANALYST : CH/DL

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 11/21/2022 Calibration

Analyte Compounds	*Source*[1]	*CCV*[2]	*% Recovery*[3]
4-BFB (surrogate standard)	9.60	8.84	92
Chlorodifluoromethane	10.40	11.21	108
Propene	10.60	10.14	96
Dichlorodifluoromethane	10.40	11.87	114
Dimethyl Ether	10.20	10.17	100
Chloromethane	10.40	11.15	107
Dichlorotetrafluoroethane	10.30	10.66	103
Vinyl Chloride	10.50	11.17	106
Acetaldehyde	21.10	23.34	111
Methanol	18.80	19.14	102
1,3-Butadiene	10.60	10.83	102
Bromomethane	10.40	10.76	103
Chloroethane	10.30	10.53	102
Dichlorofluoromethane	10.20	11.44	112
Ethanol	11.20	11.61	104
Vinyl Bromide	10.10	10.41	103
Acrolein	11.10	10.94	99
Acetone	10.60	10.92	103
Trichlorofluoromethane	10.50	10.81	103
2-Propanol (IPA)	11.00	11.80	107
Acrylonitrile	11.20	11.69	104
1,1-Dichloroethene	10.40	10.56	102
Methylene Chloride (DCM)	10.50	10.38	99
TertButanol (TBA)	11.10	11.82	106
Allyl Chloride	10.20	10.31	101
Carbon Disulfide	10.50	10.88	104
Trichlorotrifluoroethane	10.40	10.46	101
trans-1,2-Dichloroethene	10.60	10.33	97
1,1-Dichloroethane	10.50	10.49	100
Methyl Tert Butyl Ether (MTBE)	10.50	9.73	93
Vinyl Acetate	11.00	10.99	100
2-Butanone (MEK)	10.60	10.35	98
cis-1,2-Dichloroethene	10.50	10.03	96
Hexane	10.70	10.49	98
Chloroform	10.60	10.69	101
Ethyl Acetate	10.60	10.38	98
Tetrahydrofuran	10.20	9.83	96
1,2-Dichloroethane	10.50	10.90	104
1,1,1-Trichloroethane	10.40	10.23	98
Benzene	10.60	10.47	99
Carbon Tetrachloride	10.20	10.55	103
Cyclohexane	10.50	10.09	96

Analyte Compounds (Continued)	*Source*[1]	*CCV*[2]	*% Recovery*[3]
1,2-Dichloropropane	10.50	10.68	102
Bromodichloromethane	10.40	10.78	104
1,4-Dioxane	10.40	10.39	100
Trichloroethene (TCE)	10.40	9.93	95
2,2,4-Trimethylpentane	10.00	10.29	103
Methyl Methacrylate	11.00	10.97	100
Heptane	10.50	10.35	99
cis-1;3-Dichloropropene	10.40	10.53	101
4-Methyl-2-pentanone (MiBK)	10.40	10.55	101
trans-1,3-Dichloropropene	10.50	10.71	102
1,1,2-Trichloroethane	10.50	10.13	96
Toluene	10.60	10.53	99
2-Hexanone (MBK)	10.50	10.74	102
Dibromochloromethane	10.30	10.50	102
1,2-Dibromoethane	10.60	10.50	99
Tetrachloroethene (PCE)	10.40	9.79	94
Chlorobenzene	10.60	10.48	99
Ethylbenzene	10.50	11.22	107
m & p-Xylene	21.00	22.10	105
Bromoform	10.50	11.38	108
Styrene	10.50	11.21	107
1,1,2,2-Tetrachloroethane	10.50	11.84	113
o-Xylene	10.50	11.43	109
1,2,3-Trichloropropane	11.00	11.18	102
Isopropylbenzene (Cumene)	10.30	11.32	110
α-Pinene	10.70	11.27	105
2-Chlorotoluene	10.30	10.45	101
n-Propylbenzene	10.10	11.15	110
4-Ethyltoluene	10.30	11.60	113
1,3,5-Trimethylbenzene	10.30	11.14	108
β-Pinene	11.00	9.86	90
1,2,4-Trimethylbenzene	10.30	11.18	109
Benzyl Chloride (a-Chlorotoluene)	10.40	10.18	98
1,3-Dichlorobenzene	10.40	11.24	108
1,4-Dichlorobenzene	10.30	10.78	105
Sec-ButylBenzene	10.10	10.94	108
1,2-Dichlorobenzene	10.60	11.05	104
n-ButylBenzene	10.20	11.25	110
1,2-Dibromo-3-Chloropropane	10.10	10.13	100
1,2,4-Trichlorobenzene	11.00	11.41	104
Naphthalene	11.50	11.33	99
Hexachlorobutadiene	11.00	11.77	107

[1] Concentration of analyte compound in certified source standard.

[2] Measured result from daily Continuing Calibration Verification (CCV).

[3] The acceptable range for analyte recovery is 100±30%.

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/21/2022
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
CALIBRATION STD ID : MS1-111822-01
ANALYST : CH/DL

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Laboratory Control Spike Analysis

System Monitoring Compounds	*Sample Concentration*	*Spike Added*	*LCS[1] Recovery*	*LCSD[1] Recovery*	*LCS[1] % Recovery[2]*	*LCSD[1] % Recovery[2]*	*RPD[3]*
4-BFB (surrogate standard)	0.0	9.60	8.84	8.75	92	91	1.0
1,1-Dichloroethene	0.0	10.40	10.56	10.93	102	105	3.4
Methylene Chloride (DCM)	0.0	10.50	10.38	11.03	99	105	6.1
Benzene	0.0	10.60	10.47	10.43	99	98	0.4
Trichloroethene (TCE)	0.0	10.40	9.93	9.96	95	96	0.3
Toluene	0.0	10.60	10.53	10.35	99	98	1.7
Tetrachloroethene (PCE)	0.0	10.40	9.79	9.87	94	95	0.8
Chlorobenzene	0.0	10.60	10.48	10.28	99	97	1.9
Ethylbenzene	0.0	10.50	11.22	11.11	107	106	1.0
m & p-Xylene	0.0	21.00	22.10	22.17	105	106	0.3
o-Xylene	0.0	10.50	11.43	11.42	109	109	0.1

[1] Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)

[2] The acceptable range for analyte recovery is 100±30%.

[3] Relative Percent Difference (RPD) between LCS recovery and LCSD recovery (acceptable range is <25%).

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/21/2022
MATRIX : High Purity He or N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
ANALYST : CH/DL

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Method Blank Analysis

Analyte Compounds	*MB 122122*	*Reporting Limit (RL)*
4-BFB (surrogate standard)	82%	100±30%
Chlorodifluoromethane	<RL	0.5
Propene	<RL	1.0
Dichlorodifluoromethane	<RL	0.5
Dimethyl Ether	<RL	0.5
Chloromethane	<RL	0.5
Dichlorotetrafluoroethane	<RL	0.5
Vinyl Chloride	<RL	0.5
Acetaldehyde	<RL	5.0
Methanol	<RL	5.0
1,3-Butadiene	<RL	0.5
Bromomethane	<RL	0.5
Chloroethane	<RL	0.5
Dichlorofluoromethane	<RL	0.5
Ethanol	<RL	2.0
Vinyl Bromide	<RL	0.5
Acrolein	<RL	1.0
Acetone	<RL	2.0
Trichlorofluoromethane	<RL	0.5
2-Propanol (IPA)	<RL	2.0
Acrylonitrile	<RL	0.5
1,1-Dichloroethene	<RL	0.5
Methylene Chloride (DCM)	<RL	1.0
TertButanol (TBA)	<RL	0.5
Allyl Chloride	<RL	1.0
Carbon Disulfide	<RL	2.0
Trichlorotrifluoroethane	<RL	0.5
trans-1,2-Dichloroethene	<RL	0.5
1,1-Dichloroethane	<RL	0.5
Methyl Tert Butyl Ether (MTBE)	<RL	0.5
Vinyl Acetate	<RL	1.0
2-Butanone (MEK)	<RL	1.0
cis-1,2-Dichloroethene	<RL	0.5
Hexane	<RL	0.5
Chloroform	<RL	0.5
Ethyl Acetate	<RL	0.5
Tetrahydrofuran	<RL	0.5
1,2-Dichloroethane	<RL	0.5
1,1,1-Trichloroethane	<RL	0.5
Benzene	<RL	0.5
Carbon Tetrachloride	<RL	0.5
Cyclohexane	<RL	0.5

Analyte Compounds (Continued)	*MB 122122*	*Reporting Limit (RL)*
1,2-Dichloropropane	<RL	0.5
Bromodichloromethane	<RL	0.5
1,4-Dioxane	<RL	1.0
Trichloroethene (TCE)	<RL	0.5
2,2,4-Trimethylpentane	<RL	0.5
Methyl Methacrylate	<RL	0.5
Heptane	<RL	0.5
cis-1,3-Dichloropropene	<RL	0.5
4-Methyl-2-pentanone (MiBK)	<RL	0.5
trans-1,3-Dichloropropene	<RL	0.5
1,1,2-Trichloroethane	<RL	0.5
Toluene	<RL	0.5
2-Hexanone (MBK)	<RL	1.0
Dibromochloromethane	<RL	0.5
1,2-Dibromoethane	<RL	0.5
Tetrachloroethene (PCE)	<RL	0.5
Chlorobenzene	<RL	0.5
Ethylbenzene	<RL	0.5
m & p-Xylene	<RL	1.0
Bromoform	<RL	0.5
Styrene	<RL	0.5
1,1,2,2-Tetrachloroethane	<RL	0.5
o-Xylene	<RL	0.5
1,2,3-Trichloropropane	<RL	0.5
Isopropylbenzene (Cumene)	<RL	0.5
α-Pinene	<RL	1.0
2-Chlorotoluene	<RL	0.5
n-Propylbenzene	<RL	0.5
4-Ethyltoluene	<RL	0.5
1,3,5-Trimethylbenzene	<RL	0.5
β-Pinene	<RL	2.0
1,2,4-Trimethylbenzene	<RL	0.5
Benzyl Chloride (a-Chlorotoluene)	<RL	0.5
1,3-Dichlorobenzene	<RL	0.5
1,4-Dichlorobenzene	<RL	0.5
Sec-ButylBenzene	<RL	0.5
1,2-Dichlorobenzene	<RL	0.5
n-ButylBenzene	<RL	0.5
1,2-Dibromo-3-Chloropropane	<RL	0.5
1,2,4-Trichlorobenzene	<RL	0.5
Naphthalene	<RL	1.0
Hexachlorobutadiene	<RL	0.5

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/21/2022
MATRIX : Air
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
ANALYST : CH/DL
DILUTION FACTOR[1] : x74.6

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Duplicate Analysis of AAC Sample ID: 222626-39399

Analyte Compounds	*Sample*	*Duplicate*	*RPD*[2]
4-BFB (surrogate standard)	8.45	8.62	2.0
Chlorodifluoromethane	298	295	1.3
Propene	3430	3620	5.2
Dichlorodifluoromethane	203	200	1.5
Dimethyl Ether	122	129	6.0
Chloromethane	<SRL	<SRL	*NA*
Dichlorotetrafluoroethane	37.3	42.5	13.1
Vinyl Chloride	618	646	4.5
Acetaldehyde	<SRL	<SRL	*NA*
Methanol	<SRL	<SRL	*NA*
1,3-Butadiene	<SRL	<SRL	*NA*
Bromomethane	<SRL	<SRL	*NA*
Chloroethane	85.0	92.5	8.4
Dichlorofluoromethane	61.2	60.4	1.2
Ethanol	248	251	1.2
Vinyl Bromide	<SRL	<SRL	*NA*
Acrolein	<SRL	<SRL	*NA*
Acetone	<SRL	<SRL	*NA*
Trichlorofluoromethane	<SRL	<SRL	*NA*
2-Propanol (IPA)	<SRL	<SRL	*NA*
Acrylonitrile	<SRL	<SRL	*NA*
1,1-Dichloroethene	<SRL	<SRL	*NA*
Methylene Chloride (DCM)	1420	1460	2.8
TertButanol (TBA)	<SRL	<SRL	*NA*
Allyl Chloride	<SRL	<SRL	*NA*
Carbon Disulfide	<SRL	<SRL	*NA*
Trichlorotrifluoroethane	56.0	57.4	2.6
trans-1,2-Dichloroethene	<SRL	<SRL	*NA*
1,1-Dichloroethane	386	392	1.7
Methyl Tert Butyl Ether (MTBE)	<SRL	<SRL	*NA*
Vinyl Acetate	<SRL	<SRL	*NA*
2-Butanone (MEK)	107	104	2.1
cis-1,2-Dichloroethene	184	186	0.8
Hexane	1710	1750	2.8
Chloroform	<SRL	<SRL	*NA*
Ethyl Acetate	<SRL	<SRL	*NA*
Tetrahydrofuran	343	366	6.3
1,2-Dichloroethane	55.2	54.5	1.4
1,1,1-Trichloroethane	<SRL	<SRL	*NA*
Benzene	1110	1140	2.7
Carbon Tetrachloride	<SRL	<SRL	*NA*
Cyclohexane	3300	3470	5.2

Analyte Compounds (Continued)	*Sample*	*Duplicate*	*RPD*[2]
1,2-Dichloropropane	<SRL	<SRL	*NA*
Bromodichloromethane	<SRL	<SRL	*NA*
1,4-Dioxane	<SRL	<SRL	*NA*
Trichloroethene (TCE)	97.0	104	7.4
2,2,4-Trimethylpentane	236	243	3.1
Methyl Methacrylate	<SRL	<SRL	*NA*
Heptane	1130	1170	3.5
cis-1,3-Dichloropropene	<SRL	<SRL	*NA*
4-Methyl-2-pentanone (MiBK)	54.5	61.9	12.8
trans-1,3-Dichloropropene	<SRL	<SRL	*NA*
1,1,2-Trichloroethane	<SRL	<SRL	*NA*
Toluene	2240	2330	3.9
2-Hexanone (MBK)	<SRL	<SRL	*NA*
Dibromochloromethane	<SRL	<SRL	*NA*
1,2-Dibromoethane	<SRL	<SRL	*NA*
Tetrachloroethene (PCE)	204	225	9.7
Chlorobenzene	85.8	105	20.3
Ethylbenzene	1800	1870	3.9
m & p-Xylene	1540	1640	6.0
Bromoform	<SRL	<SRL	*NA*
Styrene	40.3	43.3	7.1
1,1,2,2-Tetrachloroethane	<SRL	<SRL	*NA*
o-Xylene	729	800	9.4
1,2,3-Trichloropropane	<SRL	<SRL	*NA*
Isopropylbenzene (Cumene)	303	328	8.0
α-Pinene	3180	3070	3.5
2-Chlorotoluene	<SRL	<SRL	*NA*
n-Propylbenzene	251	275	9.1
4-Ethyltoluene	384	419	8.7
1,3,5-Trimethylbenzene	251	276	9.6
β-Pinene	<SRL	<SRL	*NA*
1,2,4-Trimethylbenzene	648	677	4.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	<SRL	*NA*
1,3-Dichlorobenzene	<SRL	<SRL	*NA*
1,4-Dichlorobenzene	237	257	8.1
Sec-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dichlorobenzene	<SRL	<SRL	*NA*
n-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dibromo-3-Chloropropane	<SRL	<SRL	*NA*
1,2,4-Trichlorobenzene	<SRL	<SRL	*NA*
Naphthalene	398	454	13.3
Hexachlorobutadiene	<SRL	<SRL	*NA*

[1] Dilution factor is the product of the Canister Dilution Factor and the Analysis Dilution Factor.

[2] Relative Percent Difference (RPD) between Sample analysis and Duplicate analysis (acceptable range is <25%).

SRL - Sample Reporting Limit (minimum)

BLUE SKY ENVIRONMENTAL, INC
624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph
Contact: *Jeramie Richardson (810) 923-3181*
E.Mail jrichardson@blueskyenvironmental.com

LAB: AAC
ADDRESS: 2225 Sperry Avenue
Ventura, CA 93003
ph/fax 805 650 1642, fax -1644
Contact: John Yokoyama
E.Mail jyokoyama@aaclab.com

CHAIN OF CUSTODY RECORD

Project Name: WCCSL

Project #: 22626

SAMPLE Date	SAMPLE Time	Sample ID (Method-Run-Fraction)	CANISTER NUMBER	Type/Size of container	Analysis Requested: 1945	25C	TO-15				FINAL VAC
12/16/22		WCCSL R1 39399	2591	SUMMA	X	X	X				-3.3
12/16/22		WCCSL R2 39400	2802	SUMMA	X	X	X				-5.6
12/16/22		WCCSL R3 39401	2810	SUMMA	X	X	X				-3.8

All samples submitted to laboratories are accepted on a custodial basis only. Ownership of sample remains with the client submitting the sample. Samples should be held for 90+ days. The laboratory reserves the right to return unused sample portions.

COMMENTS:

Email results to bluesky@blueskyenvironmental.com

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	12-19-22	0800		12/20/22	1339
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Field Data Sheets

RS-West Contra Costa Sanitary Landfill

Flare A-161

		O_2	CO_2	NOx	CO	CH_4	NMOC	ZERO
Date	Time	%	%	PPM	PPM	PPM	PPM	SPAN
12/16/2022	8:57:41	0.04	0.02	0.06	-0.03	-0.39	0.02	
12/16/2022	9:06:42	20.47	12.21	45.46	44.79	445.36	44.89	
12/16/2022	9:11:43	10.46	22.41	22.80	22.67	246.48	25.22	
12/16/2022	9:12:43			20.84				LINEARITY
12/16/2022	9:13:44			12.16				
12/16/2022	9:14:44			12.11				
12/16/2022	9:15:44			11.98				
12/16/2022	9:16:44			11.95				
12/16/2022	9:17:44			11.94		150.61	14.77	NO_2 Check
12/16/2022	9:23:45	20.42	12.19	0.26	-0.21			EXTERNAL
12/16/2022	9:28:46	0.11	0.01	22.74	22.61			BIAS

Run 1		O_2	CO_2	NOx	CO	CH_4	NMOC
Date	Time	%	%	PPM	PPM	PPM	PPM
12/16/2022	9:39:48	12.98	6.58	11.7	0.30	-0.46	-0.04
12/16/2022	9:40:48	13.44	6.56	11.7	0.66	-0.43	-0.06
12/16/2022	9:41:49	13.16	6.58	11.8	0.24	-0.39	-0.05
12/16/2022	9:42:49	12.70	6.63	12.6	0.08	-0.43	-0.06
12/16/2022	9:43:49	12.59	6.69	13.0	0.03	-0.43	-0.05
12/16/2022	9:44:49	12.59	6.73	12.4	-0.04	-0.45	-0.06
12/16/2022	9:45:49	12.60	6.71	12.3	-0.09	-0.39	-0.05
12/16/2022	9:46:49	12.59	6.69	12.5	-0.18	-0.33	-0.05
12/16/2022	9:47:50	13.22	6.64	12.3	-0.20	-0.35	-0.05
12/16/2022	9:48:50	12.84	6.63	12.6	-0.16	-0.36	-0.06
12/16/2022	9:49:50	12.76	6.58	13.0	0.16	-0.45	-0.06
12/16/2022	9:50:50	12.70	6.64	13.2	-0.11	-0.48	-0.06
12/16/2022	9:51:50	12.69	6.65	14.0	-0.13	-0.42	-0.05
12/16/2022	9:52:50	12.65	6.68	13.1	-0.18	-0.38	-0.06
12/16/2022	9:53:51	12.40	7.02	13.8	-0.28	-0.38	-0.05
12/16/2022	9:54:51	12.52	7.12	15.1	-0.29	-0.44	-0.06
12/16/2022	9:55:51	12.55	7.14	15.0	-0.29	-0.48	-0.05
12/16/2022	9:56:51	12.39	7.07	15.3	-0.37	-0.49	-0.05
12/16/2022	9:57:51	12.50	6.99	14.4	-0.37	-0.39	-0.05
12/16/2022	9:58:52	12.42	7.00	14.0	-0.31	-0.44	-0.05
12/16/2022	9:59:52	12.38	7.03	14.3	-0.23	-0.42	-0.05
PORT CHANGE							
12/16/2022	10:08:53	13.07	6.7	14.80	0.58	-0.42	-0.05
12/16/2022	10:09:53	13.06	6.72	14.88	0.57	-0.43	-0.04
12/16/2022	10:10:54	13.04	6.72	14.68	0.44	-0.35	-0.06
12/16/2022	10:11:54	13.06	6.72	15.80	0.60	-0.40	-0.05
12/16/2022	10:12:54	13.07	6.69	14.77	0.35	-0.39	-0.05
12/16/2022	10:13:54	13.04	6.72	15.19	0.22	-0.44	-0.05
12/16/2022	10:14:54	13.01	6.73	15.12	0.14	-0.42	-0.06
12/16/2022	10:15:54	13.08	6.68	14.48	0.22	-0.46	-0.06
12/16/2022	10:16:55	13.01	6.76	14.83	0.15	-0.45	-0.05
12/16/2022	10:17:55	13.01	6.72	14.75	0.22	-0.43	-0.05
12/16/2022	10:18:55	12.88	6.87	15.17	0.12	-0.40	-0.06
12/16/2022	10:19:55	12.91	6.83	15.68	0.53	-0.41	-0.06
12/16/2022	10:20:55	12.96	6.84	12.31	0.30	-0.44	-0.04
12/16/2022	10:21:56	12.60	7.13	12.2	0.11	-0.36	-0.05
12/16/2022	10:22:56	12.84	6.96	13.95	0.07	-0.37	-0.05
12/16/2022	10:23:56	12.81	6.98	15.02	0.13	-0.42	-0.06
12/16/2022	10:24:56	13.02	6.81	14.21	0.34	-0.38	-0.05
12/16/2022	10:25:56	13.24	6.68	12.63	0.12	-0.41	-0.05
12/16/2022	10:26:56	13.32	6.51	12.32	0.41	-0.40	-0.05
12/16/2022	10:27:57	13.04	6.78	11.7	0.60	-0.40	-0.06
12/16/2022	10:28:57	13.93	5.93	12.66	0.36	-0.36	-0.06
AVERAGE		**12.87**	**6.76**	**13.70**	**0.11**	**-0.41**	**-0.05**

12/16/2022	10:34:58	20.39	12.24	0.31	-0.31	-0.56	-0.04
12/16/2022	10:40:59	0.09	-0.02	22.87	22.54		
12/16/2022	10:47:00					149.67	14.84

Run 2	O_2	CO_2	NOx	CO	CH_4	NMOC
Time	%	%	PPM	PPM	PPM	PPM
11:20:06	12.53	7.17	14.05	-0.04	-0.42	-0.06
11:21:06	11.97	7.74	15.54	0.08	-0.39	-0.05
11:22:06	12.22	7.56	15.77	-0.06	-0.39	-0.06
11:23:06	12.59	7.21	14.72	-0.06	-0.44	-0.05
11:24:06	12.69	7.12	14.06	-0.01	-0.40	-0.05
11:25:06	12.67	7.15	14.14	-0.05	-0.36	-0.05
11:26:07	13.09	6.73	13.08	-0.15	-0.40	-0.05
11:27:07	13.53	6.33	13.45	-0.18	-0.43	-0.05
11:28:07	13.87	6.01	12.71	-0.22	-0.37	-0.05
11:29:07	13.97	5.93	11.73	-0.09	-0.39	-0.05
11:30:07	14.02	5.92	11.78	-0.13	-0.41	-0.05
11:31:08	13.84	6.06	12.16	-0.19	-0.44	-0.05
11:32:08	13.31	6.52	12.85	-0.21	-0.42	-0.06
11:33:08	13.13	6.68	14.54	-0.36	-0.38	-0.05
11:34:08	13.37	6.51	13.80	-0.39	-0.40	-0.05
11:35:08	12.71	7.07	13.71	-0.40	-0.41	-0.06
11:36:08	13.19	6.63	13.87	-0.41	-0.39	-0.06
11:37:09	13.43	6.40	12.77	-0.35	-0.36	-0.05
11:38:09	13.37	6.44	12.65	-0.38	-0.37	-0.05
11:39:09	13.17	6.64	13.52	-0.31	-0.42	-0.04
11:40:09	13.06	6.73	13.50	-0.23	-0.34	-0.03
PORT CHANGE						
11:48:10	13.69	6.19	12.73	-0.24	-0.61	-0.05
11:49:11	13.77	6.14	12.56	-0.13	-0.30	-0.05
11:50:11	13.87	6.04	11.76	-0.26	-0.29	-0.05
11:51:11	13.39	6.50	12.82	-0.13	-0.57	-0.05
11:52:11	13.64	6.25	12.47	-0.25	-0.60	-0.05
11:53:11	13.59	6.28	12.74	-0.18	-0.61	-0.05
11:54:12	13.73	6.20	12.19	-0.21	-0.61	-0.05
11:55:12	13.65	6.22	11.99	-0.17	-0.62	-0.05
11:56:12	13.69	6.21	12.31	-0.26	-0.61	-0.05
11:57:12	13.42	6.43	12.20	-0.21	-0.60	-0.05
11:58:12	13.28	6.87	12.44	-0.24	-0.60	-0.04
11:59:12	12.92	7.18	12.77	-0.25	-0.61	-0.05
12:00:13	13.51	6.67	13.50	-0.17	-0.61	-0.05
12:01:13	13.90	6.25	13.35	-0.22	-0.61	-0.04
12:02:13	13.61	6.56	14.59	-0.17	-0.61	-0.04
12:03:13	13.72	6.39	12.31	-0.22	-0.60	-0.05
12:04:13	13.64	6.57	14.51	-0.25	-0.61	-0.05
12:05:13	13.79	6.36	12.88	-0.30	-0.61	-0.05
12:06:14	13.79	6.45	14.06	-0.22	-0.61	-0.05
12:07:14	14.02	6.19	12.80	-0.22	-0.60	-0.05
12:08:14	13.44	6.78	13.81	-0.22	-0.61	-0.04
AVERAGE	**13.38**	**6.55**	**13.22**	**-0.21**	**-0.49**	**-0.05**

12:14:15	20.32	12.19	0.34	-0.34	-0.34	-0.07	
12:19:16	0.10	-0.04	22.92	22.43			
12:27:17					151.33	14.95	

Run 3	O_2	CO_2	NOx	CO	CH_4	NMOC
Time	%	%	PPM	PPM	PPM	PPM
12:34:18	13.26	6.62	13.33	-0.43	-0.62	-0.07
12:35:19	13.18	6.62	15.25	-0.42	-0.61	-0.04
12:36:19	13.43	6.47	14.75	0.52	-0.60	-0.03
12:37:19	13.11	6.43	14.83	-0.25	-0.61	-0.06
12:38:19	13.31	6.53	15.30	-0.42	-0.62	-0.05
12:39:19	13.36	6.76	14.77	-0.42	-0.62	-0.06
12:40:20	13.12	6.55	15.16	-0.39	-0.61	-0.07
12:41:20	12.97	6.75	16.20	-0.43	-0.58	-0.01
12:42:20	13.93	6.42	14.54	-0.44	-0.51	-0.04
12:43:20	14.02	6.33	12.76	-0.40	-0.53	-0.02
12:44:20	13.22	6.62	15.03	-0.40	-0.61	0.01
12:45:20	14.17	6.63	13.59	-0.34	-0.59	-0.07
12:46:21	13.58	6.63	13.99	-0.43	-0.51	-0.11
12:47:21	13.97	6.47	14.00	-0.39	-0.51	-0.03
12:48:21	13.70	6.63	12.97	-0.43	-0.52	-0.05
12:49:21	14.64	6.62	13.39	-0.43	-0.51	-0.06
12:50:21	14.21	6.18	13.47	-0.37	-0.60	-0.05
12:51:21	13.31	6.53	14.14	-0.39	-0.61	-0.05
12:52:22	13.71	6.19	14.23	-0.43	-0.61	-0.04
12:53:22	13.91	6.21	15.39	-0.47	-0.60	-0.04
12:54:22	14.32	6.27	15.65	-0.42	-0.53	-0.03
PORT CHANGE						
13:02:23	13.77	6.13	13.52	0.04	-0.56	-0.05
13:03:24	13.54	6.41	14.43	0.12	-0.51	0.06
13:04:24	14.01	6.08	13.95	0.09	-0.45	0.12
13:05:24	13.85	6.22	13.40	-0.12	-0.42	-0.05
13:06:24	13.47	6.60	14.72	-0.41	-0.40	-0.06
13:07:24	14.05	6.05	13.57	-0.44	-0.42	-0.05
13:08:24	13.75	6.33	13.38	-0.37	-0.41	-0.05
13:09:25	13.65	6.46	14.53	-0.35	-0.42	-0.05
13:10:25	14.01	6.16	14.23	-0.38	1.48	0.38
13:11:25	13.63	6.33	13.57	-0.33	0.61	0.11
13:12:25	13.71	6.41	15.14	-0.44	-0.59	-0.05
13:13:25	14.07	6.04	13.39	-0.40	-0.51	-0.05
13:14:25	13.32	6.74	15.21	-0.41	-0.49	-0.05
13:15:26	14.08	6.08	14.03	-0.44	-0.41	-0.05
13:16:26	13.88	6.22	13.17	-0.36	-0.43	-0.05
13:17:26	13.18	6.62	13.47	-0.33	-0.71	-0.05
13:18:26	13.34	6.53	13.51	-0.42	-0.71	-0.05
13:19:26	13.22	6.62	13.18	-0.38	-0.71	-0.05
13:20:26	12.77	6.98	14.06	-0.41	-0.71	-0.05
13:21:27	13.01	6.83	14.06	-0.40	-0.55	-0.06
13:22:27	13.43	6.47	13.83	-0.40	-0.51	-0.06
AVERAGE	**13.62**	**6.45**	**14.17**	**-0.34**	**-0.47**	**-0.03**

13:29:28	20.28	12.17	0.27	-0.56	-0.59	-0.05
13:34:29	0.12	-0.03	23.03	22.38		
13:40:30					153.56	15.08

BLUE SKY ENVIRONMENTAL,INC

Method 4 Sampling Data Sheet

Facility: NCCSL
Location: A-161
Date: 9-16-22
Personnel: HS

Meter #: CM 2010-5
Yd: 1.0280
Pyrometer #: CM 2010-5
TCM4-5

Pbar: 30.2
% O_2:
% CO_2:
% H_2O:

Point	Time	Meter Vol, Ft³	Temperature, °F Meter In	Temperature, °F Imp.	Vacuum, "Hg	Meter ΔH
8	0940	318.139	59	36	3	1.7
7	5	311.64	64	43	3	1.7
6	10	314.82	66	44	3	1.7
5	15	318.01	68	45	4	1.7
4	20	322.312	69	47	4	1.7
3	25	324.62	78	46	5	1.7
2	30	327.95	71	46	5	1.7
1	35	331.2	72	47	5	1.7
END	40	335.139	—	—	—	—
TOTAL/AVG		16.70	67.4			

322.312

Initial Leak Check 0.002 CFM 15 "Hg
Final Leak Check <0.002 CFM 10 "Hg

	Initial	Final	Net
Impinger #1:	726.1	771.5	45.4
Impinger #2:	866.5	868	1.5
Impinger #3:	761.3	768.5	1.2
Silica Gel:	930.6	937	6.4
Total Net:			54.5
% Moisture			—

500.1 / 500 TARE

Point	Time	Meter Vol, Ft³	Temperature, °F Meter In	Temperature, °F Imp.	Vacuum, "Hg	Meter ΔH
8	1120	335.410	74	37	4	1.7
7	5	339.0	75	44	5	1.7
6	10	342.41	74	46	5	1.7
5	15	345.9	75	47	5	1.7
4	20	349.562	74	48	5	1.7
3	25	352.8	75	49	4	1.7
2	30	356.6	74	49	4	1.7
1	35	360.17	75	49	4	1.7
END	40	363.714	—	—	—	—
TOTAL/AVG		28.304	74.5			

114.152

Initial Leak Check 0.003 CFM 15 "Hg
Final Leak Check 0.002 CFM 10 "Hg

	Initial	Final	Net
Impinger #1:	771.5	804	32.5
Impinger #2:	868	869	1
Impinger #3:	768.5	769	0.5
Silica Gel:	937	943.5	6.5
Total Net:			40.5
% Moisture			—

Point	Time	Meter Vol, Ft³	Temperature, °F Meter In	Temperature, °F Imp.	Vacuum, "Hg	Meter ΔH
8	1235	367.014	76	38	5	1.7
7	5	370.48	76	42	5	1.7
6	10	373.95	76	46	5	1.7
5	15	377.95	76	48	5	1.7
4	20	381.05	77	49	6	1.7
3	25	384.81	77	50	6	1.7
2	30	388.41	78	50	6	1.7
1	35	392.09	79	51	6	1.7
END	40	395.742	—	—	—	—
TOTAL/AVG		28.728	76.9			

Initial Leak Check 0.003 CFM 15 "Hg
Final Leak Check 0.002 CFM 10 "Hg

	Initial	Final	Net
Impinger #1:	804	840.4	36.4
Impinger #2:	869	869.0	0
Impinger #3:	769	769.5	0.5
Silica Gel:	943.5	949.1	5.6
Total Net:			42.5
% Moisture			—

Vw std = 0.00267*Vw*(Tstd+460)/29.92

Vm std = Vm*Yd*(Tstd+460)*(Pb+(ΔH/13.6))/(Tm+

Stack Moisture H_2O % = 100*Vw std/(Vw std+Vm std

Process Information

Date	Ambient Temperature Degrees F	Backup Battery Volts	Flare Flow Flare Flow	Flare Temp Deg F	Inlet Pressure Vacuum	Main Power Volts	Signal Strength %
START RUN 1							
12/16/2022 9:36	57	8.23	382.95	1,496.30	-16.36	23.93	97
12/16/2022 9:41	58	8.23	382.57	1,501.66	-16.44	23.93	94
12/16/2022 9:46	58	8.23	367.76	1,503.99	-15.99	23.93	94
12/16/2022 9:51	58	8.23	384.85	1,508.65	-16.57	23.93	94
12/16/2022 9:56	59	8.23	366.69	1,490.98	-15.8	23.93	94
12/16/2022 10:01	59	8.23	371.94	1,500.85	-15.83	23.93	94
12/16/2022 10:06	59	8.23	368.02	1,490.27	-15.39	23.93	94
12/16/2022 10:11	60	8.23	368.45	1,498.32	-15.96	23.93	94
12/16/2022 10:16	60	8.23	383.13	1,494.37	-16.21	23.93	94
12/16/2022 10:21	60	8.23	377.49	1,484.70	-15.78	23.93	94
12/16/2022 10:26	61	8.23	388.98	1,494.47	-16.39	23.93	90
12/16/2022 10:31	61	8.23	386.48	1,493.76	-16.52	23.93	90
AVERAGE	59.2	8.23	377.44	1496.53	-16.10	23.93	93.6
START RUN 2							
12/16/2022 11:21	64	8.23	390.57	1,507.08	-16.45	23.93	94
12/16/2022 11:26	64	8.23	396.25	1,486.68	-16.91	23.93	97
12/16/2022 11:31	65	8.23	375.73	1,489.41	-15.66	23.93	97
12/16/2022 11:36	65	8.23	383.43	1,504.24	-16.07	23.93	94
12/16/2022 11:41	65	8.23	383.26	1,491.99	-15.99	23.93	94
12/16/2022 11:46	65	8.23	391.47	1,492.40	-16.59	23.93	94
12/16/2022 11:51	66	8.23	394.7	1,487.84	-16.28	23.93	94
12/16/2022 11:56	66	8.23	375.08	1,492.55	-16.07	23.93	94
12/16/2022 12:01	66	8.23	388.12	1,499.94	-16.23	23.93	94
12/16/2022 12:06	67	8.23	401.29	1,503.28	-17.04	23.93	94
12/16/2022 12:11	67	8.23	362.95	1,489.66	-15.3	23.93	94
AVERAGE	65.5	8.23	385.71	1495.01	-16.24	23.93	94.5
START RUN 3							
12/16/2022 12:31	68	8.23	396.72	1,496.50	-16.28	23.93	94
12/16/2022 12:36	68	8.23	403.78	1,500.65	-17.04	23.93	94
12/16/2022 12:41	68	8.23	407.31	1,488.96	-16.7	23.93	94
12/16/2022 12:46	68	8.23	388.08	1,496.25	-16.1	23.93	97
12/16/2022 12:51	69	8.23	395.35	1,492.90	-16.28	23.93	97
12/16/2022 12:56	69	8.23	387.82	1,499.59	-16.08	23.93	94
12/16/2022 13:01	70	8.23	391.35	1,489.46	-16.21	23.93	94
12/16/2022 13:06	70	8.23	383.99	1,503.79	-16.06	23.93	97
12/16/2022 13:11	70	8.23	403.31	1,504.70	-16.48	23.93	97
12/16/2022 13:16	71	8.23	375.51	1,503.48	-15.45	23.93	94
12/16/2022 13:21	71	8.23	392.55	1,487.59	-15.71	23.93	97
AVERAGE	69.3	8.23	393.25	1496.72	-16.22	23.93	95.4

Calibration Gas Certificates

WestAir Gases & Equipment, Inc.
3001 E. Miraloma Avenue
Anaheim, CA 92806
Telephone: (714) 860-4830
ISO 17025:2017 Accredited Company
EPA PGVP ID# W12022

EPA PROTOCOL

CERTIFICATE OF ANALYSIS

CUSTOMER NAME: Blue Sky Environmental
ADDRESS: 624 San Gabriel Avenue
Albany, CA 94706

PURCHASE ORDER #:
CERTIFIED DATE: 5/17/2022
EXPIRATION DATE: 5/18/2030
SHELF LIFE (YEARS): 8

DATE ISSUED: 5/18/2022
ORDER NUMBER:
CYLINDER SIZE: 150A
VALVE CONNECTION: CGA 590
VOLUME: 150 scf
LOT NUMBER: 00050922D50
FILL PRESSURE : 2015 psig at 70° F.
PART NUMBER: NI 15E6-DA
BARCODE: WGE000071913

ANALYSIS RESULTS

ANALYZED CYLINDER SERIAL NUMBER	COMPONENT	REQUESTED CONCENTRATION	CERTIFIED CONCENTRATION	EXPANDED UNCERTAINTY	ASSAY DATES
CC511111	Carbon Dioxide	22.5 %	22.48 %	±0.190 % Abs.	05/17/2022
	Oxygen	10.5 %	10.50 %	±0.090 % Abs.	5/17/2022
	Nitrogen	BALANCE	BALANCE	—	—

Method: This standard was analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards, EPA 600/R-12/531, May 2012, Procedure G2.

DO NOT USE THIS STANDARD WHEN CYLINDER PRESSURE IS BELOW 100 PSIG.

REFERENCE STANDARDS

TYPE / SRM, GMIS, PRM	STANDARD	SERIAL NO.	CONCENTRATION	LOT NO.	EXPIRATION
GMIS	Carbon Dioxide	CC720807	18.07 % ±0.028 % Abs.	—	10/25/2027
GMIS	Oxygen	CC720741	20.979 % ±0.043 % Abs.	—	7/24/2027
GMIS TRACEABLE TO:					
PRM	Carbon Dioxide	D791384	18.023 % ±0.018 % Abs.	C1688310.04	5/29/2024
SRM 2659a	Oxygen	FF60997	20.753 % ±0.021 % Abs.	71-F-38	7/27/2026

INSTRUMENTATION INFORMATION

INSTRUMENT / MODEL	SERIAL NUMBER	CALIBRATION DATE	ANALYTICAL PRINCIPLE
Horiba VA-5001	CLG4BAU	4/26/2022	NDIR
Horiba VA-5006	NU3PUVL2	4/25/2022	Paramagnetic

PRINCIPAL ANALYST: Miguel Calvillo

Miguel Calvillo (CA) 9/28/22
SIGNATURE **DATE**

The product furnished under the stated reference lot number has been tested and found to contain the component concentrations listed above. All values are reported in mol/mol basis gas phase. WestAir Gases & Equipment, Inc. warrants that the above product conforms, at the time of shipment, to the above description. WestAir Gases & Equipment, Inc. liability does not exceed the value of the product purchased. Specifications are reviewed annually and are subject to change without notice.
This certificate of analysis applies only to the item described and shall not be reproduced, other than in full, without written approval from WestAir Gases & Equipment, Inc. Please do not use cylinder below 50 psig. Note: ppm = µmol/mol.

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA, LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number:	E03NI67E15A4187	Reference Number:	153-402000900-1
Cylinder Number:	CC741522	Cylinder Volume:	153.8 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72021	Valve Outlet:	590
Gas Code:	CO2,O2,BALN	Certification Date:	Jan 12, 2021

Expiration Date: Jan 12, 2029

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON DIOXIDE	12.50 %	12.26 %	G1	+/- 0.6% NIST Traceable	01/12/2021
OXYGEN	20.50 %	20.54 %	G1	+/- 0.3% NIST Traceable	01/12/2021
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	13060405	CC411744	7.489 % CARBON DIOXIDE/NITROGEN	0.6%	May 14, 2025
NTRM	12062008	CC367433	22.883 % OXYGEN/NITROGEN	0.2%	May 14, 2024

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Horiba VIA-510 SV4MEUTJ CO2	CO2 NDIR (Dixon)	Jan 04, 2021
Horiba MPA-510 W603MM58 O2	O2 Paramagnetic (Mason)	Jan 04, 2021

Triad Data Available Upon Request

Signature on file
Approved for Release

Airgas Specialty Gases
Airgas USA LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03NI99E15AC356	Reference Number:	153-402341010-1
Cylinder Number:	EB0141819	Cylinder Volume:	144.3 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72022	Valve Outlet:	660
Gas Code:	CO,NO,NOX,BALN	Certification Date:	Feb 08, 2022

Expiration Date: Feb 08, 2025

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	22.50 PPM	22.93 PPM	G1	+/- 1.2% NIST Traceable	02/01/2022, 02/08/2022
CARBON MONOXIDE	22.50 PPM	22.52 PPM	G1	+/- 0.9% NIST Traceable	02/01/2022
NITRIC OXIDE	22.50 PPM	22.86 PPM	G1	+/- 1.2% NIST Traceable	02/01/2022, 02/08/2022
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	190608-03	CC714700	26.694 PPM CARBON MONOXIDE/NITROGEN	0.7%	Jun 04, 2025
NTRM	12010507	KAL004854	20.00 PPM NITRIC OXIDE/NITROGEN	1.1%	Feb 13, 2024
NTRM	12010507	KAL004854-NOX	20.00 PPM NOx/NITROGEN	1.1%	Feb 13, 2024

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Thermo 48i-TLE 1163640031 CO	CO NDIR (Mason)	Jan 03, 2022
Thermo 42i-LS 1123749327 NO	Chemiluminescence (Mason)	Feb 03, 2022
Thermo 42i-LS 1123749327 NOx	Chemiluminescence (Mason)	Feb 03, 2022

Triad Data Available Upon Request

Signature on file

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03NI99E15A0259	Reference Number:	153-402175260-1
Cylinder Number:	EB0063409	Cylinder Volume:	144.3 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72021	Valve Outlet:	660
Gas Code:	CO,NO,NOX,BALN	Certification Date:	Aug 06, 2021

Expiration Date: Aug 06, 2024

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	45.00 PPM	45.45 PPM	G1	+/- 1.4% NIST Traceable	07/30/2021, 08/06/2021
CARBON MONOXIDE	45.00 PPM	45.02 PPM	G1	+/- 0.7% NIST Traceable	07/30/2021
NITRIC OXIDE	45.00 PPM	45.28 PPM	G1	+/- 1.3% NIST Traceable	07/30/2021, 08/06/2021
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	14060737	CC434385	49.88 PPM CARBON MONOXIDE/NITROGEN	0.6%	Feb 13, 2026
PRM	12376	D562879	10.01 PPM NITROGEN DIOXIDE/NITROGEN	2.0%	Aug 17, 2018
NTRM	20061124	CC708079	49.82 PPM NITRIC OXIDE/NITROGEN	1.0%	Feb 02, 2025
PRM	12386	D685025	9.91 PPM NITROGEN DIOXIDE/AIR	2.0%	Feb 20, 2020
GMIS	7302017111	CC511391	4.634 PPM NITROGEN DIOXIDE/NITROGEN	2.0%	Aug 15, 2021
GMIS	401648675102	CC500959	5.074 PPM NITROGEN DIOXIDE/NITROGEN	2.1%	Feb 01, 2023

The SRM, NTRM, PRM, or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet iS50 AUP2110269 CO LCO	FTIR	Jul 14, 2021
Nicolet iS50 AUP2110269 NO LNO	FTIR	Jul 29, 2021
Nicolet iS50 AUP2110269 NO2 impurity	FTIR NO2 impurity	Jul 29, 2021

Triad Data Available Upon Request

Signature on file

Approved for Release

Airgas Specialty Gases
Airgas USA LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03AI99E15A0080	Reference Number:	153-402016119-1
Cylinder Number:	CC250383	Cylinder Volume:	146.2 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72021	Valve Outlet:	590
Gas Code:	CH4,PPN,BALA	Certification Date:	Feb 02, 2021

Expiration Date: Feb 02, 2029

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
PROPANE	5.000 PPM	4.958 PPM	G1	+/- 1.1% NIST Traceable	02/02/2021
METHANE	150.0 PPM	151.4 PPM	G1	+/- 0.7% NIST Traceable	02/01/2021
AIR	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	17060910	ND61548	9.800 PPM PROPANE/AIR	0.5%	Jul 24, 2023
NTRM	16060812	CC471305	98.84 PPM METHANE/AIR	0.6%	Mar 28, 2022

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AMP0900119 CH4 M1CH4	FTIR	Jan 21, 2021
MKS FTIR C3H8 018143349	FTIR	Jan 21, 2021

Triad Data Available Upon Request

Signature on file

Approved for Release

Airgas Specialty Gases
Airgas USA LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03AI99E15A0081	Reference Number:	153-402034962-1
Cylinder Number:	CC505102	Cylinder Volume:	146.2 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72021	Valve Outlet:	590
Gas Code:	CH4,PPN,BALA	Certification Date:	Feb 23, 2021

Expiration Date: Feb 23, 2029

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
PROPANE	8.500 PPM	8.315 PPM	G1	+/- 1.4% NIST Traceable	02/23/2021
METHANE	250.0 PPM	249.6 PPM	G1	+/- 0.8% NIST Traceable	02/22/2021
AIR	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	17060910	ND61548	9.800 PPM PROPANE/AIR	0.5%	Jul 24, 2023
NTRM	08011514	K021368	246.7 PPM METHANE/AIR	0.6%	May 15, 2025

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AMP0900119 CH4 M1CH4	FTIR	Feb 18, 2021
MKS FTIR C3H8 018143349	FTIR	Feb 22, 2021

Triad Data Available Upon Request

Signature on file
Approved for Release

Airgas Specialty Gases
Airgas USA LLC
525 North Industrial Loop Road
Tooele, UT 84074
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03AI99E15A0082	Reference Number:	153-402016141-1
Cylinder Number:	CC408135	Cylinder Volume:	146.2 CF
Laboratory:	124 - Tooele (SAP) - UT	Cylinder Pressure:	2015 PSIG
PGVP Number:	B72021	Valve Outlet:	590
Gas Code:	CH4,PPN,BALA	Certification Date:	Feb 01, 2021

Expiration Date: Feb 01, 2029

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
PROPANE	15.00 PPM	14.85 PPM	G1	+/- 1.4% NIST Traceable	02/01/2021
METHANE	450.0 PPM	444.6 PPM	G1	+/- 1.0% NIST Traceable	02/01/2021
AIR	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	18060318	6162727Y	29.99 PPM PROPANE/AIR	0.4%	Jun 14, 2025
NTRM	16060413	CC471321	500.5 PPM METHANE/AIR	0.6%	Nov 20, 2021

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AMP0900119 CH4 M1CH4	FTIR	Jan 21, 2021
MKS FTIR C3H8 018143349	FTIR	Jan 21, 2021

Triad Data Available Upon Request

Signature on file
Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number:	E03NI99E15W0021	Reference Number:	54-401874351-1
Cylinder Number:	CC513361	Cylinder Volume:	144.4 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2015 PSIG
PGVP Number:	B12020	Valve Outlet:	660
Gas Code:	NO2,O2,BALN	Certification Date:	Aug 19, 2020

Expiration Date: Aug 19, 2023

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NITROGEN DIOXIDE	12.00 PPM	12.59 PPM	G1	+/- 2.1% NIST Traceable	08/03/2020, 08/19/2020
NITROGEN	Balance			-	

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	7042010104	CC500333	15 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.1%	Jul 03, 2022
PRM	12386	D685025	9.91 PPM NITROGEN DIOXIDE/AIR	+/- 2.0%	Feb 20, 2020

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
MKS FTIR NO2 017707558	FTIR	Aug 14, 2020

Triad Data Available Upon Request

Signature on file

Approved for Release

QC Equipment Calibrations

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

DATE:	8-4.22	NEW METER ON 12-13		INITIAL	FINAL	AVG (P_{bar})
TIME:	1130-1330	METER SERIAL #:	269821	BAROMETRIC PRESSURE (in Hg):	29.85	29.85	29.85
METER PART #:	CM-2010-5	CRITICAL ORIFICE SET SERIAL #:	1380S				

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
16	1	0.4258	23	607.535	613.103	5.568	84	93	94	93.5	10.00	0.96	5.3124	5.4510	1.0261		1.7340
	2	0.4258	23	613.103	618.680	5.577	84	94	94	94.0	10.00	0.96	5.3162	5.4510	1.0253		1.7324
	3	0.4258	23	618.680	624.244	5.564	84	94	95	94.5	10.00	0.96	5.2990	5.4510	1.0287		1.7308
														AVG =	1.0267	-0.12	
22	1	0.5856	21	566.925	572.982	6.057	82	90	91	90.5	8.00	1.90	5.8239	6.0084	1.0317		1.8218
	2	0.5856	21	572.982	579.058	6.076	83	91	91	91.0	8.00	1.90	5.8369	6.0029	1.0284		1.8235
	3	0.5856	21	579.058	585.151	6.093	83	91	91	91.0	8.00	1.90	5.8532	6.0029	1.0256		1.8235
														AVG =	1.0286	0.06	
25	1	0.6767	20	585.151	592.161	7.010	84	91	92	91.5	8.00	2.50	6.7379	6.9303	1.0286		1.8011
	2	0.6767	20	592.161	599.637	7.476	84	92	93	92.5	8.50	2.50	7.1728	7.3635	1.0266		1.7979
	3	0.6767	20	599.637	607.535	7.898	84	93	94	93.5	9.00	2.50	7.5640	7.7966	1.0308		1.7946
														AVG =	1.0286	0.06	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y =	1.0280	
PREVIOUS AVERAGE DRY GAS METER CALIBRATION FACTOR, Y =	1.0228	0.51 PASS
AVERAGE $\Delta H_@$ =	1.7844	

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right)^2 \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

BLUE SKY ENVIRONMENTAL, INC

Thermometer/Thermocouple Calibration

Item **CM-2010-5 DGM TC & Digital Thermocouple Display**

Units °F

Reference Devices **NIST Standards: Mercury -30 - 120 °F 304937**
Mercury 0 - 230 °F T2022-1
Mercury 14 - 590 °F T315C
TC Simulator: FLUKE 724 TEMPERATURE CALIBRATOR
Pyrometer: FLUKE 724 TEMPERATURE CALIBRATOR

Reference Values Ice Water **32** Ambient **74**
Boiling Water **212**

CALIBRATION DATE	T/C IDENTIFICATION	REFERENCE READING	DEVICE READING	°F DIFFERENCE <400°F	% DIFFERENCE >400°F	CALIBRATED BY
8/4/2022	STACK	32	32	0		TJE
		212	212	0		
		932	933	-1	-0.11	
		1832	1834	-2	-0.11	
8/4/2022	PROBE	32	32	0		TJE
		212	213	-1		
		932	933	-1	-0.11	
		1832	1834	-2	-0.11	
8/4/2022	FILTER	32	32	0		TJE
		212	213	-1		
		932	933	-1	-0.11	
		1832	1834	-2	-0.11	
8/4/2022	DRYER	32	33	-1		TJE
		212	212	0		
		932	933	-1	-0.11	
		1832	1835	-3	-0.16	
8/4/2022	AUX	32	33	-1		TJE
		212	212	0		
		932	933	-1	-0.11	
		1832	1834	-2	-0.11	
8/4/2022	TC OUT	Ice Water 32	31	1		TJE
		Ambient 74	72	2		
		Boiling Wa 212	212	0		

40CFR60, Appendix, Method 2
Tolerance Limits: +/- 4 °F for <400°F
Tolerance Limits: +/- 1.5% for >400°F
Calibration Frequency: 6 mo.

BLUE SKY ENVIRONMENTAL, INC

Thermometer/Thermocouple Calibration

Item	**JR VAN TCs**				
Units	°F				
Reference Devices	**NIST Standards:**	**Mercury -30 - 120 °F 304937**			
		Mercury 0 - 230 °F T2022-1			
		Mercury 14 - 590 °F T315C			
	TC Simulator:	FLUKE 724 TEMPERATURE CALIBRATOR			
	Pyrometer:	FLUKE 724 TEMPERATURE CALIBRATOR			
Reference Values	Ice Water	**32**	Ambient	**75**	
	Boiling Water	**212**	Boiling Mineral Oil	**490**	

CALIBRATION DATE	T/C IDENTIFICATION	REFERENCE READING		DEVICE READING	°F DIFFERENCE <400°F	% DIFFERENCE >400°F	CALIBRATED BY
7/22/2022	W0238	Ice Water	32	34	-2		RK
		Ambient	75	75	0		
		Boiling Water	212	211	1		
		Boiling Mineral Oil	490	499	-9	-1.84	
7/22/2022	TC 121	Ice Water	32	34	-2		RK
		Ambient	75	75	0		
		Boiling Water	212	211	1		
		Boiling Mineral Oil	520	521	-1	-0.19	
7/22/2022	M4-3	Ice Water	32	32	0		RK
		Ambient	75	73	2		
		Boiling Water	212	211	1		
		Boiling Mineral Oil	490	490	0	0.00	
7/22/2022	M4-5	Ice Water	32	34	-2		RK
		Ambient	75	75	0		
		Boiling Water	212	212	0		
		Bioling Mineral Oil	490	491	-1	-0.20	
7/22/2022	M4-4	Ice Water	32	34	-2		RK
		Ambient	75	76	-1		
		Boiling Water	212	211	1		
		Boiling Mineral Oil	490	499	-9	-1.84	
7/22/2022	JR ADM TC	Ice Water	32	34	-2		RK
		Ambient	75	76	-1		
		Boiling Water	212	213	-1		
		Boiling Mineral Oil	490	N/A			
7/22/2022	M4-8	Ice Water	32	34	-2		RK
		Ambient	75	76	-1		
		Boiling Water	212	211	1		
		Boiling Mineral Oil	490	491	-1	-0.20	

40CFR60, Appendix, Method 2

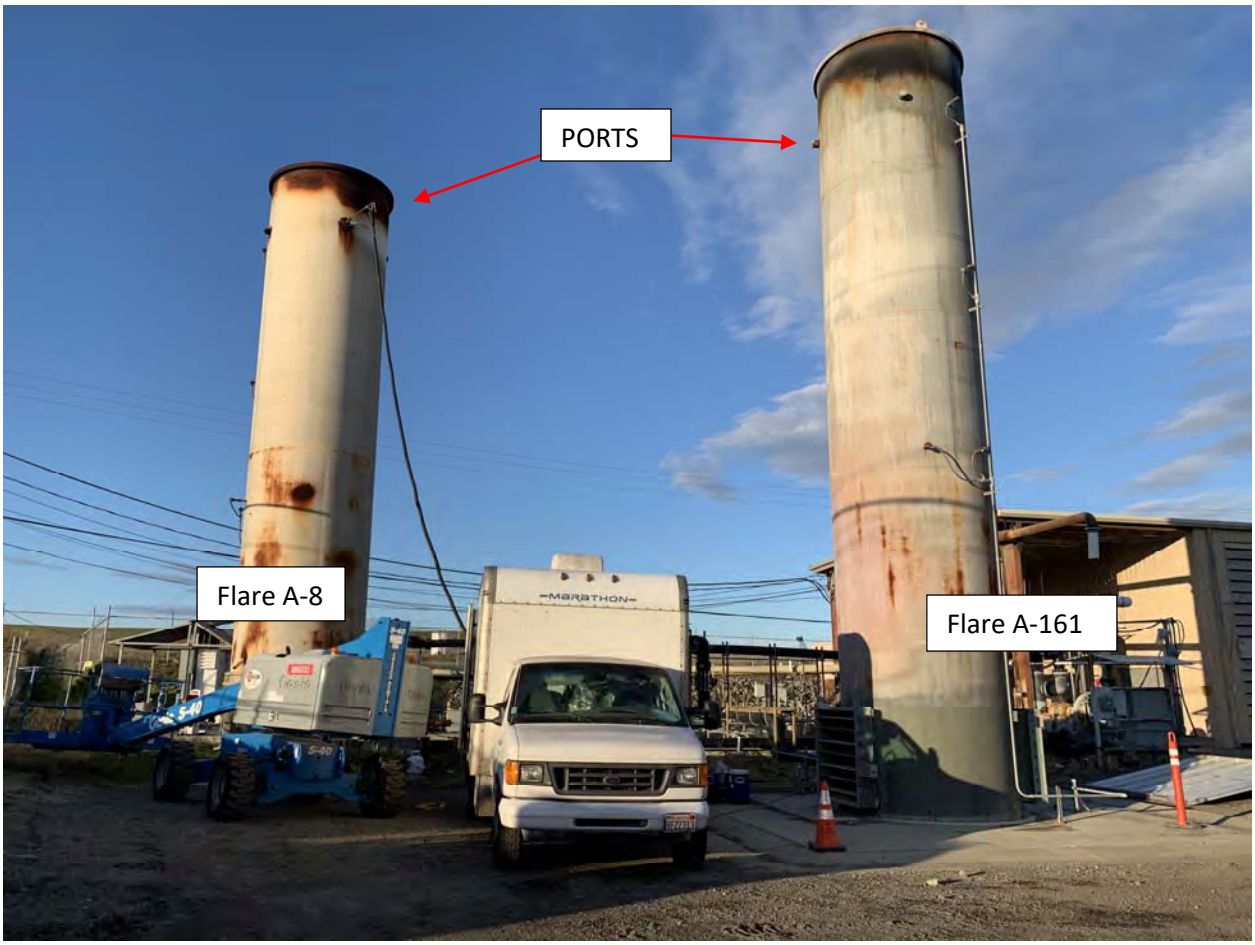
Tolerance Limits: +/- 4 °F for <400°F

Tolerance Limits: +/- 1.5% for >400°F

Calibration Frequency: 6 mo.

40CFR60, Appendix, Method 2
Tolerance Limits: +/- 4 °F for <400°F
Tolerance Limits: +/- 1.5% for >400°F
Calibration Frequency: 6 mo.

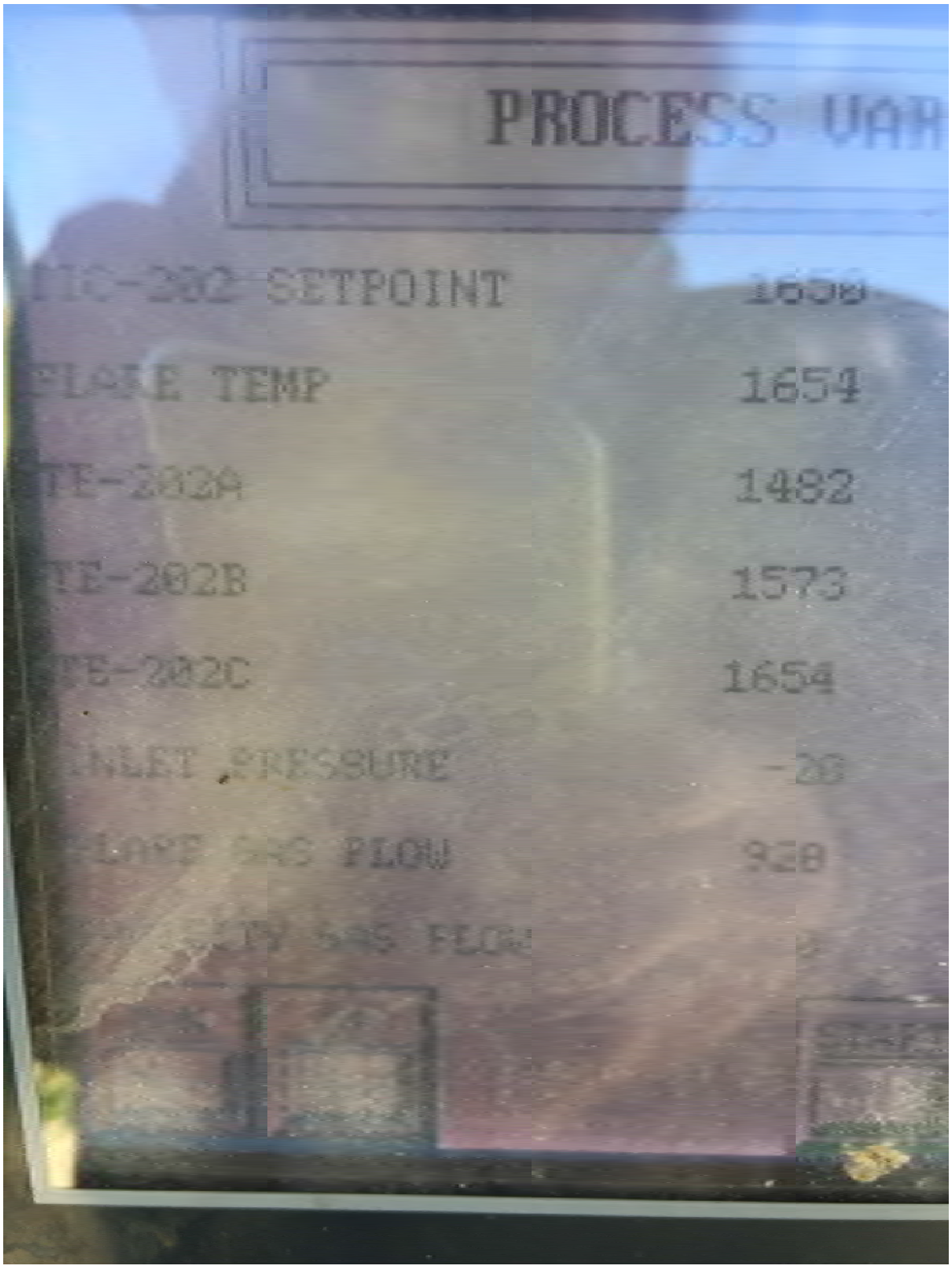
Stack Diagram



Republic Services, West Contra Costa Sanitary Landfill

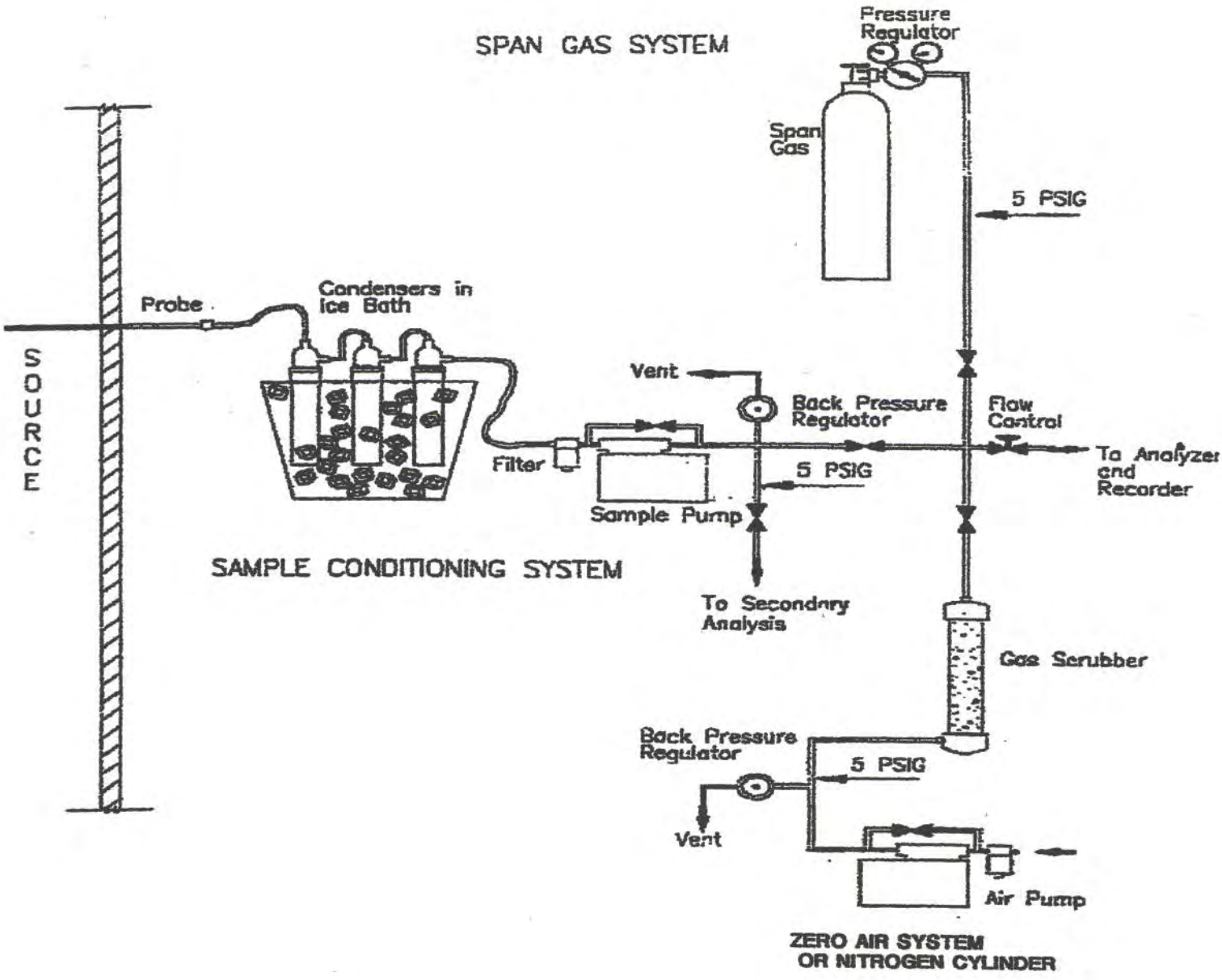
West Contra Costa Sanitary Landfill – Flare A161

LFG Sample Location



Flare Monitoring Screen

Sample System Diagram



BAAQMD ST-5 (CO_2)
BAAQMD ST-6 (CO)
BAAQMD ST-7 (THC by FID)
BAAQMD ST-13A (NO_x)
BAAQMD ST-14 (O_2)
BAAQMD ST-19A (SO_2)

Permit/Authority to Construct

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

November 15, 2017

West Contra Costa County Landfill
101 Pittsburg Avenue
Richmond, CA 94801

Attention: Peter Nuti

Authority to Construct for Permit Application No. 28377, Plant No. 1840

Required Action

Your Authority to Construct is enclosed. This Authority to Construct is not a Permit to Operate. **To receive your Permit to Operate you must:**

1. Complete the Start-up Notification portion of the Authority to Construct.
2. Send the Start-up Notification to the assigned Permit Engineer via e-mail, fax or mail **at least seven days** prior to operating your equipment.

Note: *Operation of equipment without sending the Start-up Notification to the District may result in enforcement action.*

Authorization of Limited Use

The Authority to Construct authorizes operation during the start-up period from the date of initial operation indicated in your Start-up Notification until the Permit to Operate is issued, up to a maximum of 90 days. All conditions (specific or implied) included in this Authority to Construct will be in effect during the start-up period.

Contact Information

If you have any questions, please contact your assigned Permit Engineer:

Stanley Tom, Air Quality Engineer II

Tel: (415) 749-8681 **Fax:** (415) 749-4949 **Email:** stom@baaqmd.gov

---

Plant Name: West Contra Costa Landfill
Source No. S-15 Landfill with Gas Collection System, abated by A-161 and A-8 Landfill Gas Flares
Condition No. 25293 Plant No. 1840 Application No. 28377

For: S-15 West Contra Costa Sanitary Landfill (Closed Class I and Class II Waste Disposal Areas) - Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-8 Landfill Gas Flare and A-161 Landfill Gas Flare

1. Effective October 1, 2006, no waste shall be disposed of in the S-15 Class I or Class II Landfills. S-15 does not include the waste disposal activities associated with the Corrective Action Management Unit (CAMU), which are included under S-47. The total cumulative amount of all decomposable materials placed in the S-15 landfills shall not exceed 13.0 million tons. This amount includes 12.3 million tons in the Class II landfill at time of closure and 376,110 tons of decomposable materials in the Class I landfill. The maximum design capacity of the landfill (total volume of all wastes and cover materials placed in the landfill, excluding final cover) shall not exceed 21.47 million cubic yards.
(Basis: Regulation 2-1-301, Cumulative Increase)

2. Water and/or dust suppressants shall be applied to all unpaved roadways associated with this landfill as necessary to prevent visible particulate emissions. Paved roadways at the facility shall be kept sufficiently clear of dirt and debris as necessary to prevent visible particulate emissions from vehicle traffic or wind. (Basis: Regulations 2-1-403, 6-1-301, and 6-1-305)

3. The owner/operator shall ensure that fugitive non-methane organic compounds (NMOC) emissions from S-15 do not exceed 15.8 tons (calculated as hexane) during any consecutive 12 month period. The owner/operator shall demonstrate compliance with this emission limit by complying with the landfill gas NMOC concentration limit in Part 4 and by complying with the landfill gas collection and control requirements specified in Parts 5-8.
(Basis: Cumulative Increase and Regulation 2-1-301)

4. The concentration of total non-methane organic compounds (NMOC) in the combined landfill gas collected from S-15 shall not exceed 392 ppmv, measured as C6 or hexane, on a dry basis. (Basis: Cumulative Increase and Regulation 2-1-301)

5. S-15 shall be equipped with a landfill gas collection system, which shall be operated continuously as defined in Regulation 8-34-219, unless the owner/operator

complies with all applicable provisions of Regulation 8, Rule 34, Section 113. All collected landfill gas shall be vented to properly operating abatement equipment including the Internal Combustion Engines (S-5, S-6, and S-37), the Landfill Gas Flares (A-8 or A-161), or a combination of these devices. The A-8 flare shall only be operated as a back-up to A-161. The A-8 and A-161 flares shall not operate concurrently, except for short periods of time when necessary during the diversion of gas from one flare to the other flare. In the event of an engine shutdown, the landfill gas that was being burned at that engine shall be automatically diverted to a flare. In order to assure compliance with this condition, each flare shall be equipped with local and remote alarms and auto restart capabilities. Raw landfill gas shall not be vented to the atmosphere, except for unavoidable landfill gas emissions that occur during collection system installation, maintenance, or repair that is performed in compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or 118 and for inadvertent component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303. (Basis: Regulation 8-34-301)

6. The owner/operator shall apply for and receive a Change of Condition from the District before altering the landfill gas collection system described in Part 6a below. Increasing or decreasing the number of wells or collectors, or significantly changing the length of collectors, or the locations of wells or collectors are all considered to be alterations that are subject to this requirement. Replacement of landfill gas collection system components with identical or functionally equivalent components will not be deemed an alteration and will not be subject to the Authority to Construct requirement under the following circumstances. If a well or collector will be shut down and replaced by a new well or collector in essentially the same location as the old component and this decommission/installation will be accomplished in accordance with Regulations 8-34

117 and 8-34-118, then this activity shall be considered a component replacement that is not subject to the Authority to Construct requirement. For each individual well or collector replacement, this subpart authorizes a maximum vacuum disconnection time of five consecutive days for compliance with Regulation 8-34-117.5. The disconnected component and the new component shall not be counted toward the subpart 1b(i) limits; the numbers of replacement wells and replacement collectors are not limited. Alterations, repairs, or replacements of non-perforated piping sections (such as risers, laterals, or

header pipes), piping connectors, or valves are not subject to the Authority to Construct requirement.

a. The owner/operator has been issued Change of Condition for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in the Republic Services West Contra Costa Sanitary Landfill Updated Landfill Gas Collection and Control System Design Plan Class II dated March 3, 2008 and in Table 2 Class II Landfill Gas Extraction Well List submitted August 11, 2008. The authorized number of landfill gas collection system components is the baseline count listed below plus any components installed and minus any components decommissioned pursuant to subpart 6b, as evidenced by start-up and decommissioning notification letters submitted to the District.

   i. Baseline Count of Components Located in Class II Waste Disposal Area

	Required Components
Total # of Vertical Wells:	67
Total # of Horizontal Collectors:	7
Total # of leachate sump wellheads	3

   ii. Baseline Count of Components Located in Class I Waste Disposal Area

	Required Components
Total # of Horizontal Collectors:	16

b. The owner/operator is authorized to make the landfill gas collection system alterations described below:
   i. install up to 94 new vertical wells;
   ii. install up to 20 new horizontal collectors;
   iii. decommission up to 27 vertical wells;
   iv. decommission up to 9 horizontal collectors;
   v. connect the leachate collection and recovery system (LCRS) to the landfill gas collection unit. LCRS is comprised of:
   (5 vaults, 13 wells and 13 sumps)

   Wells installed pursuant to this subpart shall be added to or removed from subpart a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.

c. The owner/operator shall submit a start-up/shutdown notification to the District at least three days before the installation of a new well or the decommissioning of an existing well. The notification shall include:
   i. an updated well list that includes the well name, installation date, well type, well status (active/not active) well depth and decommission date (if applicable)
   ii. an updated LFG Extraction System drawing

reflecting the modifications.
(Basis: Regulations 2-1-301, 8-34-301.1, 8-34-304, 8-34-305)

7. The landfill gas collection system components described in Part 6a shall be operated continuously. Wells shall not be shut off, disconnected or removed from operation without written authorization from the District, unless the owner/operator complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 116, 117, and 118. Individual wells, collectors, and adjustment valves shall not be disconnected, removed, or completely closed, without prior written authorization from the District, unless the owner/operator complies with all applicable provisions of Regulation 8, Rule 34, Sections 113, 116, 117, or with Parts 7a-d below.
(Basis: Regulations 8-34-301.1, 8-34-404, 8-34-305, 8-34-414, 8-34-501.5, and 8-34-505)
   a. The owner/operator may operate the vacuum on any of the leachate collection and recovery system (LCRS) components on a less than continuous basis. LCRS components may be connected to the vacuum system as needed to prevent component or surface leaks or to abate landfill gas that has migrated into the LCRS. The LCRS components may be disconnect from the vacuum system when methane concentration in the component is less than 5.0% by volume, or when oxygen concentration in the component is 15.0% by volume or more, or when abatement is no longer necessary to maintain compliance with applicable component and surface leak limits. LCRS components are not subject to subparts 7b-c below or Regulation 8-34-305 but are subject to the alternative wellhead operating and monitoring requirements in subpart 7d below.
   b. The owner/operator may temporarily disconnect individual landfill gas collection system vertical wells located in the Class II Waste Disposal Area from the vacuum system, provided that all requirements of this subpart are satisfied.
      i. No more than five (5) vertical wells may be temporarily disconnected from the vacuum system at any one time pursuant to subpart 7b.
      iii. For each individual well that is temporarily disconnected from the vacuum system pursuant to subpart 7b, the total vacuum system disconnection time shall not exceed 120 days during any 12-month period.
      iv. Vertical wells that are temporarily disconnected from the vacuum system pursuant to this subpart are not subject to wellhead limits (Regulation 8-34-305) or monthly wellhead

monitoring requirements (Regulation 8-34-505).

v. Wells that are temporarily disconnected from the vacuum system pursuant to subpart 7b continue to be subject to the component leak limit (Regulation 8-34-301.2) and the quarterly leak testing requirement (Regulation 8-34-503) at all times. In addition, the owner/operator shall conduct the following additional component leak monitoring at each well that has been disconnected from the vacuum system pursuant to subpart 7b: test for component leaks using the procedures identified in Regulation 8-34-602 within 10 days of disconnection from vacuum and again within 30 days of disconnection from vacuum. If a component leak is detected at a component, the owner/operator shall take all steps necessary to reduce the leak below the applicable limit, including reconnecting the component to the vacuum system, if no other corrective action measures are successful within the time frames allowed by Regulation 8, Rule 34.

vi. For each well disconnection event, the owner/operator shall record each affected well ID number, all well disconnection dates and times, all well reconnection dates and times, all related monitoring dates and monitoring results in a District approved log. This log shall also include an explanation of why the temporary well shut down was necessary and shall describe all adjustments or repairs that were made in order to allow this well to operate continuously, to reduce leaks, or to achieve compliance with an applicable limit. All records shall be retained for a minimum of five years and shall be made available to District staff upon request.

c. The owner/operator shall operate each group of horizontal landfill gas collectors (one group of horizontal collectors is located in the Class I waste disposal area and one group of horizontal collectors is located in the Class II waste disposal area) on a continuous basis. Individual horizontal collectors within each group of horizontal collectors may be connected to or disconnected from the vacuum system in accordance with the following criteria.

i. The owner/operator shall begin operating each horizontal collector (open the valve to the vacuum system with sufficient vacuum to generate gas flow from the collector and direct

collected gases to a control device) upon detection of a gauge pressure of 1.0 inches of water or more, or upon detection of a methane concentration of 5.0% by volume or more in the collector.

ii. The owner/operator may temporarily disconnect a horizontal collector from the vacuum system (isolation valve completely closed) upon detection of a methane concentration in the collector of less 5.0% by volume, or upon detection of an oxygen concentration in the collector of 15.0% by volume or more.

iii. Collection system components that are temporarily disconnected from the vacuum system in accordance with this subpart are not subject to the Regulation 8-34-305 wellhead limits or the subpart 7d alternative component limits.

iv. Collection system components that are temporarily disconnected from the vacuum system continue to be subject to the component leak limit (Regulation 8-34-301.2) and the quarterly component-leak testing requirement (Regulation 8-34-503) at all times. In addition, the owner/operator shall conduct the following component-leak monitoring at each component that has been disconnected from the vacuum system pursuant to subpart 7c: test for component leaks using the procedures identified in Regulation 8-34-602 within 10 days of disconnection from vacuum and again within 30 days of disconnection from vacuum. If a component leak is detected at a component, the owner/operator shall take all steps necessary to reduce the leak below the applicable limit, including reconnecting the component to the vacuum system, if no other corrective action measures are successful within the time frames allowed by Regulation 8, Rule 34.

vii. For each well or collector disconnection event, the owner/operator shall record the well/collector ID number, all vacuum disconnection dates and times, all vacuum reconnection dates and times, all related monitoring dates, and all monitoring results in a District approved log. This log shall also include an explanation of why the temporary disconnection was necessary and shall describe all adjustments or repairs that were made in order to allow the collection system component to operate continuously, to reduce leaks, or to achieve compliance with an applicable limit. All records shall be retained for a minimum of

five years and shall be made available to District staff upon request.

d. The owner/operator shall operate any LCRS components (subject to subpart 7a) and any horizontal collectors (subject to subpart 7c) in compliance with the alternative component limits and related monitoring requirements listed in this subpart instead of the wellhead limits cited in Regulation 8-34-305. The alternative component limits listed below apply to each LCRS component and to each horizontal collector while it is connected to the vacuum system and required to be operating. The alternative component limits do not apply during vacuum disconnection time that is authorized by subpart 7a or 7c or Regulation 8, Rule 34.

i. Each component that is required to be operating shall operate under a vacuum with a gauge pressure of less than 0.0 inches of water, except for the following circumstance. If a component has been disconnected from the vacuum system for more than 24 hours, the gauge pressure may exceed 0.0 inches of water for up to 24 hours after the vacuum reconnection time.

ii. For each component that is required to be operating, the gas temperature shall not exceed 131 degrees F.

iii. For each component that is required to be operating, the oxygen concentration of the gas in the wellhead shall not exceed 15.0% oxygen by volume (dry basis), except for the following circumstances. If a component must be operated pursuant to subpart 7c(i), the oxygen concentration may exceed 15% by volume from the time of detection until the component is disconnected from the vacuum system pursuant to subpart 7c(ii).

iv. The owner/operator shall demonstrate compliance with these alternative component limits by monitoring each LCRS component and each horizontal collector listed in subpart 6a and any LCRS components or horizontal collectors installed pursuant to subpart 6b on a monthly basis for gauge pressure, gas temperature, methane concentration, and oxygen concentration using the procedures identified in Regulation 8-34-604 and 8-34-608.

v. All monitoring dates and monitoring results shall be recorded in a District approved log. Each month, the owner/operator shall compare these monitoring results to the operating requirements in subparts 7a and 7c and the

alternative component limits in subpart 7d(i-iii). The owner/operator shall identify any components that must or may undergo a change of operational status due to the pressure results or methane and oxygen concentration results. The owner/operator shall also identify any operating components where the measured gauge pressure, temperature, or oxygen concentration exceeds the applicable limit in subpart 7d(i-iii). If the operator identifies an excess of a component limit, the operator may follow the repair schedule requirements in Regulation 8-34-414 to correct the excess. For compliance with Regulation 8-34-414.3-4, gas collection system expansion is not required, if the excess can be corrected in some other manner such as adjusting, repairing, or replacing the component, temporarily disconnecting the component from the vacuum system (if authorized by subpart 7a or 7c), or permanently decommissioning the component (if authorized by subpart 6b). In each case, the excess shall be corrected within 120 days of the date that the excess was first discovered. All records shall be retained for a minimum of five years and shall be made available to District staff upon request.

8. The total combined Heat Input to all internal combustion engines and flares (S-5, S-6, S-37, A-8 and A-161) shall not exceed 780,134 MM BTU in any consecutive 12 month period. In order to demonstrate compliance with this part, the owner/operator shall calculate and record on a monthly basis the maximum daily and total monthly heat input to each flare and engine based on the landfill gas flow rate recorded pursuant to Part 14, the average methane concentration in the landfill gas based on the most recent source test, and a high heating value for methane of 1013 BTU/ft3 at 60 degrees F.
Heat Input (MM BTU/day) =
Daily Fuel Flow Rate (ft3/day at 60 °F and 14.7 psia) * Methane Concentration (%) * Gross Methane Heat Content (1013 BTU/ft3 CH4) * Conversion Factor (1E-8)
(Basis: Cumulative Increase and Regulation 2-1-301, Regulation 8-34-301)

9. The combustion zone temperature of the A-8 Landfill Gas Flare shall be maintained at a minimum of 1400 degrees Fahrenheit, averaged over any 3-hour period, during any time that landfill gas is vented to the flare. The combustion zone temperature of the A-161 Landfill Gas Flare shall be maintained at a minimum of 1417 degrees

Fahrenheit, averaged over any 3-hour period, during any time that landfill gas is vented to the flare. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature limits in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415, based on the following criteria. The minimum combustion zone temperature for the flare shall be equal to the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F, provided that the minimum combustion zone temperature is not less than 1400 degrees F. (Basis: Regulations 2-5-301, 8-34-301.3, and 8-34-501.3, and 40 CFR 60.756(b)(1))

10. Total reduced sulfur compounds in the collected landfill gas shall be monitored as a surrogate for monitoring sulfur dioxide in control system's exhaust. The concentration of total reduced sulfur compounds in the collected landfill gas shall not exceed 300 ppmv (dry). In order to demonstrate compliance with this part, the owner/operator shall measure the total sulfur content in collected landfill gas on a quarterly basis using a Draeger tube or by Tedlar Bag sampled laboratory analysis. The landfill gas sample shall be taken from the main landfill gas header. The owner/operator shall follow the manufacturer's recommended procedures for using the Draeger tube and interpreting the results. (Basis: Regulation 9-1-302, Cumulative Increase)

11. In order, to demonstrate compliance with Part 4, Regulation 8, Rule 34, Sections 301.3 and 412, 40 CFR 60.8 and 60.752(b)(2)(iii)(B), and the CARB Landfill Methane Control Measure, the owner/operator shall ensure that a District approved source test is conducted annually on the A-161 Landfill Gas Flare. The owner/operator shall conduct a source test on the A-8 back-up flare at least once every three years. As a minimum, the source tests required by this part shall determine the following: a. landfill gas flow rate to the flare (dry basis); b. concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), and total non-methane organic compounds (NMOC) in the landfill gas; c. stack gas flow rate from the flare (dry basis); d. concentrations (dry basis) of NOx, CO, SO2, NMOC, and O2 in the flare stack gas; e. NMOC and methane destruction efficiencies achieved by the flare; and f. the average combustion temperature in the flare during the test period. g. NOx and CO emission rates from the flare in units of pounds per million BTU The Source Test Section of the District shall be contacted at least 14 days in advance of each

source test to obtain approval for all source test procedures. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division within 60 days of the test date.
(Basis: Regulations 8-34-301.3 and 8-34-412 and CCR 954649(b)(2)(A)(1))

12. The owner/operator shall conduct a characterization of the landfill gas concurrent with the annual source test required by Part 11 above. The landfill gas sample shall be drawn from the main landfill gas header. In addition to the compounds listed in Part 11b, the landfill gas shall be analyzed for all the organic compounds listed below. If the owner/operator is conducting a laboratory analysis of the landfill gas to determine the total reduced sulfur content pursuant to Part 10, the landfill gas shall be analyzed for all of the sulfur compounds listed below. All concentrations shall be reported on a dry basis. The test report shall be submitted to the Compliance and Enforcement Division within 45 days of the test date. (Basis: Regulation 2 Rule 5, AB-2588 Air Toxics Hot Spots Act, and Regulation 8-34-412)
Organic Compounds
acrylonitrile
benzene
benzyl chloride
1,3 butadiene
carbon tetrachloride
chlorobenzene
chloroform
1,1 dichloroethane
1,1 dichlorethene
1,2 dichloroethane
1,4 dichlorobenzene
1,4 dioxane
ethylbenzene
ethylene dibromide
hexane
isopropyl alcohol
methyl ethyl ketone
methyl tert butyl ether
methylene chloride
perchloroethylene
styrene
toluene
1,1,1 trichloroethane
1,1,2,2 tetrachloroethane
trichloroethylene
vinyl chloride

xylenes

Sulfur Compounds
hydrogen sulfide
carbon disulfide
carbonyl sulfide
dimethyl sulfide
ethyl mercaptan
methyl mercaptan

*13. If the concentrations (dry basis) of toxic air contaminants in the collected landfill gas exceed any of the limits listed below, the owner/operator shall submit a permit application for a Change of Permit Conditions within 30 days of receiving the test results.

Limits on TAC Concentrations in Collected LFG:

Acrylonitrile	=	10	ppmv
Benzene	=	8.9	ppmv
Chlorobenzene	=	1.5	ppmv
Ethylbenzene	=	41	ppmv
Ethylene Chloride	=	350	ppmv
Perchloroethylene	=	4	ppmv
Toluene	=	110	ppmv
Trichloroethylene	=	0.873	ppmv
Vinyl Chloride	=	6.4	ppmv
Xylene	=	78	ppmv

(Basis: Regulation 2-5-302 and AB-2588 Air Toxics Hot Spots Act)

13. In order to demonstrate compliance with the above conditions, the owner/operator shall maintain the following records in a District approved logbook.
    a. Record of the dates, locations, and frequency per day of all watering activities on unpaved roads. Record the dates, locations, and type of any dust suppressant applications. Record the dates and description of all paved roadway cleaning activities. All records shall be summarized on monthly basis.
    b. Record the initial operation date for each new landfill gas well and collector.
    c. Maintain an accurate map of the landfill, which indicates the locations of all refuse boundaries and the locations of all wells and collectors (using unique identifiers). Maintain a list of the wells or collectors that are venting to the control system (A-8, A-161, S-5, S-6, and S-37). This map shall be updated at least once a year to include any newly installed wells and collectors and to remove any decommissioned wells and collectors. On this map, the owner/operator

shall also clearly identify each waste disposal area that contains non-decomposable waste and that is being excluded from landfill gas collection system requirements. For each excluded area, the owner/operator shall maintain records of the types and amounts of all non-decomposable waste placed in the excluded area and the percentage (if any) of decomposable waste located in the excluded area.

d. Record the operating times and the landfill gas flow rate to the A-8 or A-161 Landfill Gas Flare on a daily basis. Summarize these records on a monthly basis. Calculate and record the heat input to each flare, pursuant to Part 8.

e. Maintain continuous records of the combustion zone temperature for the each flare during all hours of operation of that flare.

f. Maintain records of all test dates and test results performed to maintain compliance parts 10, 11, and 12 above or to maintain compliance with any applicable rule or regulation.

All records shall be maintained on site or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These record keeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations.
(Basis: Cumulative Increase, Regulations 2-1-301, 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)

14. The annual report required by BAAQMD Regulation 8-34-411 shall be submitted in two semi-annual increments. The reporting periods and report submittal due dates for the semi-annual increments of the Regulation 8-34-411 report and the MSW Landfill NESHAP report, which is required pursuant to 40 CFR Part 63.1980(a), shall be synchronized with the reporting periods and report submittal due dates for the semi-annual MFR Permit monitoring reports that are required by Section I.F of the MFR Permit for this site. A single report may be submitted to satisfy the requirements of Section I.F, Regulation 8-34-411, and 40 CFR Part 63.1980(a), provided that all items required by each applicable reporting requirement are included in the single report. (Basis: Regulation 8-34-411 and 40 CFR Part 63.1980(a))

15. Nitrogen oxide (NOx) emissions from the A-161 Landfill Gas Flare shall not exceed 0.05 pounds of NOx per million BTU. (Basis: Cumulative Increase)

16. Carbon monoxide (CO) emissions from the A-161 Landfill Gas Flare shall not exceed 0.20 pounds of CO per million

BTU. (Basis: Cumulative Increase)

17. The A-161 Landfill Gas Flare shall comply with the NMOC emission limit in Regulation 8-34-301.3. (Basis: Cumulative Increase, 8-34-301.3, and 40 CFR 60.752(b)(2)(iii)(B))

18. The owner/operator shall maintain records of all planned and unanticipated shut downs of the A-161 Flare and of any temperature excursions. The records shall include the date, time, duration, and reason for any shut down or excursion. Any unanticipated shut downs or temperature excursions shall be reported to the Enforcement Division immediately. All inspection and maintenance records, records of shut downs and excursions, gas flow records, temperature records, analytical results, source test results, and any other records required to demonstrate compliance with the above permit conditions, Regulation 8 Rule 34, or 40 CFR Part 60 Subpart WWW shall be retained on site for a minimum of five years and shall be made available to District staff upon request. (Basis: 2-6-501, 8-34-501, 40 CFR 60.758)

End of Conditions

Source Test Plan

Blue Sky Environmental, Inc.
624 San Gabriel Ave
Albany, California 94706
(510) 525 1261 Office
(810) 923 3181 Mobile
bluesky@blueskyenvironmental.com

December 13, 2022

Attn.: Marco Hernandez / Gloria Espena
Bay Area Air Quality Management District
Technical Services Division, Source Test Section
375 Beale St #600
San Francisco, CA 94105

TEST NOTIFICATION & SCHEDULE
BAAQMD Plant # 1840
A-161
December 16, 2022

Re: Source Test Plan (STP) for compliance emissions testing of flare A-161 located at the Republic Services, West Contra Costa Sanitary Landfill, 1 Parr Blvd., Richmond, CA 94801.

Blue Sky Environmental is pleased to present this Source Test Plan for the above referenced sampling project. Testing will include the following:

The Annual testing requirement summary presented below was extracted from current BAAQMD Permits. The flare is currently operating under an ATC.

BAAQMD Source #	(A-161) Class I & II Site
Source Description	New Flare
Prior Test Date	Dec 17, 2021
Frequency	Annual
Permit Cond	25293-11
Required Test Parameters	O_2 NO_X CO THC/CH_4/NMOC SO_2 Exhaust Temp. Exhaust Flowrate LFG Flowrate LFG Basic Analysis[1] LFG Characterization[2]
Parameter & Emissions Limits	NO_X 0.05 lbs/MMBTU CO, 0.20 lbs/MMBTU NMOC 30 ppmv @ 3% O_2 or D.E. 98% CH_4 DE 99% TRS ≤300 ppmv LFG NMOC ≤392 ppmv as C6

Definitions:

LFG Basic Analysis[1] A-161	LFG Characterization[2] A-161 Only
CO_2	Acrylonitrile (limit 10 ppmv
N_2	Benzene (limit 8.9 ppmv)
O_2	Benzyl Chloride
CH_4	1,3 Butadiene
NMOC	Carbon Tetrachloride
	Chlorobenzene (limit 1.5 ppmv)
	Chloroform
	1,1 Dichloroethane
	1,1 Dichloroethene
	1,2 Dichloroethane
	1,4 Dichlorobenzene
	1,4 Dioxane
	Ethylbenzene (limit 41 ppmv)
	Ethylene Chloride (limit 350 ppmv)
	Ethylene Dibromide
	Hexane
	Isopropyl Alcohol
	Methyl Ethyl Ketone
	Methyl Tert Butyl Ether
	Methylene Chloride
	Perchloroethylene (limit 4 ppmv)
	Styrene
	Toluene (limit 110 ppmv)
	1,1,1 Trichloroethane
	1,1,2,2 Tetrachloroethane
	Trichloroethylene (limit 0.873 ppmv)
	Vinyl Chloride (limit 6.4 ppmv)
	Xylenes (limit 78 ppmv)
	H_2S by Draeger

1) Three 30-minute test runs will be performed on the source(s) for the following <u>as required</u>; THC/CH_4/NMOC, CO, NO_X and O_2 using EPA 7E (NO_X), EPA 10 (CO), EPA 25A (THC)+EPA 18 (CH_4) or EPA ALT-097 (modified 25A). SO_2 emissions will be determined from the LFG H_2S measured during testing using the Draeger Tubes.

2) If M25A or ALT 097 are used, then moisture will be determined by EPA Method 4 and used to correct wet THC to dry THC.

3) Three integrated SUMMA or tedlar bag sample of the landfill gas will be collected per source using EPA Method 25C to determine CH_4, THC and NMOC Destruction/Removal Efficiency (DRE). The samples will also be analyzed for %CH_4, %CO_2, %N_2, %O_2, BTU and F-factor by ASTM D-3588 and D-1945.

4) Three LFG samples will be taken by Draeger tube and the TRS will be calculated by multiplying H_2S by 1.2 according to part 10.

5) Three samples of the LFG will be collected from the Flare A-161 for Organic Speciation as specified in the Table above.

6) Emission Flowrates will be determined by EPA Method 19 calculation and measurement using the Facility fuel flow data, fuel analysis and exhaust oxygen content.

7) Facility Fuel Flow and temperature records will be collected during testing and documented in the report.

8) The Emission Test Report will be submitted to the AQMD within 45 days of the test program completion. The report will include a test narrative and tables presenting emission results in units specified in the Permit Limits (e.g., concentrations (ppm), emission factors (lbs/Bhp-hr) and emission rates (lbs/hr). All supporting documentation will be included (e.g., strip charts, field data sheets, process data, calibrations, calculations, etc.).

The facility contact is Ed Baquerizo who may be reached at ebaquerizo@republicservices.com or 510-970-7248. If you have any questions, please contact Jeramie Richardson 810-923-3181 or Anne Richardson at 810-923-1198.

Anne Richardson

From: Gloria Espena <GEspena@baaqmd.gov>
Sent: Wednesday, December 14, 2022 5:04 PM
To: Anne Richardson
Cc: Baquerizo, Ed; Morse, Hannah; Flanagan, Michael; Jeramie Richardson; Jessica Morris; Marco Hernandez; Bowen, Maria; Guy Worthington
Subject: NST-8005: WCCSL STP
Attachments: RS-WCCSL-Flare-A161-stp1.pdf; Contractor ST Supplemental Form.docx

NST-8005 has been assigned the pending 12/16/22 work referenced below.

Also, we've introduced a new, supplemental form to be included when reports are submitted. It's just a sheet intended to help us with processing reports and prioritizing report review. The intention of the email is not to request additional testing. Please complete and submit the attached **"Contractor ST Supplemental Form"** with the final test report.

NST number(s) that are assigned for each source test notifications are for inner-office tracking purposes only, not an approval of the test plan. (For source testing methodologies please review permit conditions, BAAQMD Regulations and CFR, accordingly). Future notifications and report submittals should be made to **GEspena@baaqmd.gov** and **cc: MHernandez@baaqmd.gov.**

If you have other questions, please contact Marco Hernandez at mhernandez@baaqmd.gov.

Thank you,

Gloria M. Espena
Meteorology & Measurements
Source Test Section & Performance Evaluation Group
The Bay Area Air Quality Management District
375 Beale Street, Ste. 600 | San Francisco, CA 94105
Ofc (415) 749-4725 | Fax (510) 758-3087
gespena@baaqmd.gov | *www.baaqmd.gov*

From: Anne Richardson <arichardson@blueskyenvironmental.com>
Sent: Tuesday, December 13, 2022 9:47 AM
To: Gloria Espena <GEspena@baaqmd.gov>
Cc: Baquerizo, Ed <ebaquerizo@republicservices.com>; Morse, Hannah <HMorse@scsengineers.com>; Flanagan, Michael <MFlanagan@scsengineers.com>; Jeramie Richardson <jrichardson@blueskyenvironmental.com>; Jessica Morris <jperreira@blueskyenvironmental.com>; Marco Hernandez <MHernandez@baaqmd.gov>; Bowen, Maria <MBowen@scsengineers.com>; Guy Worthington <guy@blueskyenvironmental.com>
Subject: WCCSL STP

Hello Gloria,

Attached please find West Contra Costa Sanitary Landfill Source Test Plan, scheduled for December 16, for your review and approval. Should you have any questions or comments please let us know.

Sincerely,
Anne Richardson
Office Manager

Happy Holidays!!

**Please note Blue Sky will be closed November 21st – 27th and December 24th – January 2nd.*
We appreciate you choosing Blue Sky Environmental, Inc.

BLUE SKY ENVIRONMENTAL, INC
624 San Gabriel Ave.
Albany, CA 94706
Direct: (810) 923-1198
Office: (510) 525-1261
arichardson@blueskyenvironmental.com

Visit our website at www.blueskyenvironmental.com

Appendix E – Surface Emission and GCCS Component Leak Monitoring Results

February 27, 2023
Project No. 07221013.00

Mr. Ed Baquerizo
Republic Services, Inc.
1 Parr Boulevard
Richmond, California 94801

Subject: West Contra Costa County Landfill – Richmond, California
Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS)
Surface Emissions Monitoring for Fourth Quarter 2022.

Dear Mr. Baquerizo:

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 Closed West Contra Costa Sanitary Landfill (Site) during the fourth quarter 2022. 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 Michael Flanagan at (925) 421-9768 or Whitney Stackhouse (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney M. Stackhouse
Project Manager
SCS Field Services

Michael Flanagan
Project Manager
SCS Field Services

WS/MF/ms

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

Enclosure: West Contra Costa County Landfill, LMR and NSPS SEM Report – Fourth Quarter 2022

West Contra Costa County Landfill

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

Fourth Quarter 2022

Presented to:

Mr. Ed Baquerizo
Republic Services, Inc.
1 Parr Boulevard
Richmond, California 94801

SCS FIELD SERVICES

File No. 07221013.00 | February 27, 2023

SCS FIELD SERVICES
4730 Enterprise Way
Modesto, CA 95356

West Contra Costa County Landfill

Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring Fourth Quarter 2022

INTRODUCTION

This report provides results of the Fourth Quarter 2022 LMR and/or NSPS landfill surface emissions monitoring (SEM) performed on October 3, 4, and 13 and November 13, 2022, by SCS Field Services (SCS) at the closed West Contra Costa County Landfill. All work was performed in accordance with our approved Work Scope dated September 13, 2018, and the LMR requirements.

SUMMARY AND CONCLUSIONS

On October 3 and 4, 2022, instantaneous and integrated SEM was performed over the surface of the site, as required by the Bay Area Air Quality Management District (BAAQMD). Results indicated four (4) exceedances of the LMR and NSPS instantaneous limit of 500 parts per million by volume (ppmv). Locations are shown on a map provided in **Attachment 2**. Based on these monitoring results, as shown in **Attachment 3**, follow-up monitoring was required. All exceedance locations were observed in compliance during the required 10-day (LMR and NSPS) and 30-day (NSPS) follow-up monitoring performed on October 13 and November 3, 2022, respectively.

Also, during the instantaneous monitoring event, SCS performed integrated monitoring of the landfill surface. As required by the LMR, the landfill was divided into 50,000 square foot areas. The West Contra Costa County Landfill surface area was divided into 165 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 composting activities, unsafe conditions, excessively overgrown vegetation, or there was no waste in place prior to the monitoring event. Calculated integrated monitoring indicated no integrated exceedances of the 25-ppmv limit. Based on these monitoring results, as shown in **Attachment 4** (Table 2), no follow up monitoring was required.

In addition to surface monitoring, quarterly monitoring was conducted at the pressurized piping or components of the Gas Collection and Control System (GCCS) that are under positive pressure. Results of the testing of the landfill gas (LFG) Blower Flare Station (BFS) pressurized pipe and components indicated no exceedances of the LMR 500-ppmv limit or the BAAQMD 1,000-ppmv limit. Results are shown in **Attachment 3**.

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. Three (3) locations were observed to exceed the 200 ppmv threshold as shown in **Attachment 2**. If concentrations exceeding 200 ppmv are observed during monitoring events, they are reported to site personnel and will be reported in the next submittal of the LMR annual report.

As stipulated in the 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, in accordance with the rule and based on previous instantaneous monitoring results, the site is required to perform surface emissions monitoring on a 25-foot pathway spacing on a quarterly basis.

Finally, to help prevent potential future exceedances, SCS routinely inspects the landfill surface, and any observed areas in need of repair would be noted, and the findings sent directly to the client.

BACKGROUND

The West Contra Costa Sanitary Landfill is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The West Contra Costa Sanitary Landfill property contains a GCCS to control the combustible gases generated in the landfill that may otherwise either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties.

SURFACE EMISSIONS MONITORING

On October 3, 4, and 13 and November 3, 2022, 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 limit of 500 ppmv measured as methane for instantaneous monitoring, or 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 SEM 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.

- Electronic 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**, respectively.

SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the LMR, NSPS, and BAAQMD 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 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 5 miles per hour, and no instantaneous speeds exceeded 10 miles per hour. No rainfall had occurred within 72 hours prior to the monitoring events. Therefore, site meteorological conditions were within the LMR requirements on the above-mentioned dates.

TESTING RESULTS

During this event, SCS performed the quarterly monitoring on a 25-foot pathway in accordance with the LMR and NSPS requirements. 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 of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring required by the LMR.

On October 3 and 4, 2022, SCS performed fourth quarter 2022 instantaneous emissions monitoring as required. During this monitoring, surface emissions results indicated four (4) location exceeded the 500 ppmv maximum concentration. The required first 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring performed on October 13 and November 3, 2022, respectively, indicated that the locations had returned to compliance following system adjustments and remediation (wellfield adjustment and borehole repairs using bentonite and soil) performed by SCS personnel. Based on these monitoring results, no additional follow up testing is required. Results of the instantaneous monitoring are shown in **Attachment 3** (Table 1).

Additionally, calculated integrated monitoring indicated no integrated exceedances of the 25-ppmv requirement. Integrated surface emissions monitoring results indicated the highest average methane concentration was 4.71 ppmv in Grid 94. Based on these monitoring results, no follow up monitoring was required. Results of the integrated monitoring are shown in **Attachment 4** (Table 2). Calibration logs for the monitoring equipment are provided in **Attachment 5**.

During this monitoring event, several girds were not monitored, in accordance with the LMR, due to active composting activities, unsafe conditions, excessively overgrown vegetation or no waste in place. SCS recommends performing weed abatement to grant safe access to all monitoring locations. SCS will continue to monitor all accessible locations during all future quarterly monitoring events.

PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On October 4, 2022, quarterly component 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 pipe and associated components. No locations exceeding the 500-ppmv limit were observed during this monitoring event. The maximum reading, which was 2.60 ppmv, was below the limit as shown in Table 1 provided in **Attachment 3**. Therefore, all pressurized pipe and components located at the LFG BFS were in compliance at the time of our testing.

PROJECT SCHEDULE

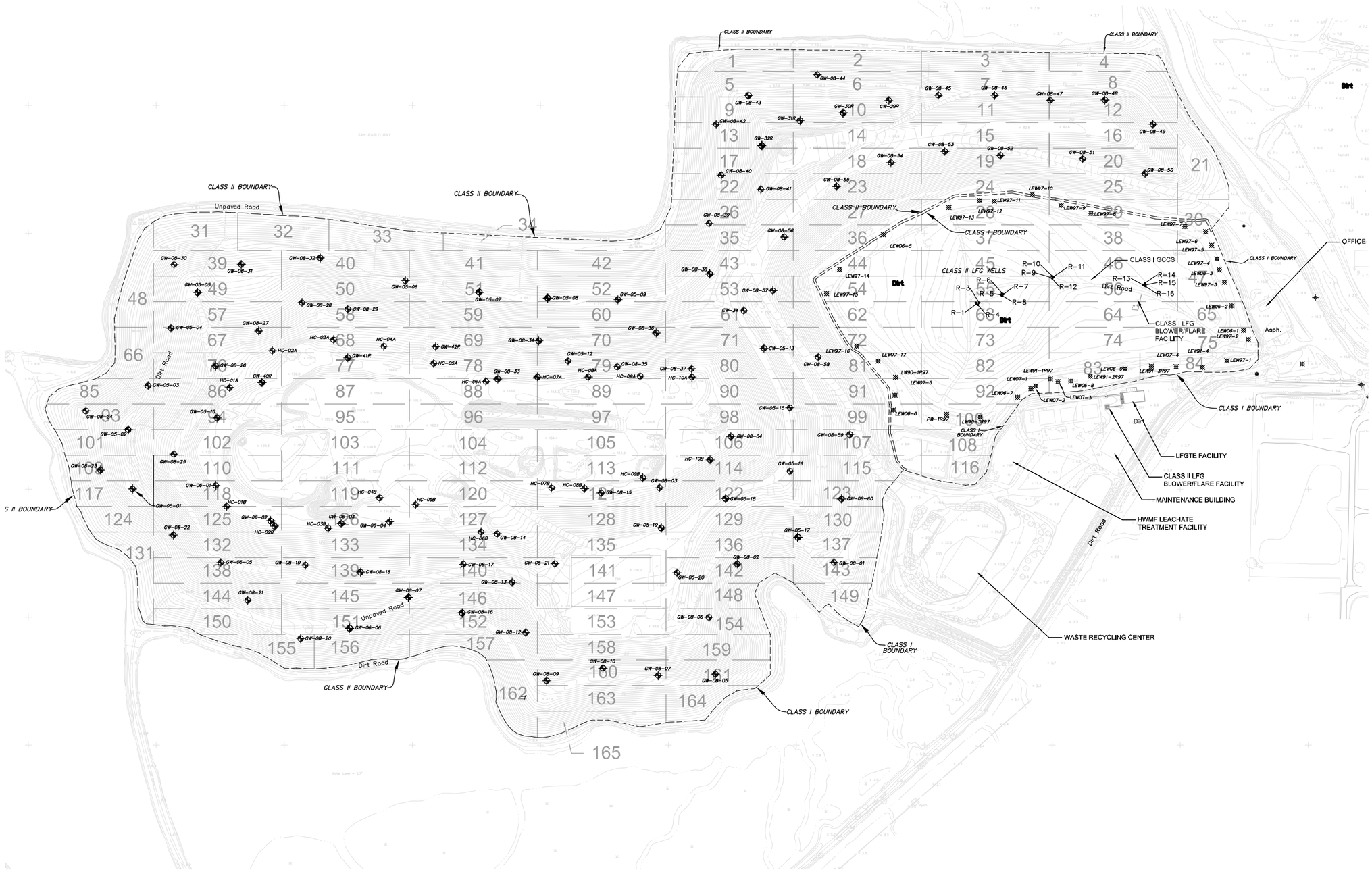
In accordance with our approved Work Scope, the next quarterly SEM event is scheduled to be performed by the end of March 2023.

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 Map



LEGEND

- EXISTING CLASS 1 SOLID WASTE BOUNDARY
- EXISTING CLASS 2 SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- 1 — SEM GRID BLOCK
- 1 — SEM GRID BLOCK WITH NO WASTE IN PLACE

N

0 200 400

SCALE IN FEET
SCALED FOR
22"x34" SIZE SHEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY HJW GEOSPATIAL. DATE OF PHOTOGRAPHY: MARCH 20, 2008. DATUM: CALIFORNIA COORDINATE SYSTEM, ZONE III, NAD27.

DRAFT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE 5/11/2011	DRAWN BY JDW; DESIGNED BY JDW	CHECKED BY REF		APPROVED BY PJS	

CORNERSTONE Environmental Group, LLC

WEST CONTRA COSTA COUNTY SANITARY LANDFILL
CONTRA COSTA COUNTY, CALIFORNIA

SURFACE EMISSIONS MONITORING
GRID MAP

SHEET NO. **1**

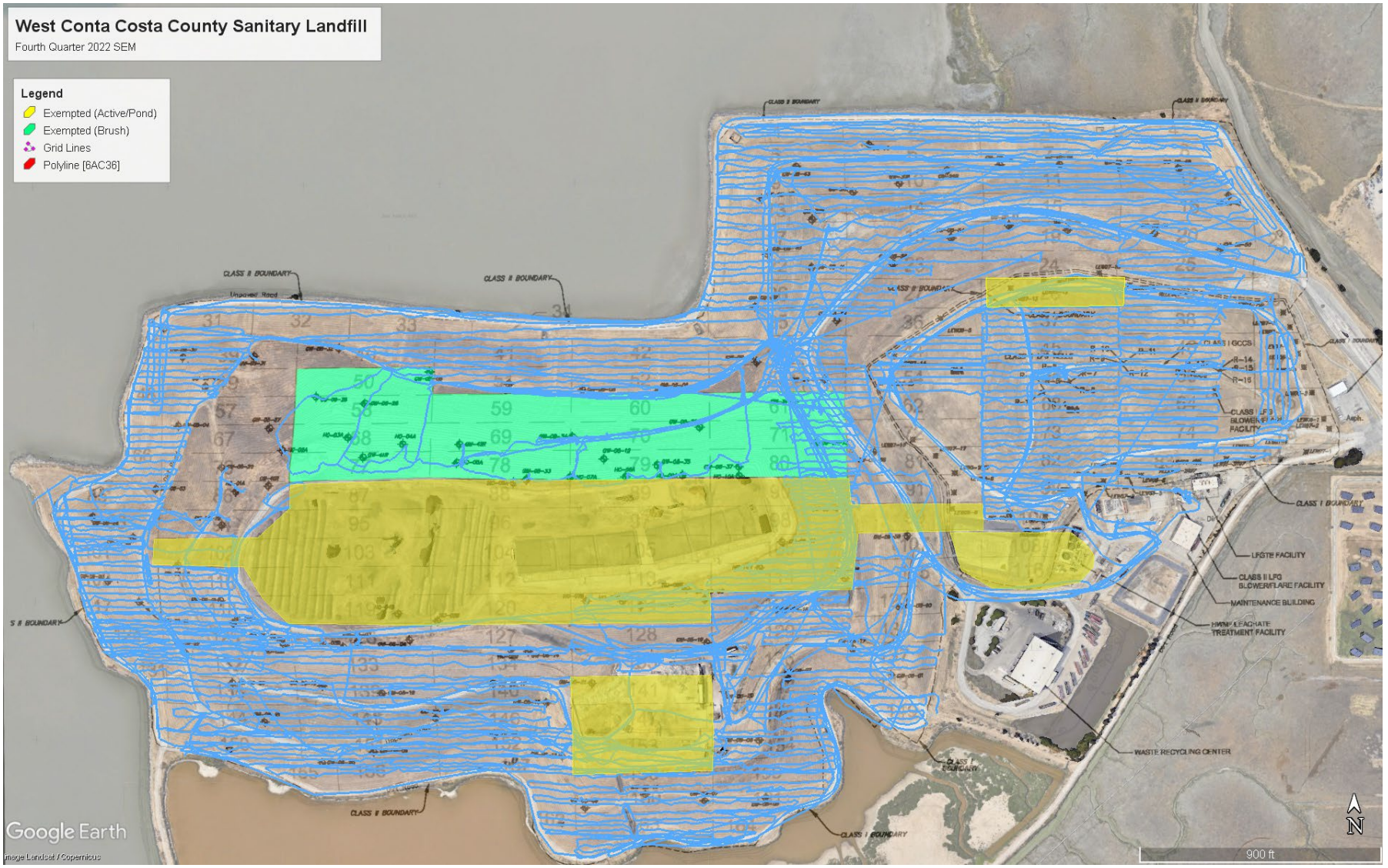
PROJECT NO. 110218

1" 1/2" 0" 1"

File: K:\PROJECTS\REPUBLIC (CORP)\xxxxx - CA LF WCA_West County\SEM_PROJECT DRAWINGS\dwg\SEMWCCSG- 2011 SEM GRID MAP.dwg Layout: Layout1 User: jonathonwise May 11, 2011 - 2:56pm

Attachment 2

Surface Monitoring Maps



Fourth Quarter 2022
LMR Surface Emissions Monitoring Pathway
West Contra Costa County Sanitary Landfill, Contra Costa County, California

Attachment 3

Instantaneous and Component Emissions Monitoring Results

Fourth Quarter 2022

Table 1. LMR Instantaneous Surface and Component Emissions Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Instantaneous Data Report for October 3, 4, and 13 and November 3, 2022

Location	Initial Methane Concentration (ppmv) 10/4/22	First 10-day Follow-up Concentration (ppmv) 10/13/22	30-day Follow-up Concentration (ppmv) 11/3/22	Latitude	Longitude
WCLFR006	4,229	225	2	37.968741°	-122.383824°
LEW-9715	2,108	134	15.8	37.968730°	-122.386173°
WCLF0839	1,589	137	251	37.969329°	-122.387807°
WCLFH05A	1,420	2.4	1.1	37.967868°	-122.391456°
WCLFH03A	482	--	--	37.968083°	-122.392850°
Surface Reading in Grid 55	211	--	--	37.968831°	-122.384338°
WCLFR002	205	--	--	37.968646°	-122.384129°

Pressurized Pipe and Component Results

Location	Date	Concentration (ppmv)
Flare	10/4/2022	2.6

No other exceedances of the 500-ppmv limits were observed during the monitoring performed during the fourth quarter 2022. The highest reading observed was 4,229 ppmv.

Fourth Quarter 2022

LMR Surface Emissions Monitoring Initial Locations >500 ppm

West Contra Costa County Sanitary Landfill, Contra Costa County, California

Fourth Quarter 2022

LMR Surface Emissions Monitoring – Readings 200-499 ppmv

West Contra Costa County Sanitary Landfill, Contra Costa County, California

Attachment 4

Integrated Monitoring Results

Fourth Quarter 2022
Table 2. Integrated Surface Emission Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 001	10/3/2022	1.55	
W.CoCo 002	10/3/2022	1.52	
W.CoCo 003	10/3/2022	1.36	
W.CoCo 004	10/3/2022	1.64	
W.CoCo 005	10/4/2022	1.05	
W.CoCo 006	10/4/2022	1.16	
W.CoCo 007	10/3/2022	1.42	
W.CoCo 008	10/3/2022	1.30	
W.CoCo 009	10/4/2022	0.65	
W.CoCo 010	10/4/2022	0.87	
W.CoCo 011	10/4/2022	0.90	
W.CoCo 012	10/4/2022	0.81	
W.CoCo 013	10/4/2022	0.62	
W.CoCo 014	10/4/2022	0.85	
W.CoCo 015	10/4/2022	1.35	
W.CoCo 016	10/4/2022	1.59	
W.CoCo 017	10/4/2022	2.05	
W.CoCo 018	10/4/2022	2.19	
W.CoCo 019	10/4/2022	2.36	
W.CoCo 020	10/4/2022	2.37	
W.CoCo 021	10/4/2022	1.99	
W.CoCo 022	10/3/2022	0.14	
W.CoCo 023	10/3/2022	0.12	
W.CoCo 024	10/3/2022	3.16	
W.CoCo 025	10/4/2022	3.06	
W.CoCo 026	10/3/2022	0.43	
W.CoCo 027	10/3/2022	0.35	
W.CoCo 028	-	-	Exempted
W.CoCo 029	10/4/2022	1.06	
W.CoCo 030	10/4/2022	1.28	
W.CoCo 031	10/3/2022	1.39	
W.CoCo 032	10/3/2022	0.89	
W.CoCo 033	10/3/2022	1.20	
W.CoCo 034	10/3/2022	2.56	
W.CoCo 035	10/3/2022	1.28	
W.CoCo 036	10/3/2022	0.81	
W.CoCo 037	10/4/2022	1.55	
W.CoCo 038	10/4/2022	1.30	
W.CoCo 039	10/3/2022	2.38	
W.CoCo 040	10/4/2022	2.80	
W.CoCo 041	10/4/2022	2.82	
W.CoCo 042	10/4/2022	2.77	
W.CoCo 043	10/4/2022	2.43	

Fourth Quarter 2022
Table 2. Integrated Surface Emission Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 044	10/4/2022	0.82	
W.CoCo 045	10/4/2022	2.64	
W.CoCo 046	10/4/2022	1.31	
W.CoCo 047	10/4/2022	1.20	
W.CoCo 048	10/3/2022	2.00	
W.CoCo 049	10/3/2022	1.33	
W.CoCo 050	10/4/2022	1.81	
W.CoCo 051	10/4/2022	2.27	
W.CoCo 052	10/4/2022	1.80	
W.CoCo 053	10/4/2022	1.62	
W.CoCo 054	10/4/2022	2.42	
W.CoCo 055	10/4/2022	1.23	
W.CoCo 056	10/4/2022	1.53	
W.CoCo 057	10/3/2022	1.36	
W.CoCo 058	-	-	Exempted
W.CoCo 059	10/4/2022	1.42	
W.CoCo 060	10/4/2022	1.96	
W.CoCo 061	-	-	Exempted
W.CoCo 062	10/3/2022	2.91	
W.CoCo 063	10/4/2022	0.83	
W.CoCo 064	10/4/2022	2.10	
W.CoCo 065	10/4/2022	1.17	
W.CoCo 066	10/3/2022	1.45	
W.CoCo 067	10/3/2022	1.02	
W.CoCo 068	-	-	Exempted
W.CoCo 069	-	-	Exempted
W.CoCo 070	-	-	Exempted
W.CoCo 071	-	-	Exempted
W.CoCo 072	10/3/2022	1.61	
W.CoCo 073	10/4/2022	0.83	
W.CoCo 074	10/4/2022	1.89	
W.CoCo 075	10/4/2022	1.13	
W.CoCo 076	10/3/2022	1.46	
W.CoCo 077	-	-	Exempted
W.CoCo 078	-	-	Exempted
W.CoCo 079	-	-	Exempted
W.CoCo 080	-	-	Exempted
W.CoCo 081	10/3/2022	1.40	
W.CoCo 082	10/3/2022	1.41	
W.CoCo 083	10/4/2022	1.08	
W.CoCo 084	10/4/2022	1.13	
W.CoCo 085	10/3/2022	1.20	
W.CoCo 086	10/3/2022	1.25	

Fourth Quarter 2022
Table 2. Integrated Surface Emission Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 087	-	-	Exempted
W.CoCo 088	-	-	Exempted
W.CoCo 089	-	-	Exempted
W.CoCo 090	-	-	Exempted
W.CoCo 091	10/4/2022	1.93	
W.CoCo 092	10/4/2022	0.85	
W.CoCo 093	10/3/2022	4.65	
W.CoCo 094	10/3/2022	4.71	
W.CoCo 095	-	-	Exempted
W.CoCo 096	-	-	Exempted
W.CoCo 097	-	-	Exempted
W.CoCo 098	-	-	Exempted
W.CoCo 099	-	-	Exempted
W.CoCo 099	10/3/2022	4.28	
W.CoCo 100	10/4/2022	0.78	
W.CoCo 101	10/3/2022	4.46	
W.CoCo 102	-	-	Exempted
W.CoCo 103	-	-	Exempted
W.CoCo 104	-	-	Exempted
W.CoCo 105	-	-	Exempted
W.CoCo 106	-	-	Exempted
W.CoCo 107	10/3/2022	4.21	
W.CoCo 108	-	-	Exempted
W.CoCo 109	10/4/2022	1.38	
W.CoCo 110	10/4/2022	1.26	
W.CoCo 111	-	-	Exempted
W.CoCo 112	-	-	Exempted
W.CoCo 113	-	-	Exempted
W.CoCo 114	-	-	Exempted
W.CoCo 115	10/4/2022	1.29	
W.CoCo 116			
W.CoCo 117	10/4/2022	1.06	
W.CoCo 118	10/4/2022	1.13	
W.CoCo 119	-	-	Exempted
W.CoCo 120	-	-	Exempted
W.CoCo 121	-	-	Exempted
W.CoCo 122	10/4/2022	1.71	
W.CoCo 123	10/4/2022	2.12	
W.CoCo 124	10/4/2022	1.10	
W.CoCo 125	10/4/2022	1.11	
W.CoCo 126	10/4/2022	1.21	
W.CoCo 127	10/4/2022	1.16	
W.CoCo 128	10/4/2022	2.20	

Fourth Quarter 2022
Table 2. Integrated Surface Emission Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 129	10/4/2022	2.20	
W.CoCo 130	10/4/2022	2.10	
W.CoCo 131	10/4/2022	0.93	
W.CoCo 132	10/4/2022	0.89	
W.CoCo 133	10/4/2022	0.94	
W.CoCo 134	10/4/2022	1.00	
W.CoCo 135	10/4/2022	2.25	
W.CoCo 136	10/4/2022	2.24	
W.CoCo 137	10/4/2022	1.18	
W.CoCo 138	10/4/2022	0.59	
W.CoCo 139	10/4/2022	0.64	
W.CoCo 140	10/4/2022	0.60	
W.CoCo 141	-	-	Exempted
W.CoCo 142	10/4/2022	0.17	
W.CoCo 143	10/4/2022	0.18	
W.CoCo 144	10/4/2022	0.34	
W.CoCo 145	10/4/2022	0.33	
W.CoCo 146	10/4/2022	0.34	
W.CoCo 147	-	-	Exempted
W.CoCo 148	10/4/2022	0.99	
W.CoCo 149	10/4/2022	1.73	
W.CoCo 150	10/4/2022	1.15	
W.CoCo 151	10/4/2022	1.16	
W.CoCo 152	10/4/2022	1.17	
W.CoCo 153	-	-	Exempted
W.CoCo 154	10/4/2022	1.00	
W.CoCo 155	10/4/2022	2.16	
W.CoCo 156	10/4/2022	1.96	
W.CoCo 157	10/4/2022	2.18	
W.CoCo 158	10/4/2022	2.11	
W.CoCo 159	10/4/2022	2.12	
W.CoCo 160	10/4/2022	2.55	
W.CoCo 161	10/4/2022	2.66	
W.CoCo 162	10/4/2022	2.86	
W.CoCo 163	10/4/2022	3.51	
W.CoCo 164	10/4/2022	3.29	
W.CoCo 165	10/4/2022	1.62	

Attachment 5

Calibration Logs

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10-3-22 Site Name: West Contra

Inspector(s): Ruben Rios Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 1 MPH Wind Direction: NE Barometric Pressure: 30.05 "Hg

Air Temperature: 53 °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: 23664 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	8	501	1	1
2	8	510	10	2
3	6	502	2	1

Average Difference: 4.3

*Perform recalibration if average difference is greater than 10

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

V = 100%- 4.3 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 185900
Counters Observed for the Zero= 6621

Trial 2:
Counts Observed for the Span= 183952
Counters Observed for the Zero= 4035

Trial 3:
Counts Observed for the Span= 187396
Counters Observed for the Zero= 5038

Post Monitoring Calibration Check

Zero Air Reading: 0.5 ppm Cal Gas Reading: 520 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: per Grid 23 Reading: 2.2 ppm

Downwind Location Description: Flare Reading: 2.2 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10/03/22 Site Name: ~~West Contra~~ West Contra

Inspector(s): Alfredo Gomez (signature) Alfredo Gomez Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: E Barometric Pressure: 30.04 "Hg

Air Temperature: 55 °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: 4388 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	497	3	1
2	-0.1	499	1	1
3	-0.1	501	1	2

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%

= %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 156488
Counters Observed for the Zero= 4250

Trial 2:
Counts Observed for the Span= 153712
Counters Observed for the Zero= 4187

Trial 3:
Counts Observed for the Span= 152064
Counters Observed for the Zero= 4152

Post Monitoring Calibration Check

Zero Air Reading: 0.9 ppm Cal Gas Reading: 492 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: G 23 Reading: 2.5 ppm

Downwind Location Description: Flare Reading: 2.3 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: 10/03/22 | Site Name: West Contra

Inspector(s): Diego Pinto | Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH | Wind Direction: E | Barometric Pressure: 30.04 "Hg

Air Temperature: 55 °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	-0.1	502	2	1
2	0	500	0	2
3	-0.1	500	0	1

Average Difference: 0.6

*Perform recalibration if average difference is greater than 10

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

= 100%- 0.6 /500 x 100%

= %

Span Sensitivity: 121504

Trial 1:

Counts Observed for the Span= ~~[illegible]~~

Counters Observed for the Zero= 3959

Trial 2:

Counts Observed for the Span= 123438

Counters Observed for the Zero= 3898

Trial 3:

Counts Observed for the Span= 133188

Counters Observed for the Zero= 3918

Post Monitoring Calibration Check

Zero Air Reading: 1.2 ppm | Cal Gas Reading: 527 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: E. 23 | Reading: 2.0 ppm

Downwind Location Description: Flare | Reading: 1.9 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: 10-3-22 Site Name: West Contra

Inspector(s): R. Warren Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 1 MPH Wind Direction: NE Barometric Pressure: 30.05 "Hg

Air Temperature: 53 °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: 41066 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	0	500	0	2
3	0	500	0	1

Average Difference: 0

*Perform recalibration if average difference is greater than 10

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

= 100%- 0 /500 x 100%

= 100 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 144676
Counters Observed for the Zero= 6247

Trial 2:
Counts Observed for the Span= 144540
Counters Observed for the Zero= 6240

Trial 3:
Counts Observed for the Span= 144214
Counters Observed for the Zero= 6214

Post Monitoring Calibration Check

Zero Air Reading: 0.9 ppm Cal Gas Reading: 527 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: G 23 Reading: 2.5 ppm

Downwind Location Description: Flare Reading: 2.2 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: ~~10/~~ 10/03/22 Site Name: West Contra

Inspector(s): E. Paz Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: E Barometric Pressure: 30.04 "Hg

Air Temperature: 55 °F General Weather Conditions: ~~55~~ 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	499	1	1
2	-0.1	500	0	1
3	0	501	1	2

Average Difference: 0.6

*Perform recalibration if average difference is greater than 10

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

= 100%- 0.6 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 171440
Counters Observed for the Zero= 5281

Trial 2:
Counts Observed for the Span= 169528
Counters Observed for the Zero= 5301

Trial 3:
Counts Observed for the Span= 169688
Counters Observed for the Zero= 5211

Post Monitoring Calibration Check

Zero Air Reading: 1.1 ppm Cal Gas Reading: 519 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: G.23 Reading: 2.3 ppm

Downwind Location Description: Flare Reading: 2.5 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: 10-3-22 Site Name: West Contra

Inspector(s): E. Paz Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 1 MPH Wind Direction: NE Barometric Pressure: 30.05 "Hg

Air Temperature: 53 °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: 5421 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	-0.1	505	5	1
2	0	500	0	2
3	0	506	6	2

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%

= %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 142312
Counters Observed for the Zero= 5213

Trial 2:
Counts Observed for the Span= 141672
Counters Observed for the Zero= 5126

Trial 3:
Counts Observed for the Span= 143524
Counters Observed for the Zero= 5107

Post Monitoring Calibration Check

Zero Air Reading: 1.0 ppm Cal Gas Reading: 527 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: C-23 Reading: 2.1 ppm

Downwind Location Description: Flare Reading: 2.2 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.

SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 10/4/22 Site Name: west contra

Inspector(s): Bryan Ochoa Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: NE Barometric Pressure: 30.02 "Hg

Air Temperature: 56 °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: 2364 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	502	2	5
3	-.1	501	1	4

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= 186084

Counters Observed for the Zero= 4242

Trial 2:

Counts Observed for the Span= 186192

Counters Observed for the Zero= 4177

Trial 3:

Counts Observed for the Span= 187172

Counters Observed for the Zero= 4223

Post Monitoring Calibration Check

Zero Air Reading: -3.8 ppm Cal Gas Reading: 492 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 2.2 ppm

Downwind Location Description: Flare Reading: 2.5 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: 10/4/22 Site Name: west cont'g

Inspector(s): Alfredo Gomez Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: NE Barometric Pressure: 30.02 "Hg

Air Temperature: 56 °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	-.1	500	0	4
2	0	499	1	5
3	0	499	1	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= 179420
Counters Observed for the Zero= 4944

Trial 2:
Counts Observed for the Span= 174304
Counters Observed for the Zero= 4896

Trial 3:
Counts Observed for the Span= 176148
Counters Observed for the Zero= 4847

Post Monitoring Calibration Check

Zero Air Reading: -4.1 ppm Cal Gas Reading: 506 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 2.2 ppm

Downwind Location Description: Flare Reading: 2.1 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: 10/4/22 Site Name: West Contra

Inspector(s): Diego Romero Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: NE Barometric Pressure: 30.02 "Hg

Air Temperature: 56 °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	0	502	2	5
2	0	499	1	3
3	0	499	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= 128740
Counters Observed for the Zero= 4128

Trial 2:
Counts Observed for the Span= 122316
Counters Observed for the Zero= 4037

Trial 3:
Counts Observed for the Span= 121332
Counters Observed for the Zero= 4003

Post Monitoring Calibration Check

Zero Air Reading: -3.9 ppm Cal Gas Reading: 519 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 2.3 ppm

Downwind Location Description: Flare Reading: 2.1 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: 10-4-22 Site Name: West Contra

Inspector(s): R. Warren & Diego Romero Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °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	-0.3	500	0	5
2	0	500	0	3
3	0	500	0	1

Average Difference: .5

*Perform recalibration if average difference is greater than 10

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

= 100%- .5 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:

Counts Observed for the Span= 148699

Counters Observed for the Zero= 2715

Trial 2:

Counts Observed for the Span= 149612

Counters Observed for the Zero= 2648

Trial 3:

Counts Observed for the Span= 148224

Counters Observed for the Zero= 2625

Post Monitoring Calibration Check

Zero Air Reading: 1.0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 2.3 ppm

Downwind Location Description: Flare Reading: 2.1 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: 10-4/22 Site Name: West Contra

Inspector(s): D. Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °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	501	1	1
2	0	500	0	3
3	0	498	2	2

Average Difference: .8

*Perform recalibration if average difference is greater than 10

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

= 100%- .8 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 124812
Counters Observed for the Zero= 3564

Trial 2:
Counts Observed for the Span= 135128
Counters Observed for the Zero= 3555

Trial 3:
Counts Observed for the Span= 126352
Counters Observed for the Zero= 3539

Post Monitoring Calibration Check

Zero Air Reading: 1.2 ppm Cal Gas Reading: 502 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Entrance Reading: 2.5 ppm

Downwind Location Description: Flare Reading: 2.8 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: 10-4-22 Site Name: West Contra

Inspector(s): Don. Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: SW Barometric Pressure: 30 "Hg

Air Temperature: 55 °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: 4388 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	0	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%

= 99.9 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 154172
Counters Observed for the Zero= 3969

Trial 2:
Counts Observed for the Span= 155224
Counters Observed for the Zero= 3949

Trial 3:
Counts Observed for the Span= 155852
Counters Observed for the Zero= 3923

Post Monitoring Calibration Check

Zero Air Reading: 6.9 ppm Cal Gas Reading: 513 ppm

BACKGROUND CONCENTRATIONS CHECKS

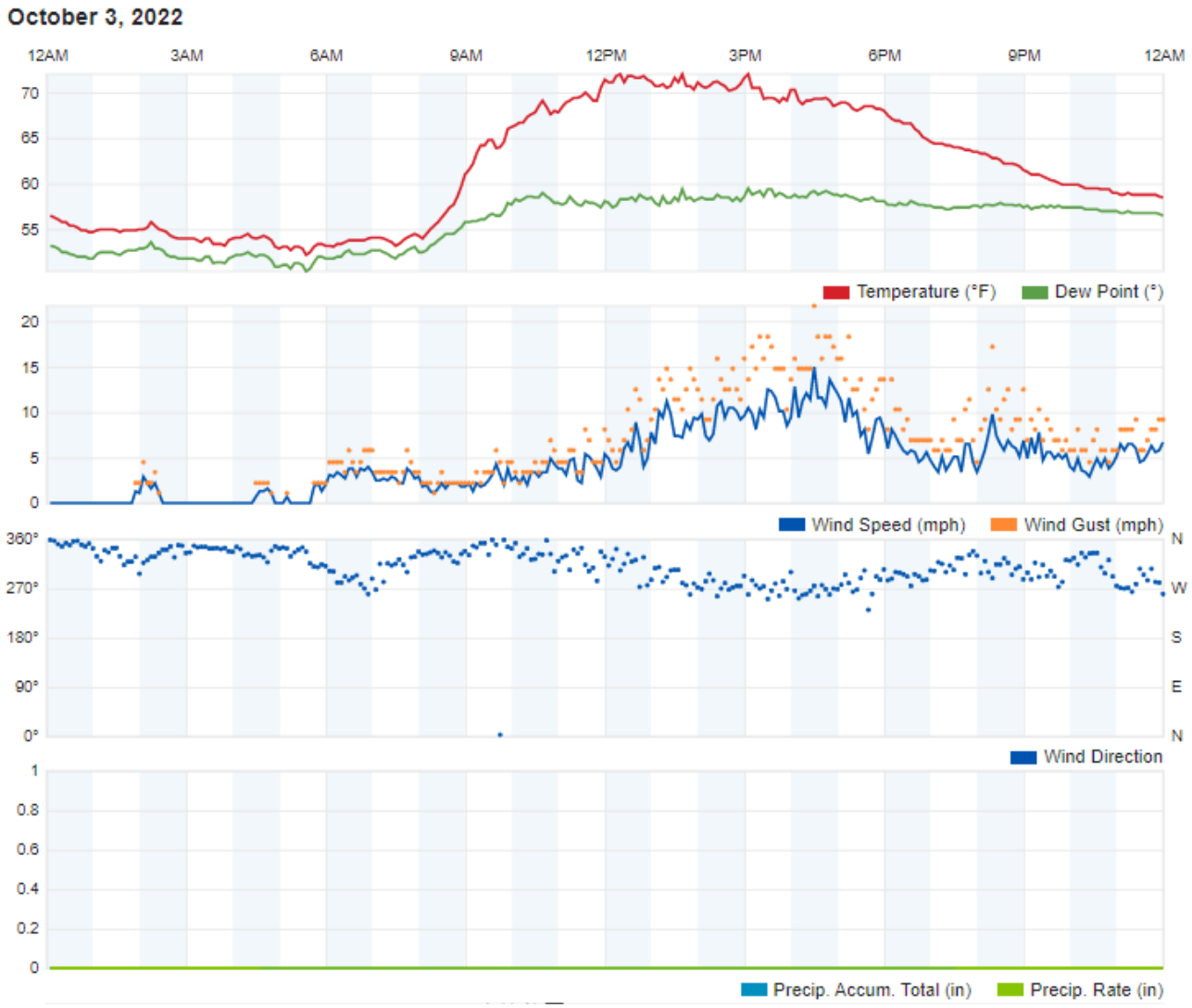
Upwind Location Description: Entrance Reading: 2.1 ppm

Downwind Location Description: Flare Reading: 2.3 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.

Attachment 6

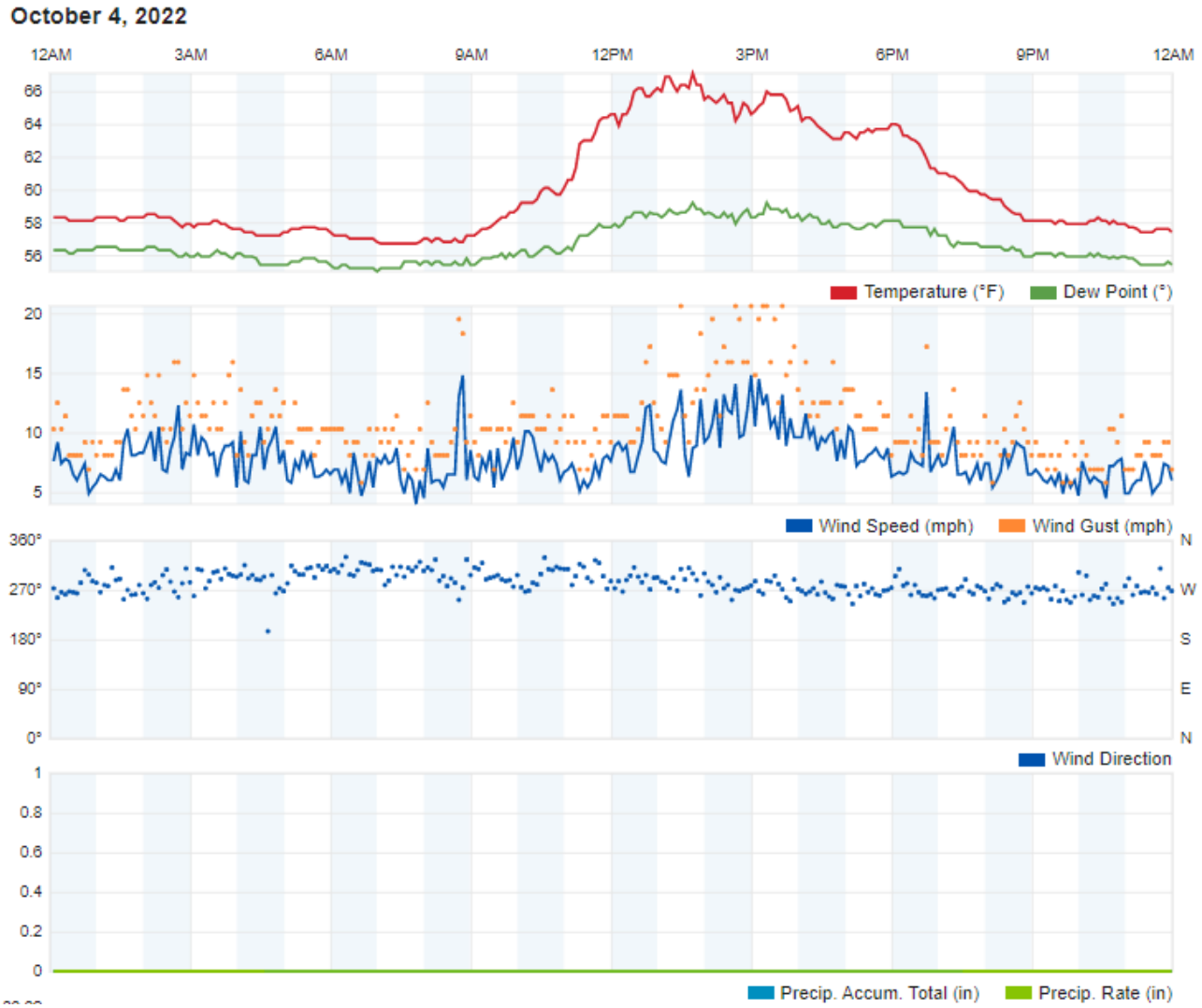
Weather Data



Fourth Quarter 2022

SEM Weather for October 3, 2022

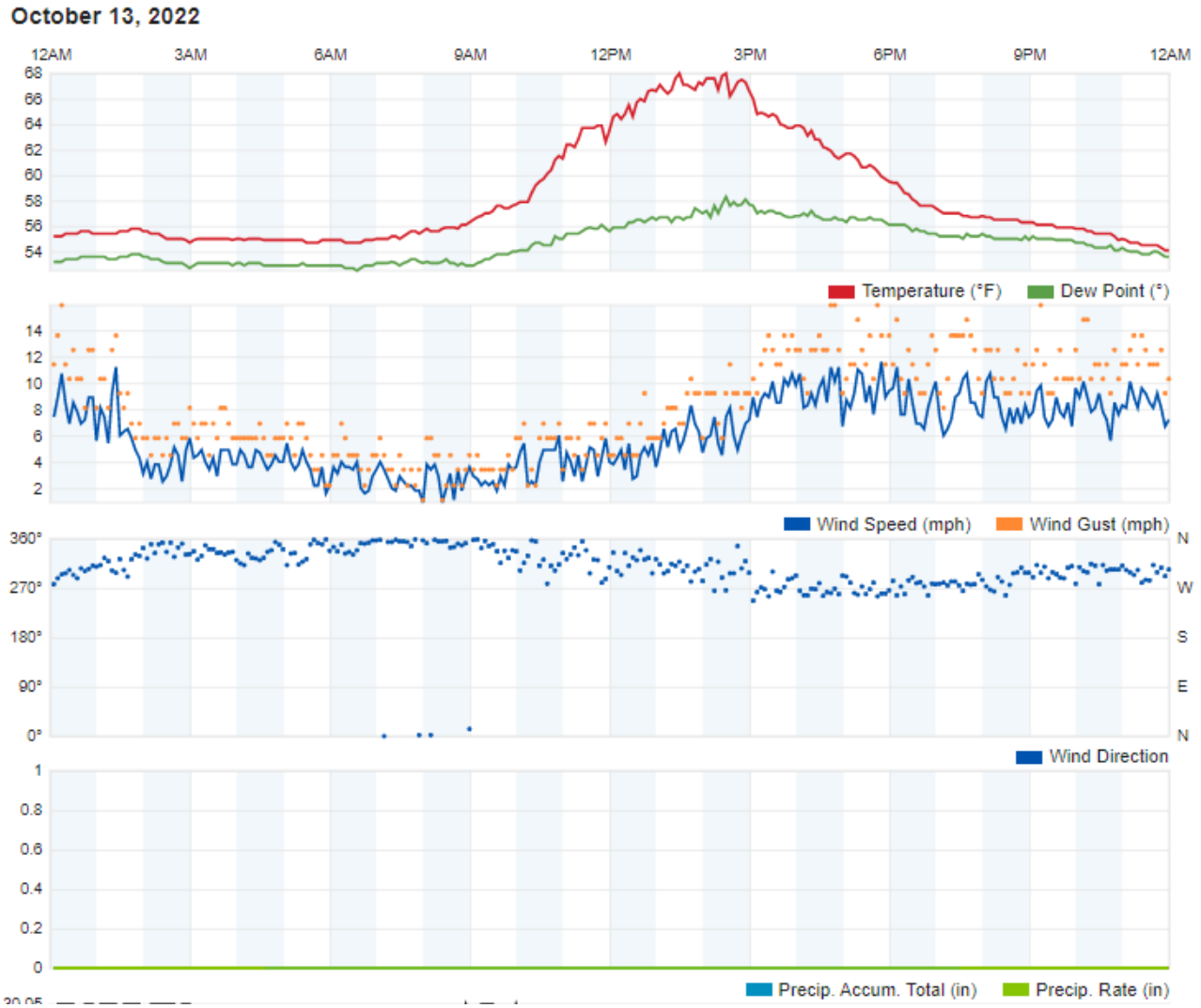
West Contra Costa County Sanitary Landfill, Contra Costa County, California



Fourth Quarter 2022

SEM Weather for October 4, 2022

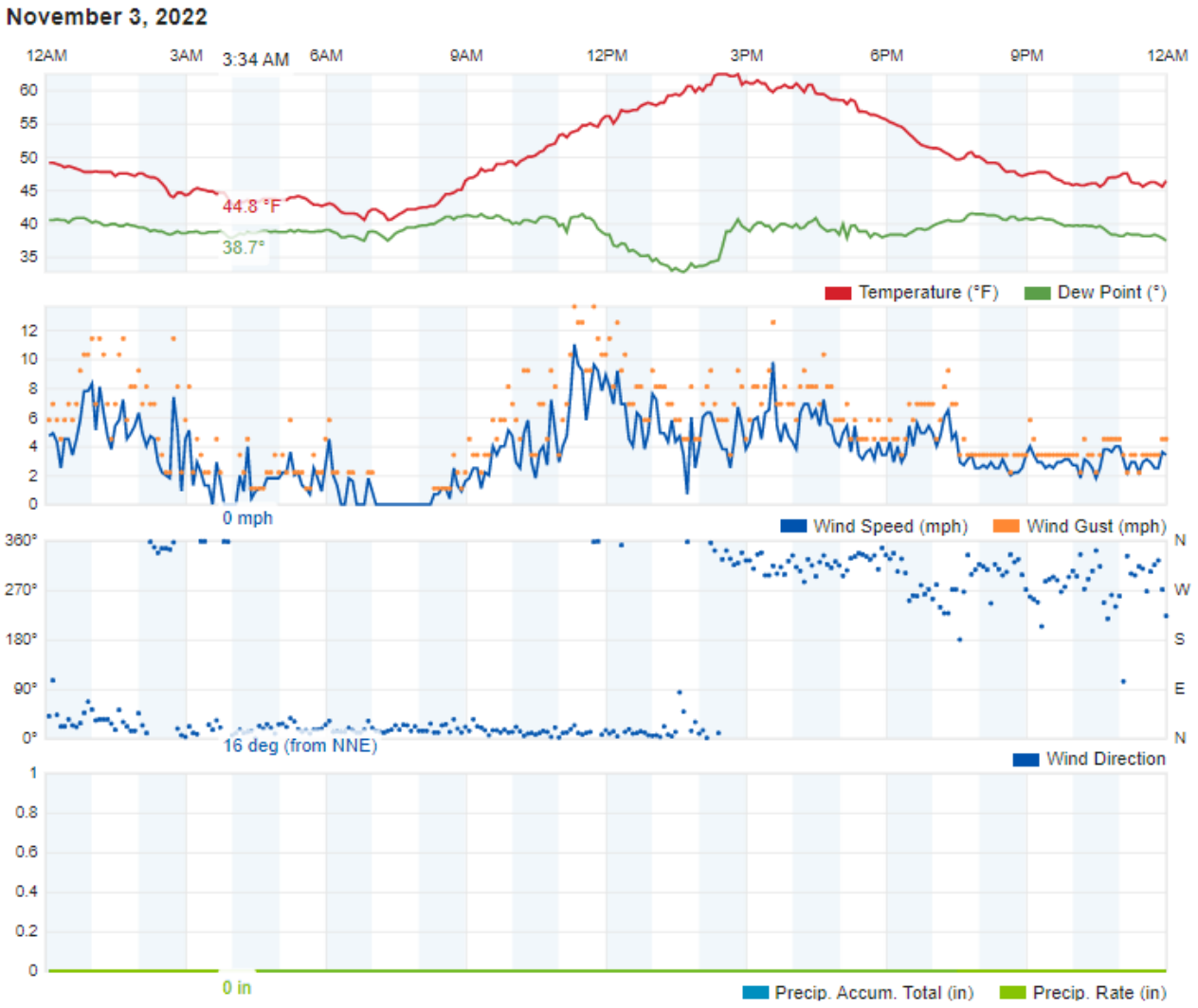
West Contra Costa County Sanitary Landfill, Contra Costa County, California



Fourth Quarter 2022

SEM Weather for October 13, 2022

West Contra Costa County Sanitary Landfill, Contra Costa County, California



Fourth Quarter 2022

SEM Weather for November 3, 2022

West Contra Costa County Sanitary Landfill, Contra Costa County, California

May 19, 2023
Project No. 07221013.00

Mr. Ed Baquerizo
Republic Services, Inc.
1 Parr Boulevard
Richmond, California 94801

Subject: West Contra Costa County Landfill – Richmond, California
Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS)
Surface Emissions Monitoring for First Quarter 2023.

Dear Mr. Baquerizo:

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 Closed West Contra Costa Sanitary Landfill (Site) during the first quarter 2023. 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 Michael Flanagan at (925) 421-9768 or Whitney Stackhouse (209) 338-7990 if you have any questions or comments.

Sincerely,

Whitney M. Stackhouse
Project Manager
SCS Field Services

Michael Flanagan
Project Manager
SCS Field Services

WS/MF/ms

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

Enclosure: West Contra Costa County Landfill, LMR and NSPS SEM Report – First Quarter 2023

West Contra Costa County Landfill

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

First Quarter 2023

Presented to:

Mr. Ed Baquerizo
Republic Services, Inc.
1 Parr Boulevard
Richmond, California 94801

SCS FIELD SERVICES

File No. 07221013.00 | May 19, 2023

SCS FIELD SERVICES
4730 Enterprise Way
Modesto, CA 95356

West Contra Costa County Landfill

Landfill Methane Rule (LMR) and New Source Performance Standards (NSPS) Surface Emissions Monitoring First Quarter 2023

INTRODUCTION

This report provides results of the First Quarter 2023 LMR, NSPS and Bay Area Air Quality Management District (BAAQMD) landfill surface emissions monitoring (SEM) performed on January 19, 20, and 23, 2022, by SCS Field Services (SCS) at the closed West Contra Costa County Landfill. All work was performed in accordance with our approved Work Scope dated September 13, 2018, and the LMR requirements.

SUMMARY AND CONCLUSIONS

On January 19, 20 and 23, 2023, instantaneous and integrated SEM was performed over the surface of the site. Results indicated zero (0) exceedances of the LMR, NSPS, and BAAQMD instantaneous limit of 500 parts per million by volume (ppmv). Elevated reading locations are shown on a map provided in **Attachment 2**. Based on these monitoring results, as shown in **Attachment 3**, follow-up monitoring was not required.

Also, during the instantaneous monitoring event, SCS performed integrated monitoring of the landfill surface. As required by the LMR, the landfill was divided into 50,000 square foot areas. The West Contra Costa County Landfill surface area was divided into 165 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 composting activities, unsafe conditions, excessively overgrown vegetation, or there was no waste in place prior to the monitoring event. Calculated integrated monitoring indicated no integrated exceedances of the 25-ppmv limit. Based on these monitoring results, as shown in **Attachment 4** (Table 2), no follow up monitoring was required.

In addition to surface monitoring, quarterly monitoring was conducted at the pressurized piping or components of the Gas Collection and Control System (GCCS) that are under positive pressure. Results of the testing of the landfill gas (LFG) Blower Flare Station (BFS) pressurized pipe and components indicated no exceedances of the LMR 500-ppmv limit or the BAAQMD 1,000-ppmv limit. Results are shown in **Attachment 3**.

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. Three (3) locations were observed to exceed the 200 ppmv threshold as shown in **Attachment 2**. If concentrations exceeding 200 ppmv are observed during monitoring events, they are reported to site personnel and will be reported in the next submittal of the LMR annual report.

As stipulated in the 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, in accordance with the rule, the site could return to annual LMR monitoring on a 100-foot spacing beginning with the 2023 calendar year. However, based on previous instantaneous monitoring results, the site is required to perform surface emissions monitoring on a 25-foot pathway spacing on a quarterly basis.

Finally, to help prevent potential future exceedances, SCS routinely inspects the landfill surface, and any observed areas in need of repair would be noted, and the findings sent directly to the client.

BACKGROUND

The West Contra Costa Sanitary Landfill is an inactive organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas, which contains approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide, and trace amounts of various other gases, some of which are odorous. The West Contra Costa Sanitary Landfill property contains a GCCS to control the combustible gases generated in the landfill that may otherwise either vent vertically to the atmosphere or migrate horizontally through subsurface soil to locations on adjacent properties.

SURFACE EMISSIONS MONITORING

On January 19, 20 and 23, 2023, 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 limit of 500 ppmv measured as methane for instantaneous monitoring, or 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 SEM 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.

- Electronic 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**, respectively.

SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the LMR, NSPS, and BAAQMD 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 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 5 miles per hour, and no instantaneous speeds exceeded 10 miles per hour. No rainfall had occurred within 72 hours prior to the monitoring events. Therefore, site meteorological conditions were within the LMR requirements on the above-mentioned dates.

TESTING RESULTS

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

On January 19, 20 and 23, 2023, SCS performed first quarter 2023 instantaneous emissions monitoring as required. Instantaneous SEM results indicated the highest methane concentration detected was 436 ppmv. Based on these monitoring results, corrective action and additional follow up monitoring were not required. Results of the instantaneous monitoring are shown in **Attachment 3** (Table 1).

Additionally, calculated integrated monitoring indicated no integrated exceedances of the 25-ppmv requirement. Integrated surface emissions monitoring results indicated the highest average methane concentration was 3.06 ppmv in Grid 42. Based on these monitoring results, no follow up monitoring was required. Results of the integrated monitoring are shown in **Attachment 4** (Table 2). Calibration logs for the monitoring equipment are provided in **Attachment 5**.

During this monitoring event, several girds were not monitored, in accordance with the LMR, due to active composting activities, unsafe conditions, excessively overgrown vegetation or no waste in place. SCS recommends performing weed abatement to grant safe access to all monitoring locations. SCS will continue to monitor all accessible locations during all future quarterly monitoring events.

PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On January 19, 2023, quarterly component 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 pipe and associated components. No locations exceeding the 500-ppmv limit were observed during this monitoring event. The maximum reading, which was 1.70 ppmv, was below the limit as shown in Table 1

provided in **Attachment 3**. Therefore, all pressurized pipe and components located at the LFG BFS were in compliance at the time of our testing.

PROJECT SCHEDULE

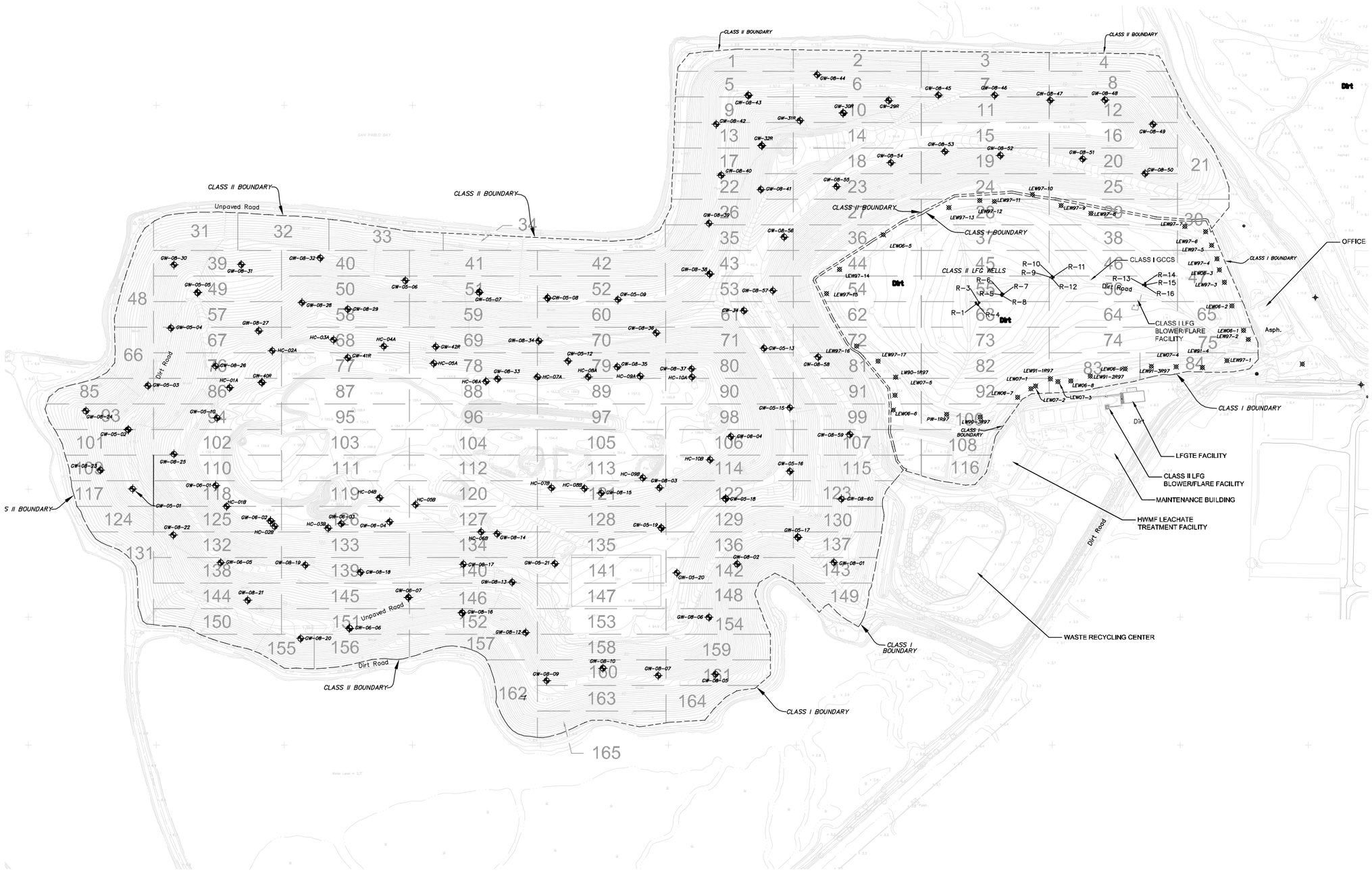
In accordance with our approved Work Scope, the next quarterly SEM event is scheduled to be performed by the end of June 2023.

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 Map



LEGEND

- EXISTING CLASS 1 SOLID WASTE BOUNDARY
- EXISTING CLASS 2 SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- 1 — SEM GRID BLOCK
- 1 — SEM GRID BLOCK WITH NO WASTE IN PLACE

N

0 200 400

SCALE IN FEET
SCALED FOR
22"x34" SIZE SHEET

NOTES:

1. TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY HJW GEOSPATIAL. DATE OF PHOTOGRAPHY: MARCH 20, 2008. DATUM: CALIFORNIA COORDINATE SYSTEM, ZONE III, NAD27.

DRAFT

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE 5/11/2011	DRAWN BY JDW; DESIGNED BY JDW	CHECKED BY REF		APPROVED BY PJS	

CORNERSTONE Environmental Group, LLC

WEST CONTRA COSTA COUNTY SANITARY LANDFILL
CONTRA COSTA COUNTY, CALIFORNIA

SURFACE EMISSIONS MONITORING
GRID MAP

SHEET NO. **1**

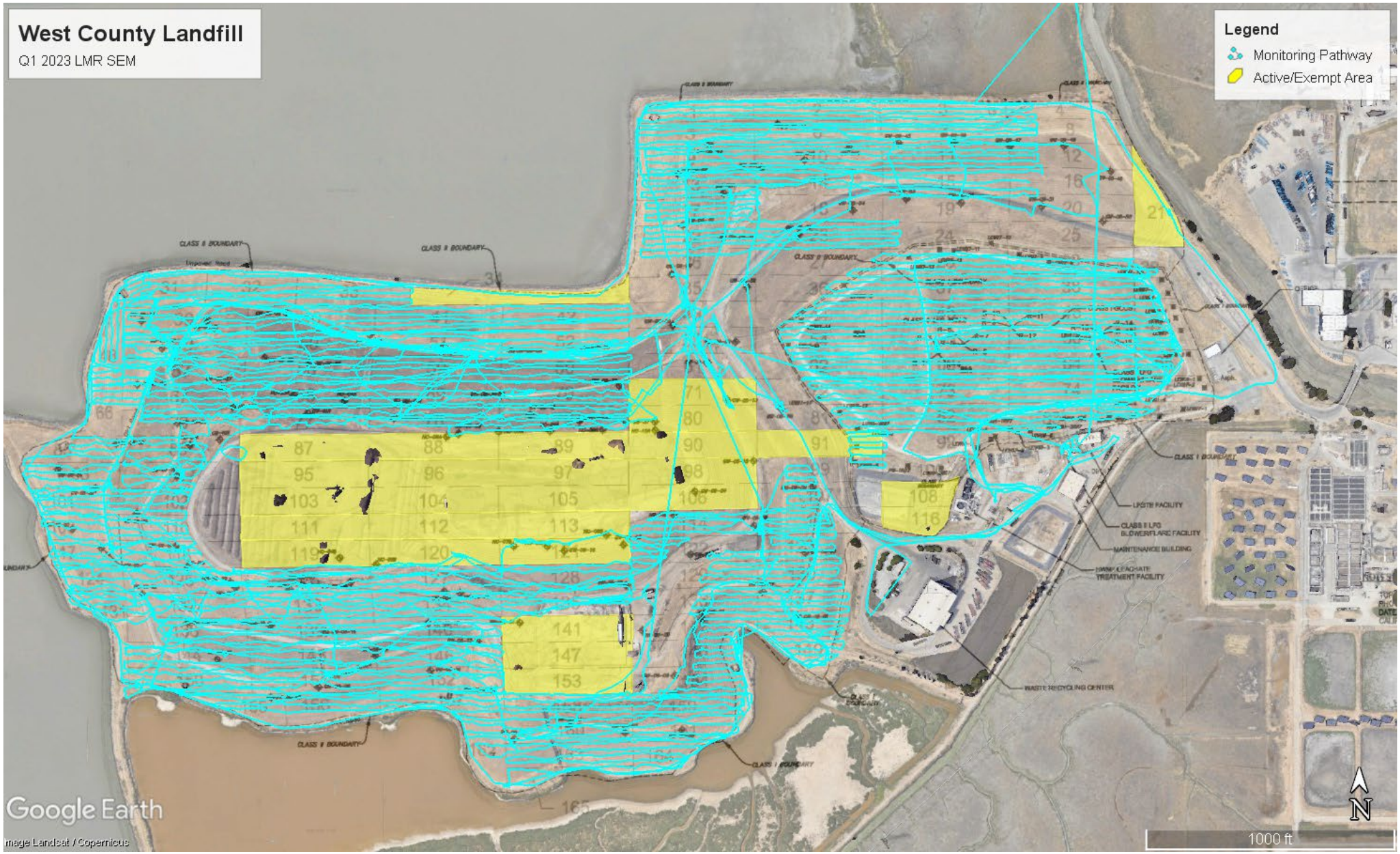
PROJECT NO. 110218

1" 1/2" 0" 1"

File: K:\PROJECTS\REPUBLIC (CORP)\xxxxx - CA LF WCA_West County\SEM_PROJECT DRAWINGS\dwg\SEMWCCSG- 2011 SEM GRID MAP.dwg Layout: Layout1 User: jonathonwise May 11, 2011 - 2:56pm

Attachment 2

Surface Monitoring Maps



First Quarter 2023
LMR Surface Emissions Monitoring Pathway
West Contra Costa County Sanitary Landfill, Contra Costa County, California

Attachment 3

Instantaneous and Component Emissions Monitoring Results

First Quarter 2023

Table 1. LMR Instantaneous Surface and Component Emissions Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Instantaneous Data Report for January 19, 20, and 23, 2023

Location	Initial Methane Concentration (ppmv) 1/19/23	Latitude	Longitude
WCLF034R	342	37.964400°	-122.389983°
WCLF0839	398	37.969467°	-122.387767°
WCLF0840	436	37.969983°	-122.387683°

Pressurized Pipe and Component Results

Location	Date	Concentration (ppmv)
Flare	1/19/2023	1.70

Zero (0) exceedances of the 500-ppmv limits were observed during the monitoring performed during the first quarter 2023. The highest reading observed was 436 ppmv.

First Quarter 2023
LMR Surface Emissions Monitoring – Readings 200-499 ppmv
West Contra Costa County Sanitary Landfill, Contra Costa County, California

Attachment 4

Integrated Monitoring Results

First Quarter 2023

Table 2. Integrated Surface Emission Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 001	1/19/2023	1.46	
W.CoCo 002	1/19/2023	0.88	
W.CoCo 003	1/19/2023	0.86	
W.CoCo 004	1/19/2023	0.93	
W.CoCo 005	1/19/2023	0.91	
W.CoCo 006	1/19/2023	0.39	
W.CoCo 007	1/19/2023	0.37	
W.CoCo 008	1/19/2023	0.38	
W.CoCo 009	1/19/2023	0.30	
W.CoCo 010	1/19/2023	0.08	
W.CoCo 011	1/19/2023	0.19	
W.CoCo 012	1/19/2023	0.14	
W.CoCo 013	1/20/2023	2.99	
W.CoCo 014	1/23/2023	1.02	
W.CoCo 015	1/23/2023	1.06	
W.CoCo 016	1/23/2023	0.97	
W.CoCo 017	1/23/2023	1.27	
W.CoCo 018	1/23/2023	0.96	
W.CoCo 019	1/23/2023	1.25	
W.CoCo 020	1/23/2023	1.14	
W.CoCo 021	--	--	Inaccessible. Health & Safety Reasons
W.CoCo 022	1/23/2023	1.59	
W.CoCo 023	1/23/2023	2.23	
W.CoCo 024	1/23/2023	3.04	
W.CoCo 025	1/23/2023	1.85	
W.CoCo 026	1/23/2023	1.37	
W.CoCo 027	1/23/2023	2.24	
W.CoCo 028	1/19/2023	2.14	
W.CoCo 029	1/19/2023	1.62	
W.CoCo 030	1/19/2023	1.76	
W.CoCo 031	1/20/2023	1.10	
W.CoCo 032	1/20/2023	0.96	
W.CoCo 033	1/20/2023	1.05	
W.CoCo 034	--	--	Inaccessible. Health & Safety Reasons
W.CoCo 035	1/23/2023	1.66	
W.CoCo 036	1/19/2023	2.55	
W.CoCo 037	1/19/2023	1.99	
W.CoCo 038	1/19/2023	1.63	
W.CoCo 039	1/19/2023	1.91	
W.CoCo 040	1/19/2023	1.98	
W.CoCo 041	1/19/2023	2.69	
W.CoCo 042	1/19/2023	3.06	
W.CoCo 043	1/23/2023	1.55	

First Quarter 2023

Table 2. Integrated Surface Emission Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 044	1/19/2023	1.27	
W.CoCo 045	1/19/2023	0.97	
W.CoCo 046	1/19/2023	0.86	
W.CoCo 047	1/19/2023	1.09	
W.CoCo 048	1/23/2023	2.40	
W.CoCo 049	1/19/2023	1.28	
W.CoCo 050	1/19/2023	1.13	
W.CoCo 051	1/19/2023	1.53	
W.CoCo 052	1/19/2023	1.46	
W.CoCo 053	1/23/2023	1.43	
W.CoCo 054	1/19/2023	1.50	
W.CoCo 055	1/19/2023	1.19	
W.CoCo 056	1/19/2023	1.15	
W.CoCo 057	1/19/2023	1.00	
W.CoCo 058	1/19/2023	0.88	
W.CoCo 059	1/19/2023	1.48	
W.CoCo 060	1/19/2023	1.10	
W.CoCo 061	1/23/2023	1.82	
W.CoCo 062	1/19/2023	1.29	
W.CoCo 063	1/19/2023	1.08	
W.CoCo 064	1/19/2023	1.09	
W.CoCo 065	1/19/2023	1.37	
W.CoCo 066	1/19/2023	1.78	
W.CoCo 067	1/19/2023	0.96	
W.CoCo 068	1/19/2023	0.98	
W.CoCo 069	1/19/2023	1.13	
W.CoCo 070	1/19/2023	1.53	
W.CoCo 071	--	--	Inaccessible. Health & Safety Reasons
W.CoCo 072	1/19/2023	0.81	
W.CoCo 073	1/19/2023	0.68	
W.CoCo 074	1/19/2023	0.64	
W.CoCo 075	1/19/2023	1.44	
W.CoCo 076	1/19/2023	1.11	
W.CoCo 077	1/19/2023	1.22	
W.CoCo 078	1/19/2023	1.45	
W.CoCo 079	1/19/2023	1.34	
W.CoCo 080	--	--	Inaccessible. Health & Safety Reasons
W.CoCo 081	1/19/2023	0.74	
W.CoCo 082	1/19/2023	0.65	
W.CoCo 083	1/19/2023	0.62	
W.CoCo 084	1/19/2023	0.69	
W.CoCo 085	1/20/2023	0.81	
W.CoCo 086	1/20/2023	0.32	

First Quarter 2023

Table 2. Integrated Surface Emission Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 087	--	--	Active Area
W.CoCo 088	--	--	Active Area
W.CoCo 089	--	--	Active Area
W.CoCo 090	--	--	Active Area
W.CoCo 091	--	--	Inaccessible. Health & Safety Reasons
W.CoCo 092	1/19/2023	0.69	
W.CoCo 093	1/20/2023	0.68	
W.CoCo 094	1/20/2023	0.52	
W.CoCo 095	--	--	Active Area
W.CoCo 096	--	--	Active Area
W.CoCo 097	--	--	Active Area
W.CoCo 098	--	--	Active Area
W.CoCo 099	1/23/2023	1.31	
W.CoCo 100	1/19/2023	0.65	
W.CoCo 101	1/19/2023	2.25	
W.CoCo 102	1/19/2023	1.87	
W.CoCo 103	--	--	Active Area
W.CoCo 104	--	--	Active Area
W.CoCo 105	--	--	Active Area
W.CoCo 106	--	--	Active Area
W.CoCo 107	1/23/2023	1.26	
W.CoCo 108	--	--	Active Area
W.CoCo 109	1/19/2023	1.49	
W.CoCo 110	1/19/2023	1.17	
W.CoCo 111	--	--	Active Area
W.CoCo 112	--	--	Active Area
W.CoCo 113	--	--	Active Area
W.CoCo 114	1/23/2023	1.56	
W.CoCo 115	1/23/2023	1.32	
W.CoCo 116	--	--	Active Area
W.CoCo 117	1/19/2023	0.88	
W.CoCo 118	1/19/2023	0.75	
W.CoCo 119	--	--	Active Area
W.CoCo 120	--	--	Active Area
W.CoCo 121	--	--	Active Area
W.CoCo 122	1/23/2023	1.61	
W.CoCo 123	1/23/2023	1.68	
W.CoCo 124	1/19/2023	0.61	
W.CoCo 125	1/19/2023	1.24	
W.CoCo 126	1/19/2023	1.38	
W.CoCo 127	1/19/2023	1.31	
W.CoCo 128	1/19/2023	1.46	
W.CoCo 129	1/23/2023	1.58	

First Quarter 2023

Table 2. Integrated Surface Emission Monitoring Results

West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 130	1/23/2023	1.93	
W.CoCo 131	1/23/2023	1.03	
W.CoCo 132	1/23/2023	1.32	
W.CoCo 133	1/23/2023	1.49	
W.CoCo 134	1/23/2023	1.41	
W.CoCo 135	1/23/2023	1.39	
W.CoCo 136	1/23/2023	1.73	
W.CoCo 137	1/23/2023	1.84	
W.CoCo 138	1/19/2023	1.85	
W.CoCo 139	1/19/2023	1.87	
W.CoCo 140	1/19/2023	1.88	
W.CoCo 141	--	--	Active Area
W.CoCo 142	1/23/2023	1.19	
W.CoCo 143	1/23/2023	1.63	
W.CoCo 144	1/23/2023	1.75	
W.CoCo 145	1/23/2023	1.93	
W.CoCo 146	1/23/2023	2.02	
W.CoCo 147	--	--	Active Area
W.CoCo 148	1/23/2023	0.58	
W.CoCo 149	1/23/2023	2.21	
W.CoCo 150	1/23/2023	1.04	
W.CoCo 151	1/23/2023	1.24	
W.CoCo 152	1/23/2023	1.49	
W.CoCo 153	--	--	Active Area
W.CoCo 154	1/23/2023	0.26	
W.CoCo 155	1/19/2023	0.85	
W.CoCo 156	1/19/2023	1.20	
W.CoCo 157	1/19/2023	0.93	
W.CoCo 158	1/19/2023	1.06	
W.CoCo 159	1/19/2023	0.77	
W.CoCo 160	1/19/2023	0.78	
W.CoCo 161	1/19/2023	0.48	
W.CoCo 162	1/19/2023	0.88	
W.CoCo 163	1/19/2023	0.40	
W.CoCo 164	1/19/2023	0.20	

Attachment 5

Calibration Logs

AND PERTINENT DATA

Date: 1-19-23

Inspector(s): Andrew Stone

Site Name: WEST CONTRA

Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 6 MPH

Wind Direction: S

Barometric Pressure: 30.21 "Hg

Air Temperature: 43 °F

General Weather Conditions: PARTLY 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: 1153

Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	-0.1	500	0	1
2	0	500	0	1
3	-0.1	501	1	2

Average Difference: 0.3

*Perform recalibration if average difference is greater than 10

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

= 100%- 0.3 /500 x 100%

= 99.9 %

Span Sensitivity:

Trial 1:

Counts Observed for the Span= 164552

Counters Observed for the Zero= 3559

Trial 2:

Counts Observed for the Span= 164164

Counters Observed for the Zero= ~~3515~~ 3495

Trial 3:

Counts Observed for the Span= 163616

Counters Observed for the Zero= 3529

Post Monitoring Calibration Check

Zero Air Reading: 1.2 ppm

Cal Gas Reading: 510 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare

Reading: 1.6 ppm

Downwind Location Description: G.34

Reading: 2.1 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.

FUGITIVE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA

Date: 1-19-23 Site Name: West Contra Costa

Inspector(s): Alfredo Gomez Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: NE Barometric Pressure: 30.2 "Hg

Air Temperature: 91 °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: 4106 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	-0.1	499	1	1
2	-0.1	495	5	2
3	0	502	2	1

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%

= 99.48 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 171924
Counters Observed for the Zero= 5848

Trial 2:
Counts Observed for the Span= 147108
Counters Observed for the Zero= 5763

Trial 3:
Counts Observed for the Span= 156188
Counters Observed for the Zero= 5657

Post Monitoring Calibration Check

Zero Air Reading: -4.1 ppm Cal Gas Reading: 510 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.7 ppm

Downwind Location Description: Grid 34 Reading: 2.1 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.

CALIBRATION AND PERTINENT DATA

Date: 1-19-2023 Site Name: West Contra Costa

Inspector(s): Ricardo Yepez Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: NNW Barometric Pressure: 30.2 "Hg

Air Temperature: 41 °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: 5421 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0.1	501	1	5
2	-0.1	496	4	4
3	0	497	3	4

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%

= 99.48 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 137284
Counters Observed for the Zero= 4420

Trial 2:
Counts Observed for the Span= 140540
Counters Observed for the Zero= 4365

Trial 3:
Counts Observed for the Span= 145196
Counters Observed for the Zero=

Post Monitoring Calibration Check

Zero Air Reading: -3.2 ppm Cal Gas Reading: 511 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.5 ppm

Downwind Location Description: Grid 34 Reading: 2.1 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.

Date: 1-19-23 Site Name: west contra

Inspector(s): Rwarren Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 3 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg

Air Temperature: 39 °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	-0.1	502	2	1
2	0.0	501	1	1
3	0.	504	4	2

Average Difference: 2.3

*Perform recalibration if average difference is greater than 10

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

= 100%- 2.3 /500 x 100%

= 99.5 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 127692
Counters Observed for the Zero= 3993

Trial 2:
Counts Observed for the Span= 130072
Counters Observed for the Zero= 3918

Trial 3:
Counts Observed for the Span= 132028
Counters Observed for the Zero= 3897

Post Monitoring Calibration Check

Zero Air Reading: 1.0 ppm Cal Gas Reading: 512 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.6 ppm

Downwind Location Description: G-34 Reading: 2.1 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.

CALIBRATION AND PERTINENT DATA

Date: 1-19-23 Site Name: west contra costa

Inspector(s): Bryan Ochoa Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH Wind Direction: HA NNW Barometric Pressure: 30.2 "Hg

Air Temperature: 41 °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: 5419 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	2
2	0	505	5	1
3	0	503	3	2

Average Difference: 3.3

*Perform recalibration if average difference is greater than 10

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

= 100%- 3.3 /500 x 100%

= 99.34%

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 182300
Counters Observed for the Zero= 5305

Trial 2:
Counts Observed for the Span= 152380
Counters Observed for the Zero= 5180

Trial 3:
Counts Observed for the Span= 164524
Counters Observed for the Zero= 5123

Post Monitoring Calibration Check

Zero Air Reading: -2.7 ppm Cal Gas Reading: 513 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.4 ppm

Downwind Location Description: Grid 34 Reading: 2.2 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.

CALIBRATION AND PERTINENT DATA

Date: 1-19-23 | Site Name: west contra costa

Inspector(s): Emmanuel Paz | Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 4 MPH | Wind Direction: HA NNW | Barometric Pressure: 30.2 "Hg

Air Temperature: 41 °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	499	1	2
2	0	505	5	2
3	0	501	1	1

Average Difference: 2.3

*Perform recalibration if average difference is greater than 10

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

= 100%- 2.3 /500 x 100%

= 99.54 %

Span Sensitivity:

Trial 1:

Counts Observed for the Span= 123108

Counters Observed for the Zero= 3312

Trial 2:

Counts Observed for the Span= 121588

Counters Observed for the Zero= 3224

Trial 3:

Counts Observed for the Span= 137344

Counters Observed for the Zero= 3113

Post Monitoring Calibration Check

Zero Air Reading: -3.6 ppm | Cal Gas Reading: 512 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare | Reading: 1.6 ppm

Downwind Location Description: Grid 34 | Reading: 2.3 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.

Date: 1-19-23 Site Name: west contra

Inspector(s): D. Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 2 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg

Air Temperature: 38 °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	0.0	505	5	2
2	0.8	495	5	2
3	0.8	499	1	1

Average Difference: 3.6

*Perform recalibration if average difference is greater than 10

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

= 100%- 3.6 /500 x 100%

= 99.2 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 169896
Counters Observed for the Zero= 4954

Trial 2:
Counts Observed for the Span= 181476
Counters Observed for the Zero= 4957

Trial 3:
Counts Observed for the Span= 177134
Counters Observed for the Zero= 4995

Post Monitoring Calibration Check

Zero Air Reading: 0.2 ppm Cal Gas Reading: 507 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.6 ppm

Downwind Location Description: 6.34 Reading: 2.1 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.

CALIBRATION AND PERTINENT DATA

Date: 1-20-23 Site Name: West Contra

Inspector(s): A. Stone Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: S Barometric Pressure: 30.28 "Hg

Air Temperature: 41 °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	-0.2	500	0	1
2	-0.1	502	2	1
3	0.0	500	0	2

Average Difference: 0.6

*Perform recalibration if average difference is greater than 10

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

= 100%- 0.6 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 127800
Counters Observed for the Zero= 4219

Trial 2:
Counts Observed for the Span= 126908
Counters Observed for the Zero= 4111

Trial 3:
Counts Observed for the Span= 124161
Counters Observed for the Zero= 4005

Post Monitoring Calibration Check

Zero Air Reading: 1.0 ppm Cal Gas Reading: 515 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.7 ppm

Downwind Location Description: E-34 Reading: 2.0 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.

CALIBRATION AND PERTINENT DATA

Date: 1-20-23 Site Name: west contra

Inspector(s): R. Warren Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: S Barometric Pressure: 30.00 "Hg

Air Temperature: 41 °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: 4106 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0	502	2	1
2	0	501	1	1
3	0	499	1	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= 136100
Counters Observed for the Zero= 4219

Trial 2:
Counts Observed for the Span= 136019
Counters Observed for the Zero= 4200

Trial 3:
Counts Observed for the Span= 135100
Counters Observed for the Zero= 4208

Post Monitoring Calibration Check

Zero Air Reading: 0.5 ppm Cal Gas Reading: 502 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Hack Reading: 1.8 ppm

Downwind Location Description: 6.34 Reading: 2.0 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.

CALIBRATION AND PERTINENT DATA

Date: 1-20-23 Site Name: West Contra

Inspector(s): E. Paz Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: S Barometric Pressure: 30.28 "Hg

Air Temperature: 41 °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: 4398 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	|Cal Gas Conc.-Cal Gas Reading|	Response Time (seconds)
1	0.1	499	1	1
2	0.8	498	3	1
3	0.8	501	1	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= 125100
Counters Observed for the Zero= 3980

Trial 2:
Counts Observed for the Span= 125100
Counters Observed for the Zero= 3976

Trial 3:
Counts Observed for the Span= 127800
Counters Observed for the Zero= 3890

Post Monitoring Calibration Check

Zero Air Reading: 0.7 ppm Cal Gas Reading: 517 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 2.1 ppm

Downwind Location Description: G. 34 Reading: 2.2 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.

CALIBRATION AND PERTINENT DATA

Date: 1-20-23 Site Name: West Contra

Inspector(s): D. Romero Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 5 MPH Wind Direction: S Barometric Pressure: 30.28 "Hg

Air Temperature: 41 °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: 5419 Cal Gas Concentration: 500ppm

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

Average Difference: 0.6

*Perform recalibration if average difference is greater than 10

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

= 100%- 0.6 /500 x 100%

= 99.8 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 146183
Counters Observed for the Zero= 3912

Trial 2:
Counts Observed for the Span= 146175
Counters Observed for the Zero= 4001

Trial 3:
Counts Observed for the Span= 144186
Counters Observed for the Zero= 3880

Post Monitoring Calibration Check

Zero Air Reading: 0.5 ppm Cal Gas Reading: 510 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Plane Reading: 1.7 ppm

Downwind Location Description: 6-34 Reading: 2.0 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: 1-23-22 Site Name: West Contra

Inspector(s): Andrew Hore Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 12 MPH Wind Direction: S Barometric Pressure: 30.13 "Hg

Air Temperature: 47 °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	-0.1	501	1	4
2	0	501	1	2
3	-01	502	2	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%

= 99.74 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 122392
Counters Observed for the Zero= 4088

Trial 2:
Counts Observed for the Span= 120400
Counters Observed for the Zero= 4013

Trial 3:
Counts Observed for the Span= 134172
Counters Observed for the Zero= 3847

Post Monitoring Calibration Check

Zero Air Reading: 3.6 ppm Cal Gas Reading: 505 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 2 Reading: 4.2 ppm

Downwind Location Description: Transfer Station Reading: 3.6 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: 1-23-22 Site Name: West centre

Inspector(s): Bryan Ochoa Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 12 MPH Wind Direction: S Barometric Pressure: 30.13 "Hg

Air Temperature: 47 °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: 5421 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	-0.1	498	2	2
3	-0.1	498	2	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%

= 99.74 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 140972
Counters Observed for the Zero= 4498

Trial 2:
Counts Observed for the Span= 144608
Counters Observed for the Zero= 4419

Trial 3:
Counts Observed for the Span= 142428
Counters Observed for the Zero= 4311

Post Monitoring Calibration Check

Zero Air Reading: 4.2 ppm Cal Gas Reading: 515 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 2 Reading: 4.2 ppm

Downwind Location Description: Transfer station Reading: 3.6 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: 1-23-22 Site Name: Westcentra

Inspector(s): Emmanuel Paz Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 12 MPH Wind Direction: S Barometric Pressure: 30.13 "Hg

Air Temperature: 47 °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	501	1	2
2	0	501	1	5
3	0	496	4	3

Average Difference: 2

*Perform recalibration if average difference is greater than 10

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

= 100%- 2 /500 x 100%

= 99.6 %

Span Sensitivity:

Trial 1:
Counts Observed for the Span= 157100
Counters Observed for the Zero= 4840

Trial 2:
Counts Observed for the Span= 169148
Counters Observed for the Zero= 4768

Trial 3:
Counts Observed for the Span= 168712
Counters Observed for the Zero= 4895

Post Monitoring Calibration Check

Zero Air Reading: -1.9 ppm Cal Gas Reading: 512 ppm

BACKGROUND CONCENTRATIONS CHECKS

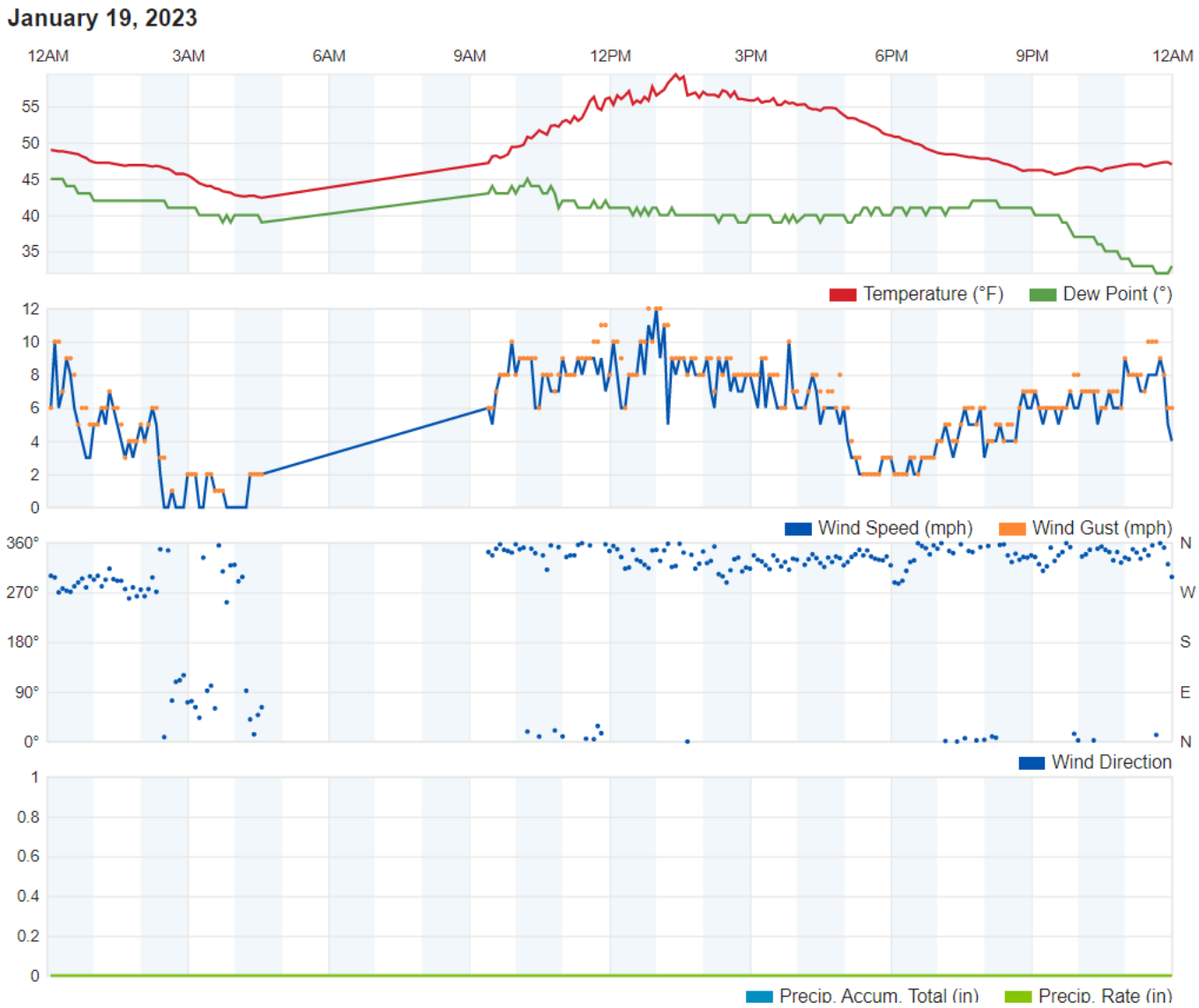
Upwind Location Description: Grid 2 Reading: 4.2 ppm

Downwind Location Description: Transfer station Reading: 3.6 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.

Attachment 6

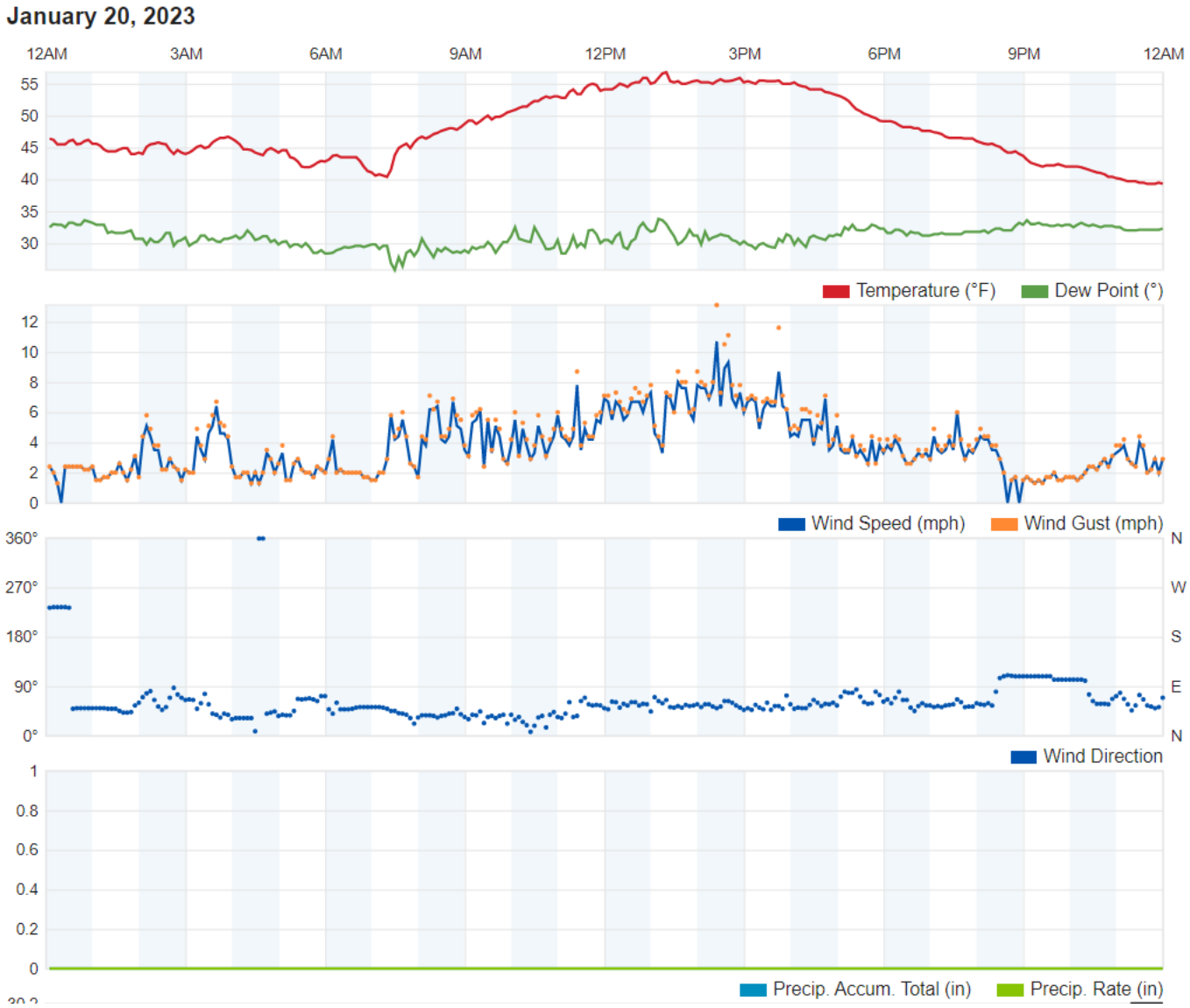
Weather Data



First Quarter 2023

SEM Weather for January 19, 2023

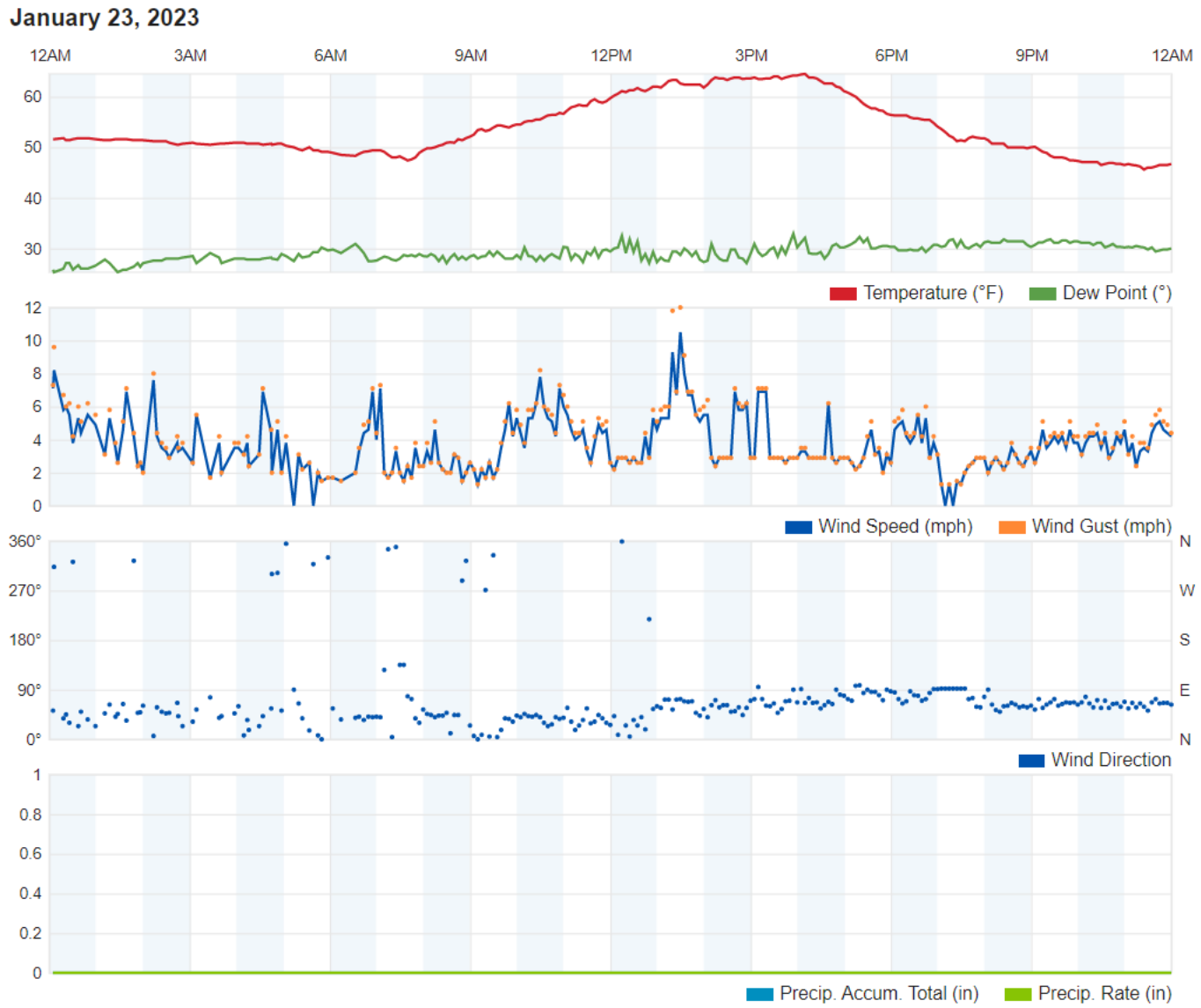
West Contra Costa County Sanitary Landfill, Contra Costa County, California



First Quarter 2023

SEM Weather for January 20, 2023

West Contra Costa County Sanitary Landfill, Contra Costa County, California



First Quarter 2023

SEM Weather for January 23, 2023

West Contra Costa County Sanitary Landfill, Contra Costa County, California

Appendix F – Root Cause Analysis Forms

December 19, 2022

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

Re: 75-Day Notification of Pressure Exceedance
West Contra Costa Sanitary Landfill, Richmond, California
Facility Number A1840

Ms. Cabral:

On behalf of West Contra Costa Sanitary Landfill, SCS Engineers (SCS) hereby provides the Bay Area Air Quality Management District (BAAQMD or District) with a 75-day notification pursuant to the compliance provisions identified in Title 40 of the Code of Federal Regulations (CFR) 63.1981(j)(1) for a pressure exceedance at WCLF0842.

Well WCLF0842 had an initial pressure reading of 0.06 inches of water ("H2O) on October 5, 2022. Corrective actions were initiated within 5 days as the valve was adjusted; however, the well could not be brought back into compliance within 15 days.

As required under 40 CFR 63.1960(a)(3), a root cause analysis and a corrective action analysis and implementation schedule were completed within 60 days from the original exceedance. Copies of these forms are attached. All the steps for compliance were conducted, however, the well remains in exceedance but will be remediated prior to the 120-day deadline (February 2, 2023). As such, this 75-day notification is required.

If you have any questions or require additional information, please do not hesitate to contact Maria Bowen at (619) 455-9518

Sincerely,

Hannah Morse
Associate Staff Professional
SCS Engineers

Maria Bowen
Project Manager
SCS Engineers

cc: Michael Flanagan, SCS Field Services
Maria Bowen, SCS Engineers
Administrator, U.S. EPA Region 9

Attachment A: Root Cause Analysis Form and Corrective Action Analysis and Implementation Schedule Form

Attachment A:
Root Cause Analysis Form and
Corrective Action Analysis and Implementation Schedule Form

PRESSURE EXCEEDANCE

Root Cause Analysis

Date of Initial Exceedance:	10/5/2022
Collection Device ID:	WCLF0842
Pressure Reading:	0.04 inH_2O

Root Cause Analysis		
Was the reason for the positive pressure due to one of the following:		
A fire or increased well temperature.	☐ Yes	☒ No
Use of a geomembrane or synthetic cover.	☐ Yes	☒ No
A decommissioned well.	☐ Yes	☒ No
• If YES to **ANY** of the above, exempt as per 40 CFR 62.16720(a)(3)(iii)/ 40 CFR §63.1958(b). • If NO to **ALL** of the above, continue the form.		
Describe what was inspected.		
Vacuum source at wellhead (lateral is buried/inaccessible)		
Describe what was determined to be the root cause of the exceedance.		
Lack of gas concentration, wellhead valve difficulties.		
Determine the required next steps.		
Was the positive pressure 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.		

PRESSURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	10/5/2022
Collection Device ID:	WCLF0842
Pressure Reading:	0.04 inH_2O

Corrective Action Analysis
Describe the corrective actions taken to remediate exceedance.
Lateral to well had failed due to active landfilling.

Implementation Schedule	
Expected Start Date:	10/5/2022
Expected Completion Date:	2/2/2023
Provide a description of proposed repairs and/or remedial action required and supporting information for implementation timeframe.	
In the process of installing a new lateral and awaiting material.	

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 NSPS 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 NSPS Report.

PRESSURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	2/13/2023
Collection Device ID:	WCLFH01A
Pressure Reading:	0.02

Root Cause Analysis		
Was the reason for the positive pressure due to one of the following:		
A fire or increased well temperature.	☐ Yes	☒ No
Use of a geomembrane or synthetic cover.	☐ Yes	☒ No
A decommissioned well.	☐ Yes	☒ No
• If YES to **ANY** of the above, exempt as per 40 CFR 62.16720(a)(3)(iii)/ 40 CFR §63.1958(b). • If NO to **ALL** of the above, continue the form.		
Describe what was inspected.		
Well's gas quality in relations with flow and applied vacuum		
Describe what was determined to be the root cause of the exceedance.		
Lack of gas concentration, wellhead valve difficulties.		
Determine the required next steps.		
Was the positive pressure 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.		

PRESSURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	2/13/2023
Collection Device ID:	WCLFR001
Pressure Reading:	0.00

Root Cause Analysis		
Was the reason for the positive pressure due to one of the following:		
A fire or increased well temperature.	☐ Yes	☒ No
Use of a geomembrane or synthetic cover.	☐ Yes	☒ No
A decommissioned well.	☐ Yes	☒ No
• If YES to **ANY** of the above, exempt as per 40 CFR 62.16720(a)(3)(iii)/ 40 CFR §63.1958(b). • If NO to **ALL** of the above, continue the form.		
Describe what was inspected.		
Well's gas quality in relations with flow and applied vacuum		
Describe what was determined to be the root cause of the exceedance.		
Lack of gas concentration, wellhead valve difficulties.		
Determine the required next steps.		
Was the positive pressure 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.		

Appendix G – Title V Semi-Annual Report

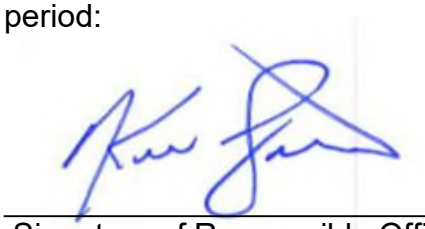
WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: WEST CONTRA COSTA SANITARY LANDFILL	**FACILITY ID♯:** A1840
REPORTING PERIOD: *from* 11/01/2022	*through* 04/30/2023

CERTIFICATION:

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



Signature of Responsible Official

5/30/23

Date

Ken Lewis

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

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: WEST CONTRA COSTA SANITARY LANDFILL	**FACILITY ID#:** A1840
REPORTING PERIOD: *from* 11/01/2022	*through* 04/30/2023

List of Permitted Sources and Abatement Device in Title V Permit

Permit Unit Number	**Equipment Description**
S-#	**Description**
S-5	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas
S-6	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas
S-15	West Contra Costa Sanitary Landfill (Closed Class I and Class II Waste Disposal Areas), Waste Decomposition Process Equipped with Landfill Gas Collection System, and Landfill gas collection system
S-37	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas
S-50	Solid Waste Transfer Station
S-69	Inlet Storage Tank #1
S-70	Inlet Storage Tank #2
S-71	Primary Oil Water Separator
S-72	Secondary Separator/Emulsion Breaker
S-74	Inclined Plate Clarifier
S-111	Concrete Crusher
S-112	Crushed Concrete Screener
S-113	Concrete/Asphalt Storage Piles
S-114	Conveyors (Crushed Concrete)
S-115	Wood/Yard Waste Shredder (Tub Grinder)
S-116	Wood Waste Screener
S-117	Composting Operation
S-118	Crushing of Asphalt Debris
S-120	Air Stripper
S-123	Air Stripper Holding (Feed) Tank
S-130	Standby Air Stripper
S-140	Clarifier Holding (Feed) Tank
S-141	Inlet Feed Holding Tank
S-142	Waste Oil Tank
S-145	E-22R Area Tank
S-146	Pretreatment Inlet Feed Tank
S-151	Waste Oil Tank
S-155	Oil Sludge Thickener
S-156	Three Day Tanks
S-157	Filter Press Surge Tank
A-8	Backup Landfill Gas Flare, burning landfill gas, 49.5 MM BTU/hour

Permit Unit Number	Equipment Description
A-14	Carbon Adsorber (three vessels in series with A-14 first, followed by A-15, followed by A-16)
A-15	Carbon Adsorber (three vessels in series with A-14 first, followed by A-15, followed by A-16)
A-16	Carbon Adsorber (three vessels in series with A-14 first, followed by a-15, followed by A-16)
A-120*	Landfill Gas Flare, burning landfill gas, 91.26 MM BTU/hour
A-17	Carbon Adsorber (three vessels in series with A-17 first, followed by A-18, followed by A-19)
A-18	Carbon Adsorber (three vessels in series with A-17 first, followed by A-18, followed by A-19)
A-19	Carbon Adsorber (three vessels in series with A-17 first, followed by A-18, followed by A-19)
A-20	Carbon Adsorber (two vessels in series)
A-21	Carbon Adsorber (two vessels in series)
A-50	Water Mist System
A-111	Water Spray System
A-112	Water Spray System
A-113	Water Spray System
A-114	Water Spray System
A-115	Water Spray System
A-116	Water Spray System
A-117	Water Spray Truck
A-118	Water Spray System

* The A-120 Flare was removed from WCCSL and replaced with the A-161 Flare in November 2017. The A-161 Flare was initially started in December 2017.

Notes:

- Authority to Construct (ATC) Application Number (A/N) 20621/Permit to Operate (PTO) Condition 25004
    - Includes conditions for leachate treatment facility and inlet storage tanks. A-20 and A-21 carbon adsorbers, S-71, S-72, S-141, and S-156 wastewater separators, S-120 and S-130 air strippers, A-14, A-15, A-16, A-17, A-18, and A-19 activated carbon vessels, S-69 and S-70 inlet storage tanks, S-141 inlet feed holding tank, and S-156 three day tanks. These changes have not yet been incorporated into the Title V Permit.

- ATC A/N 25019
    - Includes conditions for S-117 covered aerated static pile (CASP) composting operations, A-119 biofilter, S-185 portable trommel screen and grinder operation, A-115 water spray system, S-186 portable diesel engine for trommel screen, S-189 wood waste stockpiles, and A-115 water spray system. S-115 was replaced by S-185. These changes have not yet been incorporated into the Title V Permit.

- PTO Condition 27409

    - Includes conditions for S-190 trommel screen, S-191 diesel engine powering trommel screen, and S-192 tub grinder. These changes have not yet been incorporated into the Title V Permit.

- Non-Operational Equipment
    - Engines S-5, S-6, and S-37 were offline for the entirety of the reporting period as they have been inoperable since December 2017, January 2022, and March 2018, respectively.
    - A-8 Back-up flare was offline for the entirety of the reporting period, reflecting its backup status.

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-5 INTERNAL COMBUSTION LEAN BURN ENGINE; AND S-6 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	None	N/A	None	BAAQMD 6-1-301	Ringelmann No. 1 for < 3 minutes/hr	Continuous	N/A
Opacity	None	N/A	None	SIP 6-301	Ringelmann No. 1 for < 3 minutes/hr	Continuous	N/A
FP	None	N/A	None	BAAQMD 6-1-310	0.15 grains/dscf	Continuous	N/A
FP	None	N/A	None	SIP 6-310	0.15 grains/dscf	Continuous	N/A
TOC (Total Organic Compounds Plus Methane)	BAAQMD 8-34-501.6 and 8-34-503	Quarterly Inspection and Records	Periodic / Quarterly	BAAQMD 8-34-301.2	1000 ppmv as methane (component leak limit)	Continuous	N/A
Non- Methane Organic Compounds (NMOC)	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 5771, Part 7	Initial and Annual Source Tests and Records	Periodic / Annually	BAAQMD 8-34-301.4 and BAAQMD Condition # 5771, Part 6	98% removal by weight OR < 120 ppmv, dry basis @ 3% O2, expressed as methane	Continuous	N/A
NMOC	40 CFR 60.8 and 60.752(b)(2)(iii)(B) and 60.758(b)(2)	Initial Source Test and Records	Periodic	40 CFR 60.752(b)(2)(iii)(B)	98% removal by weight OR < 20 ppmv dry @ 3% O2, expressed as hexane	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-5 INTERNAL COMBUSTION LEAN BURN ENGINE; AND S-6 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits ≤ 0.5 ppm for 3 minutes, ≤ 0.25 ppm for 60 minutes, and ≤0.05 ppm for 24 hours	Continuous	N/A
SO_2	BAAQMD Condition #25293, Part 10 and BAAQMD Condition # 5771, Part 7	Quarterly Sulfur Analysis of Landfill Gas and Annual Source Test	Periodic / Quarterly and Periodic / Annually	BAAQMD 9-1-302	≤ 300 ppm (dry)	Continuous	N/A
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
NO_x	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.1	Waste Fuel Gas, Lean-Burn ≤ 70 ppmv, dry basis @ 15% O2	Continuous	N/A
NO_x	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	SIP 9-8-302.1	Waste Fuel Gas, Lean-Burn ≤ 140 ppmv, dry basis @ 15% O2	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-5 INTERNAL COMBUSTION LEAN BURN ENGINE; AND S-6 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NO_x	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD Condition # 5771, Part 4	≤ 63 ppmv, dry basis @ 15% O2	Continuous	N/A
CO	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.3	Waste Fuel Gas: ≤ 2000 ppmv, dry basis @ 15% O2	Continuous	N/A
CO	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD Condition # 5771, Part 5	≤ 376 ppmv, dry basis @ 15% O2	Continuous	N/A
Heat Input	BAAQMD Condition # 5771, Parts 3 and 9	Gas Flow Meter and Recorder and Records	Continuous	BAAQMD Condition # 5771, Part 8	285.6 MM BTU per day (each engine) and 104,250 MM BTU per year (each engine)	Continuous	N/A
Gas Flow	BAAQMD 8-34-501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes)	Continuous	BAAQMD 8-34-301 and 301.1	Vent all collected gases to a properly operating control system and operate control system continuously.	Continuous	N/A
Gas Flow	BAAQMD Condition # 5771, Part 3	Gas Flow Meter and Recorder	Continuous	BAAQMD Condition # 5771, Part 2	Upon shut down of an engine (S-5 or S-6), automatically divert excess collected gas to either flare A-120 or backup A-8 Flare	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-5 INTERNAL COMBUSTION LEAN BURN ENGINE; AND S-6 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Gas Flow	40 CFR 60.756(b)(2) (i or ii) and 60.758(c)(2)	Gas Flow Meter and Recorder (every 15 minutes) or Monthly Inspection of Bypass Valve & Lock and Records	Continuous and Periodic / Monthly	40 CFR 60.753(a) and (e)	Vent all collected gases to a properly operating control system and operate control system at all times when gas is vented to it	Continuous	N/A
Emission Control System Shutdown TIme	BAAQMD 8-34 501.2 and BAAQMD Condition # 5771, Part 9	Records	Periodic / Daily	BAAQMD 8-34-113.2	240 hours/year	Continuous	N/A
Emission Control System Startup Shutdown or Malfunction	40 CFR 60.7(b), 60.757(f)(2) and (f)(3), and 60.758(e)	Records of occurrence and duration	Periodic / Daily	40 CFR 60.755(e)	≤ 1 hour per event	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

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-5 INTERNAL COMBUSTION LEAN BURN ENGINE; AND S-6 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Engine Cylinder or Exhaust Temperature	BAAQMD 8-34-507 and 8-34-509	Temperature sensor and continuous recorder	Continuous	BAAQMD Condition #5771 Part 10	To be established during first source test conducted after permit issuance	Continuous	N/A
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.4	Records of occurrence and duration	Periodic / Daily	BAAQMD 1-523.2	15 consecutive days/incident and 30 calendar days/12 month period	Continuous	N/A
Continuous Monitors	40 CFR 60.7(b)	Records of occurrence and duration	Periodic / Daily	40 CFR 60.13€	Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	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 # 25293, Parts 14b-c	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 #25293, Parts 14b-c	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 #25293, Parts 14b-c	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

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection System Installation Dates	40 CFR 60.758(a), (d)(1) and (d)(2), and 60.759(a)(3)	Records	Periodic / on event basis	40 CFR 60.753 (a)(2) and 60.755 (b)(2)	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	40 CFR 60.758(a), (d)(1) and (d)(2)	Records	Periodic / on event basis	40 CFR 60.753 (a)(1) and 60.755 (b)(1)	For Active Areas: Collection system components must be installed and operating by 5 years + 60 days after initial waste placement	Continuous	N/A
Gas Flow	BAAQMD 8-34-501.5, 501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes) and records	Continuous	BAAQMD 8-34-301 and 301.1 and 404	Landfill gas collection system shall operate continuously, except as described in condition #25293 part 7 and all collected gases shall be vented to a properly operating control system	Intermittent	There was one landfill gas collection and control system (GCCS) downtime event that did not meet the exemption criteria specified in Rule 8-34-113. This event included blower malfunction and auto valve failure which resulted in shutdowns of the GCCS that occurred on March 14, 2023 at 11:43 to March 15, 2023 at 18:33. As it was

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
							found the auto valve had malfunctioned after attempted restart of the flare and the event would be longer than 24 hours a reportable compliance activity (RCA) was submitted. This event was reported to the BAAQMD as RCA and breakdown relief was requested.
Gas Flow	BAAQMD Condition # 5771, Part 9; BAAQMD Condition #17812, Part 9; and BAAQMD Condition #25293, Parts 14b-d	Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime, and Collection System Components	Periodic / Daily	BAAQMD Condition #25293, Parts 5, 6, and 7	Landfill gas collection system shall operate continuously, except as described in condition #25293 part 7 and all collected gases shall be vented to a properly operating control system	Continuous	N/A
Gas Flow	BAAQMD Condition #5771, Part 9; BAAQMD Condition #17812, Part	Records of Landfill Gas Flow Rates, Collection and Control Systems	Periodic / Daily	BAAQMD Condition #25293, Parts 5, 6, and 7	Landfill gas collection system shall operate less than continuously and all collected gases shall be vented to a	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
	9; and BAAQMD Condition #25293, Parts 14b-d	Downtime, and Collection System Components			properly operating control system		
Gas Flow	40 CFR 60.756(b)(2) (i or ii) and 60.758(c)(2)	Gas Flow Meter and Recorder (every 15 minutes) or Monthly Inspection of Bypass Valve and Lock and Records	Continuous or Periodic / Monthly	40 CFR 60.753(a) and (e)	Operate a Collection System in each area or cell and vent all collected gases to a properly operating control system	Continuous	N/A
Collection and Control Systems Shutdown Time	BAAQMD 8-34-501.1	Operating Records	Periodic / Daily	BAAQMD 8-34-113.2	240 hours/year or 5 consecutive days	Continuous	N/A
Collection and Control	40 CFR 60.7(b),	Operating Records (all	Periodic / Daily	40 CFR 60.755(e)	5 days per event for collection system and	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
System Startup Shutdown or Malfunction	60.757(f)(2), (f)(3) and (f)(4)	occurrences and duration of each)			1 hour per event for control system		
Startup Shutdown or Malfunction Procedures	40 CFR 63.1980(a-b)	Records (all occurrences, duration of each, and corrective actions)	Periodic / on event basis	40 CFR 63.6(e)	Minimize Emissions by Implementing SSM Plan	Continuous	N/A
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/incident and 30 calendar days/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

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
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
Wellhead Pressure	40 CFR 60.755(a)(3), 60.756(a)(1), and 60.758(c) and (e)	Monthly Inspection and Records	Periodic / Monthly	40 CFR 60.753(b)	< 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	Continuous	N/A
Temperature of Gas at Wellhead	40 CFR 60.755(a)(5), 60.756(a)(3), and 60.758(c) and (e)	Monthly Inspection and Records	Periodic / Monthly	40 CFR 60.753(c)	< 55 ^{o}C	Continuous	N/A
Gas Concentrations at Wellhead	BAAQMD 8-34-414, 501.9 and 505.3 or 505.4 and BAAQMD Condition	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.3 or 305.4 and BAAQMD Condition #25293 Part 7d	Applies to Gas Collection System Components Other than Leachate Wells N2 < 20% OR O2 < 5% Applies to Leachate	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
	#25293 Part 7d				Wells When Connected to the LFG Collection System O2 < 15% by volume		
Gas Concentrations at Wellhead	40 CFR 60.755(a)(5), 60.756(a)(2), and 60.758(c) and (e)	Monthly Inspection and Records	Periodic / Monthly	40 CFR 60.753(c)	N2 < 20% **OR** O2 < 5%	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-117.4	No more than 5 wells at a time or 10% of total collection system, whichever is less	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-117.6 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	Quarterly Inspection of collection and control system components with OVA and Records	Periodic / Quarterly	BAAQMD 8-34-301.2	1000 ppmv as methane (component leak limit)	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	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	Monthly Visual Inspection of Cover, Quarterly Inspection with OVA of Surface, Various Reinspection Times for Leaking Areas, and Records	Periodic / Monthly, Quarterly, and on event basis	BAAQMD 8-34-303	500 ppmv as methane at 2 inches above surface	Continuous	N/A
TOC	40 CFR 60.755(c)(1), (4) and (5), 60.756(f), and 60.758(c) and (e)	Monthly Visual Inspection of Cover, Quarterly Inspection with Portable Analyzer of Surface, Various Reinspection Times for Leaking Areas, and Records	Periodic / Monthly, Quarterly, and on event basis	40 CFR 60.753(d)	<500 ppmv as methane at 5-10 cm from surface	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Non- Methane Organic Compounds (NMOC)	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition #25293, Parts 4, 11	Initial and Annual Source Tests and Records	Periodic / Annually	BAAQMD 8-34-301.3	98% removal by weight OR < 30 ppmv, dry basis @ 3% O2, expressed as methane (applies to A-120 and A-8 Flares only)	Continuous	N/A
NMOC	40 CFR 60.8 and 60.752(b)(2)(iii)(B) and 60.758 (b)(2)(ii)	Initial Source Test and Records	Periodic / on event basis	40 CFR 60.752(b)(2)(iii)(B)	98% removal by weight OR < 20 ppmv dry @ 3% O2, expressed as hexane (applies to A-120 and A-8 Flares only)	Continuous	N/A
Temperature of Combustion Zone (CT)	BAAQMD 8-34-501.3 and 507, and BAAQMD Condition #25293, Part 14e	Temperature Sensor and Recorder (continuous)	Continuous	BAAQMD Condition #25293, Part 9	CT $\geq$ 1400 °F, CT > 1417 °F averaged over any 3-hour period (applies to A-8 and A-120 Flares only)	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
CT	40 CFR 60.756(b)(1) and 60.758 (b)(2)(i)	Temperature Sensor and Recorder (measured every 15 minutes and averaged over 3 hours)	Continuous	40 CFR 60.758 (c)(1)(i)	CT $\geq$ 1467 °F (3-hour average) from (CT $\geq$ CTPF – 28 °C), where CTPF is the average combustion temperature during the most recent complying performance test (applies to A-120 Flare only)	Continuous	N/A
Opacity	BAAQMD Condition #25293, Part 14e	Records of all site watering cleaning events and road	Periodic / on event basis, Monthly	BAAQMD 6-1-301	Ringelmann No. 1 for < 3 minutes/hr (applies to S-15 Landfill operations)	Continuous	N/A
Opacity	BAAQMD Condition #25293, Part 14e	Records of all site watering and road cleaning events	Periodic / on event basis, Monthly	SIP 6-301	Ringelmann No. 1 for < 3 minutes/hr (applies to S-15 Landfill operations)	Continuous	N/A
Opacity	None	N/A	None	BAAQMD 6-1-301	Ringelmann No. 1 for < 3 minutes/hr (applies to A-8 and A-	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
					120 Flares)		
Opacity	None	N/A	None	SIP 6-301	Ringelmann No. 1 for < 3 minutes/hr (applies to A-8 and A-120 Flares)	Continuous	N/A
FP	None	N/A	None	BAAQMD 6-1-310	$\leq$ 0.15 grains/dscf (applies to A-8 and A-120 Flares only)	Continuous	N/A
FP	None	N/A	None	SIP 6-310	$\leq$ 0.15 grains/dscf (applies to A-8 and A-120 Flares only)	Continuous	N/A
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: $\leq$ 0.5 ppm for 3 minutes and $\leq$ 0.25 ppm for 60 min. and $\leq$0.05 ppm for 24 hours	Continuous	N/A
SO_2	BAAQMD Condition #25293, Part 10	Source Test	Periodic / Annually	BAAQMD 9-1-302	$\leq$ 300 ppm (dry basis) (applies to A-8 and A-120 Flares only)	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 25293, Part 10	Sulfur analysis of landfill gas	Periodic / Quarterly	BAAQMD Condition #25293, Part 10	$\leq$ 300 ppmv	Continuous	N/A
H_2S	None	N/A	None	BAAQMD 9-2-301	Property Line Ground Level Limits: $\leq$ 0.06 ppm, averaged over 3 minutes and $\leq$ 0.03 ppm, averaged over 60 minutes	Continuous	N/A
Heat Input	BAAQMD Condition # 25293, Part 8	Records	Periodic / Daily	BAAQMD Condition # 25293 Part 8	$\leq$ 2137 MM BTU per day and $\leq$ 780,134 MM BTU per year	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-15 LANDFILL AND A-8 BACKUP LANDFILL GAS FLARE AND A-120 LANDFILL GAS FLARE (NOTE A-161 REPLACED A-120)	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Toxic Air Contaminants	BAAQMD Condition # 25293, Part 12	Annual Landfill Gas Analysis	Periodic / Annually	BAAQMD Condition # 25293 Part 13	Benzene 8.9 ppmv Chlorobenzene 1.5 ppmv Trichloroethylene 0.873 ppmv Ethylbenzene 41 ppmv Vinyl Chloride 6.4 ppmv Xylene 78 ppmv Toluene 110 ppmv Perchloroethylene 0.4 ppmv Acrylonitrile 10 ppmv Methylene Chloride 350 ppmv	Continuous	N/A
NOx	BAAQMD Condition # 25293 Part 16	Annual Source Test and Records	Periodic / Annually	BAAQMD Condition # 25293 Part 16	From A-120 only < 0.05 lbs/MMBTU	Continuous	N/A
CO	BAAQMD Condition # 25293 Part 17	Annual Source Test and Records	Periodic / Annually	BAAQMD Condition # 25293 Part 17	From A-120 only < 0.20 lbs/MM BTU	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-37 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	None	N/A	None	BAAQMD 6-1-301	Ringelmann No. 1 for < 3 minutes/hr	Continuous	N/A
Opacity	None	N/A	None	SIP 6-301	Ringelmann No. 1 for < 3 minutes/hr	Continuous	N/A
FP	None	N/A	None	BAAQMD 6-1-310	0.15 grains/dscf	Continuous	N/A
FP	None	N/A	None	SIP 6-310	0.15 grains/dscf	Continuous	N/A
TOC (Total Organic Compounds Plus Methane)	BAAQMD 8-34-501.6 and 8-34-503	Quarterly Inspection and Records	Periodic / Quarterly	BAAQMD 8-34-301.2	1000 ppmv as methane (component leak limit)	Continuous	N/A
Non- Methane Organic Compounds (NMOC)	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 17812, Part 8	Initial and Annual Source Tests and Records	Periodic / Annually	BAAQMD 8-34-301.4	98% removal by weight OR < 120 ppmv, dry basis @ 3% O2, expressed as methane	Continuous	N/A
NMOC	40 CFR 60.8 and 60.752(b)(2)(iii)(B) and 60.758(b)(2)	Initial Source Test and Records	Periodic / Initial	40 CFR 60.752(b)(2)(iii)(B)	98% removal by weight OR < 20 ppmv dry @ 3% O2, expressed as hexane	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-37 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
SO_2	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits ≤ 0.5 ppm for 3 minutes, ≤ 0.25 ppm for 60 minutes, and ≤0.05 ppm for 24 hours	Continuous	N/A
SO_2	BAAQMD Condition #25293, Part 10 and BAAQMD Condition # 17812, Part 8	Quarterly Sulfur Analysis of Landfill Gas and Annual Source Test	Periodic / Quarterly and Periodic / Annually	BAAQMD 9-1-302	≤ 300 ppm (dry)	Continuous	N/A
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
NO_x	BAAQMD Condition # 17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.1	Waste Fuel Gas, Lean-Burn ≤ 70 ppmv, dry basis @ 15% O2	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-37 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NO_x	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	SIP 9-8-302.1	Waste Fuel Gas, Lean-Burn $\leq$ 140 ppmv, dry basis @ 15% O2	Continuous	N/A
NO_x	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD Condition #17812, Part 5	$\leq$ 63 ppmv, dry basis @ 15% O2	Continuous	N/A
CO	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.3	Waste Fuel Gas: $\leq$ 2000 ppmv, dry basis @ 15% O2	Continuous	N/A
CO	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD Condition #17812, Part 6	$\leq$ 309 ppmv, dry basis @ 15% O2	Continuous	N/A
Heat Input	BAAQMD Condition #17812, Parts 7 and 9c-d	Gas Flow Meter and Recorder and Records	Continuous	BAAQMD Condition #17812, Part 2	251.9 MM BTU per day and 91,951 MM BTU per consecutive 12-month period	Continuous	N/A
Gas Flow	BAAQMD 8-34-501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes)	Continuous	BAAQMD 8-34-301 and 301.1	Vent all collected gases to a properly operating control system and operate control system continuously.	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-37 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Gas Flow	BAAQMD Condition # 17812, Part 7	Gas Flow Meter and Recorder	Continuous	BAAQMD Condition #17812, Parts 3 & 4	Operate S-37 continuously; Upon shutdown of S-37 or if any amount of gas exceeds the capacity of S- 37, return gas to A-8 Flare automatically	Continuous	N/A
Gas Flow	40 CFR 60.756(b)(2) (i or ii) and 60.758(c)(2)	Gas Flow Meter and Recorder (every 15 minutes) or Monthly Inspection of Bypass Valve & Lock and Records	Continuous and Periodic / Monthly	40 CFR 60.753(a) and (e)	Vent all collected gases to a properly operating control system and operate control system at all times when gas is vented to it	Continuous	N/A
Emission Control System Shutdown Time	BAAQMD 8-34-501.2 and BAAQMD Condition #17812, Part 9a	Records	Periodic / Daily	BAAQMD 8-34-113.2	240 hours/year	Continuous	N/A
Emission Control System Startup Shutdown or Malfunction	40 CFR 60.7(b), 60.757(f)(2) and (f)(3), and 60.758(e)	Records of occurrence and duration	Periodic / Daily	40 CFR 60.755(e)	$\leq$ 1 hour per event	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-37 INTERNAL COMBUSTION LEAN BURN ENGINE	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
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
Engine Cylinder or Exhaust Temperature	BAAQMD 8-34-507 and 8-34-509	Temperature sensor and continuous recorder	Continuous	BAAQMD Condition #17812, Part 10	To be established during first source test conducted after permit issuance	Continuous	N/A
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.4	Records of occurrence and duration	Periodic / Daily	BAAQMD 1-523.2	15 consecutive days/incident and 30 calendar days/12 month period	Continuous	N/A
Continuous Monitors	40 CFR 60.7(b)	Records of occurrence and duration	Periodic / Daily	40 CFR 60.13(e)	Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-120 AIR STRIPPER; S-130 STANDBY AIR STRIPPER; ABATED BY: A-14 CARBON ADSORBER; A-15 CARBON ADSORBER, AND A-16 CARBON ADSORBER; OR A-17 CARBON ADSORBER; A-18 CARBON ADSORBER AND A-19 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Total Organic Compounds (TOC)	BAAQMD 8-47-501.1, 8-47-501.2, and 8-47-601 and BAAQMD Condition #23316, Parts 7 and 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers, Daily Records of Wastewater Throughput and Monthly Records of Water Analyses	Periodic / Daily, Weekly, and Monthly	BAAQMD 8-47-301 and 8-47-302	Control device shall reduce total organic compound emissions to the atmosphere by at least: 90% by weight	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-120 AIR STRIPPER; S-130 STANDBY AIR STRIPPER; ABATED BY: A-14 CARBON ADSORBER; A-15 CARBON ADSORBER, AND A-16 CARBON ADSORBER; OR A-17 CARBON ADSORBER; A-18 CARBON ADSORBER AND A-19 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NMOC	BAAQMD Condition #23316, Part 8	Monthly, Weekly, or Daily FID Measure-ments at Carbon Adsorbers (inlet and outlet) and Records	Periodic / Daily, Weekly, and Monthly	BAAQMD Condition #23316, Part 4	Carbon replacement upon detection of an outlet NMOC concentration (from A-14, A-15 or A-17, A-18) that is 10% or more of the inlet NMOC concentration and is 10 ppmv or greater (measured as methane)	Continuous	N/A
NMOC	BAAQMD Condition #23316, Part 8	Monthly, Weekly, or Daily FID Measure-ments at Carbon Adsorbers (outlet) and Records	Periodic / Daily, Weekly, and Monthly	BAAQMD Condition #23316, Part 5	Carbon replacement upon detection of an outlet NMOC concentration (from A-16 or A-19) of 6 ppmv (measured as methane)	Continuous	N/A
POC	None	N/A	None	BAAQMD Condition #23316, Part 3	Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-120 AIR STRIPPER; S-130 STANDBY AIR STRIPPER; ABATED BY: A-14 CARBON ADSORBER; A-15 CARBON ADSORBER, AND A-16 CARBON ADSORBER; OR A-17 CARBON ADSORBER; A-18 CARBON ADSORBER AND A-19 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Wastewater Throughput Limits	BAAQMD Condition #23316 Part 7	Records	Periodic / Daily	BAAQMD Condition #23316 Part 1	40,800 Gallons/Day 14,892,000 Gallons/Year	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-50 SOLID WASTE TRANSFER STATION; AND A-50 WATER MIST SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Opacity	BAAQMD Condition #18258, Part 3	Continuous Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	BAAQMD Condition #18258, Part 3	Continuous Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Amount of Waste Accepted	BAAQMD Condition #18258, Part 7	Records	Periodic / on event basis	BAAQMD Condition #22792, Part 1	2000 tons/day or 730,000 tons in any consecutive twelve month period	Continuous	N/A
Amount of Vehicle Traffic	BAAQMD Condition #18258, Part 7	Records	Periodic / on event basis	BAAQMD Condition #22792, Part 5 and 6	601 vehicle trips per day to both S-15 and S-50 while waste is accepted at S-15; 715 vehicle trips per day to S-50 after waste is no longer accepted at S-15	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-69 INLET STORAGE TANK #1; S-70 INLET STORAGE TANK #2; S-141 INLET FEED TANK; S-156 THREE DAY TANKS; EACH ABATED BY A-20 CARBON ADSORBER AND A-21 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Organic Compounds	BAAQMD 8-5-501 and BAAQMD Condition #23220, Parts 7 and 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers and Daily Records of Wastewater Throughput	Periodic / Daily, Weekly, and Monthly	BAAQMD 8-5-301 and 306	Abatement efficiency of at least 95% by weight	Continuous	N/A
Organic Compounds	BAAQMD 8-5-501 and BAAQMD Condition #23220, Parts 7 and 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers and Daily Records of Wastewater Throughput	Periodic / Daily, Weekly, and Monthly	SIP 8-5-301 and 306	Abatement efficiency of at least 95% by weight	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-69 INLET STORAGE TANK #1; S-70 INLET STORAGE TANK #2; S-141 INLET FEED TANK; S-156 THREE DAY TANKS; EACH ABATED BY A-20 CARBON ADSORBER AND A-21 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
NMOC	BAAQMD Condition #23220, Part 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers (inlet and outlet) and Records	Periodic / Daily, Weekly, and Monthly	BAAQMD Condition #23220, Part 5	Carbon replacement upon detection of an outlet NMOC concentration (from A-20) that is 10% or more of the inlet NMOC concentration and is 10 ppmv or greater (measured as methane)	Continuous	N/A
NMOC	BAAQMD Condition #23220, Part 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers (outlet) and Records	Periodic / Daily, Weekly, and Monthly	BAAQMD Condition #23220, Part 6	Carbon replacement upon detection of an outlet NMOC concentration (from A-21) of 6 ppmv (measured as methane)	Continuous	N/A
POC	None	N/A	None	BAAQMD Condition #23220, Part 4	Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-69 INLET STORAGE TANK #1; S-70 INLET STORAGE TANK #2; S-141 INLET FEED TANK; S-156 THREE DAY TANKS; EACH ABATED BY A-20 CARBON ADSORBER AND A-21 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Wastewater Throughput Limits	BAAQMD Condition #23220, Part 7	Records	Periodic / Daily	BAAQMD Condition #23220, Part 1	40,800 Gallons/Day 14,892,000 Gallons/Year	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-71 PRIMARY OIL WATER SEPARATOR; S-72 SECONDARY SEPARATOR/EMULSION BREAKER; AND S-157 FILTER PRESS SURGE TANK; ABATED BY: A-20 CARBON ADSORBER; AND A-21 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Organic Compounds	BAAQMD Condition #23220, Part 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers	Periodic / Daily, Weekly, and Monthly	BAAQMD 8-8-301.3	Combined collection and removal efficiency of at least 95% by weight	Continuous	N/A
Organic Compounds	BAAQMD Condition #23220, Part 8	Monthly, Weekly, or Daily FID Measurements at Carbon Adsorbers	Periodic / Daily, Weekly, and Monthly	SIP 8-8-301.3	Combined collection and removal efficiency of at least 95% by weight	Continuous	N/A
Organic Compounds	None	N/A	None	BAAQMD 8-8-303	All gauging and sampling devices shall have vapor tight covers, seals, or lids	Continuous	N/A
POC	None	N/A	None	BAAQMD Condition #23220 Part 4	Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-74 INCLINED PLATE CLARIFIER; S-140 CLARIFIER HOLDING TANKS; S-123 AIR STRIPPER FEED TANK; S-145 E-22R AREA TANKS; S-146 PRETREATMENT INLET FEED TANK; S-155 OIL SLUDGE THICKENER; S-142 WASTE OIL TANK; S-151 WASTE OIL TANK; ABATED BY: A-20 CARBON ADSORBER; AND A-21 CARBON ADSORBER	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Total Carbon	BAAQMD Condition #23220, Part 7	Records	Periodic / Daily	BAAQMD 8-2-301	15 Pounds/Day or 300 ppm, dry basis	Continuous	N/A
Wastewater Throughput Limits	BAAQMD Condition #23220, Part 7	Records	Periodic / Daily	BAAQMD Condition #23220, Part 1	40,800 Gallons/Day 14,892,000 Gallons/Year	Continuous	N/A
POC	None	N/A	None	BAAQMD Condition #23220, Part 4	Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-111 CONCRETE CRUSHER; AND A-111 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23350, Part 6	Records	Periodic / on event basis	BAAQMD Condition #23350, Part 2	30,000 tons of concrete in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23350, Part 4	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23350, Part 4	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
PM	BAAQMD Condition #23350, Part 6	Records	Periodic / on event basis	BAAQMD Condition #23350, Part 5	Application of dust suppressant to all unpaved on-site truck routes to and from the concrete and asphalt recycling operations to maintain a PM control efficiency of 75 % by weight	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-112 CRUSHED CONCRETE SCREENER; AND A-112 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23351, Part 5	Records	Periodic / on event basis	BAAQMD Condition #23351, Part 2	30,000 tons of concrete in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23351, Part 4	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23351, Part 4	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-113 CONCRETE/ASPHALT STORAGE PILES; AND A-113 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23352, Part 4	Records	Periodic / on event basis	BAAQMD Condition #23352, Part 1	30,000 tons of concrete in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23352, Part 3	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23352, Part 3	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-114 CONVEYORS (CRUSHED CONCRETE); AND A-114 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23353, Part 5	Records	Periodic / on event basis	BAAQMD Condition #23353, Part 2	30,000 tons of concrete in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23353, Part 4	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23353, Part 4	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-115 WOOD/YARD WASTE SHREDDER (TUB GRINDER); AND A-115 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23354, Part 7	Records	Periodic / on event basis	BAAQMD Condition #23354, Part 2	19,000 tons of wood waste in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23354, Part 4	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23354, Part 4	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-116 WOOD WASTE SCREENER; AND A-116 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23355, Part 4	Records	Periodic / on event basis	BAAQMD Condition #23355, Part 1	19,000 tons of wood waste in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23355, Part 3	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23355, Part 3	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-117 COMPOSTING OPERATION; AND A-117 WATER SPRAY TRUCK	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23356, Part 5	Records	Periodic / on event basis	BAAQMD Condition #23356, Part 1	19,000 tons of wood waste in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23356, Part 3	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23356, Part 3	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
PM	BAAQMD Condition #23356, Part 5	Records	Periodic / on event basis	BAAQMD Condition #23356, Part 4	Application of dust suppressant or water to all unpaved on-site truck routes to and from the composting operation to maintain a PM control efficiency of 75 % by weight	Continuous	N/A

WEST CONTRA COSTA SANITARY LANDFILL

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: West Contra Costa Sanitary Landfill	**Facility ID#:** A2254
Permitted Unit: S-118 CRUSHING OF ASPHALT DEBRIS; AND A-118 WATER SPRAY SYSTEM	**Reporting Period:** *from* 11/01/2022 *through* 04/30/2023

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Throughput	BAAQMD Condition #23357, Part 4	Records	Periodic / on event basis	BAAQMD Condition #23357, Part 1	5,000 tons of asphalt in any consecutive twelve month period	Continuous	N/A
Opacity	BAAQMD Regulation 6-1-401 and BAAQMD Condition #23357, Part 3	Observation of Source in Operation	Continuous	BAAQMD 6-1-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A
Opacity	SIP 6-401 and BAAQMD Condition #23357, Part 3	Observation of Source in Operation	Continuous	SIP 6-301	Ringelmann 1.0 for 3 minutes in any hour	Continuous	N/A

Appendix H – Title V Annual Compliance Certification

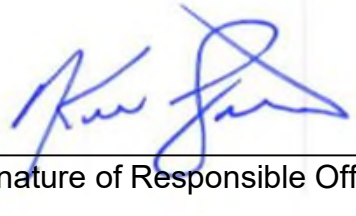
WEST CONTRA COSTA SANITARY LANDFILL

TITLE V ANNUAL CERTIFICATION

SITE: WEST CONTRA COSTA SANITARY LANDFILL	**FACILITY ID#:** A1840
REPORTING PERIOD: *from* 05/01/2022	*through* 04/30/2023

CERTIFICATION:

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



Signature of Responsible Official

5/30/23

Date

Ken Lewis

Name of Responsible Official (please print)

General Manager

Title of Responsible Official (please print)

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

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	General Requirements (12/19/12, effective 8/31/16)	Y	C	
BAAQMD 2-1-429	Federal Emissions Statement (12/21/04)	Y	C	
BAAQMD Regulation 2, Rule 5	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 and Visible Emissions (12/5/07)	N	C	
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y	C	
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	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

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

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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	
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	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

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

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (6/8/99)	Y	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 Code of Regulations Title 17, Section 93105	Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (10/8/02)	N	C	
California Code of Regulations Title 17, Section 93106	Asbestos Airborne Toxic Control Measure for Surfacing Applications (7/16/01)	N	C	
California Code of Regulations Title 17, Section 93115	Airborne Toxic Control Measure for Stationary Compression Ignition Engines (5/19/11)	N	C	
California Code of Regulations Title 17, Section 93116	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (2/19/11)	N	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

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 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	
40 CFR Part 61, Subpart A	National Emission Standards for Hazardous Air Pollutants – General Provisions (4/9/04)	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	
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (2/21/95)		C	
Subpart F, 40 CFR 82.154	Prohibitions	Y	C	
Subpart F, 40 CFR 82.156	Leak Repair	Y	C	
Subpart F, 40 CFR 82.158	Standards for Recycling and Recovery Equipment	Y	C	
Subpart F, 40 CFR 82.161	Certification of Technicians	Y	C	
Subpart F, 40 CFR 82.162	Certification by Owners of Recovery and Recycling Equipment	Y	C	
Subpart F, 40 CFR 82.166	Records of Refrigerant	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

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)**			
1-523	Parametric Monitoring and Recordkeeping Procedures	N	C	
1-523.1	Reporting requirement for periods of in-operation > 24 hours	Y	C	
1-523.2	Limit on duration of in operation	Y	C	
1-523.3	Reporting requirement for violations of any applicable limits	N	C	
1-523.4	Records of in-operation, 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 (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-310	Particle Weight Limitation	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	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
6-401	Appearance of Emissions	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	Record keeping Requirement	Y	C	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	C	
8-34-301.1	Continuous Operation	Y	C	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	C	
8-34-301.4	Limits for Other Emission Control Systems	Y	C	
8-34-404	Less than Continuous Operation Petition Contents	Y	C	
8-34-404.1	Monitoring requirements for individual gas collection system components that are subject to less than continuous operation provisions	Y	C	
8-34-404.2	Map showing components that are operating less than continuously	Y	C	
8-34-404.3	Operating, maintenance, and inspection schedule for components that are operating less than continuously	Y	C	
8-34-404.4	Operating conditions for components that are operating less than continuously	Y	C	
8-34-404.5	Renewal requirements apply whenever information submitted pursuant to 8-34-404.1 changes	Y	C	
8-34-412	Compliance Demonstration Tests	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-34-413	Performance Test Report	Y	C	S-5 has not been source tested since 2016. It has been inoperable and will be source tested after the S-5 engine is rehabilitated and is running again. S-6 was last source tested on February 4, 2021. On November 21, 2021, S-6 became inoperable due to a mechanical issue. As S-6 is inoperable, it will be source tested after the S-6 engine is rehabilitated and is running again. On January 28, 2022, a letter to request an extension of the source test date and to explain the situation was submitted to the Bay Area Air Quality Management District (BAAQMD).
8-34-501	Operating Records	Y	C	
8-34-501.2	Emission Control System Downtime	Y	C	
8-34-501.4	Testing	Y	C	
8-34-501.5	Record keeping requirements for components subject to Section 404 less than continuous operating provisions	Y	C	
8-34-501.6	Leak Discovery and Repair Records	Y	C	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	C	
8-34-501.11	Records of Key Emission Control System Operating Parameters	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	
8-34-508	Gas Flow Meter	Y	C	
8-34-509	Key emission control system operating parameters	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0005, 0006 **Source Name:** S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			
9-1-301	Limitations on Ground Level Concentrations	Y	C	
9-1-302	General Emission Limitations	Y	C	
BAAQMD Regulation 9, Rule 2	**Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)**			
9-2-301	Limitations on Hydrogen Sulfide	N	C	
BAAQMD Regulation 9 Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)**			
9-8-302	Emission Limits – Waste Derived Fuel Gas	N	C	
9-8-302.1	Lean-Burn Engines: NOx Emission Limit	N	C	
9-8-302.3	CO Emission Limit	Y	C	
SIP Regulation 9 Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)**			
9-8-302	Emission Limits- Waste Derived Fuel Gas	Y	C	
9-8-302.1	Lean Burn Engines: NOx Emission Limit	Y	C	
40 CFR Part 60, Subpart A	**Standards of Performance for New Stationary Sources – General Provisions (5/4/98)**			
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.7	Notification and Record Keeping	Y	C	
60.8	Performance Tests	Y	C	S-5 has not been source tested since 2016. It has been inoperable and will be source tested after the S-5 engine is rehabilitated and is running again. S-6 was last source tested on February 4, 2021. On November 21, 2021, S-6 became inoperable due to a mechanical issue. As S-6 is inoperable, it will be source tested after the S-6 engine is rehabilitated and is running again. On January 28, 2022, a letter to request an extension of the source test date and to explain the situation was submitted to the BAAQMD.
60.11	Compliance with Standards and Maintenance Requirements	Y	C	
60.11(a)	Compliance determined by performance tests	Y	C	
60.11(d)	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	
60.13(g)	Requires multiple monitors for multiple stacks	Y	C	
60.14	Modification	Y	C	
60.15	Reconstruction	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0005, 0006 **Source Name:** S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.19	General Notification and Reporting Requirements	Y	C	
40 CFR Part 60, Subpart WWW	**Standards of Performance for New Stationary Sources – Standards of Performance for Municipal Solid Waste Landfills (4/10/00)**			
60.752	Standards for Air Emissions from Municipal Solid Waste Landfills	Y	C	
60.752(b)	Comply with paragraph (b)(2) or calculate NMOC emission rate	Y	C	
60.752(b)(2)	Comply with all requirements in sections (b)(2)(i through iv)	Y	C	
60.752 (b)(2)(i)	Submit a collection and control system design plan	Y	C	
60.752 (b)(2)(ii)	Install a collection and control system	Y	C	
60.752 (b)(2)(iii)	Route collected gases to a control system	Y	C	
60.752 (b)(2)(iii)(B)	Reduce NMOC emissions by 98% by weight or reduce NMOC outlet concentration to less than 20 ppmv as hexane at 3% O2, dry basis	Y	C	
60.752 (b)(2)(iv)	Operate in accordance with 60.753, 60.755, and 60.756	Y	C	
60.753	Operational Standards for Collection and Control Systems	Y	C	
60.753(e)	Vent all collected gases to a control system complying with 60.752(b)(2)(iii)	Y	C	
60.753(f)	Operate the control system at all times when collected gas is Routed to the control system	Y	C	
60.754	Test Methods and Procedures	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.754(d)	Test Methods for Performance Test (Method 18 or 25C)	Y	C	
60.755	Compliance Provisions	Y	C	
60.755(e)	Provisions apply at all times except during startup, shutdown, or malfunction, provided the duration of these shall not exceed 5 days for collection systems or 1 hour for control systems	Y	C	
60.756	Monitoring of Operations	Y	C	
60.756(d)	Approval of other control devices	Y	C	
60.756(e)	Procedures for requesting alternative monitoring parameters	Y	C	
60.757	Reporting Requirements	Y	C	
60.757(c)	Submit a Collection and Control System Design Plan	Y	C	
60.757(e)	Submit Equipment Removal Report 30 days prior to removal or cessation of operation of the control equipment	Y	C	
60.757(f)	Submit Annual Reports containing information required by (f)(1), (f)(2), and (f)(3)	Y	C	
60.757(f)(1)	Value and length of time for exceedance of parameters monitored per 60.756(b) or (e)	Y	C	
60.757(f)(2)	Description and duration of all periods when gas is diverted from the control device by a by-pass line	Y	C	
60.757(f)(3)	Description and duration of all periods when control device was not operating for more than 1 hour	Y	C	
60.758	Recordkeeping Requirements	Y	C	
60.758(b)	Control Equipment Records (Control Device Vendor Specifications) Note: Subsections 1 through 4 do not apply.	Y	C	
60.758(c)	Records of parameters monitored pursuant to 60.756 (e)	Y	C	
60.758(e)	Records of any exceedance of 60.753(e) or (f)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
40 CFR Part 62 Subpart F	**Approval and Promulgation of State Plans for Designated Facilities and Pollutants (6/9/03)**			
62.1100	Identification of Plan	Y	C	
62.1115	Identification of Sources	Y	C	
40 CFR Part 63, Subpart A	**National Emission Standards for Hazardous Air Pollutants: General Provisions (4/20/06)**			
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	
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 (1/16/03)**			
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)(2)	Comply with State Plan that implements 40 CFR Part 60, Subpart Cc	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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	
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 # 5771				
Part 1	Fuel Restrictions (Cumulative Increase)	Y	C	
Part 2	Diverter Valve Requirement (Regulation 8-34-301)	Y	C	
Part 3	Gas Flow Meter Requirement (Cumulative Increase and Regulation 8-34-508)	Y	C	
Part 4	NOx Emissions Limit (BACT, Offsets)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0005, 0006
Source Name: S-5 and S-6 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 5	CO Emissions Limit (BACT)	Y	C	
Part 6	NMOC Emissions Limit (BACT and Regulation 8-34-301.4)	Y	C	
Part 7	Annual Source Test Requirement (BACT and Regulations 8-34-301.4, 8-34-412, 9-8-302.1, and 9-8-302.3)	Y	C	The 2016 source test was performed on September 22, 2016 for the S-5 IC Engine. The Source Test Report was delivered to the BAAQMD within 45 days of the test date. S-5 has not been source tested since 2016. It has been inoperable and will be source tested after the S-5 engine is rehabilitated and is running again. The 2021 source test was performed on February 4, 2021 for the S-6 IC Engine. The Source Test Report was delivered to the BAAQMD within 45 days of the test date. S-6 has not been source tested since 2021. It has been inoperable and will be source tested after the S-6 engine is rehabilitated and is running again.
Part 8	Heat Input Limitation (Regulation 2-1-301, Offsets)	Y	C	
Part 9	Daily Record Keeping Requirement (Offsets, Cumulative Increase, and Regulations 2-1-301, 2-6-501, and 8-34-301)	Y	C	
Part 10	Engine Temperature Limit and Temperature Monitoring Requirements (Regulations 8-34-301, 8-34-501.11, and 8-34-509)	Y	C	NOTE: Temperature requirements were changed as of January 1, 2020 by Application Number (AN) 29522.

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

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)**			
1-523	Parametric Monitoring and Recordkeeping Procedures	N	C	
1-523.1	Reporting requirement for periods of in operation > 24 hours	Y	C	
1-523.2	Limit on duration of in operation	Y	C	
1-523.3	Reporting requirement for violations of any applicable limits	N	C	
1-523.4	Records of in operation, tests, calibrations, adjustments, & maintenance	Y	C	
1-523.5	Maintenance and calibration	N	C	
SIP Regulation 1	**General Provisions and Definitions (6/28/99)**		C	
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 (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-310	Particle Weight Limitation (applies to A-8 Flare only)	N	C	
6-1-401	Appearance of Emissions	N	C	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**			

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
6-301	Ringelmann No. 1 Limitation	Y	C	
6-305	Visible Particles	Y	C	
6-310	Particle Weight Limitation (applies to A-8 Flare only)	Y	C	
6-401	Appearance of Emissions	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	
8-34-117	Limited Exemption, Gas Collection System Components	Y	C	
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	Y	C	
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	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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	There were unplanned shutdowns of the gas collection and control system (GCCS) that did not meet the exemption criteria in Rule 8-34-113 on - May 3, 2022 from 03:16 to 09:58; - May 16, 2022 from 11:32 to 20:34; - May 29, 2022 20:44 to May 30, 2022 05:00; - September 5, 2022 at 21:32 to September 6, 2022 07:28; - March 14, 2023 at 11:43 to March 15, 2023 at 18:33 These events included utility outages, power surge/fluctuations, air compressor malfunctions, and an auto valve failure which resulted in shutdowns of the GCCS. These events were reported to the

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
				BAAQMD as reportable compliance activities (RCA) and breakdown relief was requested.
		Y	I	On April 24, 2023, Notice of Violation (NOV) A62068 was issued to the site as breakdown relief was denied for the March 14, 2023 RCA event (IDs 08R50 and 08R51). The 10-Day Response was submitted on May 4, 2023.
8-34-301.2	Collection and Control Systems Leak Limitations	Y	C	
8-34-301.3	Limits for Enclosed Flares	Y	C	
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	
8-34-304.4	Based on NMOC Emission Rate	Y	C	
8-34-305	Wellhead Requirements	Y	C	
8-34-305.1	Operate Under Vacuum	Y	C	
8-34-305.2	Temperature < 55 °C	Y	C	
8-34-305.3	Nitrogen < 20% or	Y	C	Requirements of 8-34-305.4 met instead.
8-34-305.4	Oxygen < 5%	Y	C	
8-34-404	Less than Continuous Operation Petition Contents	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-34-404.1	Monitoring requirements for individual gas collection system components that are subject to less than continuous operation provisions	Y	C	
8-34-404.2	Map showing components that are operating less than continuously	Y	C	
8-34-404.3	Operating, maintenance, and inspection schedule for components that are operating less than continuously	Y	C	
8-34-404.4	Operating conditions for components that are operating less than continuously	Y	C	
8-34-404.5	Renewal requirements apply whenever information submitted pursuant to 8-34-404.1 changes	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	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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	
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	
8-34-501.6	Leak Discovery and Repair Records	Y	C	
8-34-501.5	Record keeping requirements for components subject to Section 404 less than continuous operating provisions	Y	C	
8-34-501.7	Waste Acceptance Records	Y	C	
8-34-501.8	Non-decomposable Waste Records	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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 Recorded	Y	C	
8-34-508	Gas Flow Meter	Y	C	
8-34-510	Cover Integrity Monitoring	Y	C	
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			
9-1-301	Limitations on Ground Level Concentrations	Y	C	
9-1-302	General Emission Limitations (applies to flares 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 (5/4/98)**			

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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	
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 WWW	**Standards of Performance for New Stationary Sources – Standards of Performance for Municipal Solid Waste Landfills (4/10/00)**			

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.752	Standards for Air Emissions from Municipal Solid Waste Landfills	Y	C	
60.752(b)	Requirements for MSW Landfills with Design Capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 (Large Designated Facilities)	Y	C	
60.752(b)(2)	Comply with all requirements in sections (b)(2)(i through iv)	Y	C	
60.752 (b)(2)(i)	Submit a Collection and Control System Design Plan	Y	C	
60.752 (b)(2)(i)(A)	The collection and control system in the Design Plan shall comply with 60.752(b)(2)(ii)	Y	C	
60.752 (b)(2)(i)(B)	Design Plan shall include all proposed alternatives to 60.753 through 60.758	Y	C	
60.752 (b)(2)(i)(C)	Design Plan shall conform to 60.759 (active collection system) or demonstrate sufficiency of proposed alternatives	Y	C	
60.752 (b)(2)(ii)	Install a collection and control system	Y	C	
60.752 (b)(2)(iii)	Route collected gases to a control system.	Y	C	
60.752 (b)(2)(iii)(B)	Reduce NMOC emissions by 98% by weight or reduce NMOC outlet concentration to less than 20 ppmv as hexane at 3% O_2, dry basis, as demonstrated by initial performance test within 180 days of start-up.	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.752 (b)(2)(iv)	Operate in accordance with 60.753, 60.755, and 60.756	Y	C	
60.752(c)	Title V Operating Permit Requirements	Y	C	
60.752(c)(1)	Subject date is June 10, 1996 for Landfills new or modified between May 30, 1991 and March 12, 1996	Y	C	
60.753	Operational Standards for Collection and Control Systems	Y	C	
60.753(a)	Operate a Collection System in each area or cell in which:	Y	C	
60.753(a)(1)	Active Cell – solid waste in place for 5 years or more	Y	C	
60.753(a)(2)	Closed/Final Grade – solid waste in place for 2 years or more	Y	C	
60.753(b)	Operate each wellhead under negative pressure unless:	Y	C	
60.753(b)(1)	Fire or increased well temperature or to prevent fire	Y	C	
60.753(b)(2)	Use of geomembrane or synthetic cover (subject to alternative pressure limits)	Y	C	
60.753(b)(3)	Decommissioned well after approval received for shut-down	Y	C	
60.753(c)	Operate each wellhead at < 55 °C, and either < 20% N_2 or < than 5% O_2 (or other approved alternative levels)	Y	C	
60.753(c)(1)	N_2 determined by Method 3C	Y	C	
60.753(c)(2)	O_2 determined by 3A and as described in (2)(i-v)	Y	C	
60.753(d)	Surface Leak Limit is less than 500 ppm methane above background at landfill surface. This section also describes some surface monitoring procedures.	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.753(e)	Vent all collected gases to a control system complying with 60.752(b)(2)(iii). If collection or control system inoperable, shut down gas mover and close all vents within 1 hour	Y	C	
60.753(f)	Operate the control system at all times when collected gas is routed to the control system	Y	C	
60.753(g)	If monitoring demonstrates that 60.753(b), (c), or (d) are not being met, corrective action must be taken	Y	C	
60.754	Test Methods and Procedures	Y	C	
60.754(c)	For PSD, NMOC emissions shall be calculated using AP-42	Y	C	
60.754(d)	Test Methods for Performance Test (Method 18 or 25C)	Y	C	
60.755	Compliance Provisions	Y	C	
60.755(a)	For Gas Collection Systems	Y	C	
60.755(a)(1)	Calculation procedures for maximum expected gas generation flow rate	Y	C	
60.755 (a)(1)(i)	Equation for unknown year-to-year waste acceptance rate	Y	C	
60.755 (a)(1)(ii)	Equation for known year-to-year waste acceptance rate	Y	C	
60.755(a)(2)	Vertical wells and horizontal collectors shall be of sufficient density to meet all performance specifications	Y	C	
60.755(a)(3)	Measure wellhead pressure monthly. If pressure is positive, take corrective action (final corrective action = expand system within 120 days of initial positive pressure reading)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.755(a)(4)	Expansion not required during first 180 days after startup.	Y	C	
60.755(a)(5)	Monitor wellheads monthly for temperature and either nitrogen or oxygen. If readings exceed limits, take corrective action up to expanding system within 120 days of first excess.	Y	C	
60.755(b)	Wells shall be placed in cells as described in Design Plan and no later than 60 days after:	Y	C	
60.755(b)(1)	Five years after initial waste placement in cell, for active cells	Y	C	
60.755(b)(2)	Two years after initial waste placement in cell, for closed/final grade cells.	Y	C	
60.755(c)	Procedures for complying with surface methane standard	Y	C	
60.755(c)(1)	Quarterly monitoring of surface and perimeter	Y	C	
60.755(c)(2)	Procedure for determining background concentration	Y	C	
60.755(c)(3)	Method 21 except probe inlet placed 5-10 cm above ground	Y	C	
60.755(c)(4)	Excess is any reading of 500 ppmv or more. Take corrective action indicated below (i-v).	Y	C	
60.755 (c)(4)(i)	Mark and record location of excess	Y	C	
60.755 (c)(4)(ii)	Repair cover or adjust vacuum. Re-monitor within 10 calendar days.	Y	C	
60.755 (c)(4)(iii)	If still exceeding 500 ppmv, take additional corrective action. Re-monitor within 10 calendar days of 2nd $_{excess}$.	Y	C	
60.755 (c)(4)(iv)	Re-monitor within 1 month of initial excess.	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.755 (c)(4)(v)	For any location with 3 monitored excesses in a quarter, additional collectors (or other approved collection system repairs) shall be operational within 120 days of 1st excess.	Y	C	
60.755(c)(5)	Monitor cover integrity monthly and repair as needed.	Y	C	
60.755(d)	Instrumentation and procedures for complying with 60.755(c).	Y	C	
60.755(d)(1)	Portable analyzer meeting Method 21	Y	C	
60.755(d)(2)	Calibrated with methane diluted to 500 ppmv in air	Y	C	
60.755(d)(3)	Use Method 21, Section 4.4 instrument evaluation procedures	Y	C	
60.755(d)(4)	Calibrate per Method 21, Section 4.2 immediately before monitoring.	Y	C	
60.755(e)	Provisions apply at all times except during startup, shutdown, or malfunction, provided the duration of these shall not exceed 5 days for collection systems or 1 hour for control systems.	Y	C	
60.756	Monitoring of Operations	Y	C	
60.756(a)	For active collection systems, install wellhead sampling port	Y	C	
60.756(a)(1)	Measure gauge pressure in wellhead on a monthly basis	Y	C	
60.756(a)(2)	Measure nitrogen or oxygen concentration in wellhead gas on a monthly basis.	Y	C	
60.756(a)(3)	Measure temperature of wellhead gas on a monthly basis.	Y	C	
60.756(b)	Enclosed combustors shall comply with (b)(1) and (b)(2)	Y	C	
60.756(b)(1)	Temperature monitor and continuous recorder (not required for boilers and process heaters with capacity > 44 MW)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.756(b)(2)	Device that records flow to or bypass of the control device (i or ii below)	Y	C	
60.756 (b)(2)(i)	Install, calibrate, and maintain a device that records flow to the control device at least every 15 minutes.	Y	C	
60.756(e)	Procedures for requesting alternative monitoring parameters	Y	C	
60.756(f)	Monitor surface on a quarterly basis.	Y	C	
60.757	Reporting Requirements	Y	C	
60.757(a)(3)	Amended Design Capacity Report required within 90 days of receiving a permitted increase in design capacity or within 90 days of an annual density calculation that results in a design capacity over the thresholds.	Y	C	
60.757(b)(3)	Sites with collection and control systems operating in compliance with this subpart are exempt from (b)(1) and (b)(2) above.	Y	C	
60.757(c)	Submit a Collection and Control System Design Plan within 1 year of first NMOC emission rate report showing NMOC > 50 MG/year, except as follows	Y	C	
60.757(f)	Submit Annual Reports containing information required by (f)(1) through (f)(6)	Y	C	
60.757(f)(1)	Value and length of time for exceedance of parameters monitored per 60.756(a), (b) or (d)	Y	C	
60.757(f)(2)	Description and duration of all periods when gas is diverted from the control device by a by-pass line	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

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

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.758(b)	Collection and Control Equipment Records (retain for life of control equipment except 5 years for monitoring data)	Y	C	
60.758(b)(1)	Collection System Records	Y	C	
60.758 (b)(1)(i)	Maximum expected gas generation flow rate.	Y	C	
60.758 (b)(1)(ii)	Density of wells and collectors	Y	C	
60.758(b)(2)	Control System Records - enclosed combustors other than boilers or process heaters with heat input > 44 MW	Y	C	
60.758 (b)(2)(i)	Combustion temperature measured every 15 minutes and averaged over the same time period as the performance test	Y	C	
60.758 (b)(2)(ii)	Percent NMOC reduction achieved by the control device	Y	C	
60.758(c)	Records of parameters monitored pursuant to 60.756 and periods of operation when boundaries are exceeded (retain for 5 years).	Y	C	
60.758(c)(1)	Exceedances subject to record keeping are	Y	C	
60.758 (c)(1)(i)	All 3-hour periods when average combustion temperature was more than 28 C below the average combustion temperature during the most recent complying performance test	Y	C	
60.758(c)(2)	Records of continuous flow to control device or monthly inspection records if seal and lock for bypass valves	Y	C	
60.758(d)	Plot map showing location of all existing and planned collectors with a unique label for each collector (retain for life of collection system)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.758(d)(1)	Installation date and location of all newly installed collectors	Y	C	
60.758(d)(2)	Records of nature, deposition date, amount, and location of asbestos or non-degradable waste excluded from control	Y	C	
60.758(e)	Records of any exceedance of 60.753, location of exceedance and re-monitoring dates and data (for wellheads and surface). Retain for 5 years.	Y	C	
60.759	Specifications for Active Collection Systems	Y	C	
60.759(a)	Active wells and collectors shall be at sufficient density	Y	C	
60.759(a)(1)	Collection System in refuse shall be certified by PE to achieve comprehensive control of surface gas emissions	Y	C	
60.759(a)(2)	Collection Systems (active or passive) outside of refuse shall address migration control	Y	C	
60.759(a)(3)	All gas producing areas shall be controlled except as described below (i-iii).	Y	C	
60.759(b)	Gas Collection System Components	Y	C	
60.759(b)(1)	Must be constructed of PVC, HDPE, fiberglass, stainless steel, or other approved material and of suitable dimensions to convey projected gas amounts and withstand settling, traffic, etc.	Y	C	
60.759(b)(2)	Collectors shall not endanger liner, shall manage condensate and leachate, and shall prevent air intrusion and surface leaks.	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.759(b)(3)	Header connection assemblies shall include positive closing throttle valve, seals and couplings to prevent leaks, at least one sampling port, and shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other approved materials.	Y	C	
60.759(c)	Gas Mover Equipment shall be sized to handle maximum expected gas generation rate over the intended period of use.	Y	C	
60.759(c)(1)	For existing systems, flow data shall be used to project maximum flow rate.	Y	C	
60.759(c)(2)	For new systems, gas generation rate shall be calculated per 60.755(a)(1)	Y	C	
40 CFR Part 62 Subpart F	**Approval and Promulgation of State Plans for Designated Facilities and Pollutants (6/9/03)**			
62.1100	Identification of Plan	Y	C	
62.1115	Identification of Sources	Y	C	
40 CFR Part 63, Subpart A	**National Emission Standards for Hazardous Air Pollutants: General Provisions (4/20/06)**			
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	
63.6(f)	Compliance with non-opacity emission standards	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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 (1/16/03)**			
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)(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 #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
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 #25293				
Part 1	Waste acceptance rate limits (Regulation 2-1-301, Cumulative Increase)	Y	C	
Part 2	Particulate emission control measures (Regulations 2-1-403, 6-1-301, and 6-1-305)	Y	C	
Part 3	Fugitive non-methane organic compounds (NMOC) emissions limit (Cumulative Increase and Regulation 2-1-301)	Y	C	
Part 4	Concentration limit of NMOC from S-15 (Cumulative Increase and Regulation 2-1-301)	Y	C	
Part 5	Control requirements for collected landfill gas (Regulation 8-34-301)	Y	C	
Part 6	Landfill gas collection system description (Regulations 2-1-301, 8-34-301.1, 8-34-304, and 8-34-305)	Y	I	There were unplanned shutdowns of the GCCS" that did not meet the exemption criteria in Rule 8-34-113 on - May 3, 2022 from 03:16 to 09:58; - May 16, 2022 from 11:32 to 20:34; - May 29, 2022 20:44 to May 30,

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
				2022 05:00; - September 5, 2022 at 21:32 to September 6, 2022 07:28; - March 14, 2023 at 11:43 to March 15, 2023 at 18:33 These events included utility outages, power surge/fluctuations, air compressor malfunctions, and an auto valve failure which resulted in shutdowns of the GCCS. These events were reported to the BAAQMD as RCA and breakdown relief was requested.
Part 7	Landfill gas collection system operating requirements (Regulations 8-34-301.1, 8-34-404, 8-34-305, 8-34-414, 8-34-501.5 and 8-34-505)	Y	I	See above.
Part 8	Flare operating restrictions and heat input limits (Cumulative Increase and Regulations 2-1-301 and 8-34-301)	Y	C	
Part 9	Flare temperature limit (Regulations 2-5-301, 8-34-301.3, 8-34-501.3, and 40 CFR 60.756(b)(1))	Y	C	The A-120 Flare was removed from WCCSL and replaced with the A-161 Flare in November 2017. The A-161 Flare was initially started in December 2017. In accordance with Part 9, the A-161 Flare is to operate based on the same limitation as the previous A-120 Flare.
Part 10	Landfill gas sulfur content limit and monitoring requirements (Regulation 9-1-302 and Cumulative Increase)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0015, A008, A0120, A0161
Source Name: Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-120 Landfill Gas Flare (through December 2017). Landfill gas collection system with A-8 Back-Up Landfill Gas Flare and A-161 Landfill Gas Flare (beginning in January 2018)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 11	Annual source test (Regulations 8-34-301.3 and 8-34-412 and CCR 95464(b)(2)(A)(1))	Y	C	
Part 12	Annual landfill gas characterization test (Regulation 2, Rule 5, AB-2588 Air Toxics Hot Spots Act, and Regulation 8-34-412)	Y	C	
Part 13	Toxic compound concentration limits (Regulation 2-5-302 and AB-2588 Air Toxics Hot Spots Act)	N	C	
Part 14	Record keeping requirements (Cumulative Increase, Regulations 2-1-301, 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 15	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	
Part 16	NOx emission limit from Flare A-120 (Cumulative Increase)	Y	C	
Part 17	CO emission limit from Flare A-120 (Cumulative Increase)	Y	C	
Part 18	A-120 shall comply with NMOC emission limit (Cumulative Increase, 8-34-301.3; 40 CFR 60.752(b)(2)(iii)(B))		C	
Part 19	Record keeping of all planned and unanticipated shut downs of A-120 and of temperature excursions. (2-6-501, 8-34-501, 40 CFR 60.758)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

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)**			
1-523	Parametric Monitoring and Record keeping Procedures	N	C	
1-523.1	Reporting requirement for periods of in-operation > 24 hours	Y	C	
1-523.2	Limit on duration of in operation	Y	C	
1-523.3	Reporting requirement for violations of any applicable limits	N	C	
1-523.4	Records of in-operation, 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 (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
6-1-310	Particle Weight Limitation	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	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0037 **Source Name:** S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
6-401	Appearance of Emissions	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	Record keeping Requirement	Y	C	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	C	
8-34-301.1	Continuous Operation	Y	C	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	C	
8-34-301.4	Limits for Other Emission Control Systems	Y	C	
8-34-404	Less than Continuous Operation Petition Contents	Y	C	
8-34-404.1	Monitoring requirements for individual gas collection system components that are subject to less than continuous operation provisions	Y	C	
8-34-404.2	Map showing components that are operating less than continuously	Y	C	
8-34-404.3	Operating, maintenance, and inspection schedule for components that are operating less than continuously	Y	C	
8-34-404.4	Operating conditions for components that are operating less than continuously	Y	C	
8-34-404.5	Renewal requirements apply whenever information submitted pursuant to 8-34-404.1 changes	Y	C	
8-34-412	Compliance Demonstration Tests	Y	C	
8-34-413	Performance Test Report	Y	C	The 2017 source test was performed

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
				on December 4, 2017 for the S-37 IC Engine. The Source Test Report was delivered to the BAAQMD within 45 days of the test date. The 2017 source test of S-37 was delayed because the engine was inoperable as of December 2017, as it was undergoing extensive maintenance. A letter to request an extension of the source test date and to explain the maintenance being performed was submitted to the BAAQMD on August 24, 2017. The S-37 has not been source tested since 2017. It has been inoperable and will be source tested after the engine is rehabilitated and is running again.
8-34-501	Operating Records	Y	C	
8-34-501.2	Emission Control System Downtime	Y	C	
8-34-501.4	Testing	Y	C	
8-34-501.5	Record keeping requirements for components subject to Section 404 less than continuous operating provisions	Y	C	
8-34-501.6	Leak Discovery and Repair Records	Y	C	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	C	
8-34-501.11	Records of Key Emission Control System Operating Parameters	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	
8-34-508	Gas Flow Meter	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0037 **Source Name:** S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-34-509	Key emission control system operating parameters	Y	C	
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**			
9-1-301	Limitations on Ground Level Concentrations	Y	C	
9-1-302	General Emission Limitations	Y	C	
BAAQMD Regulation 9, Rule 2	**Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)**			
9-2-301	Limitations on Hydrogen Sulfide	N	C	
BAAQMD Regulation 9 Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)**			
9-8-302	Emission Limits – Waste Derived Fuel Gas	N	C	
9-8-302.1	Lean-Burn Engines: NOx Emission Limit	N	C	
9-8-302.3	CO Emission Limit	Y	C	
SIP Regulation 9 Rule 8	**Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)**			
9-8-302	Emission Limits- Waste Derived Fuel Gas	Y	C	
9-8-302.1	Lean Burn Engines: NOx Emission Limit	Y	C	
40 CFR Part 60, Subpart A	**Standards of Performance for New Stationary Sources – General Provisions (5/4/98)**			
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.7	Notification and Record Keeping	Y	C	
60.8	Performance Tests	Y	C	The 2017 source test was performed on December 4, 2017 for the S-37 IC Engine. The Source Test Report was delivered to the BAAQMD within 45 days of the test date. The 2017 source test of S-37 was delayed because the engine was inoperable as of December 2017, as it was undergoing extensive maintenance. A letter to request an extension of the source test date and to explain the maintenance being performed was submitted to the BAAQMD on August 24, 2017. The S-37 has not been source tested since 2017. It has been inoperable and will be source tested after the engine is rehabilitated and is running again.
60.11	Compliance with Standards and Maintenance Requirements	Y	C	
60.11(a)	Compliance determined by performance tests	Y	C	
60.11(d)	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 operation 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	
60.13(g)	Requires multiple monitors for multiple stacks	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.14	Modification	Y	C	
60.15	Reconstruction	Y	C	
60.19	General Notification and Reporting Requirements	Y	C	
40 CFR Part 60, Subpart WWW	**Standards of Performance for New Stationary Sources – Standards of Performance for Municipal Solid Waste Landfills (4/10/00)**			
60.752	Standards for Air Emissions from Municipal Solid Waste Landfills	Y	C	
60.752(b)	Comply with paragraph (b)(2) or calculate NMOC emission rate	Y	C	
60.752(b)(2)	Comply with all requirements in sections (b)(2)(i through iv)	Y	C	
60.752 (b)(2)(i)	Submit a collection and control system design plan	Y	C	
60.752 (b)(2)(ii)	Install a collection and control system	Y	C	
60.752 (b)(2)(iii)	Route collected gases to a control system	Y	C	
60.752 (b)(2)(iii)(B)	Reduce NMOC emissions by 98% by weight or reduce NMOC outlet concentration to less than 20 ppmv as hexane at 3% O2, dry basis	Y	C	
60.752 (b)(2)(iv)	Operate in accordance with 60.753, 60.755, and 60.756	Y	C	
60.753	Operational Standards for Collection and Control Systems	Y	C	
60.753(e)	Vent all collected gases to a control system complying with 60.752(b)(2)(iii)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.753(f)	Operate the control system at all times when collected gas is Routed to the control system	Y	C	
60.754	Test Methods and Procedures	Y	C	
60.754(d)	Test Methods for Performance Test (Method 18 or 25C)	Y	C	
60.755	Compliance Provisions	Y	C	
60.755(e)	Provisions apply at all times except during startup, shutdown, or malfunction, provided the duration of these shall not exceed 5 days for collection systems or 1 hour for control systems	Y	C	
60.756	Monitoring of Operations	Y	C	
60.756(d)	Approval of other control devices	Y	C	
60.756(e)	Procedures for requesting alternative monitoring parameters	Y	C	
60.757	Reporting Requirements	Y	C	
60.757(c)	Submit a Collection and Control System Design Plan	Y	C	
60.757(e)	Submit Equipment Removal Report 30 days prior to removal or cessation of operation of the control equipment	Y	C	
60.757(f)	Submit Annual Reports containing information required by (f)(1), (f)(2), and (f)(3)	Y	C	
60.757(f)(1)	Value and length of time for exceedance of parameters monitored per 60.756(b) or (e)	Y	C	
60.757(f)(2)	Description and duration of all periods when gas is diverted from the control device by a by-pass line	Y	C	
60.757(f)(3)	Description and duration of all periods when control device was not operating for more than 1 hour	Y	C	
60.758	Recordkeeping Requirements	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
60.758(b)	Control Equipment Records (Control Device Vendor Specifications) Note: Subsections 1 through 4 do not apply.	Y	C	
60.758(c)	Records of parameters monitored pursuant to 60.756 (e)	Y	C	
60.758(e)	Records of any exceedance of 60.753(e) or (f)	Y	C	
40 CFR Part 62 Subpart F	**Approval and Promulgation of State Plans for Designated Facilities and Pollutants (6/9/03)**			
62.1100	Identification of Plan	Y	C	
62.1115	Identification of Sources	Y	C	
40 CFR Part 63, Subpart A	**National Emission Standards for Hazardous Air Pollutants: General Provisions (4/20/06)**			
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	
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 (1/16/03)**			
63.1945	When do I have to comply with this subpart?	Y	C	
63.1945(b)	Compliance date for existing affected landfills	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
63.1955	What requirements must I meet?	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	
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 # 17812				
Part 1	Fuel Restrictions (Offsets and Cumulative Increase)	Y	C	
Part 2	Heat Input Limits (Offsets and Cumulative Increase)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0037
Source Name: S-37 Internal Combustion Lean Burn Engines

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 3	Continuous operating requirement (Regulation 8-34-301.1)	Y	C	
Part 4	Diverter Valve Requirement (Regulation 8-34-301)	Y	C	
Part 5	NO_x Emission Limit (BACT, Offsets)	Y	C	
Part 6	CO Emission Limit (BACT)	Y	C	
Part 7	Gas flow meter and recorder requirement (Offsets and Cumulative Increase)	Y	C	
Part 8	Annual source test requirement (BACT and Regulations 8-34-301.4, 8-34-412, 9-8-302.1, and 9-8-302.3)	Y	C	The 2017 source test was performed on December 4, 2017 for the S-37 IC Engine. The Source Test Report was delivered to the BAAQMD within 45 days of the test date. The 2017 source test of S-37 was delayed because the engine was inoperable as of December 2017, as it was undergoing extensive maintenance. A letter to request an extension of the source test date and to explain the maintenance being performed was submitted to the BAAQMD on August 24, 2017. The S-37 has not been source tested since 2017. It has been inoperable and will be source tested after the engine is rehabilitated and is running again.
Part 9	Record keeping requirements (BACT, Offsets, Cumulative Increase, and Regulations 2-1-301, 2-6-501, and 8-34-501)	Y	C	
Part 10	Engine Temperature Limit and Temperature Monitoring Requirements (Regulations 8-34-301, 8-34-501.11, 8-34-509)	Y	C	NOTE: Temperature requirements were changed as of January 1, 2020 by AN 29522.

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0120, 0130, A14, A15, A16, A17, A18, A19
Source Name: S-120 Air Stripper, S-130 Standby Air Stripper, A-14, A-15, A-16, A-17, A-18, and A-19 Carbon Adsorber

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 47	**Air Stripping and Soil Vapor Extraction Operations (6/15/05)**			
8-47-301	Emission Control Requirement, Specific Compounds	Y	C	
8-47-302	Organic Compounds	Y	C	
8-47-501	Records	Y	C	
8-47-501.1	Water Analysis Records	Y	C	
8-47-501.2	Vapor Monitoring Results	Y	C	
8-47-601	Air Stripper Water Sampling	Y	C	
BAAQMD Condition #23316			C	
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-47-301-302)	Y	C	
Part 3	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 4	Replacement requirements for second to last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 5	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Requirements for Carbon Replacement Inventory (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0120, 0130, A14, A15, A16, A17, A18, A19
Source Name: S-120 Air Stripper, S-130 Standby Air Stripper, A-14, A-15, A-16, A-17, A-18, and A-19 Carbon Adsorber

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0050, A50
Source Name: Solid Waste Transfer Station and A-50 Water Mist Station

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #22792				
Part 1	Waste Acceptance Rate Limits (Cumulative Increase)	Y	C	
Part 2	Requires That Mixed Wastes, Green Material and Wood Waste Be Removed Within 48 Hours of Being Received (Regulation 1-301)	Y	C	
Part 3	Visible Emissions – Particulate Fallout Restrictions for Operations at the Transfer Station (Regulations 1-301, 6-1-301 and 6-1-305)	Y	C	
Part 4	Visible Emissions – Maintenance and Cleaning Requirements for Roadways (Regulations 6-1-301 and 6-1-305)	Y	C	
Part 5	Requires that, within 90 days after start-up of S50 transfer station, waste is no longer accepted at S-15 landfill. (Cumulative Increase and Regulation 2-2-410)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0050, A50
Source Name: Solid Waste Transfer Station and A-50 Water Mist Station

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 6	Limitations on the Vehicle Traffic to S-50. (BACT and Cumulative Increase)	Y	C	
Part 7	Recordkeeping Requirements for Waste Accepted and Vehicle Traffic to S-50 (Cumulative Increase, Regulations 2-6-501, and 6-1-305)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0069, 0070, A12, A13
Source Name: Inlet Storage Tanks #1 and #2; A-12 and A-13 Carbon Adsorbers

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids (10/18/06)**			
8-5-301	Vapor Loss Control Device Requirement	N	C	
8-5-306	Approved Emission Control System Requirement	N	C	
8-5-307	Requirements for Fixed Roof Tanks, Pressure Tanks and Blanketed Tanks	N	C	
8-5-307.1	Fixed roof tank shell condition	N	C	
8-5-307.2	Pressure tank criteria	N	C	
8-5-307.3	Sealing mechanism criteria	N	C	
8-5-328	Tank Degassing Requirements	N	C	
8-5-328.1	Control requirement for tanks > 75 cubic meters	N	C	
8-5-328.2	Tank degassing prohibitions	N	C	
8-5-328.3	Notification and approval requirement	N	C	
8-5-331	Tank Cleaning Requirements	N	C	
8-5-331.1	Agents used to clean tank interior	N	C	
8-5-331.2	Steam cleaning limitations	N	C	
8-5-331.3	Steam cleaning criteria	N	C	
8-5-332	Sludge Handling Requirements	N	C	
8-5-332.1	Sludge container leak limits	N	C	
8-5-322.2	Sludge container gap requirements	N	C	
SIP Regulation 8 Rule 5	Organic Compounds- Storage of Organic Liquids (6/5/2003)	Y	C	
8-5-301	Vapor Loss Control Device Requirement	Y	C	
8-5-306	Approved Emission Control System Requirement	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0069, 0070, A12, A13
Source Name: Inlet Storage Tanks #1 and #2; A-12 and A-13 Carbon Adsorbers

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-5-307	Requirements for Pressure Tanks and Blanketed Tanks	Y	C	
8-5-328	Tank Degassing Requirements	Y	C	
8-5-328.1	Control requirements for tanks > 75 cubic meters	Y	C	
8-5-328.2	Tank degassing prohibitions	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-5-301)	Y	C	
Part 3	Operating requirements for Oil/Water Separators (Regulations 8-8-301 and 8-8-303)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 5	Replacement requirements for second to last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0071, 0072
Source Name: Primary Oil Water Separator and Secondary Separator/Emulsion Breaker

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 8	**Organic Compounds – Wastewater (Oil-Water) Separators (9/15/04)**			
8-8-301	Waste Water Separators Greater than 760 Liters Per Day and Smaller than 18.9 liters per second	Y	C	
8-8-301.3	OC Vapor Recovery System	N	C	
8-8-303	Gauging and Sampling Devices	Y	C	
8-8-304	Sludge-dewatering Unit	N	C	
8-8-305	Oil-Water Separator And/Or Air Floatation Unit Slop Oil Vessels	N	C	
8-8-501	API Separator or Air Flotation Bypassed Wastewater Records	N	C	
8-8-503	Inspection and Repair Records	Y	C	
8-8-504	Portable Hydrocarbon Detector	Y	C	
SIP Regulation 8, Rule 8	**Organic Compounds – Wastewater (Oil-Water) Separators (8/29/94)**	Y	C	
8-8-301.3	OC Vapor Recovery System	Y	C	
8-8-304	Sludge-dewatering Unit	Y	C	
8-8-305	Oil-Water Separator And/Or Air Floatation Unit Slop Oil Vessels	Y	C	
8-8-501	API Separator or Air Flotation Bypassed Wastewater Records	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0071, 0072
Source Name: Primary Oil Water Separator and Secondary Separator/Emulsion Breaker

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-5-301)	Y	C	
Part 3	Operating requirements for Oil/Water Separators (Regulations 8-8-301 and 8-8-303)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0111, A111
Source Name: Concrete Crusher, and A-111 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23350				
Part 1	Permit requirement for future power source (Regulation 2-1-301 and 302)	Y	C	
Part 2	Concrete Throughput Limit (Cumulative Increase)	Y	C	
Part 3	Abatement Requirement (Cumulative Increase)	Y	C	
Part 4	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 5	Dust Suppressant Requirement on Unpaved Roads (Cumulative Increase)	N	C	
Part 6	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0112, A112
Source Name: Crushed Concrete Screener, and A-112 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23351				
Part 1	Permit requirement for future power source (Regulation 2-1-301 and 302)	Y	C	
Part 2	Concrete Throughput Limit (Cumulative Increase)	Y	C	
Part 3	Abatement Requirement (Cumulative Increase)	Y	C	
Part 4	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 5	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0113, A113
Source Name: Concrete/Asphalt Storage Piles, and A-113 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23352				
Part 1	Concrete and Asphalt Throughput Limits (Cumulative Increase)	Y	C	
Part 2	Abatement Requirement (Cumulative Increase)	Y	C	
Part 3	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 4	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0114, A114
Source Name: Conveyers (Crushed Concrete), and A-114 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23353				
Part 1	Permit requirement for future power source (Regulation 2-1-301 and 302)	Y	C	
Part 2	Concrete Throughput Limit (Cumulative Increase)	Y	C	
Part 3	Abatement Requirement (Cumulative Increase)	Y	C	
Part 4	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 5	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0115, A115
Source Name: S-115 Wood/Yard Waste Shredder (Tub Grinder), and A-115 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23354				
Part 1	Permit requirement for future power source (Regulation 2-1-301 and 302)	Y	C	
Part 2	Wood Waste Throughput Limit (Cumulative Increase)	Y	C	
Part 3	Shredder Abatement Requirement (Cumulative Increase)	Y	C	
Part 4	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 5	Unloading, stockpiling and loading Abatement Requirement (Cumulative Increase)	Y	C	
Part 6	Permit requirement for any required future modifications to controls emissions (Regulation 1-301)	N	C	
Part 7	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0116, A116
Source Name: S-116 Wood Waste Screener, and A-116 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23355				
Part 1	Permit requirement for power source for this unit (Regulation 2-1-301 and 302)	Y	C	
Part 2	Wood Waste Throughput Limit (Cumulative Increase)	Y	C	
Part 3	Abatement Requirement (Cumulative Increase)	Y	C	
Part 4	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 5	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A117
Source Name: Composting Operation, and A-117 Water Spray Truck (05/01/16 through 11/22/2016)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23356				
Part 1	Wood Waste Throughput Limit (Cumulative Increase)	Y	C	
Part 2	Abatement Requirement (Cumulative Increase)	Y	C	
Part 3	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301 and Regulation 1-301)	Y	C	
Part 4	Dust Suppressant and Watering Requirements on Unpaved Roads (Cumulative Increase)	Y	C	
Part 5	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0118, A118
Source Name: S-118 Crushing of Asphalt Debris, A-118 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23357				
Part 1	Asphalt Throughput Limit (Cumulative Increase)	Y	C	
Part 2	Abatement Requirement (Cumulative Increase)	Y	C	
Part 3	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301, and Regulation 1-301)	Y	C	
Part 4	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A119
Source Name: Commercial Green Waste and Food Waste Composting Covered Aerated Static Pile (CASP) Method, and A119 Active Biofilter

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 1	**General Provisions and Definitions**			
1-301	Public Nuisance	N	C	
BAAQMD Regulation 2, Rule 5	**New Source Review of Toxic Air Contaminants**			
2-5-302	Project Risk Requirement	N	C	
BAAQMD Regulation 2, Rule 6	**Major Facility Review**			
2-6-423	District Procedures for Synthetic Minor Operating Permits	Y	C	
BAAQMD Regulation 6, Rule 1	**General Requirements**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	N	C	
BAAQMD Regulation 7, Rule 1	**Odorous Substances**	N	C	
BAAQMD Regulation 8, Rule 2	**Miscellaneous Operations**			
8-2-301	Miscellaneous Operations	N	C	
Application No. 25019, Authority to Construct, BAAQMD	**Commercial Green Waste and Food Waste Composting (Issued 12/18/15, Start-up Notification submitted 11/15/16-Operations Started on 11/23/16)**			

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A119
Source Name: Commercial Green Waste and Food Waste Composting Covered Aerated Static Pile (CASP) Method, and A119 Active Biofilter

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Condition 26088				
Part 1	Feedstock Material Throughput Limit (BACT, Offsets, and Cumulative increase)	Y	C	
Part 2	Covered Aerated Static Pile (CASP) Requirement (BACT, Offsets, and Cumulative increase)	Y	C	
Part 3	Additional Food Waste Usage Requirements (BACT, Offsets, Cumulative Increase; Regulation 2-5-302, and Regulation 2-6-423)	Y	C	
Part 4	Methanol Emissions Limit (Regulation 2-6-423)	Y	C	
Part 5	Total Carbon Emissions Limit (Regulation 8-2-301)	Y	C	
Part 6	Fleet Vehicle Limitations (Cumulative increase)	Y	I	During the previous 12-months, the highest 12-month rolling total unpaved miles totaled 23,152.5 miles and the paved miles totaled 6,324.5 miles, which was over the permitted limits. However, on September 7, 2017, WCCSL submitted a change of permit conditions (COPC) to the BAAQMD to increase the allowable vehicle miles traveled. WCCSL is continuing to work with the BAAQMD to ensure this application is processed as quickly as possible.
Part 7	Abatement Requirement (Regulation 1-301 and 6-1-305)	Y	C	
Part 8	Dust Suppressant Requirement on Unpaved Roads (Regulation 1-301 and 6-1-305, BACT)	Y	C	
Part 9	Visible Emissions Limitation (Regulation 1-301, 6-1-301, and Regulation 6-1-305)	Y	C	
Part 10	Best Management Practices (BMP) for Aerated Static Pile Requirements (BMP for BACT)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A119
Source Name: Commercial Green Waste and Food Waste Composting Covered Aerated Static Pile (CASP) Method, and A119 Active Biofilter

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 11	Green Waste Process and Incorporation Limitation (BMP for BACT, Regulation 1-301, and 7-1)	Y	C	
Part 12	CASP Disturbance Requirement (BMP for BACT)	Y	C	
Part 13	CASP Parameter Requirements (BMP for BACT)	Y	C	
Part 14	A-119 Biofilter Parameter Requirements (BMP for BACT)	Y	C	
Part 15	Liquid Handling Requirement (BMP for BACT)	Y	C	
Part 16	Material Storage Area Cleaning Requirement (BMP for BACT)	Y	C	
Part 17	Additional Control Measure Requirement (Regulation 1-301)	Y	C	
Part 18	Recordkeeping Procedures (BACT, Offsets, and Cumulative Increase)	Y	C	
Part 19	Compliance Testing Requirement - 2-4 (BACT, Offsets, and Cumulative Increase)	Y	C	In accordance with authority to construct (ATC) A/N 25019, Condition Number 26088, Parts 19 and 21, the initial source test shall be initiated within 60 days of the start- up. The CASP "start-up" was on November 22, 2016, annual source testing has been conducted since 2017. The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with application number A/N 25019, Condition Number 26088, Part 3 for limits of precursor organic compounds (POC) and ammonia (NH3).

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A119
Source Name: Commercial Green Waste and Food Waste Composting Covered Aerated Static Pile (CASP) Method, and A119 Active Biofilter

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 20	Compliance Testing Requirement - Methanol (BACT, Offsets, and Cumulative Increase)	Y	C	The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with A/N 25019, Condition Number 26088, Part 3 for limits of POCs and NH3.
Part 21	Compliance Testing Requirement - Total Carbon (8-2-301)	Y	C	The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with A/N 25019, Condition Number 26088, Part 3 for limits of POCs and NH3.
Part 22	Compliance Testing Requirement - Vehicle Fleet (Cumulative Increase)	Y	C	The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with A/N 25019, Condition Number 26088, Part 3 for limits of POCs and NH3.

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0117, A119
Source Name: Commercial Green Waste and Food Waste Composting Covered Aerated Static Pile (CASP) Method, and A119 Active Biofilter

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 23	Compliance Testing Requirement - Dust Mitigation (BACT, Regulation 1-301, and 6-1-305)	Y	C	The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with A/N 25019, Condition Number 26088, Part 3 for limits of POCs and NH3.
Part 24	Compliance Testing Requirement - BMPs for BACT (BMP for BACT)		C	The 2019 CASP Source Test was conducted from May 14, 2019 through May 16, 2019. The Source Test Report was submitted to the BAAQMD on August 14, 2019, which indicated compliance with A/N 25019, Condition Number 26088, Part 3 for limits of POCs and NH3.

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0118, A118
Source Name: Crushing of Asphalt Debris, and A-118 Water Spray System

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/5/07)**			
6-1-301	Ringelmann No. 1 Limitation	N	C	
6-1-305	Visible Particles	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	
6-401	Appearance of Emissions	Y	C	
BAAQMD Condition #23357				
Part 1	Asphalt Throughput Limit (Cumulative Increase)	Y	C	
Part 2	Abatement Requirement (Cumulative Increase)	Y	C	
Part 3	Visible Emissions Limitation (Regulation 6-1-301, SIP Regulation 6-301, and Regulation 1-301)	Y	C	
Part 4	Recordkeeping Requirement (Cumulative Increase and Regulation 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0120, 0130, A14, A15, A16, A17, A18, A19
Source Name: Air Stripper and Standby Air Stripper; A-14, A-15, A-16, A-17, A-18, and A-19 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 47	**Air Stripping and Soil Vapor Extraction Operations (6/15/05)**			
8-47-301	Emission Control Requirement, Specific Compounds	Y	C	
8-47-302	Organic Compounds	Y	C	
8-47-501	Records	Y	C	
8-47-501.1	Water Analysis Records	Y	C	
8-47-501.2	Vapor Monitoring Results	Y	C	
8-47-601	Air Stripper Water Sampling	Y	C	
BAAQMD Condition #23316				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-47-301-302)	Y	C	
Part 3	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 4	Replacement requirements for second to last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 5	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Requirements for Carbon Replacement Inventory (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0120, 0130, A14, A15, A16, A17, A18, A19
Source Name: Air Stripper and Standby Air Stripper; A-14, A-15, A-16, A-17, A-18, and A-19 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Address: 1 Parr Boulevard
Source #: 074, 0123, 0140, 0142, 0145, 0146, 0151, 0155, A20, A21

Site Name: West Contra Costa Sanitary Landfill
City: Richmond, CA
Source Name: Clarifier Holding Tank, Clarifier Holding (Feed) Tank, Waste Oil Tank, E-22R Area Tank, Pre-Treatment Inlet Feed Tank, Waste Oil Tank, and Oil Sludge Thickener; A-20 and A-21 Carbon Vessels

Reporting Period: 05/01/2022 to 04/30/2023
Zip Code: 94801

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 2	**Organic Compounds-Miscellaneous Operation (7/20/05)**			
8-2-301	Miscellaneous Operations	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-5-301)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0141, A20, A21
Source Name: Inlet Feed High Density Linear Polyethylene (HDLPE) Tank; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids (11/27/02)**			
8-5-301	Vapor Loss Control Device Requirement	N	C	
8-5-306	Approved Emission Control System Requirement	N	C	
8-5-307	Requirements for Fixed Roof Tanks, Pressure Tanks and Blanketed Tanks	N	C	
8-5-307.1	Fixed roof tank shell condition	N	C	
8-5-307.2	Pressure tank criteria	N	C	
8-5-307.3	Sealing mechanism criteria	N	C	
8-5-328	Tank Degassing Requirements	N	C	
8-5-328.1	Control requirement for tanks > 75 cubic meters	N	C	
8-5-328.2	Tank degassing prohibitions	N	C	
8-5-328.3	Notification and approval requirement	N	C	
8-5-331	Tank Cleaning Requirements	N	C	
8-5-331.1	Agents used to clean tank interior	N	C	
8-5-331.2	Steam cleaning limitations	N	C	
8-5-331.3	Steam cleaning criteria	N	C	
8-5-332	Sludge Handling Requirements	N	C	
8-5-332.1	Sludge container leak limits	N	C	
8-5-322.2	Sludge container gap requirements	N	C	
SIP Regulation 8 Rule 5	Organic Compounds- Storage of Organic Liquids (6/5/2003)	Y	C	
8-5-301	Vapor Loss Control Device Requirement	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0141, A20, A21
Source Name: Inlet Feed High Density Linear Polyethylene (HDLPE) Tank; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-5-306	Approved Emission Control System Requirement	Y	C	
8-5-307	Requirements for Pressure Tanks and Blanketed Tanks	Y	C	
8-5-328	Tank Degassing Requirements	Y	C	
8-5-328.1	Control requirements for tanks > 75 cubic meters	Y	C	
8-5-328.2	Tank degassing prohibitions	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5 and 8-5-301)	Y	C	
Part 3	Operating requirements for Oil/Water Separators (Regulations 8-8-301 and 8-8-303)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 5	Replacement requirements for second to last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0150, A20, A21
Source Name: Clarifier Holding Tank; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 2	**Organic Compounds-Miscellaneous Operation (7/20/05)**			
8-2-301	Miscellaneous Operations	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0153, A153 **Source Name:** HCL (acid) Tank; A-153 Scrubber

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 2, Rule 5	**New Source Review of Toxic Air Contaminants (1/6/10)**	N	C	
BAAQMD Regulation 2, Rule 6	**Monitoring and Records**			
2-6-501	Recordkeeping	Y	C	
BAAQMD Regulation 8, Rule 5	**Organic Compounds, Storage of Organic Liquids (11/27/02)**			
8-5-301	Storage Tank Control Requirements	N	C	
PTO BAAQMD Condition Number 20054				
Part 1	Wastewater throughput limits (Cumulative Increase, Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Regulation 8, Rule 5, Part 301; Cumulative Increase, Regulation 2, Rule 5)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 5	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Requirements for Carbon Replacement Inventory (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5; Regulation 2-6-501)	Y	C	

*S-153 no longer operates at WCCSL. The Title V Permit issued June 1, 2017 no longer lists S-153 as a source.

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0155, A20, A21
Source Name: Oil Sludge Thickener; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 2	**Organic Compounds-Miscellaneous Operation (7/20/05)**			
8-2-301	Miscellaneous Operations	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0156, A20, A21 **Source Name:** Day Tanks (D-1, D-2, D-3); A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids (11/27/02)**			
8-5-301	Storage Tank Control Requirements	N	C	
8-5-306	Approved Emission Control System Requirement	N	C	
8-5-307	Requirements for Fixed Roof Tanks, Pressure Tanks and Blanketed Tanks	N	C	
8-5-307.1	Fixed roof tank shell condition	N	C	
8-5-307.2	Pressure tank criteria	N	C	
8-5-307.3	Sealing mechanism criteria	N	C	
8-5-328	Tank Degassing Requirements	N	C	
8-5-328.1	Control requirement for tanks > 75 cubic meters	N	C	
8-5-328.2	Tank degassing prohibitions	N	C	
8-5-328.3	Notification and approval requirement	N	C	
8-5-331	Tank Cleaning Requirements	N	C	
8-5-331.1	Agents used to clean tank interior	N	C	
8-5-331.2	Steam cleaning limitations	N	C	
8-5-331.3	Steam cleaning criteria	N	C	
8-5-332	Sludge Handling Requirements	N	C	
8-5-332.1	Sludge container leak limits	N	C	
8-5-322.2	Sludge container gap requirements	N	C	
SIP Regulation 8 Rule 5	Organic Compounds- Storage of Organic Liquids (6/5/2003)	Y	C	
8-5-301	Vapor Loss Control Device Requirement	Y	C	
8-5-306	Approved Emission Control System Requirement	Y	C	

Compliance Certification Report

Site #: A1840 **Site Name:** West Contra Costa Sanitary Landfill **Reporting Period:** 05/01/2022 to 04/30/2023

Address: 1 Parr Boulevard **City:** Richmond, CA **Zip Code:** 94801

Source #: 0156, A20, A21 **Source Name:** Day Tanks (D-1, D-2, D-3); A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
8-5-307	Requirements for Pressure Tanks and Blanketed Tanks	Y	C	
8-5-328	Tank Degassing Requirements	Y	C	
8-5-328.1	Control requirements for tanks > 75 cubic meters	Y	C	
8-5-328.2	Tank degassing prohibitions	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 3	Operating requirements for Oil/Water Separators (Regulations 8-8-301 and 8-8-303)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 5	Replacement requirements for second to last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 6	Replacement requirements for last Carbon Adsorber (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 7	Wastewater monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 8	Methane and non-methane measurement method, and Carbon Adsorber monitoring requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5 and 2-6-501)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0157, A20, A21
Source Name: Filter Press Surge Tank; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
BAAQMD Regulation 8, Rule 8	**Organic Compounds – Wastewater (Oil-Water) Separators (9/15/04)**			
8-8-301	Waste Water Separators Greater than 760 Liters Per Day and Smaller than 18.9 liters per second	Y	C	
8-8-301.3	OC Vapor Recovery System	N	C	
8-8-303	Gauging and Sampling Devices	Y	C	
8-8-304	Sludge-dewatering Unit	N	C	
8-8-305	Oil-Water Separator And/Or Air Floatation Unit Slop Oil Vessels	N	C	
8-8-501	API Separator or Air Flotation Bypassed Wastewater Records	N	C	
8-8-503	Inspection and Repair Records	Y	C	
8-8-504	Portable Hydrocarbon Detector	Y	C	
SIP Regulation 8, Rule 8	**Organic Compounds – Wastewater (Oil-Water) Separators (8/29/94)**	Y	C	
8-8-301.3	OC Vapor Recovery System	Y	C	
8-8-304	Sludge-dewatering Unit	Y	C	
8-8-305	Oil-Water Separator And/Or Air Floatation Unit Slop Oil Vessels	Y	C	
8-8-501	API Separator or Air Flotation Bypassed Wastewater Records	Y	C	
BAAQMD Condition #23220				
Part 1	Wastewater throughput limits (Cumulative Increase and Regulation 2, Rule 5)	Y	C	

Compliance Certification Report

Site #: A1840
Site Name: West Contra Costa Sanitary Landfill
Reporting Period: 05/01/2022 to 04/30/2023
Address: 1 Parr Boulevard
City: Richmond, CA
Zip Code: 94801
Source #: 0157, A20, A21
Source Name: Filter Press Surge Tank; A-20 and A-21 Carbon Vessels

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Continuous or Intermittent	Notes
Part 2	Abatement requirement for POC emissions (Cumulative Increase and Regulation 2, Rule 5)	Y	C	
Part 3	Operating requirements for Oil/Water Separators (Regulations 8-8-301 and 8-8-303)	Y	C	
Part 4	POC leak limit for valves, flanges, and pumps (Cumulative Increase)	Y	C	
Part 9	Record keeping requirements (Cumulative Increase and Regulation 2, Rule 5)	Y	C	