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November 30, 2022

Direction of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

Director of the Air Division, USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Air-3

Subject: Combined 8-34 Semi-Annual Report, 40 CFR Part 63 Subpart AAAA Semi-Annual Report, and Title V Semi-Annual Monitoring 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, and Title V Semi-Annual Monitoring Report 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 May 1, 2022 through October 31, 2022.

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

Prepared for:



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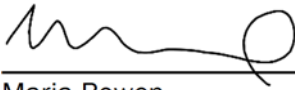
01204082.02 Task 1 | November 2022

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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, and Title V Semi-Annual Monitoring Report for the West Contra Costa Sanitary Landfill in Richmond, California, dated November 2022, was prepared and reviewed by the following:



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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 May 1, 2022 through October 31, 2022 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 000. The major compliance provisions of Subpart WWWW and 000 were replaced as of September 27, 2021 by the NESHAP 40 CFR 63, Subpart AAAA requirements, which essentially implement and enhance provisions of 40 CFR 60, Subparts XXX (which were updated NSPS for Municipal Solid Waste (MSW) landfills promulgated in 2016) as well as removing the SSM Plan requirements. However, because the Title V Permit references Subpart WWWW and SSM reporting, this semi-annual report will continue to include Subpart WWWW and SSM requirements. References to Subpart WWWW and SSM will be removed from all reports after a new Title V Permit is issued removing references to Subpart WWWW 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 000 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 were 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 May 1, 2022 through October 31, 2022.

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.
--	--
--	Submit semi-annual CMS summary reports including required items listed in 40 CFR 63.10(e)(3)(vi)

3.1 MONITORED PARAMETERS

The following information is required to be monitored:

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.

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.756(a), (b), (c), (d)	40 CFR 63.1961(a), (b), (f)
<p>Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C (131 degrees F) to comply with 40 CFR 60.753 (c).</p>	<p>Temperature of the LFG at the wellheads is monitored on a monthly basis. Temperature must be maintained below 55 degrees C (145 degrees F) to comply with 40 CFR 63.1961(a)(3).</p>
<p>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)).</p>	<p>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)).</p>
<p>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)).</p>	<p>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)).</p>
<p>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).</p>	<p>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).</p>
<p>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.</p>	<p>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</p>

NSPS Subpart WWW	Updated NESHAP Subpart AAAA
40 CFR 60.756(a), (b), (c), (d)	40 CFR 63.1961(a), (b), (f)
	except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (in compliance with 40 CFR 63.1961(h)).

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 thirty-three (33) occasions for a total of 84.03 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 four events. These events included utility outages, power surge/ fluctuations, and air compressor malfunctions, which resulted in shutdowns of the GCCS that occurred on:

- May 3, 2022 from 03:16 to 09:58 (power surge -IDs 08H25 and 08H26);
- May 16, 2022 from 11:32 to 20:34 (utility outage – IDs 08H71 and 08H72);
- May 29, 2022 from 20:44 to May 30, 2022 05:00 (power surge – IDs 08H98 and 08H99); and
- September 5, 2022 from 21:32 to September 6, 2022 07:28 (power surge – IDs 08L52 and 08L53).

These events were reported to the BAAQMD as reportable compliance activities (RCA) and breakdown relief was requested. Due to the short duration of these events, there is no reason to believe there were any excess LFG surface emissions during these GCCS downtimes.

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 84.03 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 4,416 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 4,416 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 in 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 May 1, 2022 through October 31, 2022, 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 May 1, 2022 through October 31, 2022, 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, 2022 source test report, summarizing the test results for the flares, was included in the May 2022 SAR.

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 D** and are available for review at the site.

4.2.1 Second 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 April 25, 2022. No component leaks above 1,000 ppm_v were detected at the flare station, wellfield, or LFGTE facility during second quarter 2022 monitoring event. These results are included in **Appendix D**.

4.2.2 Third Quarter 2022 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 July 21, 2022. No component leaks above 1,000 ppm_v were detected at the flare station, wellfield, or LFGTE facility during third quarter 2022 monitoring event. These results are included in **Appendix D**.

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 17, 2021 to demonstrate compliance with the control efficiency standard of 98 percent NMOC destruction efficiency or outlet concentration of 30 ppm_v of NMOC as methane, 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 2021 source test was measured to be 99.998 percent by weight, and the NMOC as methane concentration in the flare outlet was <2.4 ppm_v. As such, Flare A-161 is in compliance with the aforementioned rules.

Excerpts from the A-161 Flare December 2021 source test report dated January 27, 2022, summarizing the test results, were included in the previous report. The next test is scheduled for December 16, 2022, which is outside of this reporting period.

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 D**.

4.4.1 Second Quarter 2022 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 500 ppm_v above background on April 25, May 5, and 25, 2022. During the second quarter 2022 monitoring event, one (1) location exceeded the 500 ppm_v surface emissions maximum

concentration. The location had returned to compliance by the required first 10-Day and 30-day follow-up monitoring that was performed on May 5, and 25, 2022, respectively. As all locations return to compliance, subsequent re-monitoring was not required.

The results of the second quarter 2022 monitoring event is provided in **Appendix D**.

4.4.2 Third Quarter 2022 Monitoring

SCSFS personnel monitored the landfill surface for leaks with a methane concentration of greater than 25 ppm_v and 500 ppm_v on July 21, 2022. No surface emissions in excess of 500 ppm_v were detected during the third quarter 2022 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 third quarter 2022 monitoring event is provided in **Appendix D**.

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 E** 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 reporting period. This well will be brought back under negative pressure by the applicable compliance dates and compliance will be documented in the next semi-annual report.

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 WCLF601D, WCLF0807, WCLF082, WCLF0832, WCLFH01A, WCLFH02A, WCLFH04B, WCLFH05A, WCLFH08B, WCLFH09B, and WCLFR006.

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 000 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 WCLF0827, WCLF0829, WCLF0847, WCLF0857, WCLFH02A, WCLFH05A, WCLFH07B, WCLFH08A, and WCLFH10A were operating with an oxygen concentration above their respective 5% or 15% limits. All of these wells were back in compliance 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 E** 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, 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:

- May 3, 5, 7, 9, 12, 16, 17, 19, 23, and 31;
- June 1, 2, 3, 6, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 22, 23, 24, 27, 28, 29, and 30;
- July 1, 6, 8, 12, 14, 20, 22, 25, 26, 28, and 29;
- August 1, 4, 8, 11, 12, 15, 16, 18, 22, 23, 24, 25, 29, and 31;
- September 1, 6, 7, 8, 12, 14, 19, 20, 22, 23, 26, and 29; and
- October 5, 11, 19, 26 and 31.

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

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 WIP 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 LIQUIDS ADDITION REPORT

40 CFR 62.16724(l) requires documentation and reporting for the addition of liquids or leachate recirculation. The landfill has not injected liquid in the last 10 years, nor injected liquids during the

reporting period. Therefore, there were zero (0) volumes of liquids injected and zero (0) acres of area for liquids injection.

4.10 24 HOUR HIGH TEMPERATURE

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

4.11 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 NESHAPs 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 May 1, 2022 through October 31, 2022 are documented below.

- During the reporting period, the GCCS had thirty-three (33) SSM events. Details of these events are included in **Table 1a**.
- During the reporting period, A-161 Flare had thirty-three (25) SSM events. Details of these events are included in **Table 1b**.
- During the reporting period, A-8 Flare had no SSM events. Details of these events are included in **Table 1c**.
- The S-6, S-5 and S-37 Engines did not operate during the reporting period. The downtime logs provided in **Appendix C**.
- During the reporting period, thirteen (13) wellfield SSM events occurred. In addition, there were nine (9) wells that remained offline at 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 May 1, 2022 through October 31, 2022 reporting period.

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

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

Tables

Table 1a. GCCS Downtime
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

GCCS Shutdown	Restarted	Downtime Hours	Reason for Downtime	Corrective Actions Taken
5/2/22 13:02	5/2/22 13:40	0.6	Flare Maintenance (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.
5/3/22 3:16	5/3/22 9:58	6.7	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08H25 and 08H26)	Flare was inspected and adjusted before the technician manually re-started the flare.
5/4/22 13:46	5/4/22 17:12	3.4	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.
5/16/22 11:32	5/16/22 20:34	9.0	Utility Outage, Downed Power Line (RCA submitted, RCA IDs 08H71 and 08H72)	Flare was inspected and adjusted before returning to service once power was restored.
5/27/22 11:06	5/27/22 12:56	1.8	Flare Maintenance (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.
5/29/22 20:44	5/30/22 5:00	8.3	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08H98 and 08H99)	Flare was inspected and adjusted before the technician manually re-started the flare.
6/10/22 8:02	6/10/22 8:08	0.1	Blower Swap (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.
6/16/22 9:32	6/16/22 9:38	0.1	Blower Swap (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.
6/24/22 15:34	6/24/22 16:40	1.1	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.
6/25/22 0:32	6/25/22 0:34	0.0	Knock Out Pot High Liquids Shutdown (116 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.
6/25/22 18:06	6/25/22 18:26	0.3	Knock Out Pot High Liquids Shutdown (116 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.
6/25/22 19:02	6/25/22 19:08	0.1	Knock Out Pot High Liquids Shutdown (116 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.
6/25/22 21:32	6/26/22 9:06	11.6	Knock Out Pot High Liquids Shutdown (116 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.
6/27/22 9:24	6/27/22 10:14	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.
6/27/22 10:20	6/27/22 10:52	0.5	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.
6/27/22 11:38	6/27/22 11:48	0.2	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.
7/2/22 12:26	7/2/22 12:34	0.1	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.
7/5/22 4:22	7/5/22 4:28	0.1	Knock Out Pot High Liquids Shutdown (116 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.
7/26/22 14:20	7/26/22 15:44	1.4	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.
7/29/22 19:42	7/29/22 21:26	1.7	Knock Out Pot High Liquids Shutdown (116 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.
8/8/22 11:38	8/8/22 11:46	0.1	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.
8/30/22 16:12	8/30/22 16:40	0.5	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.
9/1/22 13:04	9/1/22 13:16	0.2	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.
9/5/22 21:32	9/6/22 7:28	9.9	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08L52 and 08L53)	Flare was inspected and adjusted before the technician manually re-started the flare.
9/6/22 12:54	9/6/22 13:00	0.1	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.
9/12/22 16:42	9/12/22 16:50	0.1	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.
9/12/22 17:36	9/12/22 18:20	0.7	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.
9/13/22 12:02	9/13/22 12:24	0.4	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.
9/14/22 8:04	9/14/22 10:08	2.1	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.

Table 1a. GCCS Downtime
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

GCCS Shutdown	Restarted	Downtime Hours	Reason for Downtime	Corrective Actions Taken
9/24/22 19:28	9/25/22 14:14	18.8	Condensate Sump Shutdown and Subsequent Servicing (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.
9/28/22 19:16	9/28/22 20:22	1.1	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.
9/30/22 8:02	9/30/22 9:48	1.8	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.
10/5/22 12:10	10/5/22 12:18	0.1	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.
Total:		84.03		

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 events that occurred on 5/3, 5/16, 5/29-5/30, and 9/5-9/6 which involved power outages, power surges, and air compressor malfunctions. 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
(May 1, 2022 through October 31, 2022)**

Shutdown	Startup	Downtime Hours	Reason for Downtime
5/2/22 13:02	5/2/22 13:40	0.6	Flare Maintenance (113 down time)
5/3/22 3:16	5/3/22 9:58	6.7	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08H25 and 08H26)
5/4/22 13:46	5/4/22 17:12	3.4	Maintenance on Pumping System (113 down time)
5/16/22 11:32	5/16/22 20:34	9.0	Utility outage, downed power line (RCA submitted, RCA IDs 08H71 and 08H72)
5/27/22 11:06	5/27/22 12:56	1.8	Flare Maintenance (113 down time)
5/29/22 20:44	5/30/22 5:00	8.3	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08H98 and 08H99)
6/10/22 8:02	6/10/22 8:08	0.1	Blower Swap (113 down time)
6/16/22 9:32	6/16/22 9:38	0.1	Blower Swap (113 down time)
6/24/22 15:34	6/24/22 16:40	1.1	Maintenance on Pumping System (113 down time)
6/25/22 0:32	6/25/22 0:34	0.0	KOP High Liquids Shutdown (116 down time)
6/25/22 18:06	6/25/22 18:26	0.3	KOP High Liquids Shutdown (116 down time)
6/25/22 19:02	6/25/22 19:08	0.1	KOP High Liquids Shutdown (116 down time)
6/25/22 21:32	6/26/22 9:06	11.6	KOP High Liquids Shutdown (116 down time)
6/27/22 9:24	6/27/22 10:14	0.8	Maintenance on Pumping System (113 down time)
6/27/22 10:20	6/27/22 10:52	0.5	Maintenance on Pumping System (113 down time)
6/27/22 11:38	6/27/22 11:48	0.2	Maintenance on Pumping System (113 down time)
7/2/22 12:26	7/2/22 12:34	0.1	Maintenance on Pumping System (113 down time)
7/5/22 4:22	7/5/22 4:28	0.1	KOP High Liquids Shutdown (116 down time)
7/26/22 14:20	7/26/22 15:44	1.4	Maintenance on Pumping System (113 down time)
7/29/22 19:42	7/29/22 21:26	1.7	KOP High Liquids Shutdown (116 down time)
8/8/22 11:38	8/8/22 11:46	0.1	Maintenance on Pumping System (113 down time)
8/30/22 16:12	8/30/22 16:40	0.5	Maintenance on Pumping System (113 down time)
9/1/22 13:04	9/1/22 13:16	0.2	Maintenance on Pumping System (113 down time)
9/5/22 21:32	9/6/22 7:28	9.9	Power Surge, Blower Malfunction (RCA Submitted, RCA IDs 08L52 and 08L53)
9/6/22 12:54	9/6/22 13:00	0.1	Maintenance on Pumping System (113 down time)
9/12/22 16:42	9/12/22 16:50	0.1	Maintenance on Pumping System (113 down time)
9/12/22 17:36	9/12/22 18:20	0.7	Maintenance on Pumping System (113 down time)
9/13/22 12:02	9/13/22 12:24	0.4	Maintenance on Pumping System (113 down time)
9/14/22 8:04	9/14/22 10:08	2.1	Maintenance on Pumping System (113 down time)
9/24/22 19:28	9/25/22 14:14	18.8	Condensate Sump Shutdown and Subsequent Servicing (113 down time)
9/28/22 19:16	9/28/22 20:22	1.1	Maintenance on Pumping System (113 down time)
9/30/22 8:02	9/30/22 9:48	1.8	Maintenance on Pumping System (113 down time)
10/5/22 12:10	10/5/22 12:18	0.1	Maintenance on Pumping System (113 down time)
Total		84.03	

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 5/3, 5/16, 5/29-5/30, and 9/5-9/6 which involved power outages, power surges, and air compressor malfunctions. 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
(May 1, 2022 through October 31, 2022)

Shutdown*	Startup*	Downtime Hours	Reason for Downtime
5/1/2022 0:00	11/1/2022 0:00	4416.00	Flare shutdown to remain as backup control device
Total		4416.00	

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 May 1, 2022 at 00:00 and ending on November 1, 2022 at 00:00, respectively.

**Table 2. Individual Well Startups, Shutdowns and Decommissions
West Contra Costa Sanitary Landfill
May 1, 2022 through October 31, 2022**

Well ID	Shutdown	Start-up	Days Offline	Reason for Shutdown/Startup
Wells in Class I Landfill Wellfield				
WCLFR016	11/23/20 10:26	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLFR012	5/12/21 13:48	9/1/22 11:57	476.92	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
WCLFR015	3/15/21 12:46	10/5/22 13:03	569.01	Temporarily disconnected pursuant to Condition Number 20754 Part 2(c)(iii)
Wells in Class II Landfill Wellfield				
WCLFH09B	10/29/19 8:47	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH02A	4/8/22 12:51	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH04B	5/20/21 12:06	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH01A	4/9/22 9:58	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH08B	11/30/21 12:56	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH05B	5/17/22 16:22	6/10/22 13:24	23.88	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFR006	8/29/22 0:00	NA	Ongoing	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH04A	9/4/22 0:00	9/26/22 12:24	22.52	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH05A	9/14/22 0:00	10/12/22 15:40	28.65	Temporarily disconnected pursuant to Condition Number 25293 Part 7(c)(ii)
WCLFH05B	9/12/22 0:00	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
(May 1, 2022 through October 31, 2022)**

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
WCLF032A	7/8/2022	0.09	7/8/2022	Valve Adjustment	-0.09	7/8/2022		
WCLF034R	6/30/2022	4.63	6/30/2022	Valve Adjustment	-1.09	6/30/2022		
WCLF40AS	4/30/2022	0.61	4/30/2022	Valve Adjustment	0.2	5/7/2022*	In compliance on 5/19/22	RCA
WCLF40AD	4/30/2022	0.37	4/30/2022	Valve Adjustment	0.15	5/7/2022*	In compliance on 5/19/22	RCA
WCLFHO1A	4/29/2022	0.01	4/29/2022	Valve Adjustment	-0.2	5/5/2022		
WCLF40AD	7/29/2022	0.63	7/29/2022	Valve Adjustment	-3.96	8/12/2022		
WCLF40AS	7/29/2022	0.6	7/29/2022	Valve Adjustment	-3.81	8/12/2022		
WCLF0501	10/20/2022	0.41	10/20/2022	Valve Adjustment	-0.47	10/20/2022		
WCLF505A	10/20/2022	0.04	10/20/2022	Valve Adjustment	-0.13	10/20/2022		
WCLF0509	6/30/2022	2.77	6/30/2022	Valve Adjustment	-0.82	6/30/2022		
WCLF0510	10/5/2022	2.74	10/5/2022	Valve Adjustment	2.79	10/5/22*	In compliance on 10/28/22	RCA
WCLF0516	8/22/2022	0.27	8/24/2022	Valve Adjustment	-1.71	8/24/2022		
WCLF0517	8/1/2022	0.26	8/1/2022	Valve Adjustment	-1.59	8/1/2022		
WCLF0601	8/15/2022	0.1	8/15/2022	Valve Adjustment	-0.39	8/15/2022		
WCLF0602	6/30/2022	2.42	6/30/2022	Valve Adjustment	-6.36	6/30/2022		
WCLF0602	8/1/2022	2.61	8/1/2022	Valve Adjustment	-0.74	8/1/2022		
WCLF0603	5/9/2022	0.29	5/19/2022	Valve Adjustment	-4.14	5/19/2022		
WCLF0803	7/29/2022	0.06	7/29/2022	Valve Adjustment	-0.36	7/29/2022		
WCLF0812	9/1/2022	0.01	9/1/2022	Valve Adjustment	-0.79	9/1/2022		
WCLF0820	9/8/2022	0.21	9/8/2022	Valve Adjustment	-0.28	9/8/2022		
WCLF0824	7/1/2022	0.03	7/1/2022	Valve Adjustment	-0.12	7/1/2022		
WCLF0824	7/29/2022	0.26	7/29/2022	Valve Adjustment	0.4	8/4/2022*	In compliance on 9/26/22	RCA
WCLF0826	5/17/2022	0.92	5/17/2022	Taken Offline	0.79	5/17/2022*	In compliance on 6/10/22	RCA
WCLF0827	6/30/2022	1.01	6/30/2022	Valve Adjustment	-0.57	6/30/2022		
WCLF0827	9/26/2022	0.05	9/26/2022	Valve Adjustment	-0.53	9/26/2022		
WCLF0832	9/8/2022	0.2	9/8/2022	Valve Adjustment	-0.87	9/8/2022		
WCLF0833	6/3/2022	0.22	6/3/2022	Valve Adjustment	-0.22	6/3/2022		
WCLF0839	6/30/2022	3.26	6/30/2022	Valve Adjustment	-1.92	6/30/2022		
WCLF0839	9/6/2022	0.26	9/6/2022	Valve Adjustment	0.57	9/6/2022*	In Compliance on 10/12	RCA
WCLF0840	7/8/2022	0.36	7/8/2022	Valve Adjustment	-0.21	7/8/2022		
WCLF0842	6/30/2022	0.36	6/30/2022	Valve Adjustment	0.17	7/8/2022*	In compliance 8/1/22	RCA
WCLF0842	10/5/2022	0.04	10/5/2022	Valve Adjustment	0.18	10/20/22*		RCA
WCLFR016	6/30/2022	0.1	6/30/2022	Valve Adjustment	-0.06	7/6/2022		
WCLFR012	6/30/2022	0.04	6/30/2022	Valve Adjustment	-0.06	7/6/2022		

**Table 3. Wells with Positive Pressure
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)**

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
WCLFR001	10/5/2022	0.66	10/5/2022	Valve Adjustment	-2.48	10/11/2022		
WCLFH09B	7/29/2022	0.19	7/29/2022	Valve Adjustment	-0.08	7/29/2022		
WCLFH09A	7/29/2022	0.29	7/29/2022	Valve Adjustment	-0.41	7/29/2022		
WCLFH07A	7/29/2022	0.04	7/29/2022	Valve Adjustment	-0.12	7/29/2022		
WCLFH07B	10/10/2022	0.52	10/10/2022	Valve Adjustment	-2.62	10/10/2022		
WCLFH08A	7/29/2022	0.09	7/29/2022	Valve Adjustment	-0.8	7/29/2022		
WCLFH08A	9/26/2022	0.09	9/26/2022	Valve Adjustment	-0.38	9/26/2022		
WCLFH08B	8/15/2022	0.3	8/15/2022	Valve Adjustment	-0.22	8/15/2022		
WCLFH05A	7/29/2022	0.33	7/29/2022	Valve Adjustment	-0.29	7/29/2022		
WCLFH05A	9/26/2022	0.03	9/26/2022	Valve Adjustment	-0.26	9/26/2022		
WCLFH06A	6/3/2022	0.14	6/3/2022	Valve Adjustment	-0.09	6/3/2022		
WCLFH06A	7/29/2022	0.57	7/29/2022	Valve Adjustment	-0.21	7/29/2022		
WCLFH06A	9/26/2022	0.31	9/26/2022	Valve Adjustment	-0.16	9/26/2022		
WCLFH04A	8/15/2022	0.24	8/15/2022	Valve Adjustment	-0.1	8/15/2022		
WCLF0860	8/22/2022	0.21	8/22/2022	Valve Adjustment	-0.41	8/22/2022		
WCLF0844	7/8/2022	0.93	7/8/2022	Valve Adjustment	-3.04	7/8/2022		
WCLF0845	6/30/2022	1.14	6/30/2022	Valve Adjustment	-2	6/30/2022		
WCLF0847	6/30/2022	0.33	6/30/2022	Valve Adjustment	-0.03	6/30/2022		
WCLF0849	6/30/2022	0.32	6/30/2022	Valve Adjustment	-2.85	6/30/2022		
WCLF0850	5/17/2022	0.56	5/17/2022	Valve Adjustment	-4.94	5/17/2022		

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
(May 1, 2022 through October 31, 2022)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLF034R	6/17/2022	5.7	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF034R	8/8/2022	8.5	8/8/2022	Adjusted Valve	0.0	8/18/2022	
WCLF042R	8/15/2022	6.0	8/15/2022	Adjusted Valve	2.5	8/15/2022	
WCLF042R	10/28/2022	20.7	10/28/2022	Adjusted Valve	0.4	11/8/2022	In compliance after reporting period
WCLF0501	6/2/2022	8.1	6/2/2022	Adjusted Valve	0.1	6/17/2022	
WCLF0501	8/4/2022	12.0	8/4/2022	Adjusted Valve	4.9	8/4/2022	
WCLF0501	8/25/2022	5.8	8/25/2022	Adjusted Valve	0.0	9/7/2022	
WCLF0501	10/12/2022	14.2	10/12/2022	Adjusted Valve	0.0	10/20/2022	
WCLF0501	11/3/2022	7.6	11/3/2022	Adjusted Valve	0.3	11/8/2022	In compliance after reporting period
WCLF0502	8/4/2022	8.1	8/4/2022	Adjusted Valve	3.8	8/4/2022	
WCLF0502	8/25/2022	9.1	8/25/2022	Adjusted Valve	0.0	9/7/2022	
WCLF0503	8/4/2022	9.4	8/4/2022	Adjusted Valve	4.5	8/4/2022	
WCLF0503	8/31/2022	8.5	8/31/2022	Adjusted Valve	3.4	9/12/2022	
WCLF0504	8/24/2022	7.2	8/24/2022	Adjusted Valve	4.5	8/24/2022	
WCLF0504	10/28/2022	7.5	10/28/2022	Adjusted Valve	4.2	10/28/2022	
WCLF0509	6/17/2022	6.6	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0509	8/22/2022	15.9	8/22/2022	Adjusted Valve	0.0	8/24/2022	
WCLF0510	5/9/2022	6.3	5/9/2022	Adjusted Valve	0.3	5/17/2022	
WCLF0510	8/24/2022	8.9	8/24/2022	Adjusted Valve	4.9	8/24/2022	
WCLF0510	9/23/2022	12.0	9/23/2022	Adjusted Valve	0.6	10/5/2022	
WCLF510D	6/15/2022	7.0	6/15/2022	Adjusted Valve	0.0	6/30/2022	
WCLF510D	10/6/2022	11.7	10/6/2022	Adjusted Valve	4.6	10/6/2022	
WCLF0513	8/8/2022	10.1	8/8/2022	Adjusted Valve	0.0	8/18/2022	
WCLF0519	6/15/2022	5.3	6/15/2022	Adjusted Valve	0.3	6/30/2022	
WCLF519D	7/1/2022	19.4	7/1/2022	Adjusted Valve	18.7	7/14/2022	In compliance on 8/1/22
WCLF0601	10/6/2022	8.3	10/6/2022	Adjusted Valve	2.7	10/6/2022	
WCLF601D	5/19/2022	5.0	5/19/2022	Adjusted Valve	0.0	6/3/2022	
WCLF601D	8/24/2022	9.7	8/24/2022	Adjusted Valve	4.6	8/24/2022	
WCLF601D	10/6/2022	20.0	10/6/2022	Adjusted Valve	16.7	10/19/2022*	
WCLF0602	5/9/2022	5.8	5/9/2022	Adjusted Valve	0.4	5/19/2022	
WCLF0602	6/10/2022	13.5	6/10/2022	Adjusted Valve	0.4	6/30/2022	
WCLF0602	7/29/2022	9.2	7/29/2022	Adjusted Valve	0.2	8/1/2022	
WCLF0602	8/25/2022	20.7	8/25/2022	Adjusted Valve	1.7	9/1/2022	
WCLF0603	6/30/2022	10.1	6/30/2022	Adjusted Valve	0.4	7/1/2022	
WCLF0603	8/31/2022	8.1	8/31/2022	Adjusted Valve	0.0	9/1/2022	
WCLF0603	10/12/2022	17.9	10/12/2022	Adjusted Valve	1.2	10/12/2022	
WCLF0605	8/24/2022	6.6	8/24/2022	Adjusted Valve	4.4	8/24/2022	
WCLF0803	8/31/2022	9.7	8/31/2022	Adjusted Valve	1.0	9/12/2022	
WCLF0806	8/4/2022	5.4	8/4/2022	Adjusted Valve	3.6	8/4/2022	
WCLF0806	10/28/2022	20.0	10/28/2022	Adjusted Valve	0.3	11/8/2022	In compliance after reporting period
WCLF0807	8/31/2022	14.8	8/31/2022	Adjusted Valve	3.3	9/1/2022	

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLF0807	9/19/2022	7.7	9/19/2022	Adjusted Valve	20.2	9/29/2022*	
WCLF0810	8/31/2022	7.4	8/31/2022	Adjusted Valve	0.1	9/1/2022	
WCLF0813	8/25/2022	10.6	8/25/2022	Adjusted Valve	4.8	8/25/2022	
WCLF0816	8/25/2022	14.4	8/25/2022	Adjusted Valve	0.2	9/8/2022	
WCLF0817	8/25/2022	10.7	8/25/2022	Adjusted Valve	0.0	9/1/2022	
WCLF0818	8/24/2022	8.1	8/24/2022	Adjusted Valve	0.1	9/1/2022	
WCLF0819	8/24/2022	5.4	8/24/2022	Adjusted Valve	4.1	8/24/2022	
WCLF0822	8/25/2022	18.4	8/25/2022	Adjusted Valve	0.3	9/7/2022	
WCLF0822	10/6/2022	5.7	10/6/2022	Adjusted Valve	2.3	10/6/2022	
WCLF0824	5/31/2022	19.9	5/31/2022	Adjusted Valve	0.1	6/2/2022	
WCLF0824	10/6/2022	12.0	10/6/2022	Adjusted Valve	11.2	10/19/2022*	
WCLF0825	10/6/2022	5.0	10/6/2022	Adjusted Valve	4.2	10/6/2022	
WCLF0825	10/28/2022	6.3	10/28/2022	Adjusted Valve	0.2	11/8/2022	In compliance after reporting period
WCLF0826	5/5/2022	6.7	5/5/2022	Adjusted Valve	18.8	5/17/2022	In compliance on 6/10/22
WCLF0827	8/15/2022	19.9	8/15/2022	Adjusted Valve	4.4	8/29/2022	
WCLF0827	10/12/2022	20.2	10/12/2022	Adjusted Valve	0.0	10/25/2022	
WCLF0829	10/28/2022	6.6	10/28/2022	Adjusted Valve	0.2	11/8/2022	In compliance after reporting period
WCLF0830	5/31/2022	5.7	5/31/2022	Adjusted Valve	1.8	6/2/2022	
WCLF0830	7/1/2022	5.5	7/1/2022	Adjusted Valve	5.1	7/14/2022	In compliance on 7/28/22
WCLF0832	5/5/2022	17.7	5/5/2022	Adjusted Valve	0.0	5/17/2022	
WCLF0832	6/2/2022	18.8	6/2/2022	Adjusted Valve	0.2	6/10/2022	
WCLF0832	6/17/2022	19.8	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0832	7/8/2022	19.1	7/8/2022	Adjusted Valve	17.6	7/22/2022*	
WCLF0833	5/19/2022	8.3	5/19/2022	Adjusted Valve	0.0	6/3/2022	
WCLF0833	7/8/2022	5.6	7/8/2022	Adjusted Valve	0.3	7/29/2022	
WCLF0833	8/15/2022	5.6	8/15/2022	Adjusted Valve	4.9	8/29/2022	
WCLF0833	10/12/2022	8.8	10/12/2022	Adjusted Valve	1.8	10/25/2022	
WCLF0833	10/28/2022	10.2	10/28/2022	Adjusted Valve	0.0	11/8/2022	In compliance after reporting period
WCLF0838	8/22/2022	13.5	8/22/2022	Adjusted Valve	0.0	9/6/2022	
WCLF0839	6/17/2022	20.0	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0839	8/22/2022	20.6	8/22/2022	Adjusted Valve	0.1	9/6/2022	
WCLF0842	6/17/2022	20.0	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0842	9/22/2022	22.0	9/22/2022	Adjusted Valve	0.4	10/5/2022	
WCLF0844	6/2/2022	5.2	6/2/2022	Adjusted Valve	12.9	6/10/2022	In compliance on 7/8/22
WCLF0844	8/22/2022	8.8	8/22/2022	Adjusted Valve	0.4	9/6/2022	
WCLF0844	10/12/2022	20.7	10/12/2022	Adjusted Valve	0.0	10/20/2022	
WCLF0845	6/17/2022	6.2	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0846	8/25/2022	5.3	8/25/2022	Adjusted Valve	4.6	8/25/2022	
WCLF0847	6/17/2022	7.3	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0849	6/17/2022	5.1	6/17/2022	Adjusted Valve	0.0	6/30/2022	
WCLF0850	6/2/2022	7.6	6/2/2022	Adjusted Valve	0.0	6/17/2022	

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLF0850	7/8/2022	7.7	7/8/2022	Adjusted Valve	4.6	7/20/2022	
WCLF0850	8/8/2022	5.2	8/8/2022	Adjusted Valve	4.9	8/8/2022	
WCLF0850	8/31/2022	5.5	8/31/2022	Adjusted Valve	4.6	8/31/2022	
WCLF0855	8/8/2022	9.1	8/8/2022	Adjusted Valve	3.2	8/8/2022	
WCLF0857	4/26/2022	6.9	4/26/2022	Adjusted Valve	0.0	5/17/2022	
WCLF0857	6/2/2022	6.4	6/2/2022	Adjusted Valve	5.9	6/17/2022	In compliance on 7/20/22
WCLF0857	8/4/2022	6.9	8/4/2022	Adjusted Valve	6.3	8/18/2022	In compliance on 9/26/22
WCLF0857	10/10/2022	6.9	10/10/2022	Adjusted Valve	8.5	10/20/2022	In compliance on 11/3/22
WCLF0860	5/17/2022	6.1	5/17/2022	Adjusted Valve	0.1	6/3/2022	
WCLF0860	7/1/2022	5.1	7/1/2022	Adjusted Valve	3.6	7/14/2022	
WCLFH01A	5/5/2022	16.9	5/5/2022	Adjusted Valve	20.3	5/17/2022	In compliance on 9/26/22
WCLFH01A	10/6/2022	18.8	10/6/2022	Adjusted Valve	16.5	10/19/2022*	
WCLFH01B	5/9/2022	20.4	5/9/2022	Adjusted Valve	16.1	5/19/2022	In compliance on 7/25/22
WCLFH01B	8/1/2022	20.4	8/1/2022	Adjusted Valve	20.8	8/24/2022	In compliance on 9/1/22
WCLFH01B	10/28/2022	20.1	10/28/2022	Adjusted Valve	0.8	11/8/2022	In compliance after reporting period
WCLFH02A	6/30/2022	19.9	6/30/2022	Adjusted Valve	19.9	7/8/2022*	
WCLFH03A	5/9/2022	17.5	5/9/2022	Adjusted Valve	6.4	5/19/2022	
WCLFH03B	10/28/2022	17.3	10/28/2022	Adjusted Valve	8.8	11/8/2022	In compliance after reporting period
WCLFH04A	5/9/2022	17.5	5/9/2022	Adjusted Valve	17.4	5/19/2022	In compliance on 9/26/22
WCLFH04A	10/12/2022	17.3	10/12/2022	Adjusted Valve	2.6	10/12/2022	
WCLFH04A	10/28/2022	20.8	10/28/2022	Adjusted Valve	12.3	11/8/2022	In compliance after reporting period
WCLFH04B	5/7/2022	16.7	5/7/2022	Adjusted Valve	19.8	5/17/2022	In compliance 9/19/22
WCLFH04B	10/28/2022	18.5	10/28/2022	Adjusted Valve	20.7	11/8/2022*	
WCLFH05A	5/19/2022	18.3	5/19/2022	Adjusted Valve	20.5	6/3/2022	In compliance on 9/26/22
WCLFH05A	10/28/2022	20.6	10/28/2022	Adjusted Valve	17.4	11/8/2022*	
WCLFH05B	5/17/2022	20.7	5/17/2022	Adjusted Valve	19.4	6/10/2022	In compliance 10/10/22
WCLFH06A	5/19/2022	15.9	5/19/2022	Adjusted Valve	0.0	6/3/2022	
WCLFH06B	8/1/2022	16.4	8/1/2022	Adjusted Valve	6.7	8/12/2022	
WCLFH06B	10/20/2022	20.4	10/20/2022	Adjusted Valve	0.0	11/8/2022	In compliance after reporting period
WCLFH07A	5/19/2022	15.1	5/19/2022	Adjusted Valve	16.3	6/3/2022	In compliance on 6/10/22
WCLFH07A	7/8/2022	16.4	7/8/2022	Adjusted Valve	14.3	7/29/2022	
WCLFH07A	8/15/2022	18.7	8/15/2022	Adjusted Valve	17.9	8/29/2022	In compliance on 10/12/22
WCLFH08A	8/8/2022	17.6	8/8/2022	Adjusted Valve	17.7	8/12/2022	In compliance on 9/26/22
WCLFH08B	5/7/2022	17.7	5/7/2022	Adjusted Valve	19.9	5/19/2022	In compliance on 8/15/22
WCLFH08B	8/31/2022	20.8	8/31/2022	Adjusted Valve	18.6	9/12/2022*	
WCLFH09A	6/15/2022	20.1	6/15/2022	Adjusted Valve	9.4	6/30/2022	
WCLFH09B	5/7/2022	18.2	5/7/2022	Adjusted Valve	18.8	5/19/2022*	
WCLFH10A	8/8/2022	16.5	8/8/2022	Adjusted Valve	17.8	8/12/2022	In compliance on 9/26/22
WCLFH10B	5/7/2022	18.5	5/7/2022	Adjusted Valve	11.6	5/17/2022	
WCLFH10B	7/29/2022	17.5	7/29/2022	Adjusted Valve	14.2	8/1/2022	
WCLFH10B	8/31/2022	18.1	8/31/2022	Adjusted Valve	9.4	9/1/2022	

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
WCLFR001	5/12/2022	15.5	5/12/2022	Adjusted Valve	0.0	5/16/2022	
WCLFR001	6/22/2022	18.9	6/22/2022	Adjusted Valve	17.7	6/30/2022	In compliance on 8/16/22
WCLFR001	9/7/2022	18.7	9/7/2022	Adjusted Valve	18.4	9/20/2022	In compliance on 9/29/22
WCLFR001	10/11/2022	18.4	10/11/2022	Adjusted Valve	7.9	10/19/2022	
WCLFR001	10/25/2022	16.7	10/25/2022	Adjusted Valve	3.8	10/31/2022	
WCLFR002	5/12/2022	19.0	5/12/2022	Adjusted Valve	20.0	5/23/2022	In compliance on 6/8/22
WCLFR002	6/16/2022	16.4	6/16/2022	Adjusted Valve	19.3	6/30/2022	In compliance on 8/16/22
WCLFR002	9/7/2022	18.9	9/7/2022	Adjusted Valve	18.4	9/20/2022	In compliance on 10/5/22
WCLFR002	10/11/2022	19.4	10/11/2022	Adjusted Valve	7.5	10/19/2022	
WCLFR002	10/25/2022	17.7	10/25/2022	Adjusted Valve	4.5	10/31/2022	
WCLFR003	5/12/2022	19.8	5/12/2022	Adjusted Valve	5.5	5/16/2022	
WCLFR003	5/31/2022	18.9	5/31/2022	Adjusted Valve	8.0	6/8/2022	
WCLFR003	6/22/2022	20.2	6/22/2022	Adjusted Valve	19.6	6/30/2022	In compliance on 8/16/22
WCLFR003	9/7/2022	19.6	9/7/2022	Adjusted Valve	19.3	9/20/2022	In compliance on 10/5/22
WCLFR003	10/11/2022	20.3	10/11/2022	Adjusted Valve	6.7	10/19/2022	
WCLFR003	10/25/2022	19.0	10/25/2022	Adjusted Valve	5.5	10/31/2022	
WCLFR004	5/12/2022	19.7	5/12/2022	Adjusted Valve	11.9	5/16/2022	
WCLFR004	5/23/2022	16.4	5/23/2022	Adjusted Valve	9.3	6/8/2022	
WCLFR004	6/22/2022	16.4	6/22/2022	Adjusted Valve	15.9	6/30/2022	In compliance on 7/12/22
WCLFR004	7/26/2022	15.8	7/26/2022	Adjusted Valve	14.3	8/11/2022	
WCLFR004	9/20/2022	15.4	9/20/2022	Adjusted Valve	12.8	9/29/2022	
WCLFR004	10/11/2022	20.0	10/11/2022	Adjusted Valve	4.7	10/19/2022	
WCLFR004	10/25/2022	17.5	10/25/2022	Adjusted Valve	2.3	10/31/2022	
WCLFR005	5/12/2022	18.2	5/12/2022	Adjusted Valve	3.8	5/16/2022	
WCLFR005	5/31/2022	17.3	5/31/2022	Adjusted Valve	6.0	6/8/2022	
WCLFR005	6/30/2022	21.2	6/30/2022	Adjusted Valve	7.3	7/6/2022	
WCLFR005	10/11/2022	19.9	10/11/2022	Adjusted Valve	5.6	10/19/2022	
WCLFR006	5/3/2022	17.4	5/3/2022	Adjusted Valve	19.4	5/16/2022	In compliance on 9/29/22
WCLFR006	10/5/2022	19.2	10/5/2022	Adjusted Valve	19.9	10/19/2022*	
WCLFR007	5/12/2022	20.5	5/12/2022	Adjusted Valve	2.0	5/16/2022	
WCLFR007	5/23/2022	20.4	5/23/2022	Adjusted Valve	11.1	5/31/2022	
WCLFR007	6/16/2022	15.3	6/16/2022	Adjusted Valve	3.0	6/22/2022	
WCLFR007	9/20/2022	20.8	9/20/2022	Adjusted Valve	2.8	9/29/2022	
WCLFR008	5/3/2022	18.7	5/3/2022	Adjusted Valve	3.8	5/12/2022	
WCLFR008	5/16/2022	18.0	5/16/2022	Adjusted Valve	0.2	5/31/2022	
WCLFR009	5/3/2022	19.6	5/3/2022	Adjusted Valve	20.6	5/16/2022	In compliance on 6/16/22
WCLFR009	7/6/2022	18.0	7/6/2022	Adjusted Valve	13.4	7/12/2022	
WCLFR009	7/26/2022	15.7	7/26/2022	Adjusted Valve	17.7	8/1/2022	In compliance on 8/11/22
WCLFR009	8/16/2022	19.2	8/16/2022	Adjusted Valve	9.4	8/23/2022	
WCLFR009	9/14/2022	17.5	9/14/2022	Adjusted Valve	9.5	9/20/2022	
WCLFR009	10/11/2022	20.5	10/11/2022	Adjusted Valve	19.0	10/25/2022	In compliance on 10/31/22

Table 4. Wells with Oxygen Exceedances
West Contra Costa Sanitary Landfill, Richmond, California
(May 1, 2022 through October 31, 2022)

Well ID	Date	Initial O2 [%]	5-Day Corrective Action Date	Corrective Action	Adjusted O2 [%]	15-Day Follow-Up Date	Comments
<i>WCLFR010</i>	8/1/2022	19.7	8/1/2022	Adjusted Valve	3.4	8/11/2022	
<i>WCLFR012</i>	5/16/2022	19.9	5/16/2022	Adjusted Valve	4.4	5/23/2022	
<i>WCLFR012</i>	5/31/2022	15.8	5/31/2022	Adjusted Valve	18.8	6/8/2022	In compliance on 8/23/22
<i>WCLFR012</i>	10/11/2022	20.0	10/11/2022	Adjusted Valve	3.3	10/19/2022	
<i>WCLFR012</i>	10/25/2022	18.6	10/25/2022	Adjusted Valve	13.9	10/31/2022	
<i>WCLFR013</i>	5/23/2022	18.3	5/23/2022	Adjusted Valve	15.7	5/31/2022	In compliance on 6/8/22
<i>WCLFR013</i>	6/16/2022	15.6	6/16/2022	Adjusted Valve	19.0	6/30/2022	In compliance on 8/23/22
<i>WCLFR013</i>	9/7/2022	18.3	9/7/2022	Adjusted Valve	6.2	9/14/2022	
<i>WCLFR013</i>	10/11/2022	20.6	10/11/2022	Adjusted Valve	19.3	10/25/2022	In compliance on 10/31/22
<i>WCLFR014</i>	5/12/2022	17.5	5/12/2022	Adjusted Valve	9.6	5/16/2022	
<i>WCLFR014</i>	5/23/2022	18.5	5/23/2022	Adjusted Valve	20.0	5/31/2022	In compliance on 8/16/22
<i>WCLFR014</i>	9/1/2022	18.6	9/1/2022	Adjusted Valve	13.7	9/7/2022	
<i>WCLFR014</i>	9/14/2022	18.8	9/14/2022	Adjusted Valve	14.5	9/20/2022	
<i>WCLFR014</i>	9/29/2022	18.2	9/29/2022	Adjusted Valve	9.9	10/5/2022	
<i>WCLFR014</i>	10/11/2022	20.8	10/11/2022	Adjusted Valve	14.6	10/19/2022	
<i>WCLFR014</i>	10/25/2022	19.6	10/25/2022	Adjusted Valve	9.9	11/7/2022	In compliance after reporting period
<i>WCLFR015</i>	5/23/2022	16.1	5/23/2022	Adjusted Valve	16.7	5/31/2022	In compliance on 9/29/22
<i>WCLFR015</i>	10/11/2022	18.4	10/11/2022	Adjusted Valve	6.4	10/19/2022	
<i>WCLFR015</i>	10/25/2022	16.3	10/25/2022	Adjusted Valve	10.6	10/31/2022	
<i>WCLFR016</i>	5/12/2022	20.1	5/12/2022	Adjusted Valve	0.7	5/16/2022	
<i>WCLFR016</i>	5/23/2022	19.6	5/23/2022	Adjusted Valve	20.0	6/8/2022	In compliance on 6/22/22
<i>WCLFR016</i>	6/30/2022	17.3	6/30/2022	Adjusted Valve	4.9	7/12/2022	
<i>WCLFR016</i>	7/26/2022	16.4	7/26/2022	Adjusted Valve	17.7	8/1/2022	In compliance on 8/16/22
<i>WCLFR016</i>	10/11/2022	20.7	10/11/2022	Adjusted Valve	11.7	10/19/2022	
<i>WCLFR016</i>	10/25/2022	19.2	10/25/2022	Adjusted Valve	12.4	10/31/2022	

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)

**Table 5. Wells with Temperature Exceedances
 West Contra Costa Sanitary Landfill, Richmond, California
 (May 1, 2022 through October 31, 2022)**

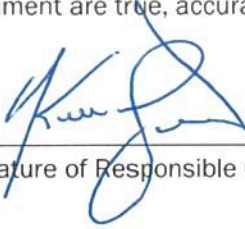
Well ID	Date	Initial Temperature [°F]	Adjusted Temperature [°F]	5-Day Corrective Action Date	Corrective Action	15-Day Follow-Up Temperature [°F]	15-Day Follow-Up Date	Comments	Additional Corrective Action
There were no temperature exceedances during this reporting period.									

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:



Signature of Responsible Official

11-29-22

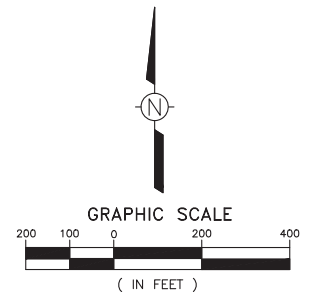
Date

Ken Lewis

Name of Responsible Official

Appendix B – Existing GCCS Layout

E 1453500 E 1454000 E 1454500 E 1455000 E 1455500 E 1456000 E 1456500 E 1457000 E 1457500 E 1458000



Well to be decommissioned per 2/5/2018 notification letter.

Well was decommissioned per 6/20/2017 notification letter

Well was decommissioned per 6/20/2017 notification letter

Well was decommissioned per 6/18/2020 notification letter.

Well was decommissioned per 3/27/2020 notification letter.

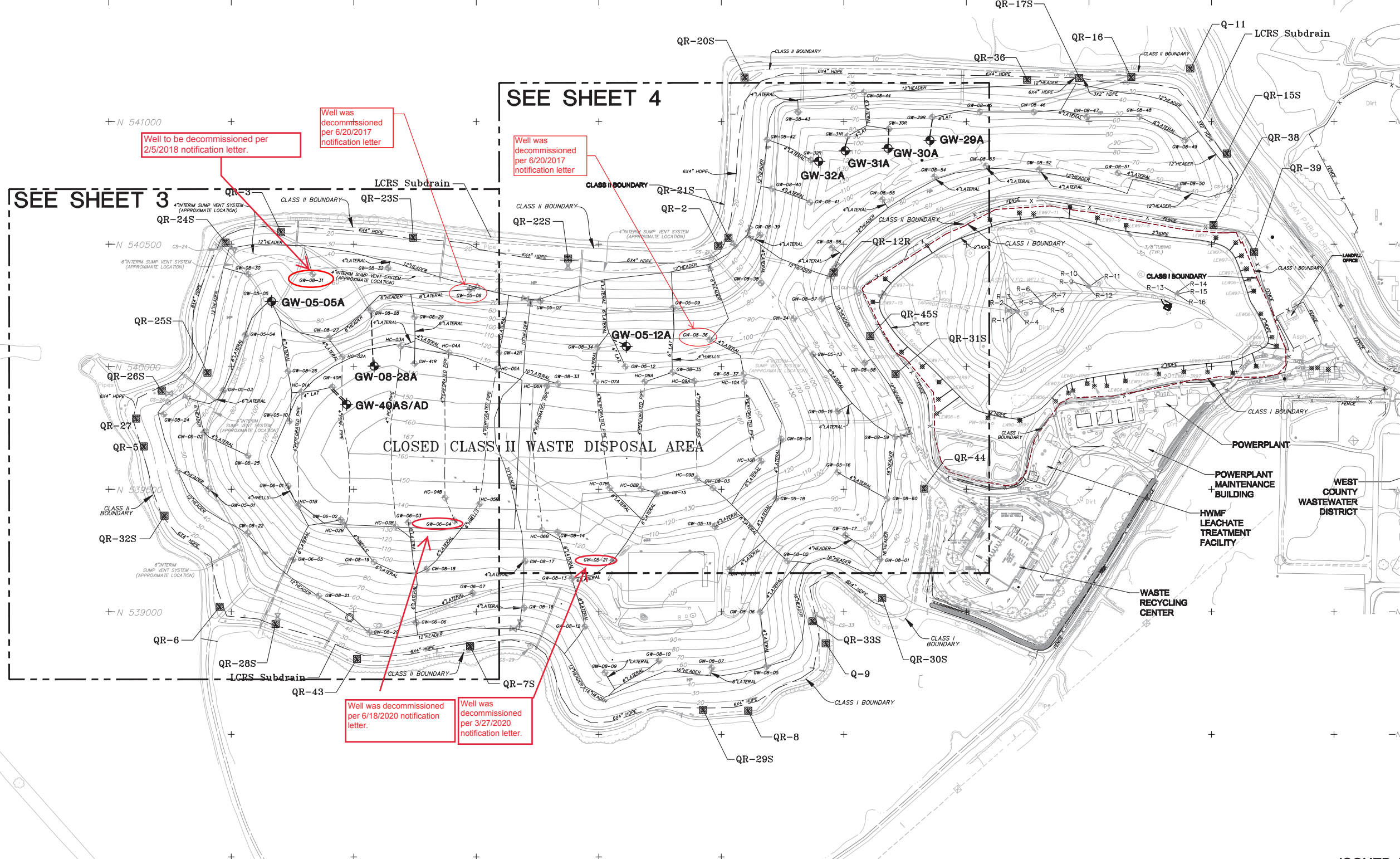
SEE SHEET 3

SEE SHEET 4

LEGEND
 GW-29A PROPOSED VERTICAL GAS EXTRACTION WELL REPLACEMENT (8 LOCATIONS)
 --- PROPOSED WELL LATERAL

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

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



ISSUED FOR CONSTRUCTION (10-31-14)

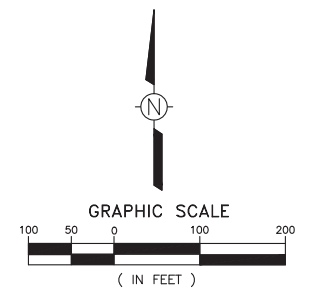
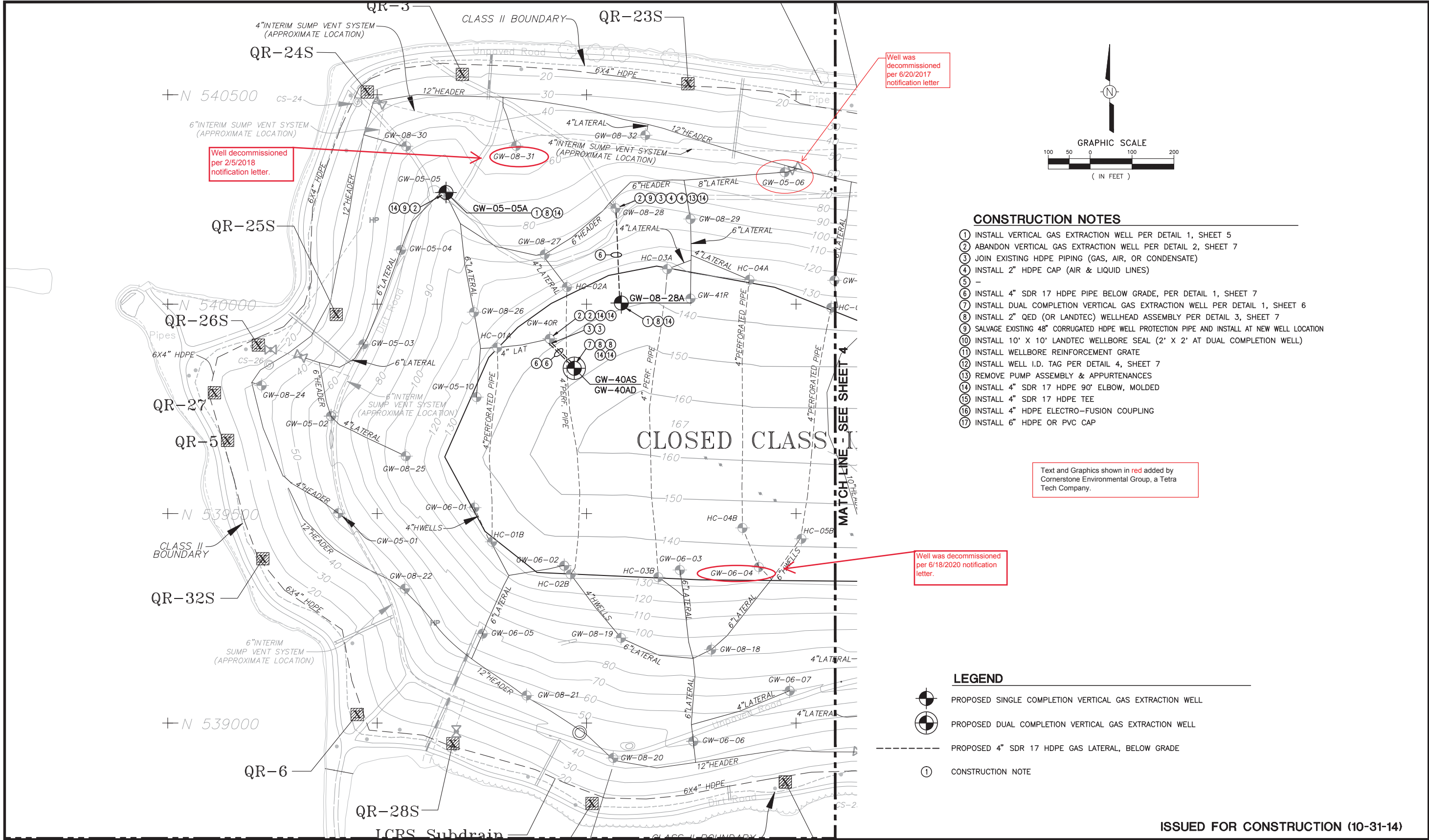
NO.	REVISION DESCRIPTION	BY:

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

TETRA TECH BAS
 1360 Valley View 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.: 02-02-0131XM
CHECKED BY : E. TJENSVOLD	DATE : 10/31/14
APPROVED BY : G. GLASSER	DATE : 10/31/14 SHEET 2 OF 7



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.

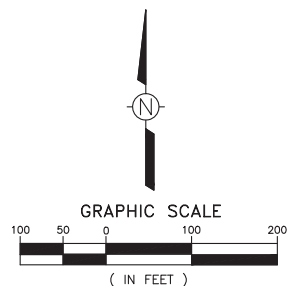
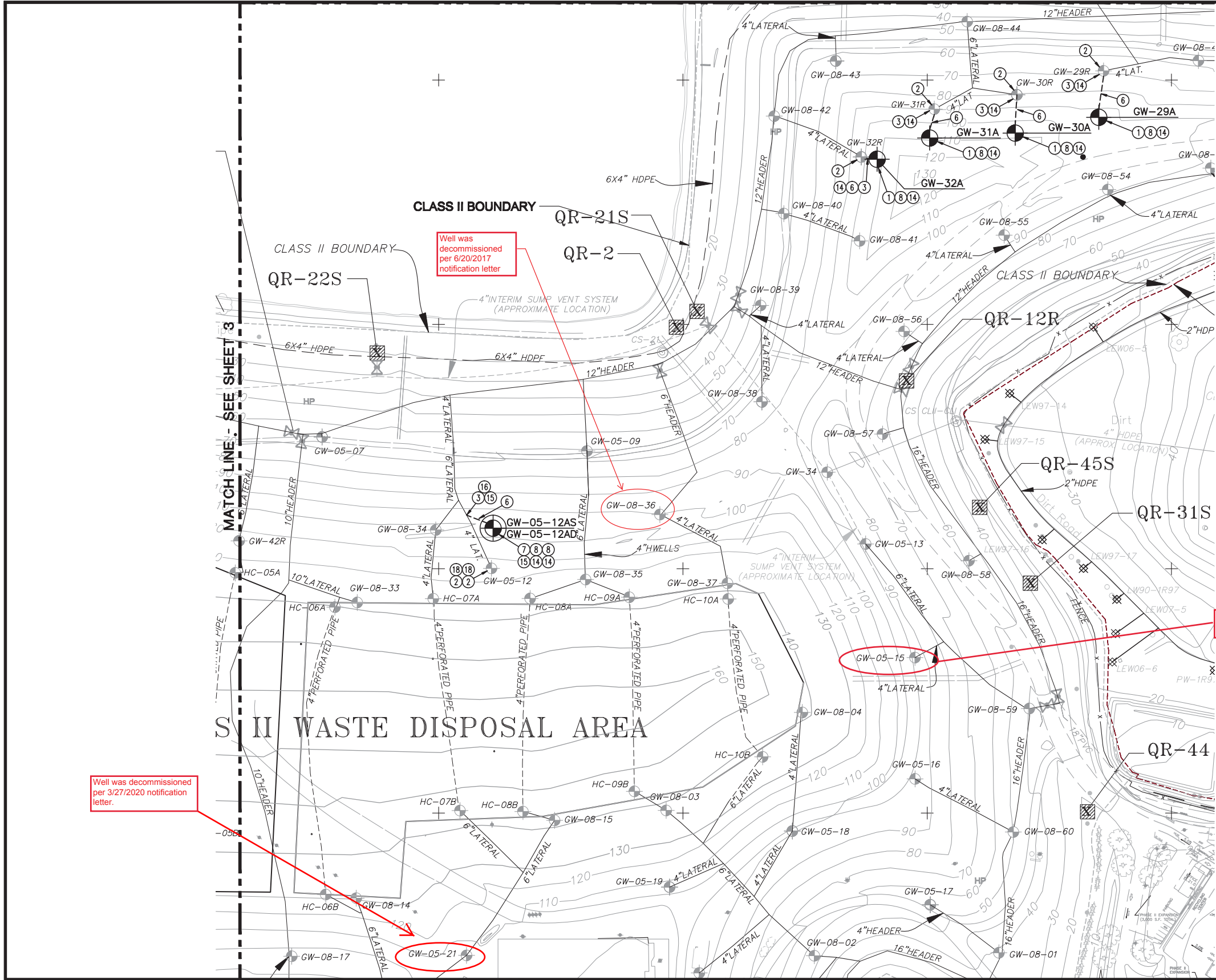
LEGEND

- 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)

	<p>WASTE COLLECTION-RECYCLING-TRANSFER-DISPOSAL</p>	<p>1360 Valley Vista Drive, Diamond Bar, CA 91765 TEL. 909.860.7777 FAX 909.860.8017</p>	<p>WEST CONTRA COSTA COUNTY LANDFILL</p> <p>2014 GAS SYSTEM IMPROVEMENTS</p> <p>GAS SYSTEM IMPROVEMENT PLAN</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED BY : RSI/SNA</td> <td>SCALE : AS SHOWN</td> </tr> <tr> <td>DRAWN BY : S. ANGUS</td> <td>DATE : 10/31/14</td> </tr> <tr> <td>CHECKED BY : E. TJENSVDL</td> <td>DATE : 10/31/14</td> </tr> <tr> <td>APPROVED BY : G. GLASSER</td> <td>DATE : 10/31/14</td> </tr> </table>	DESIGNED BY : RSI/SNA	SCALE : AS SHOWN	DRAWN BY : S. ANGUS	DATE : 10/31/14	CHECKED BY : E. TJENSVDL	DATE : 10/31/14	APPROVED BY : G. GLASSER	DATE : 10/31/14
DESIGNED BY : RSI/SNA	SCALE : AS SHOWN										
DRAWN BY : S. ANGUS	DATE : 10/31/14										
CHECKED BY : E. TJENSVDL	DATE : 10/31/14										
APPROVED BY : G. GLASSER	DATE : 10/31/14										
			<p>FILE NO.: 03-86-0141GSP</p> <p>SHEET 3 OF 7</p>								

NO.	REVISION DESCRIPTION	BY:



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.

Well was decommissioned per 6/29/2021 notification letter

Well was decommissioned per 3/27/2020 notification letter.

LEGEND

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

ISSUED FOR CONSTRUCTION (10-31-14)

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
CHECKED BY : E. TJENSVD	DATE : 10/31/14
APPROVED BY : G. GLASSER	DATE : 10/31/14

NO.	REVISION DESCRIPTION	BY:



WASTE COLLECTION-RECYCLING-TRANSFER-DISPOSAL



1360 Valley Vista Drive, Diamond Bar, CA 91765
TEL. 909.860.7777 FAX 909.860.8017

Appendix C – LFGTE Facility Downtime Logs

S-6 Engine Downtime
West Contra Costa Sanitary Landfill
(May 1, 2022 through October 31, 2022)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
5/1/2022 0:00	11/1/2022 0:00	4416.00	See note below
TOTAL DOWNTIME (HOURS):		4416.00	

*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
(May 1, 2022 through October 31, 2022)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
5/1/2022 0:00	11/1/2022 0:00	4416.00	See note below
TOTAL DOWNTIME (HOURS):		4416.00	

*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
(May 1, 2022 through October 31, 2022)

Shutdown Date/Time*	Startup Date/Time	Duration (Hours)	Reason for Downtime
5/1/2022 0:00	11/1/2022 0:00	4416.00	See note below
TOTAL DOWNTIME (HOURS):		4416.00	

*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 – Surface Emission and GCCS Component Leak Monitoring Results

September 28, 2022
Project No. 07219040.00

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 Second 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 second 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

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

West Contra Costa County Landfill

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

Second Quarter 2022

Presented to:



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

SCS FIELD SERVICES

File No. 07219040.00 | September 28, 2022

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 Second Quarter 2021

INTRODUCTION

This letter provides results of the April 25, May 5 and 25, 2022, LMR and NSPS landfill surface emissions monitoring (SEM) performed 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 April 25, May 5 and 25, 2022, instantaneous and integrated surface emissions monitoring was performed over the surface of the site. Testing results indicated no uncorrectable exceedances of the LMR and NSPS instantaneous threshold limit of 500 parts per million by volume (ppmv), or the integrated average of 25 ppmv as required by the LMR, above background. Based on these monitoring results no further follow up testing was required.

On April 25, 2022, SCS performed second quarter 2022 surface emissions monitoring testing as required by the Bay Area Air Quality Management District (BAAQMD). Instantaneous surface emissions monitoring results indicated one (1) location exceeded the 500 ppmv maximum concentration on the above-mentioned date (Table 1 in Attachment 3). The required first 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring indicated that the location had returned to below regulatory compliance limits following system adjustments and remediation (well field adjustments and installation of new bentonite plugs) by SCS personnel. Based on these monitoring results no follow up testing was 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.

During the monitoring event, there were no areas observed to exceed the LMR integrated average of 25 ppmv (Table 2 in Attachment 4). Based on these monitoring results no follow up testing was required. These results are discussed in a subsequent section of this report.

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

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. No locations were observed to exceed the 200 ppmv threshold (Attachment 3). 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 annual LMR report.

As stipulated in LMR, if uncorrectable exceedances within the 10-day limitation are detected or emissions are discovered during an inspection by Regulatory Agencies, the landfill must perform monitoring on a 25-foot pathway on a quarterly basis for active disposal sites. Upon completion of four consecutive SEM events without an uncorrectable exceedance of the 25 ppmv or 500 ppmv standards, other than non-repeatable momentary readings, the landfill may perform the monitoring on a 100-foot spacing on an annual basis for closed landfills or quarterly for active disposal sites. Therefore, in accordance with the rule, the site may return to annual LMR monitoring on a 100-foot spacing beginning with the 2021 calendar year. However, based on previous instantaneous monitoring results, the site is required to perform NSPS surface emissions monitoring on a 100-ft 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 April 25, May 5 and 25, 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 LMR threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring in the 50,000 square foot grids as required under the LMR. During this event, SCS performed the annual monitoring on a 100-foot pathway in accordance with the rules as required.

EMISSIONS TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the landfill surface emission testing consisted of the following:

- Thermo Scientific TVA 2020 portable Flame Ionization Detector (FID). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The TVA 2020 meets the State of California Air Resources Board (CARB) requirements for combined instantaneous and integrated monitoring and was calibrated in accordance with United States Environmental Protection Agency (US EPA) Method 21.

- 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.

SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the LMR and NSPS requirements. Monitoring was performed with the FID inlet held within 3-inches of the landfill surface while a technician walked a grid in parallel paths not more than 25 or 100-feet apart over the surface of the landfill. Cracks, holes and other cover penetrations in the surface were also tested. Surface emissions readings were monitored continuously and recorded every 5 seconds. Any areas in exceedance of the 200 or 500 ppmv standards (reporting and compliance levels, respectively) would be GPS tagged and stake-marked for on-site personnel to perform remediation or repairs.

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

Recorded wind speed results are shown in Attachment 5. 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 the 72 hour of the monitoring events. Therefore, site meteorological conditions were within the LMR requirements on the above mentioned date.

TESTING RESULTS

During this event, SCS performed the quarterly monitoring on a 100-foot pathway in accordance with the rule as required under the LMR and NSPS. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR or NSPS threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring (LMR).

On April 25, 2022, SCS performed second quarter 2022 instantaneous emissions monitoring testing as required by the BAAQMD. During this monitoring, surface emissions results indicated one (1) location exceeded the 500 ppmv maximum concentration, LFG Extraction Well No. 509. The required first 10-day (LMR/NSPS) and 30-day (NSPS) follow-up monitoring performed on May 5 and 25, 2022, respectively, indicated that the location 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 monitoring are shown in Attachments 2 and 3 (Table 1).

Additionally, calculated integrated monitoring indicated no integrated exceedances of the 25-ppmv requirement. Results of the monitoring are shown in Attachment 4 (Table 2). Based on these monitoring results no follow up testing was required. Calibration logs for the monitoring equipment are provided in Attachment 5.

During this monitoring event, several grids were not monitored, in accordance with the LMR, due to active 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 for the remainder of the quarterly 2022 monitoring events.

PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On April 25, 2022, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS. Monitoring was performed with the detector inlet held one-half of an inch from pressurized pipe and associated components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 5.4 ppmv, was below the maximum threshold (see Table 1 for component results). 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 NSPS event is scheduled to be performed by the end of September 2022, and the annual LMR event is scheduled to be performed by the end of calendar year 2022.

STANDARD PROVISIONS

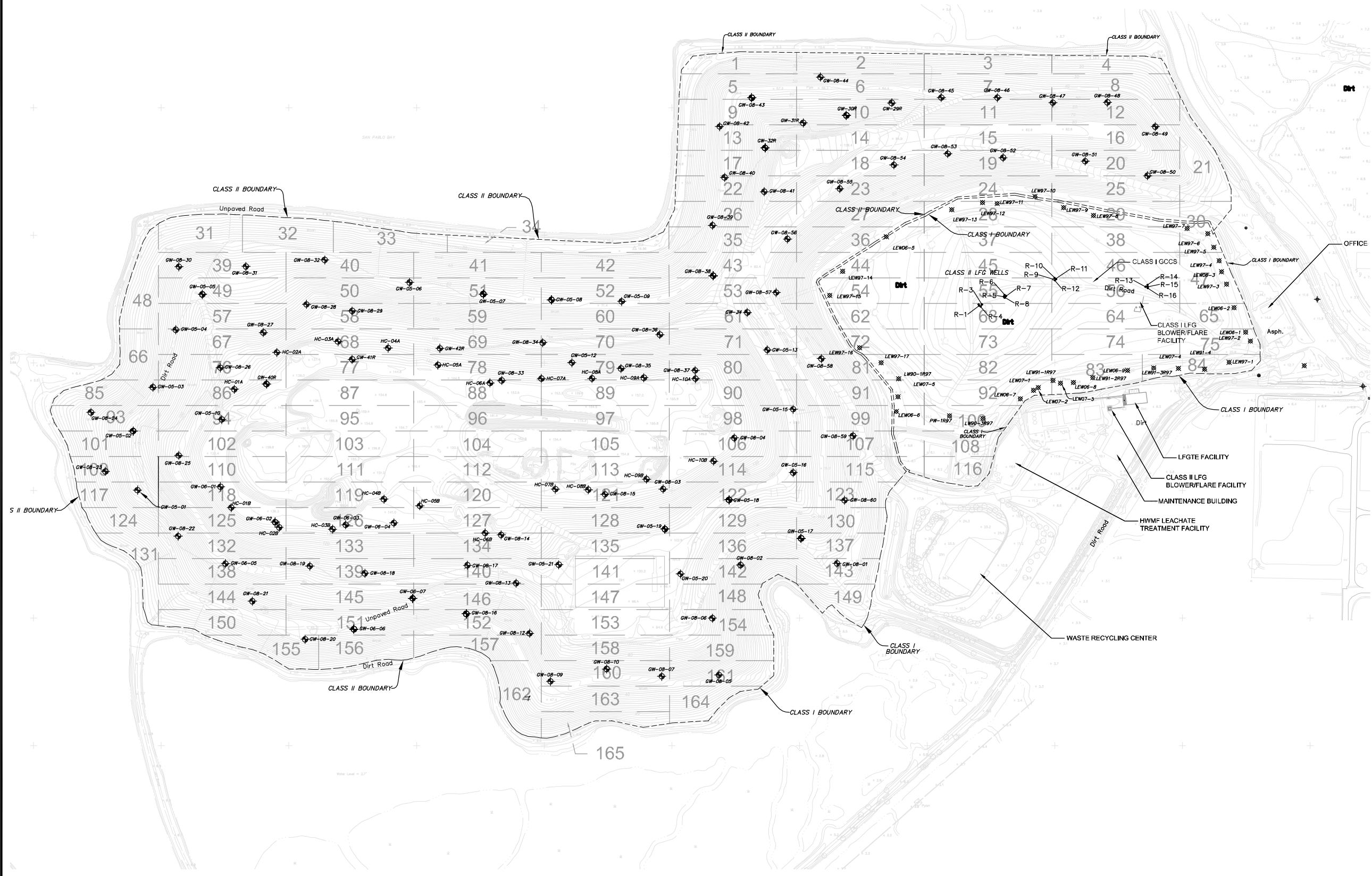
This report addresses conditions of the subject site during the testing dates only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the surface emissions at the subject site or adjacent properties.

Attachment 1

Landfill Grid

1" = 1/2" 0" 1"

File: \\PROJECTS\REPUBLIC (CORP)\WORKSPACE - CA LF MOVA\West County\SDM_PROJECT DRAWINGS\SDM_PROJECT DRAWINGS.dwg Layout: Layout1 User: jonathan.ole May 11, 2011 - 2:56pm



LEGEND

- EXISTING CLASS 1 SOLID WASTE BOUNDARY
- EXISTING CLASS 2 SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- [Grid Block Symbol] SEM GRID BLOCK
- [Hatched Grid Block Symbol] 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 JJD	CHECKED BY JJD	DWN BY	DES BY	CHK BY REF	APP BY PJS
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CORNERSTONE
 Environmental Group, LLC

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WEST CONTRA COSTA COUNTY SANITARY LANDFILL
 CONTRA COSTA COUNTY, CALIFORNIA

**SURFACE EMISSIONS MONITORING
 GRID MAP**

SHEET NO.
1
 PROJECT NO.
 110218

Attachment 2

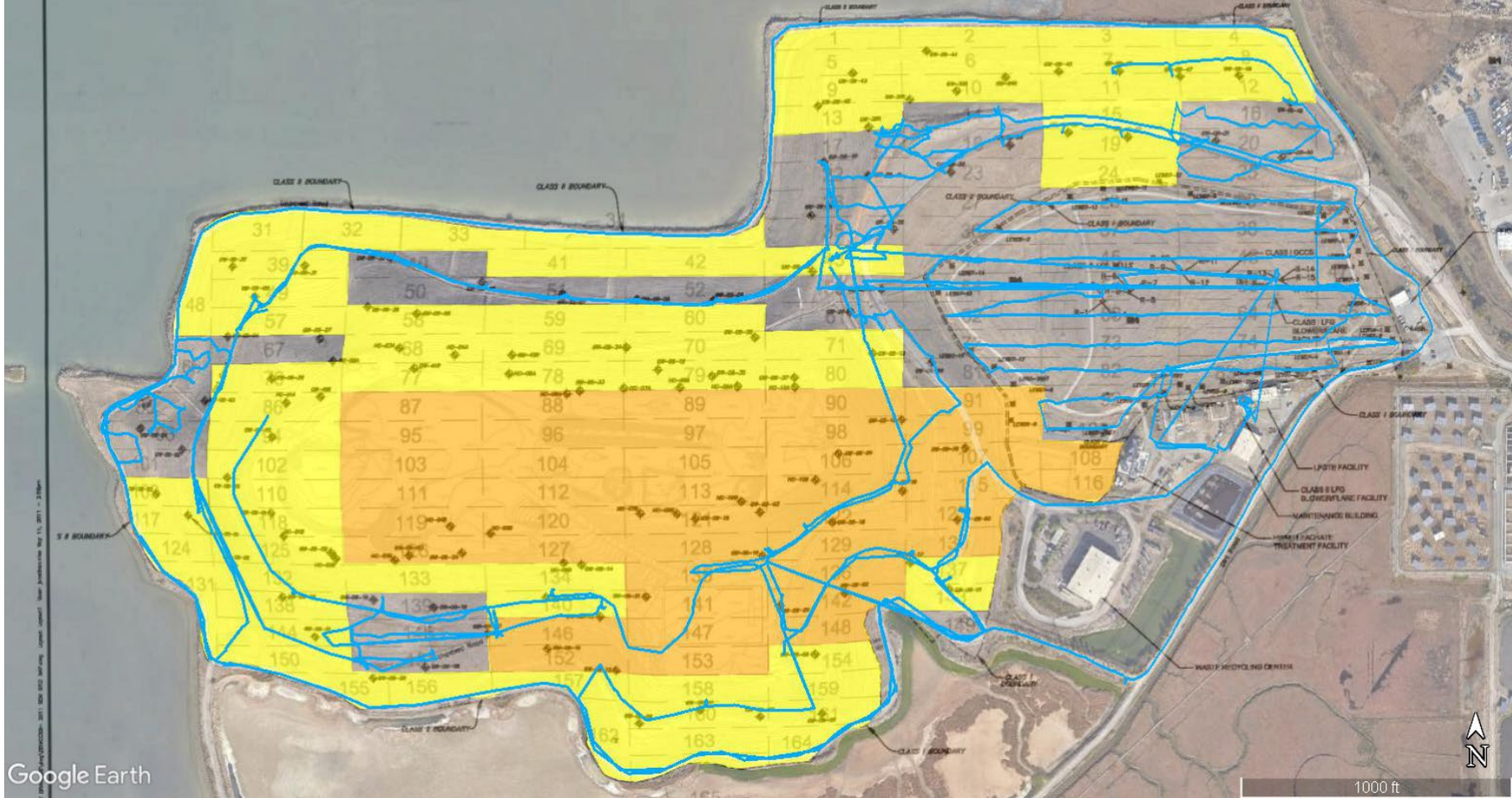
Surface Pathway

West Contra Costa Landfill

2022 Annual LMR SEM

Legend

- Active
- Safety Concern Due to Overgrown Vegetation



Second 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

Second 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 April 25, May 5 and 25, 2022

Location	Latitude	Longitude	Initial Concentration (ppmv)	First 10-Day Concentration (ppmv)	30-Day Concentration (ppmv)
			April 25, 2022	May 5, 2022	May 25, 2022
WCLF0509	37.968633°	-122.388983°	7,601	200	70.4

Pressurized Pipe and Component Results

Location	Date	Concentration (ppmv)
Flare	4/25/2022	5.4

No other exceedances of the 200 or 500 ppm thresholds were observed during the monitoring performed during the second quarter 2022. The highest reading observed was 7,601 ppmv.

West Contra Costa Landfill

2022 Annual LMR SEM

Legend

- Initial Instantaneous Locations >500 ppm



Second Quarter 2022

**Initial Instantaneous Surface Emissions Location Greater Than 500 ppm
West Contra Costa County Sanitary Landfill, Contra Costa County, California**

Attachment 4

Integrated Monitoring Results

Second Quarter 2022

Table 2. Integrated Surface Emissions Monitoring Results West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 001	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 002	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 003	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 004	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 005	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 006	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 007	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 008	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 009	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 010	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 011	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 012	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 013	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 014	4/25/2022	2.19	
W.CoCo 015	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 016	4/25/2022	2.03	
W.CoCo 017	4/25/2022	2.04	
W.CoCo 018	4/25/2022	1.70	
W.CoCo 019	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 020	4/25/2022	1.97	
W.CoCo 021	4/25/2022	1.95	
W.CoCo 022	4/25/2022	2.10	
W.CoCo 023	4/25/2022	2.03	
W.CoCo 024	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 025	4/25/2022	1.74	
W.CoCo 026	4/25/2022	2.06	
W.CoCo 027	4/25/2022	1.63	
W.CoCo 028	4/25/2022	1.69	
W.CoCo 029	4/25/2022	1.63	
W.CoCo 030	4/25/2022	1.58	
W.CoCo 031	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 032	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 033	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 034	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 035	4/25/2022	2.18	
W.CoCo 036	4/25/2022	1.71	
W.CoCo 037	4/25/2022	1.68	
W.CoCo 038	4/25/2022	1.62	
W.CoCo 039	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 040	4/25/2022	1.53	
W.CoCo 041	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation



Second Quarter 2022

Table 2. Integrated Surface Emissions Monitoring Results West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 042	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 043	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 044	4/25/2022	1.67	
W.CoCo 045	4/25/2022	2.08	
W.CoCo 046	4/25/2022	1.64	
W.CoCo 047	4/25/2022	1.60	
W.CoCo 048	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 049	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 050	4/25/2022	1.37	
W.CoCo 051	4/25/2022	1.41	
W.CoCo 052	4/25/2022	1.14	
W.CoCo 053	4/25/2022	0.99	
W.CoCo 054	4/25/2022	1.95	
W.CoCo 055	4/25/2022	1.62	
W.CoCo 056	4/25/2022	1.64	
W.CoCo 057	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 058	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 059	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 060	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 061	4/25/2022	1.64	
W.CoCo 062	4/25/2022	1.47	
W.CoCo 063	4/25/2022	1.45	
W.CoCo 064	4/25/2022	1.55	
W.CoCo 065	4/25/2022	1.67	
W.CoCo 066	4/25/2022	1.29	
W.CoCo 067	4/25/2022	1.26	
W.CoCo 068	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 069	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 070	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 071	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 072	4/25/2022	1.52	
W.CoCo 073	4/25/2022	1.45	
W.CoCo 074	4/25/2022	1.58	
W.CoCo 075	4/25/2022	1.56	
W.CoCo 076	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 077	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 078	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 079	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 080	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 081	4/25/2022	1.66	
W.CoCo 082	4/25/2022	1.53	



Second Quarter 2022

Table 2. Integrated Surface Emissions Monitoring Results West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 083	4/25/2022	1.66	
W.CoCo 084	4/25/2022	1.80	
W.CoCo 085	4/25/2022	1.50	
W.CoCo 086	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 087	-	-	Active
W.CoCo 088	-	-	Active
W.CoCo 089	-	-	Active
W.CoCo 090	-	-	Active
W.CoCo 091	-	-	Active
W.CoCo 092	4/25/2022	1.49	
W.CoCo 093	4/25/2022	1.37	
W.CoCo 094	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 095	-	-	Active
W.CoCo 096	-	-	Active
W.CoCo 097	-	-	Active
W.CoCo 098	-	-	Active
W.CoCo 099	-	-	Active
W.CoCo 100	4/25/2022	1.42	
W.CoCo 101	4/25/2022	1.37	
W.CoCo 102	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 103	-	-	Active
W.CoCo 104	-	-	Active
W.CoCo 105	-	-	Active
W.CoCo 106	-	-	Active
W.CoCo 107	-	-	Active
W.CoCo 108	-	-	Active
W.CoCo 109	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 110	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 111	-	-	Active
W.CoCo 112	-	-	Active
W.CoCo 113	-	-	Active
W.CoCo 114	-	-	Active
W.CoCo 115	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 116	-	-	Active
W.CoCo 117	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 118	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 119	-	-	Active
W.CoCo 120	-	-	Active
W.CoCo 121	-	-	Active
W.CoCo 122	-	-	Active
W.CoCo 123	-	-	Active



Second Quarter 2022

Table 2. Integrated Surface Emissions Monitoring Results West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 124	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 125	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 126	-	-	Active
W.CoCo 127	-	-	Active
W.CoCo 128	-	-	Active
W.CoCo 129	-	-	Active
W.CoCo 130	-	-	Active
W.CoCo 131	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 132	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 133	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 134	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 135	-	-	Active
W.CoCo 136	-	-	Active
W.CoCo 137	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 138	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 139	4/25/2022	1.90	
W.CoCo 140	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 141	-	-	Active
W.CoCo 142	-	-	Active
W.CoCo 143	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 144	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 145	4/25/2022	1.83	
W.CoCo 146	-	-	Active
W.CoCo 147	-	-	Active
W.CoCo 148	-	-	Active
W.CoCo 149	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 150	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 151	4/25/2022	1.89	
W.CoCo 152	-	-	Active
W.CoCo 153	-	-	Active
W.CoCo 154	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 155	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 156	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 157	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 158	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 159	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 160	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 161	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 162	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 163	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation
W.CoCo 164	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation



Second Quarter 2022

Table 2. Integrated Surface Emissions Monitoring Results West Contra Costa County Landfill, Contra Costa County, California

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 165	-	-	Inaccessible/Safety Concern Due to Overgrown Vegetation



Attachment 5

Calibration Logs

**SO₂ AND O₃ EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA**

Date: 4-28-22 Site Name: West contra
 Inspector(s): _____ Instrument: TVAZ020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: N Barometric Pressure: 30.08 "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: 1215 Cal Gas Concentration: 500

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.-Cal Gas Reading	Response Time (seconds)
1	<u>0</u>	<u>500</u>	<u>0</u>	<u>?</u>
2	<u>0</u>	<u>499</u>	<u>1</u>	<u>?</u>
3	<u>0</u>	<u>500</u>	<u>0</u>	<u>?</u>

Average Difference: 1

*Perform recalibration if average difference is greater than 10

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

$$= 100\% - \frac{3}{500} \times 100\%$$

$$= 99.4\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span = <u>134776</u>	Counts Observed for the Span = <u>136448</u>
Counters Observed for the Zero = <u>2802</u>	Counters Observed for the Zero = <u>2752</u>
Trial 2:	
Counts Observed for the Span = <u>135448</u>	
Counters Observed for the Zero = <u>2788</u>	

Post Monitoring Calibration Check

Zero Air Reading: -3.8 ppm Cal Gas Reading: 484 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.7 ppm
 Downwind Location Description: C1 Reading: 1.8 ppm

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

**SO₂ AND O₃ EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA**

Date: 4-25-22 Site Name: West Contra
 Inspector(s): JSS Instrument: TVAZ020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: N Barometric Pressure: 30.08 "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: 500

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc. - Cal Gas Reading	Response Time (seconds)
1	0	505	5	2
2	0.1	502	2	1
3	0	499	1	2

Average Difference: 2.6

*Perform recalibration if average difference is greater than 10

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

$$= 100\% - \frac{2.6}{500} \times 100\%$$

$$= 99.48\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span = <u>128456</u>	Counts Observed for the Span = <u>129800</u>
Counters Observed for the Zero = <u>3466</u>	Counters Observed for the Zero = <u>3422</u>
Trial 2:	
Counts Observed for the Span = <u>129086</u>	
Counters Observed for the Zero = <u>3414</u>	

Post Monitoring Calibration Check

Zero Air Reading: 1.9 ppm Cal Gas Reading: 513 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Flare Reading: 1.6 ppm
 Downwind Location Description: G1 Reading: 1.8 ppm

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

CALIBRATION AND PERTINENT DATA

Date: 4-23-22 Site Name: West camp
 Inspector(s): Bryan D Instrument: TVA7020

WEATHER OBSERVATIONS

Wind Speed: 7 MPH Wind Direction: N Barometric Pressure: 30.08 "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: 4106 Cal Gas Concentration: 500

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc. - Cal Gas Reading	Response Time (seconds)
1	<u>0</u>	<u>503</u>	<u>3</u>	<u>1</u>
2	<u>-0.1</u>	<u>501</u>	<u>1</u>	<u>2</u>
3	<u>0</u>	<u>498</u>	<u>2</u>	<u>1</u>

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:	Trial 3:
Counts Observed for the Span = <u>155640</u>	Counts Observed for the Span = <u>156396</u>
Counters Observed for the Zero = <u>5259</u>	Counters Observed for the Zero = <u>5184</u>
Trial 2:	
Counts Observed for the Span = <u>156276</u>	
Counters Observed for the Zero = <u>5258</u>	

Post Monitoring Calibration Check

Zero Air Reading: 2.6 ppm Cal Gas Reading: 493 ppm

BACKGROUND CONCENTRATIONS CHECKS

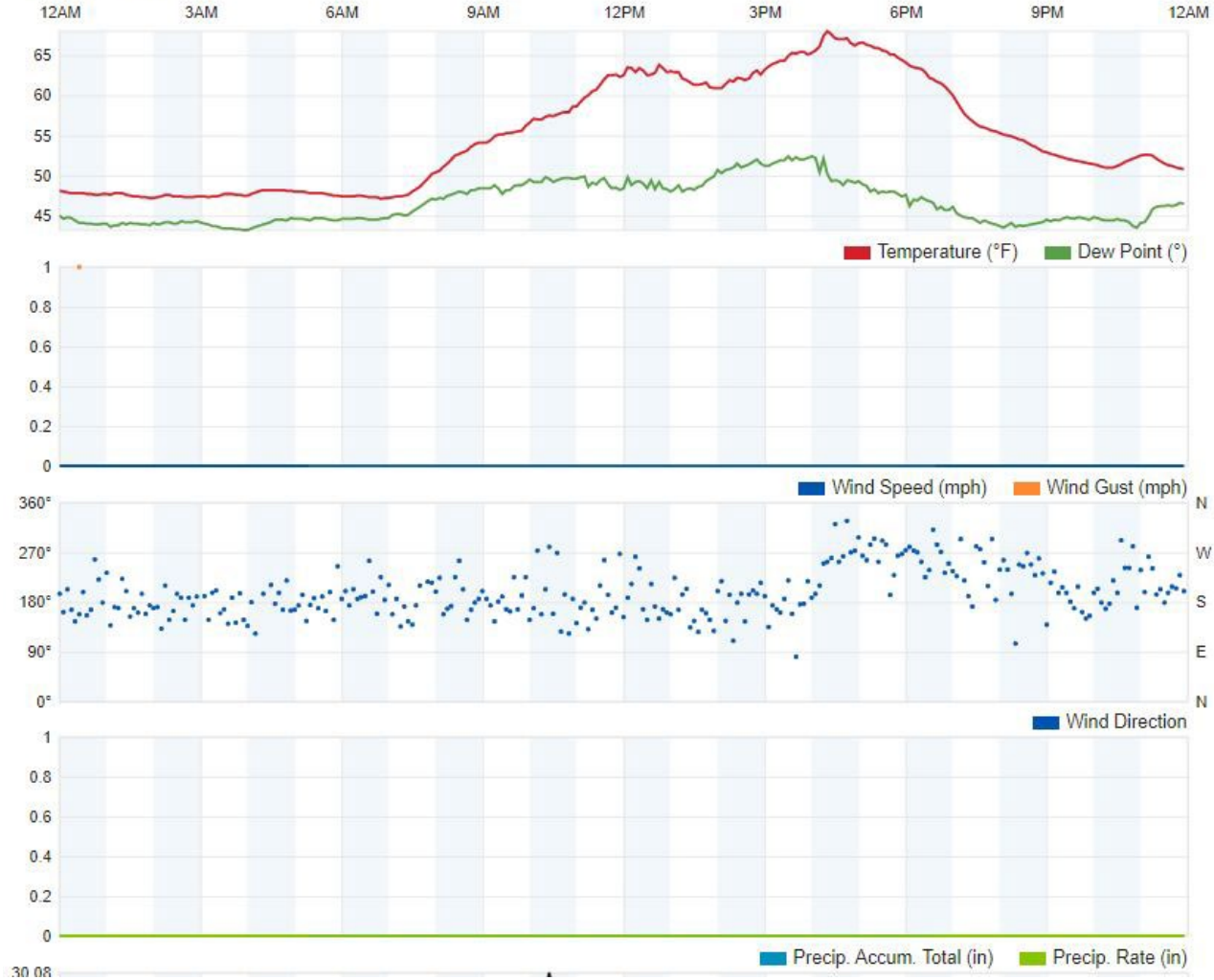
Upwind Location Description: Flare Reading: 1.6 ppm
 Downwind Location Description: G1 Reading: 1.7 ppm

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

Attachment 6

Weather Data

April 25, 2022

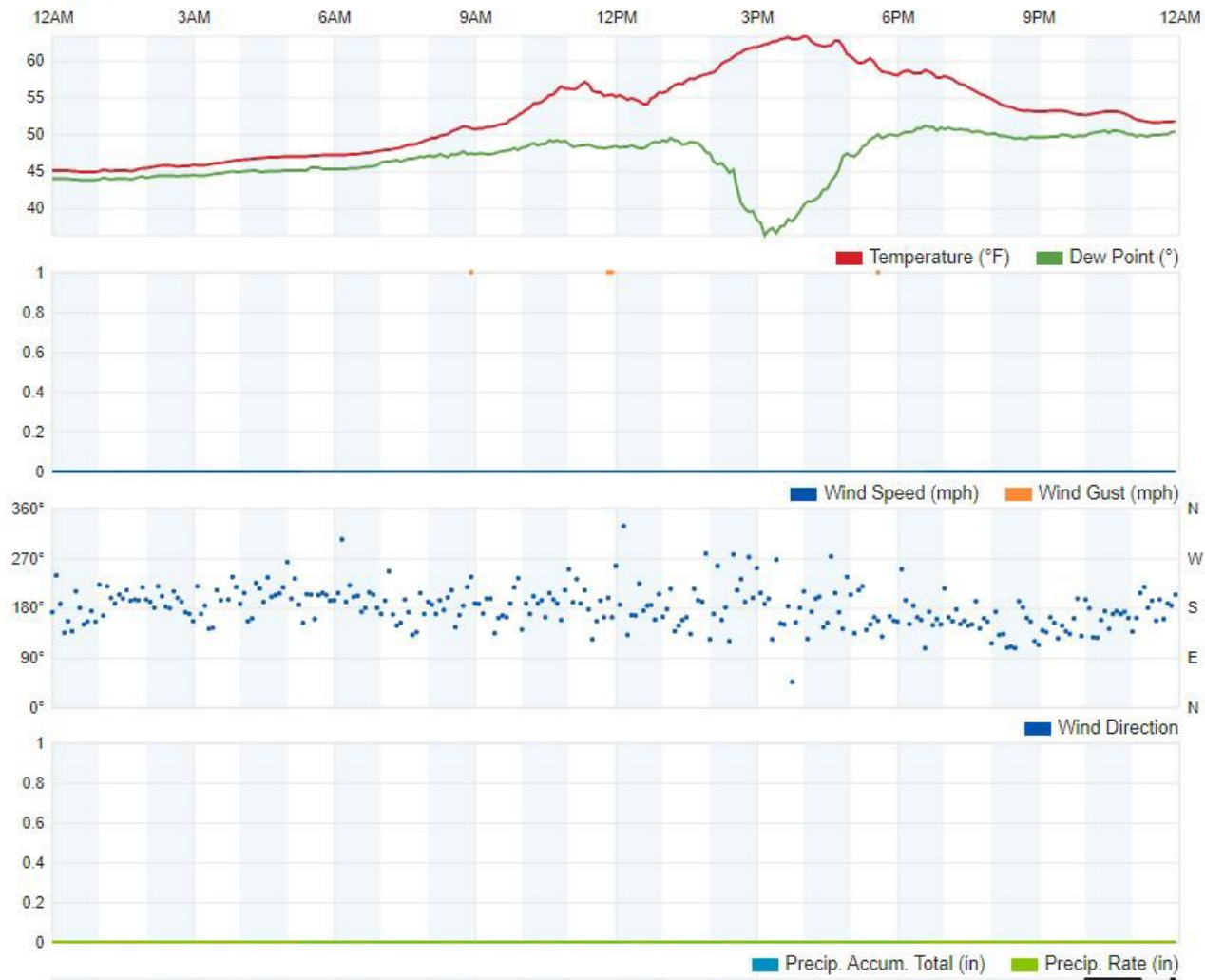


Second Quarter 2022

LMR Weather For April 25, 2022

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

May 5, 2022

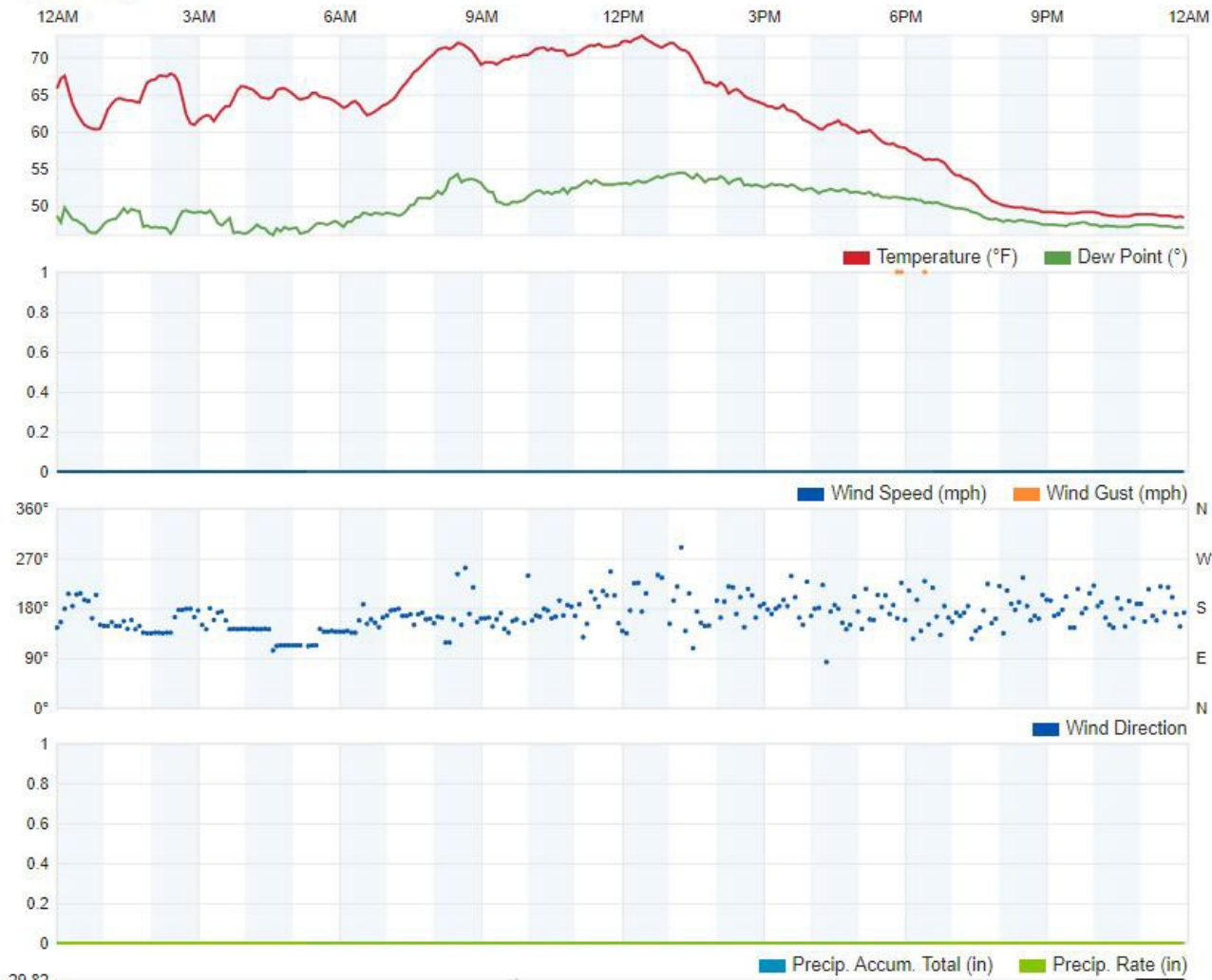


Second Quarter 2022

LMR Weather For May 5, 2022

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

May 25, 2022



Second Quarter 2022

LMR Weather For May 25, 2022

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

November 25, 2022
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 Third 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 third 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 – Third Quarter 2022

West Contra Costa County Landfill

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

Third Quarter 2022

Presented to:



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

SCS FIELD SERVICES

File No. 07221013.00 | November 25, 2022

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 Third Quarter 2022

INTRODUCTION

This letter provides results of the July 21 and 22, 2022, LMR and NSPS landfill surface emissions monitoring (SEM) performed 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 July 21 and 22, 2022, instantaneous and integrated surface emissions monitoring was performed over the surface of the site. Testing results indicated no uncorrectable exceedances of the LMR and NSPS instantaneous threshold limit of 500 parts per million by volume (ppmv), or the integrated average of 25 ppmv as required by the LMR, above background.

On July 21 and 22, 2022, SCS performed third quarter 2022 surface emissions monitoring testing as required by the Bay Area Air Quality Management District (BAAQMD). Results indicated no locations exceeded the 500-ppmv limit. Based on these monitoring results, as shown in Attachment 3, no follow up testing was 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 testing 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. No locations were observed to exceed the 200 ppmv threshold as shown in Attachment 3. 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 annual LMR report.

As stipulated in LMR, if uncorrectable exceedances within the 10-day limitation are detected or emissions are discovered during an inspection by Regulatory Agencies, the landfill must perform monitoring on a 25-foot pathway on a quarterly basis for active disposal sites. Upon completion of four consecutive SEM events without an uncorrectable exceedance of the 25 ppmv or 500 ppmv standards, other than non-repeatable momentary readings, the landfill may perform the monitoring on a 100-foot spacing on an annual basis for closed landfills or quarterly for active disposal sites. Therefore, in accordance with the rule, the site could return to annual LMR monitoring on a 100-foot spacing beginning with the 2021 calendar year. However, based on previous instantaneous monitoring results, the site is required to perform NSPS surface emissions monitoring on a 100-ft 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 July 21 and 22 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 LMR threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring in the 50,000 square foot grids as required under the LMR. During this event, SCS performed the annual monitoring on a 100-foot pathway in accordance with the rules as required.

EMISSIONS TESTING INSTRUMENTATION/CALIBRATION

Instruments used to perform the landfill surface emission testing consisted of the following:

- Thermo Scientific TVA 2020 portable Flame Ionization Detector (FID). This instrument measures methane in air over a range of 1 to 50,000 ppmv. The TVA 2020 meets the State of California Air Resources Board (CARB) requirements for combined instantaneous and integrated monitoring and was calibrated in accordance with United States Environmental Protection Agency (US EPA) Method 21.
- 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 and NSPS requirements. Monitoring was performed with the FID inlet held within 3-inches of the landfill surface while a technician walked a grid in parallel paths not more than 25 or 100-feet apart over the surface of the landfill. Cracks, holes and other cover penetrations in the surface were also tested. Surface emissions readings were monitored continuously and recorded every 5 seconds. Any areas in exceedance of the 200 or 500 ppmv standards (reporting and compliance levels, respectively) would be GPS tagged and stake-marked for on-site personnel to perform remediation or repairs.

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

Recorded wind speed results are shown in Attachment 5. 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 the 72 hour of the monitoring events. Therefore, site meteorological conditions were within the LMR requirements on the above mentioned date.

TESTING RESULTS

During this event, SCS performed the quarterly monitoring on a 100-foot pathway in accordance with the rule as required under the LMR and NSPS. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the LMR or NSPS threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring (LMR).

On July 21 and 22, 2022, SCS performed third quarter 2022 instantaneous emissions monitoring testing as required by the BAAQMD. Instantaneous surface emissions monitoring results indicated the highest methane concentration detected was 111.0 ppmv. Based on these monitoring results, no additional follow up testing was required. Results of the 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 4.19 ppmv in Grid 1. Based on these monitoring results no follow up testing was required. Results of the monitoring are shown in Attachment 4 (Table 2). Calibration logs for the monitoring equipment are provided in Attachment 5.

During this monitoring event, several grids were not monitored, in accordance with the LMR, due to active 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 for the remainder of the quarterly 2022 monitoring events.

PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On July 21, 2022, quarterly leak monitoring was performed in accordance with the LMR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS. Monitoring was performed with the detector inlet held one-half of an inch from pressurized pipe and associated

components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 5.4 ppmv, was below the maximum threshold (see Table 1 for component results). 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 NSPS event is scheduled to be performed by the end of December 2022, and the annual LMR event is scheduled to be performed by the end of calendar year 2022.

STANDARD PROVISIONS

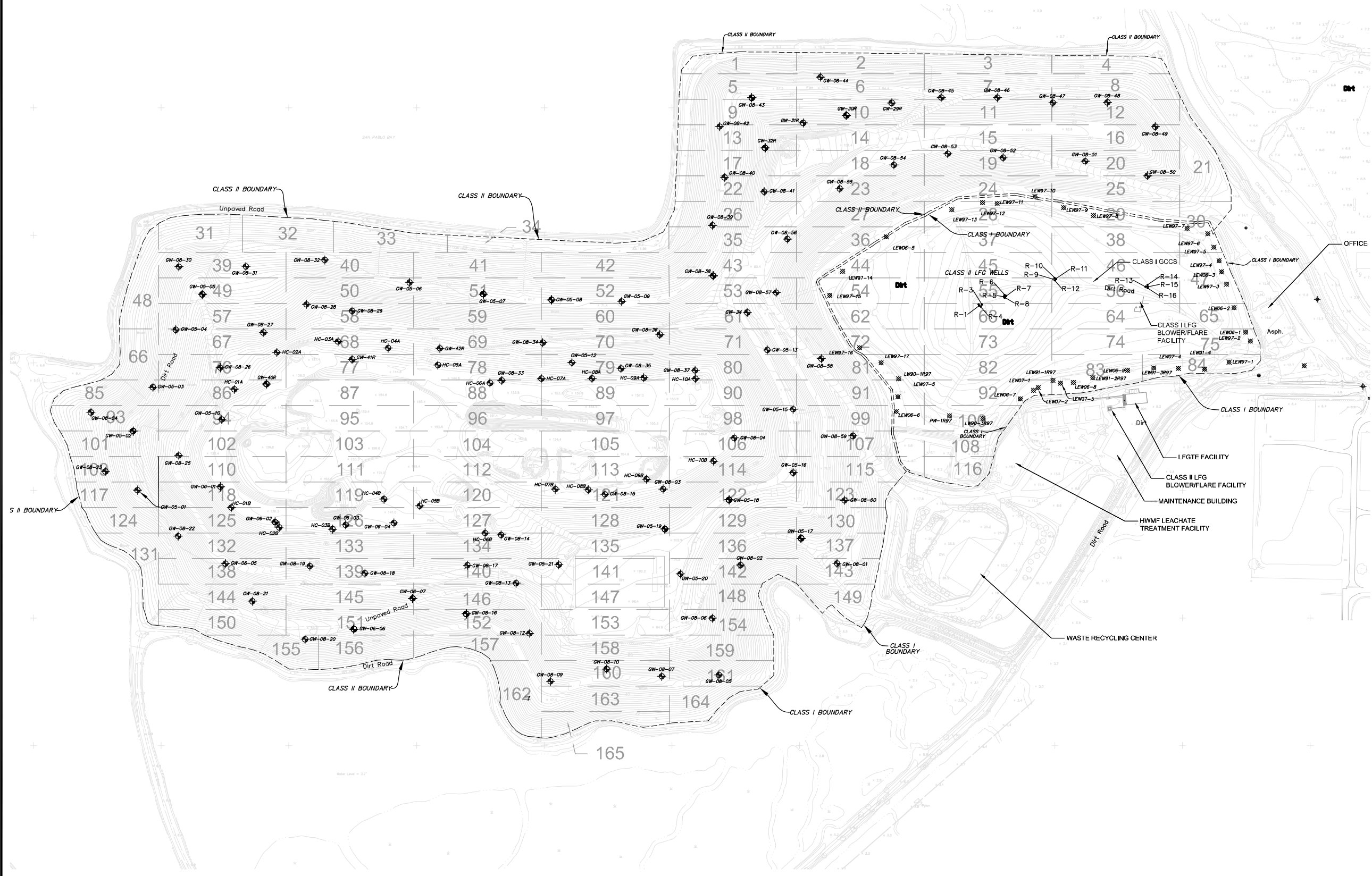
This report addresses conditions of the subject site during the testing dates only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the surface emissions at the subject site or adjacent properties.

Attachment 1

Landfill Grid

1" = 1/2" = 0" = 1"

File: \\PROJECTS\REPUBLIC (CORP)\WORK\CA_LF_MCAL_Met_Count\SEM_PROJECT DRAWINGS\SEM\GRID_MAP.dwg Layout: Layout1 User: jonathan.ole May 11, 2011 - 2:56pm



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

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 JJD	CHECKED BY JJD	DWN BY	DES BY	CHK BY REF	APP BY PJS
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CORNERSTONE
 Environmental Group, LLC

This drawing represents intellectual property of Cornerstone Environmental Group, LLC. Any modification to the original by other than Cornerstone Environmental Group, LLC personnel violates its original purpose and as such is rendered void. Cornerstone Environmental Group, LLC will not be held liable for any changes made to this document without express written consent of the originator.

WEST CONTRA COSTA COUNTY SANITARY LANDFILL
 CONTRA COSTA COUNTY, CALIFORNIA

**SURFACE EMISSIONS MONITORING
 GRID MAP**

SHEET NO.
1
 PROJECT NO.
 110218

Attachment 2

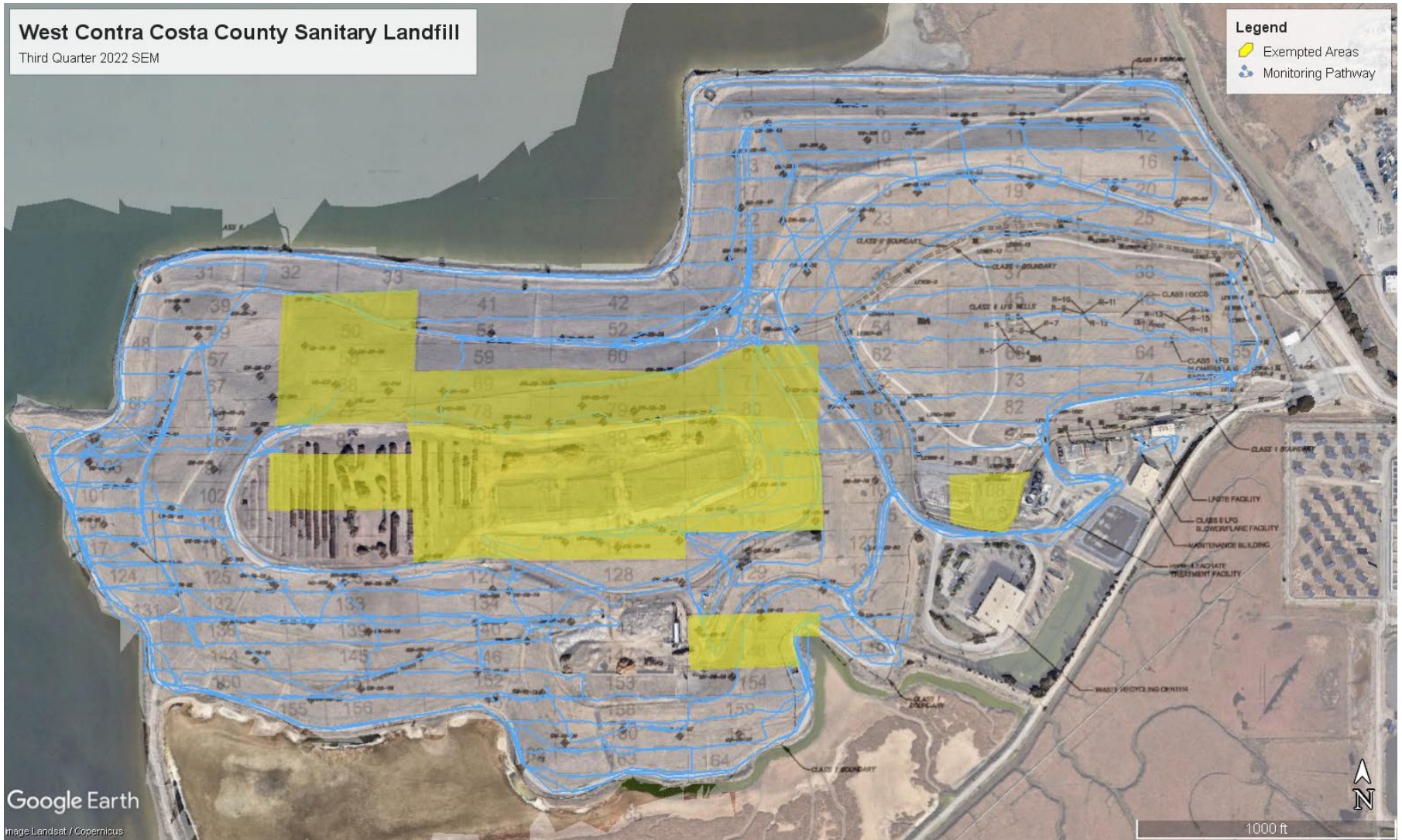
Surface Pathway

West Contra Costa County Sanitary Landfill

Third Quarter 2022 SEM

Legend

- Exempted Areas
- Monitoring Pathway



Third 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

Third 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 July 21 and 22, 2022

Location	Date	Methane Concentration (ppmv)	Latitude	Longitude
Grid 88	7/22/2022	111.0	37.967720	-122.390600

Pressurized Pipe and Component Results

Location	Date	Concentration (ppmv)
Flare	7/21/2022	1.7

No exceedances of the 500-ppmv limits were observed during the monitoring performed during the third quarter 2022. The highest reading observed was 111.0 ppmv.

Attachment 4

Integrated Monitoring Results

Third Quarter 2022

**Table 2. Integrated Surface Emissions Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California**

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 001	7/21/2022	4.19	
W.CoCo 001	7/22/2022	1.90	
W.CoCo 002	7/21/2022	3.33	
W.CoCo 003	7/21/2022	3.40	
W.CoCo 004	7/21/2022	3.08	
W.CoCo 005	7/21/2022	2.73	
W.CoCo 006	7/21/2022	2.85	
W.CoCo 007	7/21/2022	2.87	
W.CoCo 008	7/21/2022	2.95	
W.CoCo 009	7/21/2022	2.64	
W.CoCo 010	7/21/2022	2.61	
W.CoCo 011	7/21/2022	2.62	
W.CoCo 012	7/21/2022	2.61	
W.CoCo 013	7/21/2022	2.34	
W.CoCo 014	7/21/2022	2.46	
W.CoCo 015	7/21/2022	2.64	
W.CoCo 016	7/21/2022	2.56	
W.CoCo 017	7/21/2022	2.22	
W.CoCo 018	7/21/2022	2.36	
W.CoCo 019	7/21/2022	2.53	
W.CoCo 020	7/21/2022	2.38	
W.CoCo 021	7/21/2022	2.48	
W.CoCo 022	7/21/2022	1.95	
W.CoCo 023	7/21/2022	2.30	
W.CoCo 024	7/21/2022	2.90	
W.CoCo 025?	--	--	Exempted Area
W.CoCo 026	7/21/2022	1.94	
W.CoCo 027	7/21/2022	2.32	
W.CoCo 028	7/21/2022	1.00	
W.CoCo 029	7/21/2022	0.97	
W.CoCo 030	7/21/2022	1.10	
W.CoCo 031	7/21/2022	1.01	
W.CoCo 032	7/21/2022	1.10	
W.CoCo 033	7/21/2022	0.92	
W.CoCo 034	7/21/2022	1.09	
W.CoCo 035	7/21/2022	1.23	
W.CoCo 036	7/21/2022	1.57	
W.CoCo 037	7/21/2022	0.98	
W.CoCo 038	7/21/2022	1.00	
W.CoCo 039	7/21/2022	1.04	
W. CoCo 040	--	--	Exempted Area
W.CoCo 041	7/21/2022	0.92	
W.CoCo 042	7/21/2022	1.44	



Third Quarter 2022

**Table 2. Integrated Surface Emissions Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California**

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 043	7/21/2022	2.01	
W.CoCo 044	7/21/2022	1.07	
W.CoCo 045	7/21/2022	1.20	
W.CoCo 046	7/21/2022	1.00	
W.CoCo 047	7/21/2022	0.99	
W.CoCo 048	7/21/2022	1.37	
W.CoCo 049	7/21/2022	1.04	
W. CoCo 050	--	--	Exempted Area
W.CoCo 051	7/21/2022	0.80	
W.CoCo 052	7/21/2022	0.84	
W.CoCo 053	7/21/2022	0.96	
W.CoCo 054	7/21/2022	0.93	
W.CoCo 055	7/21/2022	1.06	
W.CoCo 056	7/21/2022	1.01	
W.CoCo 057	7/21/2022	1.17	
W.CoCo 058	--	--	Exempted Area
W.CoCo 059	7/21/2022	0.95	
W.CoCo 060	7/21/2022	0.75	
W. CoCo 061	--	--	Exempted Area
W.CoCo 062	7/21/2022	0.85	
W.CoCo 063	7/21/2022	1.27	
W.CoCo 064	7/21/2022	1.27	
W.CoCo 065	7/21/2022	1.12	
W.CoCo 066	7/21/2022	1.34	
W.CoCo 067	7/21/2022	1.13	
W.CoCo 068	--	--	Exempted Area
W.CoCo 069	--	--	Exempted Area
W.CoCo 070	--	--	Exempted Area
W.CoCo 071	--	--	Exempted Area
W.CoCo 072	7/21/2022	1.22	
W.CoCo 073	7/21/2022	1.23	
W.CoCo 074	7/21/2022	1.23	
W.CoCo 075	7/21/2022	1.25	
W.CoCo 076	7/21/2022	1.19	
W.CoCo 077	--	--	Exempted Area
W.CoCo 078	--	--	Exempted Area
W.CoCo 079	--	--	Exempted Area
W.CoCo 080	--	--	Exempted Area
W.CoCo 081	7/21/2022	1.14	
W.CoCo 082	7/21/2022	1.33	
W.CoCo 083	7/21/2022	1.32	
W.CoCo 084	7/21/2022	1.32	
W.CoCo 085	7/21/2022	1.05	



Third Quarter 2022

**Table 2. Integrated Surface Emissions Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California**

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 086	7/21/2022	1.11	
W.CoCo 087	7/21/2022	0.93	
W.CoCo 088	--	--	Exempted Area
W.CoCo 089	--	--	Exempted Area
W.CoCo 090	--	--	Exempted Area
W.CoCo 091	7/21/2022	2.12	
W.CoCo 092	7/21/2022	1.39	
W.CoCo 093	7/21/2022	0.80	
W.CoCo 094	7/21/2022	1.00	
W.CoCo 095	--	--	Exempted Area
W.CoCo 096	--	--	Exempted Area
W.CoCo 097	--	--	Exempted Area
W.CoCo 098	--	--	Exempted Area
W.CoCo 099	7/21/2022	2.49	
W.CoCo 100	7/21/2022	1.40	
W.CoCo 101	7/21/2022	1.55	
W.CoCo 102	7/21/2022	0.66	
W.CoCo 103	--	--	Exempted Area
W.CoCo 104	--	--	Exempted Area
W.CoCo 105	--	--	Exempted Area
W.CoCo 106	--	--	Exempted Area
W.CoCo 107	7/21/2022	2.00	
W.CoCo 108	--	--	Exempted Area
W.CoCo 109	7/21/2022	1.57	
W.CoCo 110	7/21/2022	0.64	
W.CoCo 111	--	--	Exempted Area
W.CoCo 112	--	--	Exempted Area
W.CoCo 113	--	--	Exempted Area
W.CoCo 114	--	--	Exempted Area
W.CoCo 115	7/21/2022	2.03	
W.CoCo 116	--	--	Exempted Area
W.CoCo 117	7/21/2022	0.70	
W.CoCo 118	7/21/2022	0.70	
W.CoCo 119	--	--	Exempted Area
W.CoCo 120	--	--	Exempted Area
W.CoCo 121	--	--	Exempted Area
W.CoCo 122	7/21/2022	2.11	
W.CoCo 123	7/21/2022	2.11	
W.CoCo 124	7/21/2022	1.60	
W.CoCo 125	7/21/2022	0.65	
W.CoCo 126	7/21/2022	0.27	
W.CoCo 127	7/21/2022	0.39	
W.CoCo 128	7/21/2022	0.30	



Third Quarter 2022

**Table 2. Integrated Surface Emissions Monitoring Results
West Contra Costa County Landfill, Contra Costa County, California**

Point Name	Record Date	FID Concentration (ppm)	Comments
W.CoCo 129	--	--	Exempted Area
W.CoCo 130	7/21/2022	2.19	
W.CoCo 131	7/21/2022	0.56	
W.CoCo 132	7/21/2022	0.60	
W.CoCo 133	7/21/2022	0.43	
W.CoCo 134	7/21/2022	0.51	
W.CoCo 135	7/21/2022	0.33	
W.CoCo 136	7/21/2022	0.31	
W.CoCo 137	7/21/2022	2.20	
W.CoCo 138	7/21/2022	2.21	
W.CoCo 139	7/21/2022	2.13	
W.CoCo 140	7/21/2022	2.29	
W.CoCo 141	7/21/2022	2.11	
W.CoCo 142	--	--	Exempted Area
W.CoCo 143	7/21/2022	1.39	
W.CoCo 144	7/21/2022	1.90	
W.CoCo 145	7/21/2022	1.91	
W.CoCo 146	7/21/2022	1.96	
W.CoCo 147	--	--	Exempted Area
W.CoCo 148	--	--	Exempted Area
W.CoCo 149	7/21/2022	1.49	
W.CoCo 150	7/21/2022	1.83	
W.CoCo 151	7/21/2022	1.80	
W.CoCo 152	7/21/2022	1.76	
W.CoCo 153	7/21/2022	1.72	
W.CoCo 154	7/21/2022	1.70	
W.CoCo 155	7/21/2022	1.70	
W.CoCo 156	7/21/2022	1.70	
W.CoCo 157	7/21/2022	1.70	
W.CoCo 158	7/21/2022	1.70	
W.CoCo 159	--	--	Exempted Area
W.CoCo 160	7/21/2022	1.53	
W.CoCo 161	7/21/2022	1.47	
W.CoCo 162	7/21/2022	1.55	
W.CoCo 163	7/21/2022	1.56	
W.CoCo 164	7/21/2022	1.56	
W.CoCo 165	7/21/2022	1.48	



Attachment 5

Calibration Logs

**SURFACE EMISSIONS MONITORING
CALIBRATION AND PERTINENT DATA**

Date: 7-21-22 Site Name: Contra
 Inspector(s): ~~Ricardo~~ Ricardo Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 10 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg
 Air Temperature: 57 °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: 4388 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.-Cal Gas Reading	Response Time (seconds)
1	<u>0.1</u>	<u>501</u>	<u>1</u>	<u>1</u>
2	<u>0.1</u>	<u>500</u>	<u>0</u>	<u>2</u>
3	<u>0</u>	<u>503</u>	<u>3</u>	<u>2</u>

Average Difference: 1.7
*Perform recalibration if average difference is greater than 10

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

$$= 100\% - \frac{1.7}{500} \times 100\%$$

$$= 99.7\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>153964</u>	Counts Observed for the Span= <u>155408</u>
Counters Observed for the Zero= <u>4042</u>	Counters Observed for the Zero= <u>4004</u>
Trial 2:	
Counts Observed for the Span= <u>156480</u>	
Counters Observed for the Zero= <u>3980</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.3 ppm Cal Gas Reading: 517 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 Reading: 2.8 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: 7-21-22 Site Name: Ronita
 Inspector(s): Diego Romero Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 11 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg
 Air Temperature: 57 °F General Weather Conditions: Cloudy

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

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

Instrument Serial Number: 2367 Cal Gas Concentration: 500ppm

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

$$= 100\% \cdot \frac{0.6}{500} \times 100\%$$

$$= 99.8\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>174380</u>	Counts Observed for the Span= <u>176116</u>
Counters Observed for the Zero= <u>5266</u>	Counters Observed for the Zero= <u>5135</u>
Trial 2:	
Counts Observed for the Span= <u>175400</u>	
Counters Observed for the Zero= <u>5132</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.1 ppm Cal Gas Reading: 529 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 Reading: 2.1 ppm
 Downwind Location Description: Plane 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: 7-21-22 Site Name: Contra
 Inspector(s): Don Gibson Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 11 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg
 Air Temperature: 57 °F General Weather Conditions: Sunny/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	<u>0.1</u>	<u>503</u>	<u>3</u>	<u>1</u>
2	<u>0</u>	<u>500</u>	<u>0</u>	<u>2</u>
3	<u>0</u>	<u>501</u>	<u>1</u>	<u>1</u>

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:	Trial 3:
Counts Observed for the Span= <u>136121</u>	Counts Observed for the Span= <u>148135</u>
Counters Observed for the Zero= <u>4185</u>	Counters Observed for the Zero= <u>3989</u>
Trial 2:	
Counts Observed for the Span= <u>14081</u>	
Counters Observed for the Zero= <u>4212</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.8 ppm Cal Gas Reading: 510 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 Reading: 2.2 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: 7-21-22 Site Name: Contra
 Inspector(s): Emmanuel Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 11 MPH Wind Direction: NW Barometric Pressure: 29.8 "Hg
 Air Temperature: 57 °F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

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

Instrument Serial Number: 1215 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.-Cal Gas Reading	Response Time (seconds)
1	0	502	2	1
2	0.1	500	0	2
3	0	501	1	1

Average Difference: 1
*Perform recalibration if average difference is greater than 10

Calibration Precision= Average Difference/Cal Gas Conc. X 100%
 = 100% - 1 / 500 x 100%
 = 99.8 %

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>140184</u>	Counts Observed for the Span= <u>139872</u>
Counters Observed for the Zero= <u>4004</u>	Counters Observed for the Zero= <u>4112</u>
Trial 2:	
Counts Observed for the Span= <u>137156</u>	
Counters Observed for the Zero= <u>4040</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.2 ppm Cal Gas Reading: 531 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 Reading: 2.1 ppm
 Downwind Location Description: Flare Reading: 25 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: 7-21-22 Site Name: Contra
 Inspector(s): R. Warren Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 11 MPH Wind Direction: NW Barometric Pressure: 29.9 "Hg
 Air Temperature: 57 °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	500	0	1
2	8	501	1	2
3	0	500	0	1

Average Difference: 0.3
*Perform recalibration if average difference is greater than 10

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

$$= 100\% \cdot \frac{0.3}{500} \times 100\%$$

$$= 9.99\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>125452</u>	Counts Observed for the Span= <u>130121</u>
Counters Observed for the Zero= <u>4024</u>	Counters Observed for the Zero= <u>4084</u>
Trial 2:	
Counts Observed for the Span= <u>127181</u>	
Counters Observed for the Zero= <u>4127</u>	

Post Monitoring Calibration Check

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

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 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: 7-22-22
Inspector(s): E. Paz

Site Name: West Contra
Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 9 MPH

Wind Direction: S

Barometric Pressure: 29 "Hg

Air Temperature: 59 °F

General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

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

Instrument Serial Number: 1211

Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.-Cal Gas Reading	Response Time (seconds)
1	-0.1	499	1	3
2	-0.1	500	0	3
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%

$$= \frac{100\% \cdot 0.6}{500} \times 100\% = 99.8\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>120784</u>	Counts Observed for the Span= <u>122288</u>
Counters Observed for the Zero= <u>3730</u>	Counters Observed for the Zero= <u>3722</u>
Trial 2:	
Counts Observed for the Span= <u>122988</u>	
Counters Observed for the Zero= <u>3740</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.5 ppm

Cal Gas Reading: 521 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description:

Grid-8
Entrance

Reading: 2.1 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: 7-22-22
Inspector(s): Diego Romero

Site Name: Contra
Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH

Wind Direction: NW

Barometric Pressure: 30.01 "Hg

Air Temperature: 60 °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	<u>-0.2</u>	<u>499</u>	<u>1</u>	<u>1</u>
2	<u>0-0</u>	<u>503</u>	<u>3</u>	<u>2</u>
3	<u>0-0</u>	<u>502</u>	<u>2</u>	<u>1</u>

Average Difference: 3

*Perform recalibration if average difference is greater than 10

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

$$= 100\% \cdot \frac{3}{500} \times 100\% = 99.4\%$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>182920</u>	Counts Observed for the Span= <u>181132</u>
Counters Observed for the Zero= <u>3855</u>	Counters Observed for the Zero= <u>3781</u>
Trial 2:	
Counts Observed for the Span= <u>179856</u>	
Counters Observed for the Zero= <u>5501</u>	

Post Monitoring Calibration Check

Zero Air Reading: -02 ppm

Cal Gas Reading: 329 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 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**

RW

Date: 7-22-22
Inspector(s): Ricardo yepes

Site Name: Contra
Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: NW Barometric Pressure: 30.1 "Hg
Air Temperature: 60 °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: 4785 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	500	0	1
3	0	500	0	1

Average Difference: *Perform recalibration if average difference is greater than 10

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

$$= \frac{100\% - 0}{500} \times 100\%$$

$$= 100\% \text{ %}$$

Span Sensitivity:

Trial 1:	Trial 3:
Counts Observed for the Span= <u>141492</u>	Counts Observed for the Span= <u>140 764</u>
Counters Observed for the Zero= <u>3481</u>	Counters Observed for the Zero= <u>3498</u>
Trial 2:	
Counts Observed for the Span= <u>141704</u>	
Counters Observed for the Zero= <u>3472</u>	

Post Monitoring Calibration Check

Zero Air Reading: 0.2 ppm Cal Gas Reading: 530 ppm

BACKGROUND CONCENTRATIONS CHECKS

Upwind Location Description: Grid 8 Reading: 2.0 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: 7-22-20 Site Name: Contra
 Inspector(s): R Warren Instrument: TVA 2020

WEATHER OBSERVATIONS

Wind Speed: 15 MPH Wind Direction: NW Barometric Pressure: 30.1 "Hg
 Air Temperature: 60 °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: 5421 Cal Gas Concentration: 500ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.-Cal Gas Reading	Response Time (seconds)
1	<u>-0.1</u>	<u>500</u>	<u>8</u>	<u>1</u>
2	<u>0</u>	<u>500</u>	<u>0</u>	<u>2</u>
3	<u>0</u>	<u>499</u>	<u>1</u>	<u>2</u>

Average Difference: 0.3
*Perform recalibration if average difference is greater than 10

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

$$= 100\% \cdot \frac{0.3}{500} \times 100\% = 99.9\%$$

Span Sensitivity:

Trial 1:	Trial 2:	Trial 3:
Counts Observed for the Span= <u>140244</u>	Counts Observed for the Span= <u>140924</u>	Counts Observed for the Span= <u>139260</u>
Counters Observed for the Zero= <u>3825</u>	Counters Observed for the Zero= <u>3818</u>	Counters Observed for the Zero= <u>4995</u>

Post Monitoring Calibration Check

Zero Air Reading: 0.8 ppm Cal Gas Reading: 517 ppm

BACKGROUND CONCENTRATIONS CHECKS

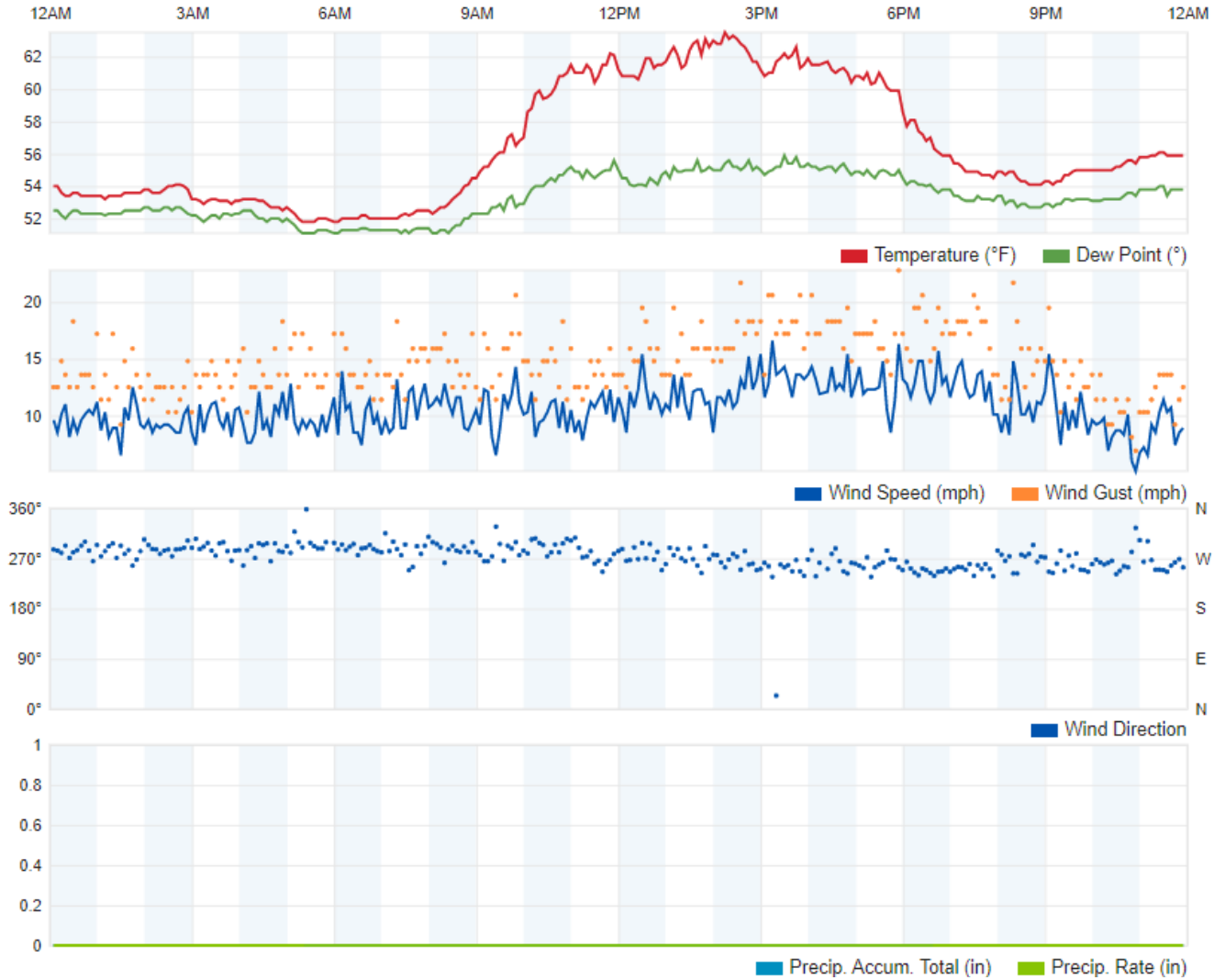
Upwind Location Description: Grid 8 Reading: 2.7 ppm
 Downwind Location Description: Flare Reading: 2.5 ppm

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.

Attachment 6

Weather Data

July 21, 2022

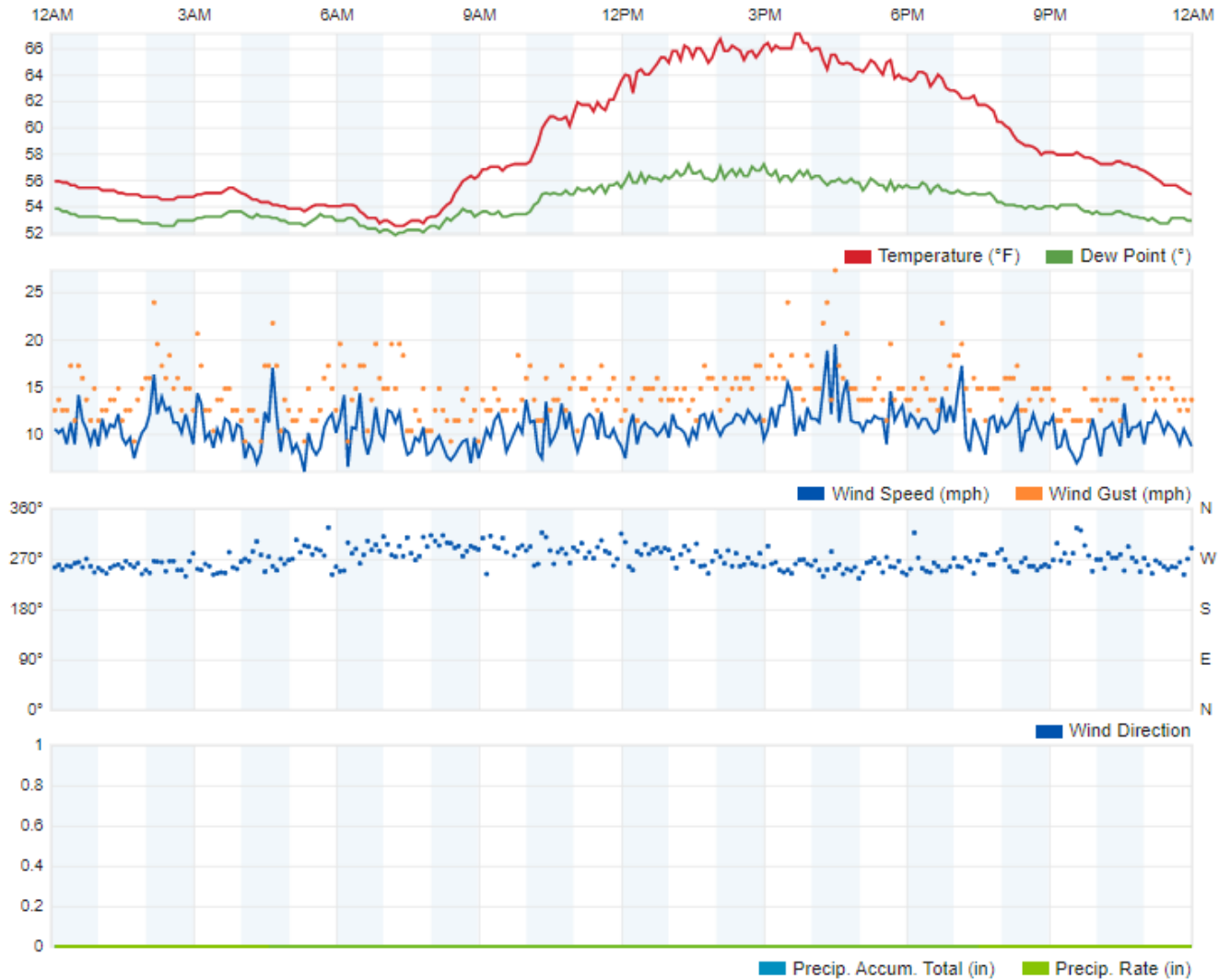


Third Quarter 2022

LMR Weather For July 21, 2022

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

July 22, 2022



Third Quarter 2022

LMR Weather For July 22, 2022

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

Appendix E – Root Cause Analysis Forms



PRESSURE EXCEEDANCE

Corrective Action Analysis and Implementation Schedule

Date of Initial Exceedance:	4/30/2022
Collection Device ID:	WCLF40Ad
Pressure Reading:	0.37

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • If YES to <u>ANY</u> of the above, exempt as per 40 CFR 62.16720(a)(3)(iii)/ 40 CFR §63.1958(b). • If NO to <u>ALL</u> of the above, continue the form. 	
Describe what was inspected.	
Gas well with on spot gas sample and vacuum lateral	
Describe what was determined to be the root cause of the exceedance.	
<p>PTO Condition Number 25293 Part 7(d)(iii), allows the horizontal collectors to operate at a HOV of 15 percent oxygen. In addition, PTO Condition Number 25293 Part 7(c)(ii), allows the horizontal collectors to be temporarily disconnected from vacuum if methane concentrations are below 5 percent or corresponding oxygen concentrations are at or above 15 percent. Per Condition Number 25293 Part 7(c)(i), these wells are allowed to stay disconnected until readings indicate methane above five percent or a pressure of 1.0 inches water column or more.</p>	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> • 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:	4/30/2022
Collection Device ID:	WCLF40AS
Pressure Reading:	0.61

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> 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.	
Gas well with on spot gas sample and vacuum lateral	
Describe what was determined to be the root cause of the exceedance.	
<p>PTO Condition Number 25293 Part 7(d)(iii), allows the horizontal collectors to operate at a HOV of 15 percent oxygen. In addition, PTO Condition Number 25293 Part 7(c)(ii), allows the horizontal collectors to be temporarily disconnected from vacuum if methane concentrations are below 5 percent or corresponding oxygen concentrations are at or above 15 percent. Per Condition Number 25293 Part 7(c)(i), these wells are allowed to stay disconnected until readings indicate methane above five percent or a pressure of 1.0 inches water column or more.</p>	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> 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

Root Cause Analysis

Date of Initial Exceedance:	5/17/2022
Collection Device ID:	WCLF0826
Pressure Reading:	0.92

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> 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.	
High oxygen concentration while under applied vacuum with flow. <i>PTO Condition Number 25293 Part 7(c)(ii), allows the horizontal collectors to be temporarily disconnected from vacuum if methane concentrations are below 5 percent or corresponding oxygen concentrations are at or above 15 percent.</i>	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> 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:	6/30/2022
Collection Device ID:	WCLF0842
Pressure Reading:	0.36

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • 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 vacuum on lateral riser, may be damaged or flooded	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> • 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:	7/29/2022
Collection Device ID:	WCLF0824
Pressure Reading:	0.26

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • If YES to <u>ANY</u> of the above, exempt as per 40 CFR 62.16720(a)(3)(iii)/ 40 CFR §63.1958(b). • If NO to <u>ALL</u> 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 vacuum on wellhead, may be damaged	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> • 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:	9/6/2022
Collection Device ID:	WCLF0839
Pressure Reading:	0.26

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> 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 vacuum on wellhead, may be damaged	
Determine the required next steps.	
Was the positive pressure remediated within 60 days since the initial exceedance?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> 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:	WCLF0510
Pressure Reading:	2.74

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> • 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

Root Cause Analysis	
Was the reason for the positive pressure due to one of the following:	
A fire or increased well temperature.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Use of a geomembrane or synthetic cover.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A decommissioned well.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> 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 F – 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 5/01/2022 through 10/31/2022	

CERTIFICATION:

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



Signature of Responsible Official

11-29-22

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 05/01/2022 through 10/31/2022	

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.

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 05/01/2022 through 10/31/2022

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% O ₂ , 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% O ₂ , 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 05/01/2022 through 10/31/2022

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 \leq 0.5 ppm for 3 minutes, \leq 0.25 ppm for 60 minutes, and \leq 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	\leq 300 ppm (dry)	Continuous	N/A
H ₂ S	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
NO _x	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.1	Waste Fuel Gas, Lean-Burn \leq 70 ppmv, dry basis @ 15% O ₂	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 \leq 140 ppmv, dry basis @ 15% O ₂	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 05/01/2022 through 10/31/2022

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% O ₂	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% O ₂	Continuous	N/A
CO	BAAQMD Condition # 5771, Part 7	Annual Source Test	Periodic / Annually	BAAQMD Condition # 5771, Part 5	≤ 376 ppmv, dry basis @ 15% O ₂	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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 were four landfill gas collection and control system (GCCS) downtime events that did not meet the exemption criteria specified in Rule 8-34-113. These events included utility outages, power surge/ fluctuations, and air compressor malfunctions which resulted in shutdowns of the GCCS that occurred on

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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
							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; and September 5, 2022 from 21:32 to September 6, 2022 07:28. These events were reported to the BAAQMD as reportable compliance activities (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	Records of Landfill Gas	Periodic / Daily	BAAQMD Condition #25293,	Landfill gas collection system shall operate	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
	#5771, Part 9; BAAQMD Condition #17812, Part 9; and BAAQMD Condition #25293, Parts 14b-d	Flow Rates, Collection and Control Systems Downtime, and Collection System Components		Parts 5, 6, and 7	less than continuously and all collected gases shall be vented to a 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

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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
Collection and Control System Startup Shutdown or Malfunction	40 CFR 60.7(b), 60.757(f)(2), (f)(3) and (f)(4)	Operating Records (all occurrences and duration of each)	Periodic / Daily	40 CFR 60.755(e)	5 days per event for collection system and 1 hour per event for control system	Continuous	N/A
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	Periodic / Daily	40 CFR 60.13(e)	Requires Continuous Operation except for	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
		Continuous Monitors			breakdowns, repairs, calibration, and required span adjustments		
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 °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 °C	Continuous	N/A
Gas Concentrations at Wellhead	BAAQMD 8-34-414, 501.9 and 505.3	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.3 or 305.4 and	Applies to Gas Collection System Components Other	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
	or 505.4 and BAAQMD Condition #25293 Part 7d			BAAQMD Condition #25293 Part 7d	than Leachate Wells N2 < 20% OR O2 < 5% Applies to Leachate 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	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
		with OVA and Records					
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	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
		Times for Leaking Areas, and Records					
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% O ₂ , 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% O ₂ , 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 ≥ 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 05/01/2022 through 10/31/2022

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	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 05/01/2022 through 10/31/2022

Type of Limit	Monitoring Requirement Citation	Monitoring Type	Monitoring Frequency	Citation of Limit	Limit	Compliance	Corrective Actions Taken
					< 3 minutes/hr (applies to A-8 and A-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	≤ 0.15 grains/dscf (applies to A-8 and A-120 Flares only)	Continuous	N/A
FP	None	N/A	None	SIP 6-310	≤ 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: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours	Continuous	N/A
SO ₂	BAAQMD Condition #25293, Part 10	Source Test	Periodic / Annually	BAAQMD 9-1-302	≤ 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 05/01/2022 through 10/31/2022

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	≤ 300 ppmv	Continuous	N/A
H ₂ S	None	N/A	None	BAAQMD 9-2-301	Property Line Ground Level Limits: ≤ 0.06 ppm, averaged over 3 minutes and ≤ 0.03 ppm, averaged over 60 minutes	Continuous	N/A
Heat Input	BAAQMD Condition # 25293, Part 8	Records	Periodic / Daily	BAAQMD Condition # 25293 Part 8	≤ 2137 MM BTU per day and ≤ 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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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% O ₂ , 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% O ₂ , 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 05/01/2022 through 10/31/2022

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 ₂ S	None	N/A	None	BAAQMD 9-2-301	Property Line ground level limits ≤ 0.06 ppm Averaged over 3 minutes and ≤ 0.03 ppm Averaged over 60 minutes	Continuous	N/A
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% O ₂	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 05/01/2022 through 10/31/2022

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 ≤ 140 ppmv, dry basis @ 15% O ₂	Continuous	N/A
NO _x	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD Condition #17812, Part 5	≤ 63 ppmv, dry basis @ 15% O ₂	Continuous	N/A
CO	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD 9-8-302.3	Waste Fuel Gas: ≤ 2000 ppmv, dry basis @ 15% O ₂	Continuous	N/A
CO	BAAQMD Condition #17812, Part 8	Annual Source Test	Periodic / Annually	BAAQMD Condition #17812, Part 6	≤ 309 ppmv, dry basis @ 15% O ₂	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 05/01/2022 through 10/31/2022

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)	≤ 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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 Measurements 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 Measurements 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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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 05/01/2022 through 10/31/2022

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