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SOUTH COAST AQMD
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PETITION FOR MODIFICATION OF AN EXISTING VARIANCE BEFORE THE HEARING BOARD OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PETITIONER: USA Waste of California, Inc. dba El Sobrante Landfill CASE NO: 5139-3

FACILITY ID: 113674

FACILITY ADDRESS : 10910 Dawson Canyon Road, Corona, CA 92883
[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

CITY, STATE, ZIP: See above

1. TYPE OF MODIFICATION REQUESTED

(a) ☒ **MODIFICATION/EXTENSION OF A FINAL COMPLIANCE DATE:** If you are operating under a variance and will not be in full compliance by the final compliance date, you may request an extension of the variance and a modification of the final compliance date. **A petition requesting such an extension must be filed at least 45 days prior to the existing final compliance date in order to meet the legal notice requirement**. *(Hearing will be held approximately 45 days from date of filing--30-day published notice required.)*

(b) ☐ **MODIFICATION OF VARIANCE CONDITIONS:** If you are unable to comply with one or more conditions of an existing variance, you may request a modification of variance conditions. *(Hearing will be held approximately 21 days from date of filing--10-day published notice required)*

(c) ☐ **MODIFICATION OF INCREMENTS OF PROGRESS:** If you are unable to comply with one or more increments of progress of an existing variance and additional time is required, you may request a modification of those increments of progress. *(Hearing will be held approximately 21 days from date of filing--10-day published notice required.)*

(1) ☐ **INTERIM AUTHORIZATION:** If compliance with an increment of progress cannot be achieved and you are unable to notify the Hearing Board at least 21 days in advance in order to schedule a noticed hearing, the Board can consider granting **one** extension of the increments of progress (interim authorization). **However**, an interim authorization cannot be granted: (1) for more than 30 days; or (2) to extend a final compliance date of an existing variance. *(Hearing will be held approximately 2 working days from date of filing*
or the next available hearing date thereafter.)

(d) ☐ OTHER: Specify:

Persons with disabilities may request this document in an alternative format by contacting the Clerk of the Board at 909-396-2500 or by e-mail at clerkofboard@aqmd.gov.

If you require disability-related accommodations to facilitate participating in the hearing, contact the Clerk of the Board at least five (5) calendar days prior to the hearing.

[ALL DOCUMENTS FILED WITH CLERK'S OFFICE BECOME PUBLIC RECORD]

2. CONTACT: Name, title, company (if different than Petitioner), address, and phone number of persons authorized to receive notices regarding this Petition (no more than two authorized persons).

Malcolm Weiss, Esq.	Timothy Miller, Esq.
Hunton Andrews Kurth LLP	Waste Management
550 S. Hope Street, 20th floor	800 S. Temescal St.
Los Angeles, CA *Zip* 90071	Corona, CA *Zip* 92879
☎ (213) 532-2130 *Ext.*	☎ (832) 707-1466 *Ext.*
Fax ( )	*Fax* ( )
E-mail Mweiss@hunton.com	*E-mail* Tmille32@wm.com

3. List the equipment and/or activity that are the subject of this petition, if different from the existing variance. **(Attach copy of last minute order regarding this variance)**

Equipment/Activity	Application/ Permit No.	RECLAIM Permit/Device No.	Date Application/Plan Denied (if relevant, attach copy of denial letter)
N/A			

4. List all District rules, and/or permit conditions from which you are requesting variance relief, if different from the existing variance. *Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate the subject equipment* ***only if you are adding*** *a request for relief from permit conditions. If RECLAIM or Title V facility, attach only the relevant sections of the Facility Permit (for example, showing the equipment or process and conditions that are the subject of this petition).*

Rules	Explanation
N/A	

5. Explain the steps taken since the last hearing to achieve compliance, including how you have met each of your existing variance conditions and/or increments of progress.

Petitioner is requesting an extension of the August 5, 2025 final compliance date for the variance granted in Case No. 5139-3. The Hearing Board's Minute Order (**Attachment 1**) and Findings and Decision (**Attachment 2**) contained 22 numbered paragraphs of conditions over numerous pages. There were no Increments of Progress.

If needed, more detail can/will be provided via declaration or testimony, but Petitioner has complied with all conditions of the variance. To highlight the most salient conditions, Petitioner has:

- To the maximum extent feasible, limited the use of Flare No. 4 and prioritized and maximized the use of the Facility's other Flare (No. 3) (Variance Cond. #2).
- Sampled, measured, analyzed, and recorded the landfill gas (LFG) sulfur compounds at the inlet to Flare No. 4 and reported results to SCAQMD staff (Variance Conds. # 3 & 4).
- Investigated and, to the extent feasible, sought to determine the underlying cause of total sulfur concentration exceedances (Variance Cond. #10).
- Investigated the availability, viability, and utilization, including pilot testing if needed, of an alternative sulfur compound treatment system that controls, treats, or removes dimethyl sulfide (DMS) and other sulfur compounds (Variance Cond. #11).
- Submitted reports to SCAQMD regarding the results of the above investigations by January 6 2025 (Variance Conds. # 10 & 11).
- Submitted a complete permit application to SCAQMD on August 27, 2024 and requested expedited application review for modification of the permitted SOx limits for Flare No. 4 (Variance Cond. #12).
- Submitted written status reports to SCAQMD every other week on a large quantity and variety of data sampled, analyzed, collected or as otherwise required (Variance Cond. #13).
- Conducted source testing pursuant to an approved source test protocol and submitted results to Staff (Variance Cond. #14-16) in a report dated January 10, 2025.
- Worked with Staff to calculate excess emissions as required under the Regular Variance (Variance Conds. #17 & 20).

6. When did you first become aware that you would not be able to comply with the existing variance?

Petitioner became aware that an extension of the final compliance date would be necessary on May 27, 2025. On that date, Petitioner met with SCAQMD Permitting & Engineering staff and was informed that staff estimates needing several more months to process Petitioner's permit application (submitted on August 27, 2024 in accordance with Variance Cond. #12), in which Petitioner requested modified SOx limits for Flare No. 4.

7. What part(s) of the existing variance are you unable to comply with (final compliance date, specific increments of progress, and/or conditions)? For each part with which you cannot comply, provide an explanation.

Petitioner is unable to comply with the Regular Variance final compliance date of August 5, 2025. During the Regular Variance period, Petitioner has dedicated substantial resources to investigating and implementing measures aimed at addressing the generation of DMS, which is leading to exceedances of the currently permitted SOx limits for Flare No. 4. This has included physical modifications at the landfill to monitor and decrease operating pressures in an effort to reduce DMS generation (*e.g.*, increasing the density of LFG collection wells, installing pumps to remove collected liquids, installing temperature probes and piezometers to monitor subsurface pressure and temperature). Petitioner has also investigated the underlying cause of sulfur concentration increases in LFG generated in the area of concern, as well as the potential efficacy of alternative sulfur compound treatment systems to assess their potential capability to reduce DMS levels.

Notwithstanding these efforts, the currently permitted SOx sulfur limits for Flare No. 4 are not achievable. It remains the case that there are no known controls for DMS in LFG generated at the landfill, as confirmed in conversations with District staff and acknowledged by the Hearing Board.

Petitioner has, however, submitted an application requesting modifications to the SOx limits for Flare No. 4 in Condition # 26 of the Facility's operating permit, as required under the Variance. This application (A/N 655059) was submitted to SCAQMD on August 27, 2024, deemed complete on October 15, 2024, and is currently undergoing engineering review. In the application, Petitioner requests a SOx limit of 116 ppmv (averaged monthly) in inlet (total sulfur as H2S), as well as SOx limits of 6.37 lbs/hr and 4,652 lbs/month. Petitioner anticipates that compliance will be achieved once this application to modify its existing permit is approved.

8. How do you intend to achieve compliance with the rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed and/or modifications or process changes to be made, a list of the dates by which the actions will be completed, and an estimate of total costs.

See above response to Question # 7, regarding anticipated compliance with the SOx limits Petitioner requested in A/N 655059. Additionally, Petitioner has taken or plans to take the following additional actions to address DMS generation in the area of concern at the landfill:

- De-watering:
    - During the Regular Variance period (commencing October 3, 2024), ESL has installed pumps at 66 wells to reduce the water within the waste mass.
    - ESL plans to install an additional four (4) pumps by August 15, 2025, for a total of 70 new pumps at wells.

- Liquids Removal:
    - Waste liquids generated at the landfill are being trucked offsite, approximately 100,000 gallons per day (at a cost of ~ $50,000/day).
    - In 2024, Petitioner shipped offsite a total of 9.3 million gallons of collected liquids.
    - As of mid-May 2025, Petitioner has shipped offsite more than 13.7 million gallons of collected liquids.
- Waste Mass Temperature Monitoring:
    - Petitioner has installed 13 fiber optic temperature probes since March 2025.
    - Petitioner plans to install an additional two (2) temperature probes by August 31, 2025.
- Increasing Well Density to help relieve subsurface pressures:
    - Petitioner has installed 35 new wells during the Regular Variance period, increasing the well density in the area of concern from two wells per acre to three wells per acre.
- Piezometer Subsurface Pressure Monitoring:
    - Petitioner installed two (2) nested piezometers in September 2024 to measure subsurface pressures at three (3) different waste depths per piezometer.
    - These piezometer readings track the progress of depressurizing the area of concern (*e.g.*, by extracting LFG via the recently-installed wells and removing liquids via the recently-installed pumps).

Finally, Petitioner applied for SCAQMD and other required permits to install and operate a new Flare No. 5 system at the Facility. SCAQMD issued a permit for Flare No. 5 on January 17, 2025, but Petitioner is still awaiting necessary building permit approvals from the County. Petitioner anticipates that Flare No. 5 will be operational before the end of 2025, assuming all necessary construction authorizations are timely received. Once Flare No. 5 is operational, Petitioner anticipates that the Facility will have increased capacity to collect and combust gas, which could help reduce operating pressure and have a beneficial impact on DMS generation.

9. State the date by which you expect to achieve final compliance:

Petitioner anticipates that final compliance will be achieved once SCAQMD approves its pending application to modify the permitted SOx limits for Flare No. 4, which SCAQMD estimates will be in several months.

List Increments of Progress here:

Actions Taken

- Presently: Petitioner is implementing measures to optimize removal of LFG and liquids, anticipated to reduce operating pressure and decrease DMS generation. Measures include installation of pumps at wells in the area of concern to reduce water within the waste mass; installation of fiber optic temperature probes and piezometers to monitor subsurface temperatures and pressure (respectively); and increasing well density to help relieve subsurface pressures in the area of concern.

- August 27, 2024: Petitioner submitted an application to SCAQMD to modify the SOx limits for Flare No. 4 in Condition # 26 of the Facility's operating permit.
- September 26, 2024: Petitioner began shipping collected liquids at the landfill offsite for disposal.

Actions to be Taken

- By July 1, 2025: Petitioner will install four (4) additional pumps at wells in the area of concern.
- By August 1, 2025: Petitioner will install two (2) additional temperature probes to be installed in the area of concern.
- By August 5, 2026: Petitioner will report to SCAQMD staff on actions taken to address DMS generation in area of concern, impacts of measures taken, and evaluation of utility of future actions (e.g., continuing to increase well density) with respect to DMS generation.
- Ongoing (unless otherwise agreed by Petitioner and SCAQMD staff): Petitioner will continue meeting monthly (approximately) with SCAQMD permitting staff to address permitting issues until SCAQMD approves the modifications requested in A/N 655059 for Flare No. 4 Condition # 26 SOx limits.
- Within one month of receipt of all needed construction permits and approvals for Flare No. 5: Petitioner will begin Flare No. 5 construction, subject to unforeseen delays outside Petitioner's control. Substantial completion is expected within eight (8) months of commencement of construction.

10. Estimate excess emissions, if any, on a daily basis, including, if applicable, excess opacity (the percentage of total opacity above 20%) during the variance period. If the variance will result in no excess emissions, go to No. 11.

Pollutant	(A) Total Estimated Excess Emissions (lbs/day)	(B) Reduction Due to Mitigation (lbs/day)	(C)* Net Emissions After Mitigation (lbs/day)
See **Attachment 3** (daily excess emissions calculated in accordance with Variance Cond. # 17).			

*Column A minus Column B = Column C

Excess Opacity: 0%

11. Show calculations used to estimate quantities in No. 10, **or** explain why there will be no excess emissions.

See **Attachment 3**.

12. Explain how you plan to reduce (mitigate) excess emissions to the maximum extent feasible. If no excess emissions, skip to No. 13.

See responses to Question **#s** 7, 8 and 9 above.

Additionally, Petitioner has and will continue to comply with applicable variance conditions to reduce emissions to the maximum extent feasible.

13. Explain how you will monitor or quantify emission levels from the subject equipment or activity during the variance period and make such records available to the District. **Any proposed monitoring does not relieve RECLAIM facilities from missing data requirements.**

Petitioner will continue monitoring, testing, and quantifying emission levels in compliance with District Rules, permit conditions, and the Regular Variance conditions.

14. What would be the harm to your business if the variance were not modified/extended as requested?

Economic losses: $ See below Number of employees laid off (if any): _____

Provide detailed information regarding economic losses, if any (anticipated business closure, breach of contracts, hardship on customers, layoffs and/or similar impacts).

If the requested modification is not granted, harm to the business identified so far would include penalties imposed by SCAQMD for violations of Condition # 26 of the Facility's operating permit. Because the Facility is an essential public service, the Facility must continue operating to meet obligations for managing public waste.

15. List the names of any District personnel with whom facility representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply.

Mary Reichert, Senior Deputy District Counsel	Ext. 2575
Alisha Lewis, Supervising Air Quality Inspector	Ext. 2171
Peter Homsey, AQ Inspector III	Ext. 3084
Duoduo Bao, Air Quality Engineer	Ext. 2112
Wayne Nastri, Executive Officer (EO)	Ext. 3131
Susan Nakamura, Chief Operating Officer	Ext. 3105

Terrence Mann, Deputy EO/Compliance & Enforcement Ext. 3023

Victor Yip, Assistant Deputy EO/Compliance & Enforcement Ext. 2465

Jason Aspell, Deputy EO/Engineering & Permitting Ext. 2491

16. Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six (6) months? No ☐ Yes ☒

Date of Complaint	Number of Complainant(s)	Nature of Complaint
From December 10, 2024 to June 10, 2025	3 individuals	Nine (9) complaints were received alleging the detection of odors from the Facility in nearby residential neighborhoods

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The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on June 10 2025, at Corona, California

Signature

David Meyer
Print Name

Sr. District Manager
Title

(Petition for Modification: Revised December 10, 2008)

ATTACHMENT 1

BEFORE THE HEARING BOARD OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MINUTE ORDER

USA WASTE CALIFORNIA, EL SOBRANTE LANDFILLL
10910 Dawson Canyon Road
Corona, CA 92883

Case No: 5139-3
Facility ID: 113674

Hearing Date*: 10/3/24** ***Hearing Type: Regular ***Consent Calendar:*** **No**

Previous Hearing Date: 8/6/24

HEARING BOARD ACTION

***Action*:** Granted ***Starting Date*:** 10/3/2024 ***Ending Date*:** 08/05/2025

COMMENTS

Upon stipulation by both parties, the Board granted the Petitioner's request to incorporate by reference the testimony and evidence from the Interim Variance hearing held on August 6, 2024.

Petitioner claimed confidentiality with respect to Attachment 5 in Exhibit 9 and Attachment 1 in Exhibit 10. On motion of Mr. Ali, seconded by Mr. Pearman, passing 3-2 with Messrs. Balagopalan and Pearman voting no, the Board deemed that both attachments be treated as confidential and exempt from disclosure. The materials deemed to be confidential will be noted in the case fileand kept in the General Counsel's Office to preserve their confidentiality, per Hearing Board Rule 10(a)(3).

RULES

203(b) {from Condition No. 26 of Facility PTC/PTO No. R-G64402}

3002(c)(1) {from Condition No. 26 of Facility PTC/PTO No. R-G64402}

EQUIPMENT DESCRIPTION	*DEVICE/APPLICATION/PERMIT*
Landfill Gas Flaring System No. 4	R-G64402

CONDITIONS

1. This variance shall only apply to the SOx and total sulfur limits applicable to Flare No. 4 under Permit to Operate (R-G64402, A/N 618396, Permit Condition 26).
2. Petitioner shall, to the maximum extent feasible during the variance period, limit the use of Flare No. 4 and prioritize and maximize the use of the facility's other Flare (No. 3) [Permit to Operate R-G64400], and/or route landfill gas to other combustion and/or control equipment operated valid South Coast AQMD Permit(s).

3. Petitioner shall sample, measure, and record the landfill gas sulfur compounds at the inlet to Flare No. 4 on a weekly basis using colorimetric tests for hydrogen sulfide (H2S). Records of the date and time of the test, the test results, and name of personnel conducting the test shall be maintained on-site and e-mailed within three (3) weekdays of conducting the measurement to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov) and Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), except as allowed by Condition No 19.

4. Petitioner shall sample and analyze the landfill gas sulfur compounds at the inlet to Flare No. 4 by August 13, 2024, using laboratory analysis for total sulfur compounds as H2S using South Coast AQMD Method 307-91 and at least once within every 14 calendar days thereafter, and no less frequent than required under the approved Rule 431.1 Alternative Monitoring Plan under A/N 351821. Petitioner shall maintain on-site, which may include electronic storage, the South Coast AQMD Method 307-91 complete laboratory analysis report, which shall include the time and date each sample collection was conducted, and initialed by the personnel that conducted the sample collection. The complete laboratory analysis report shall be e-mailed within three (3) weekdays of receiving results to Peter Homsey (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), and Duoduo Bao (dbao@aqmd.gov), except as allowed by Condition No 19.

5. Petitioner shall provide a site map no later than August 16, 2024, not later than 5:00 pm PST, to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov) indicating the facility boundary, site identifying features, and all well heads located at the facility. The map shall identify each well head by component number and include visual indicator(s) for the well heads with landfill gas temperature reading(s) that have exceeded 145 degrees Fahrenheit within calendar year 2024. Petitioner has met the initial August 16, 2024, deadline. Petitioner shall either:

    a. Send updated, current site maps identifying each well head by component number and include visual indicator(s) for the well heads with landfill gas temperature reading(s) that have exceeded 145 degrees Fahrenheit since the previously submitted map, with distinct indicator(s) to shown well heads that are newly exceeding this temperature threshold since the previously submitted map with every other bi-weekly report to the same South Coast AQMD contacts listed in this condition, commencing with the bi-weekly report due on October 25, 2024; or

    b. If there has been no change in the identified wells that have exceeded 145 degrees Fahrenheit since the previous site map submission, Petitioner shall state that in the bi-weekly report for which a new site map would be due, and no updated map shall be required under this condition.

6. Petitioner shall report the sulfur compound readings and analyses required under Conditions Nos. 3 and 4 to South Coast AQMD as part of the bi-weekly status report, pursuant to Condition No. 13. Petitioner shall comply with the following requirements when conducting the sampling, analyzing, and recording required under Condition Nos. 3 and 4:

    a. Tedlar bags used for Method 307-91 sampling and analysis shall be clean, unused, intact, and free from moisture and debris.

b. Colorimetric tube readings shall be conducted by taking a reading from the Method 307-91 Tedlar bag sample using an appropriate colorimetric tube sample collection pump. All sampling shall be performed in accordance with the operational manual for the colorimetric tube sample collection pump.

c. Colorimetric tube readings shall use colorimetric tubes of appropriate concentration range and shall be reported as follows:

   i. Petitioner shall first use the estimated appropriately-ranged colorimetric tube.

   ii. If the resulting reading reaches the upper concentration of the colorimetric tube concentration range, additional reading(s) shall be taken using a colorimetric tube with a concentration range that has a larger upper concentration threshold until the result is not the upper concentration threshold of the concentration range. Report the tube concentration range and tube concentration result for each reading.

   iii. If the reading results in the lowest concentration of the colorimetric tube concentration range or does not register a result, additional reading(s) shall be taken using a colorimetric tube with a concentration range that has a smaller lowest concentration threshold, if available, until the colorimetric tubes available to the facility result in:

      1. A reading that is within the concentration range of the tube;
      2. A reading is the lowest concentration of the colorimetric tube concentration range with the lowest concentration threshold; or
      3. The colorimetric tubes do not register a result.

   When the result is the lowest concentration of the colorimetric tube concentration range or does not register a result, the lowest concentration of the colorimetric tube concentration shall be considered the concentration result. Report the tube concentration range and tube concentration result for each reading. If a lower range colorimetric tube is not used and the tube concentration result is below the lower range of the colorimetric tube used, Petitioner shall document and report the result as "less than" or "<" the lower range value of the tube. Notwithstanding the forgoing, Petitioner shall ensure that the colorimetric tube result is below the upper range of the colorimetric tube used and shall report the precise result of all results above the lowest range of the colorimetric tube used.

7. Petitioner shall maintain an adequate stock of appropriately ranged colorimetric tubes.

8. Petitioner shall replenish and/or replace spent granular activated carbon (GAC) media in the Landfill Gas Treatment System (under AN 627016) at a frequency sufficient to maintain a concentration of total sulfur as hydrogen sulfide at the inlet to Flare No. 4, excluding dimethyl sulfide (DMS), below 60 ppmv (averaged monthly) and 85 ppm (averaged daily). Spent media removed from the landfill gas treatment system shall be stored in closed containers prior to disposal.

9. Petitioner shall maintain a record of the following information in an editable spreadsheet and pdf formats with all units labeled and provide such records to the South Coast AQMD pursuant to Condition No. 13:

a. The hourly flow of landfill gas combusted, in standard cubic feet per hour (scfm data averaged hourly) and the daily flow of landfill gas in standard cubic feet per day:

   i. Combusted by Flare No. 3;

   ii. Combusted by Flare No. 4;

   iii. Combusted in other combustion and/or control equipment operated valid South Coast AQMD Permit(s) (if applicable); and

   iv. Totaled for the facility.

b. Temperature readings, in Fahrenheit, for all wellheads (including all temperature readings from the previous month and at minimum one temperature reading for each wellhead, contained in a single spreadsheet);

c. Carbon monoxide (CO) concentration readings, in parts per million by volume (ppmv), and corrective actions relating to CO readings greater than 500 ppmv, for all wellheads (including all CO readings from the previous month and at minimum one reading for each wellhead, contained in a single spreadsheet);

d. The results of the H2S and total sulfur readings, sampling, and analyses, with the time and date when each measurement or sample collection was conducted, pursuant to Condition Nos. 3 and 4; and

e. Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

10. Petitioner shall investigate and, to the extent feasible, determine the underlying cause of total sulfur concentration exceedances. Details of this investigation, information discovered, and conclusions, if any, shall be included in a summary report to be submitted no later than January 6, 2026. The report shall explain the specific steps undertaken by Petitioner (*e.g.*, literature review, data analysis, outreach to industry and/or academic experts) to investigate the underlying cause of the total sulfur concentration exceedances, information received or discovered, any conclusions reached, and any other details that may be relevant to this issue. Petitioner shall submit this report to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov); Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov); Peter Homsey (phomsey@aqmd.gov), Alisha Lewis (alewis@aqmd.gov), and Mary Reichert (mreichert@aqmd.gov).

11. Petitioner shall investigate the availability, viability, and utilization, including pilot testing if needed, of an alternative sulfur compound treatment system that controls, treats, or removes dimethyl sulfide and other sulfur compounds. Concurrent with the summary report submitted pursuant to Condition 10, Petitioner shall submit a report of the findings from this investigation.

12. Petitioner shall submit a complete permit application and request expedited application review with associated fees pursuant to South Coast AQMD Rule 301 to South Coast AQMD for the alteration/modification of Flare No.4 under Permit to Operate (R-G64402, A/N 618396), as described in Item No. 23 of the Variance Petition, as soon as possible but no later than Wednesday, August 28, 2024, not later than 5:00 pm PST via email to permitservicesonline@aqmd.gov. Petitioner shall carbon copy or provide record of this submittal to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov); Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov); Peter Homsey

(phomsey@aqmd.gov), and Alisha Lewis (alewis@aqmd.gov). Petitioner shall respond in a timely manner to written requests for additional information related to this permit application submittal, and shall provide requested information via email to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov) within the deadline(s) provided as part of the written request, unless an extension is requested and approved in writing by South Coast AQMD.

13. Starting October 11, 2024, Petitioner shall submit a written status report to the District every other Friday of the Regular Variance Period, not later than 5:00 pm PST via email to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov). Each bi-weekly report shall contain at a minimum the following information:

    a. Records identified in Condition No. 9, in an editable spreadsheet format, with all units labeled;

        i. Readings and corrective action data gathered under Condition No. 9b and 9c shall be submitted with every other bi-weekly report, commencing with the bi-weekly report due on October 25, 2024.

    b. Records of each instance of GAC replenishment or change-out within the previous month, specifically the date, time, and the GAC that was replenished;

    c. Estimated schedule for any upcoming replacement of the GAC in the Landfill Gas Treatment System;

    d. Specifications of the equipment and materials used for the weekly colorimetric tests (only if there is a change from the previously provided specifications of the colorimetric instrumentation or method used);

    e. Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 9e.

14. Petitioner shall submit a source test protocol consistent with this paragraph, by August 20, 2024, with expedited review requested, for the review and approval of South Coast AQMD, via email to sourcetesting@aqmd.gov, Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov) Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov). The source test protocol shall include, at a minimum, procedures for testing total sulfur compounds as H2S and speciated sulfur compounds pursuant to South Coast AQMD Method 307-91, and for speciated organic compounds pursuant to U.S. EPA Method TO-15, at both the inlet to Flare No. 4, and in the vapors in the headspace of at least one leachate tank, pursuant to Condition 15 below. Petitioner has fulfilled the initial submission deadline of August 20, 2024. Petitioner shall respond in a timely manner to written requests from South Coast AQMD related to review of the submitted source test protocol within the deadline provided in the written request, unless an extension is requested and approved in writing by South Coast AQMD.

15. Petitioner shall, within 45 calendar days of the approval of the submitted source test protocol (STID 24289), unless otherwise approved in writing by South Coast AQMD, conduct sampling and analysis of vapors in the headspace of at least one of leachate tank (No. T-104a, T-104b, or T-104c) under (Permit to Operate G61424, A/N 615966)

and within the landfill gas combusted in Flare No. 4 under Permit to Operate (R-G64402, A/N 618396).

a. The sampled leachate storage tank(s) shall be filled at least 2/3 full of leachate. Tank(s) to be sampled shall be preferentially selected to be those not connected/vented to the landfill gas collection system and/or landfill gas control systems.

b. Vapor sampling and analysis for both the leachate tank vapor headspace, and the landfill gasl combusted in Flare No. 4 shall be conducted for total sulfur compounds as H2S and speciated sulfur compounds pursuant to South Coast AQMD Method 307-91, and for speciated organic compounds pursuant to U.S. EPA Method TO-15.

c. Sampling and analysis shall be performed by a South Coast AQMD Laboratory Approval Program (LAP) approved laboratory(ies), capable of sampling and analysis per South Coast AQMD Method 307-91 and U.S. EPA Method TO-15.

16. The final results of the source test required in Conditions 14 and 15 shall be submitted via email in a source test report(s) format to sourcetesting@aqmd.gov, Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov) Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov) within 3 weekdays of receipt of the final source test report(s), unless otherwise approved in writing by South Coast AQMD. Petitioner shall request and pay for expedited review of the final source test report.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Equation No. 3: SOx Excess Emissions (lb/month) = {[Monthly Average TRS (ppmv) – 60 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/month) x 1.69×10^{-7}]}

Equation No. 4: SOx Excess Emissions (lb/month) = {[Monthly Average TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/month)] x [1.69×10^{-7}]} – [2810.4 (lb/month)]

Where:

LFG: landfill gas

Daily Total Sulfur as H2S: The Total Sulfur as H2S concentration reflected in the most recent lab result collected and received pursuant to Condition No. 4.

Monthly Average Total Sulfur as H2S: The average Total Sulfur as H2S concentration calculated based upon the sum of all samples received pursuant to Condition No. 4 in a calendar month divided by the number of samples analyzed in the calendar month.

lb/scf: pounds per standard cubic foot

lb/day: pounds per day

lb/month: pounds per month

ppmv: parts per million by volume

TRS: total sulfur as H2S concentration using South Coast AQMD Method 307-91

SOx: oxides of sulfur expressed as sulfur dioxide

scf/day: standard cubic feet per day

18. Petitioner shall provide any additional records requested by South Coast AQMD that are reasonably related to the variance scope. The records shall be provided upon request within seven (7) calendar days, or a longer period if approved in writing by South Coast AQMD staff.
19. Any submittal deadline in these conditions that falls on a weekend or Federal or California holiday shall be extended to the next weekday.
20. Petitioner shall pay all applicable fees to the Clerk of the Hearing Board, or the variance shall be invalidated pursuant to Rule 303(k), except for excess emissions fees, which shall be paid within fifteen (15) days of notification in writing that the fees are due, unless otherwise ordered by the Hearing Board.
21. Petitioner shall notify the Clerk of the Board at clerkofboard@aqmd.gov in writing when final compliance has been achieved.
22. This variance shall terminate upon notification by the Petitioner to the Clerk of the Board that operation of all equipment for which a variance is granted is operating in compliance.

EXCESS EMISSIONS

SOx: 8.22 lbs/day

Failure to comply in full with any and all conditions and increments of progress may result in modification or revocation of this order by the Hearing Board, and/or enforcement actions by the South Coast AQMD.

Present:	Micah Ali, Chair Robert Pearman, Esq., Vice Chair Jerry P. Abraham, MD, MPH, CMQ Mohan Balagopalan Cynthia Verdugo-Peralta
Representing the Petitioner:	Malcolm Weiss, Attorney at Law
Representing the Respondent:	Mary Reichert, Senior Deputy District Counsel
Witness for the Petitioner:	Christian Colline, Director of Air Programs for Waste Management
Witness for the Respondent:	Peter Homsey, Air Quality Inspector
Petitioner's Exhibits:	*# 8– Stipulation to Place Matter on Consent Calendar[1] *# 9– Christian Colline Declaration (excludes Attachment 5) *#10– David Meyer Declaration (excludes Attachment 1) *#11– Proposed Findings and Decision and Order Granting Regular Variance
Respondent's Exhibit:	B – Revisions to Condition 5(a)
Hearing Board Exhibit:	HB-1 – Board Member Balagopalan Email Re: Consent Calendar Request
Motion:	**Pearman/Abraham** **4-1; Balagopalan Voted No**

Board Review/Approval Robert Pearman

Robert Pearman

Dated Nov. 6, 2024

Prepared by: Faye Thomas

*Entered into evidence

[1] This matter was not approved to be heard on the consent calendar.

ATTACHMENT 2

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Attorneys for Petitioner
USA Waste of California, Inc. dba El Sobrante Landfill

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BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In the Matter of USA Waste of California, Inc. dba El Sobrante Landfill [Facility ID No. 113674]	Case No.: 5139-3 **FINDINGS AND DECISION AND ORDER GRANTING A REGULAR VARIANCE** Section 42350 of the California Health and Safety Code Hearing Date: October 3, 2024

FINDINGS AND DECISION OF THE HEARING BOARD

The Petition for a Regular Variance (the "Petition") filed on July 19, 2024 by USA Waste of California, Inc. dba El Sobrante Landfill ("Petitioner" or "USA Waste") was heard on October 3, 2024. The following members of the Hearing Board were present: Micah Ali, Chair; Robert Pearman, Esq., Vice Chair; Jerry P. Abraham, MD, MPH, CMQ; Mohan Balagopalan; and Cynthia Verdugo-Peralta. Malcolm C. Weiss, Esquire appeared for Petitioner, and Mary Reichert, Senior Deputy District

Counsel appeared for Respondent South Coast Air Quality Management District ("SCAQMD").

Public notice of the hearing was provided. The public was given the opportunity to testify, and none did. The matter was submitted and evidence received, including all of the evidence and testimony offered in support of Petitioner's request for an Interim Variance (including all evidence and testimony presented at the August 6, 2024 hearing on the Interim Variance).

The Hearing Board finds and declares as follows:

NATURE OF BUSINESS AND LOCATION OF FACILITY

Petitioner's El Sobrante Landfill (Facility ID No. 113674) (the "Facility") is an essential public service per SCAQMD Rule 1302(m)(7). The Facility is a regional waste disposal facility that provides safe and convenient disposal services for communities, businesses, and industries in Southern California. The Facility is located at 10910 Dawson Canyon Road in Corona, California.

EQUIPMENT THAT IS THE SUBJECT OF THE REGULAR VARIANCE PETITION

The equipment that is the subject of the Petition is the landfill gas ("LFG") flaring system # 4 (the "Flare # 4 system"), that operates as abatement equipment for LFG generated by waste decomposition at the Facility. The Flare # 4 system is operated pursuant to Permit to Construct/Operate ("PTC/PTO") No. R-G64402, which is incorporated into the Facility's Title V Permit (Rev. 17) dated April 26, 2021 (the "Permit").

SUMMARY

Among other things, the Permit establishes a 60 ppmv (monthly average) total sulfur limit for the Flare # 4 system. *See* PTO/PTC No. R-G64402, Condition # 26 (hereinafter, "Condition # 26"). Condition # 26 also establishes an 85 ppmv (average daily) limit applicable to LFG at the Flare # 4 system inlet and mass SOx emission limits of 3.85 lb/hr and 2,810.4 lb/month. Total sulfur emissions from the Flare # 4

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system are comprised of more than a dozen sulfur-containing compounds, most of which are controlled by Petitioner's carbon absorption unit. However, one of these compounds, Dimethyl Sulfide (DMS), is not susceptible to removal through the Facility's carbon absorption filter system.

Petitioner became aware through recent sampling and test results that the 60 ppmv total sulfur monthly average limit for the Flare # 4 system is being exceeded due to DMS concentrations in LFG from a discrete area of the Facility (referred to as the "area of concern"). Due to these exceedances, Petitioner is or will also be in violation of the related total sulfur/SOx limits in Condition # 26 referenced above. The increase in total sulfur levels is attributable to increased temperatures unique to the area of concern, and Petitioner is investigating appropriate ways to address the SOx issue. There is no method to physically reduce the DMS component of SOx emissions, and the landfill cannot curtail operations.

As a result, Petitioner is and will be in violation of District Rules 203(b) and 3002(c)(1), and certain SOx limits in Condition # 26. On August 6, 2024, the Hearing Board voted unanimously to grant Petitioner's request for an Interim Variance, subject to conditions that were mutually agreed upon by the Parties. Petitioner has satisfied all conditions of the Interim Variance, including timely submittal of all items requested to be submitted to SCAQMD during the Interim Variance period.

FINDINGS OF FACT AND CONCLUSIONS

The following facts and conclusions support the Hearing Board making the findings in Health and Safety Code Section 42352 in support of a Regular Variance. The SCAQMD Executive Officer does not oppose the granting of the Regular Variance.

A. The petitioner for a variance is, or will be, in violation of Section 41701 or of any rule regulation or order of the District.

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Petitioner is in violation of District Rules 203(b) and 3002(c)(1), which require compliance with permit conditions, because Petitioner is not operating in compliance with Condition # 26.

B. Non-compliance with District Rules is due to conditions beyond the petitioner's reasonable control.

The DMS that is causing exceedances of the total sulfur limits in Condition # 26 is a by-product of LFG generated by the decomposition of waste that Petitioner estimates was landfilled at the Facility prior to 2005. There are no known controls for DMS, as confirmed in conversations with District staff and acknowledged in the Hearing Board's September 4, 2024 Minute Order granting an Interim Variance in this matter (the "Interim Variance Minute Order"). Because Petitioner manages municipal solid waste, the Facility provides an essential public service and cannot curtail or terminate operations. Therefore, it is currently beyond Petitioner's reasonable control to comply with the above-referenced District Rules and SOx limits in Condition # 26.

Nonetheless, Petitioner is investigating the problem and is in the process of procuring the equipment and services needed to remove gas and liquids from the reaction area of concern. Other facilities that have experienced elevated temperature events have removed the gas and liquids from the reaction area, and this has reduced the internal landfill cell area temperatures. Petitioner has planned these and other activities (*e.g.*, increasing well density) to address the temperature and DMS issues in the reaction area. These anticipated actions are not, however, intended as a compliance schedule or increments of progress, as the requested variance extends for one year or less. Petitioner has also submitted an application to modify the total sulfur/SOx limits in Condition # 26 and has requested new limits for the Flare # 4 system. The requested mass-based limits (lb/hr and lb/month SOx) are slightly more stringent than the currently permitted limits for the other flare system (the Flare # 3 system) at the Facility.

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Further, Petitioner has applied for permits to install and operate a new Flare # 5 system at the Facility, and is awaiting SCAQMD action on its application. Once the Flare # 5 system is permitted and becomes operational, it will increase the Facility's ability to collect and combust gas. This will reduce operating pressure, which is expected to reduce DMS levels. The timeline for obtaining a permit for the Flare # 5 system is beyond Petitioner's reasonable control.

C. Requiring compliance would result in either (1) an arbitrary or unreasonable taking of property, or (2) the practical closing and elimination of a lawful business.

Denial of the Regular Variance would cause an unreasonable burden upon an essential public service. It would also cause significant, unreasonable and unavoidable harm to Petitioner in that Petitioner will be subject to monetary fines and penalties for violation of its Permit, as well as Rules 203(b) and 3002(c)(1).

D. The closing or taking would be without a corresponding benefit in reducing air contaminants.

In the Petition, excess emissions from the Flare # 4 system were estimated to be approximately 8.22 pounds per day (on average) during the variance period. Average daily excess emissions during the Interim Variance period have ranged from approximately 5 to 24 pounds per day. Actual excess emissions during the Regular Variance period will continue to be calculated with SCAQMD staff in accordance with the conditions included herein. Denying a Regular Variance would result in significant harm to Petitioner, as described above, without a corresponding benefit in reducing air contaminants, as reductions of the DMS contributing to total sulfur exceedances are not immediately feasible.

E. The applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.

Petitioner has considered but cannot achieve compliance by curtailing operations in lieu of obtaining a variance. Curtailing operations would have no

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beneficial impact on the LFG generated by the decomposition of existing waste in the area of concern that is the source of the DMS causing exceedances of the SOx limits in Condition # 26. Further, as the Hearing Board acknowledged in the Interim Variance Minute Order, the Facility is unable to curtail operations without harm to the public as it provides an essential public service.

F. During the period the variance is in effect, the applicant will reduce excess emissions to the maximum extent feasible.

Petitioner will reduce emissions to the maximum extent feasible during the variance period by complying with the conditions of this variance. However, the reduction of SOx emissions associated the Flare # 4 system is not immediately feasible because the DMS contributing to exceedances of the monthly average limit in Condition # 26 is a by-product of LFG generated by existing waste already present at the Facility. There is no way to physically reduce the DMS component of these SOx emissions, even via the Facility's carbon absorption filter system. As mentioned above, however, Petitioner is assessing the issue and is seeking appropriate ways to address it.

G. During the period the variance is in effect, the applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the District, and report these emission levels to the district pursuant to a schedule established by the District.

Petitioner has agreed to monitor and report emissions to SCAQMD during the variance period pursuant to the conditions of this variance.

CONCLUSION AND ORDER

THEREFORE, the Hearing Board orders as follows:

A. Petitioner is granted a Regular Variance from SCAQMD Rules 203(b) and 3002(c) and from the SOx limits stated in Permit Condition # 26 of PTC/PTO No.

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R-G64402 for the Flare # 4 system for the period commencing October 3, 2024 and continuing until August 5, 2025, the final compliance date.

B. The variance granted herein is subject to the following conditions:

1. This variance shall only apply to the SOx and total sulfur limits applicable to Flare No. 4 under Permit to Operate (R-G64402, A/N 618396, Permit Condition 26).
2. Petitioner shall, to the maximum extent feasible during the variance period, limit the use of Flare No. 4 and prioritize and maximize the use of the facility's other Flare (No. 3) [Permit to Operate R-G64400], and/or route landfill gas to other combustion and/or control equipment operated valid South Coast AQMD Permit(s).
3. Petitioner shall sample, measure, and record the landfill gas sulfur compounds at the inlet to Flare No. 4 on a weekly basis using colorimetric tests for hydrogen sulfide (H2S). Records of the date and time of the test, the test results, and name of personnel conducting the test shall be maintained on-site and e-mailed within three (3) weekdays of conducting the measurement to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov) and Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), except as allowed by Condition No 19.
4. Petitioner shall sample and analyze the landfill gas sulfur compounds at the inlet to Flare No. 4 by August 13, 2024, using laboratory analysis for total sulfur compounds as H2S using South Coast AQMD Method 307-91 and at least once within every 14 calendar days thereafter, and no less frequent than required under the approved Rule 431.1 Alternative Monitoring Plan under A/N 351821. Petitioner shall maintain on-site, which may include electronic storage, the South Coast AQMD Method 307-91 complete laboratory analysis report, which shall include the time and date each sample collection was

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conducted, and initialed by the personnel that conducted the sample collection. The complete laboratory analysis report shall be e-mailed within three (3) weekdays of receiving results to Peter Homsey (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), and Duoduo Bao (dbao@aqmd.gov), except as allowed by Condition No 19.

5. Petitioner shall provide a site map no later than August 16, 2024, not later than 5:00 pm PST, to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov) indicating the facility boundary, site identifying features, and all well heads located at the facility. The map shall identify each well head by component number and include visual indicator(s) for the well heads with landfill gas temperature reading(s) that have exceeded 145 degrees Fahrenheit within calendar year 2024. Petitioner has met the initial August 16, 2024, deadline. Petitioner shall either:

   a. Send updated, current site maps identifying each well head by component number and include visual indicator(s) for the well heads with landfill gas temperature reading(s) that have exceeded 145 degrees Fahrenheit within calendar year 2024 with every other bi-weekly report to the same South Coast AQMD contacts listed in this condition, commencing with the bi-weekly report due on October 25, 2024; or

   b. If there has been no change in the identified wells that have exceeded 145 degrees Fahrenheit since the previous site map submission, Petitioner shall state that in the bi-weekly report for which a new site map would be due, and no updated map shall be required under this condition.

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6. Petitioner shall report the sulfur compound readings and analyses required under Conditions Nos. 3 and 4 to South Coast AQMD as part of the bi-weekly status report, pursuant to Condition No. 13. Petitioner shall comply with the following requirements when conducting the sampling, analyzing, and recording required under Condition Nos. 3 and 4:

   a. Tedlar bags used for Method 307-91 sampling and analysis shall be clean, unused, intact, and free from moisture and debris.

   b. Colorimetric tube readings shall be conducted by taking a reading from the Method 307-91 Tedlar bag sample using an appropriate colorimetric tube sample collection pump. All sampling shall be performed in accordance with the operational manual for the colorimetric tube sample collection pump.

   c. Colorimetric tube readings shall use colorimetric tubes of appropriate concentration range and shall be reported as follows:

      i. Petitioner shall first use the estimated appropriately-ranged colorimetric tube.

      ii. If the resulting reading reaches the upper concentration of the colorimetric tube concentration range, additional reading(s) shall be taken using a colorimetric tube with a concentration range that has a larger upper concentration threshold until the result is not the upper concentration threshold of the concentration range. Report the tube concentration range and tube concentration result for each reading.

      iii. If the reading results in the lowest concentration of the colorimetric tube concentration range or does not register a result, additional reading(s) shall be taken using a colorimetric tube with a concentration range that has a smaller lowest concentration

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threshold, if available, until the colorimetric tubes available to the facility result in:

1. A reading that is within the concentration range of the tube;
2. A reading is the lowest concentration of the colorimetric tube concentration range with the lowest concentration threshold; or
3. The colorimetric tubes do not register a result.

When the result is the lowest concentration of the colorimetric tube concentration range or does not register a result, the lowest concentration of the colorimetric tube concentration shall be considered the concentration result. Report the tube concentration range and tube concentration result for each reading. If a lower range colorimetric tube is not used and the tube concentration result is below the lower range of the colorimetric tube used, Petitioner shall document and report the result as "less than" or "<" the lower range value of the tube. Notwithstanding the forgoing, Petitioner shall ensure that the colorimetric tube result is below the upper range of the colorimetric tube used and shall report the precise result of all results above the lowest range of the colorimetric tube used.

7. Petitioner shall maintain an adequate stock of appropriately ranged colorimetric tubes.
8. Petitioner shall replenish and/or replace spent granular activated carbon (GAC) media in the Landfill Gas Treatment System (under AN 627016) at a frequency sufficient to maintain a concentration of total sulfur as hydrogen sulfide at the inlet to Flare No. 4, excluding dimethyl sulfide (DMS), below 60 ppmv (averaged monthly) and 85 ppm (averaged daily). Spent media removed

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from the landfill gas treatment system shall be stored in closed containers prior to disposal.

9. Petitioner shall maintain a record of the following information in an editable spreadsheet and pdf formats with all units labeled and provide such records to the South Coast AQMD pursuant to Condition No. 13:

   a. The hourly flow of landfill gas combusted, in standard cubic feet per hour (scfm data averaged hourly) and the daily flow of landfill gas in standard cubic feet per day:

      i. Combusted by Flare No. 3;

      ii. Combusted by Flare No. 4;

      iii. Combusted in other combustion and/or control equipment operated valid South Coast AQMD Permit(s) (if applicable); and

      iv. Totaled for the facility.

   b. Temperature readings, in Fahrenheit, for all wellheads (including all temperature readings from the previous month and at minimum one temperature reading for each wellhead, contained in a single spreadsheet);

   c. Carbon monoxide (CO) concentration readings, in parts per million by volume (ppmv), and corrective actions relating to CO readings greater than 500 ppmv, for all wellheads (including all CO readings from the previous month and at minimum one reading for each wellhead, contained in a single spreadsheet);

   d. The results of the H2S and total sulfur readings, sampling, and analyses, with the time and date when each measurement or sample collection was conducted, pursuant to Condition Nos. 3 and 4; and

   e. Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

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10. Petitioner shall investigate and, to the extent feasible, determine the underlying cause of total sulfur concentration exceedances. Details of this investigation, information discovered, and conclusions, if any, shall be included in a summary report to be submitted no later than January 6, 2025. The report shall explain the specific steps undertaken by Petitioner (*e.g.*, literature review, data analysis, outreach to industry and/or academic experts) to investigate the underlying cause of the total sulfur concentration exceedances, information received or discovered, any conclusions reached, and any other details that may be relevant to this issue. Petitioner shall submit this report to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov); Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov); Peter Homsey (phomsey@aqmd.gov), Alisha Lewis (alewis@aqmd.gov), and Mary Reichert (mreichert@aqmd.gov).

11. Petitioner shall investigate the availability, viability, and utilization, including pilot testing if needed, of an alternative sulfur compound treatment system that controls, treats, or removes dimethyl sulfide and other sulfur compounds. Concurrent with the summary report submitted pursuant to Condition 10, Petitioner shall submit a report of the findings from this investigation.

12. Petitioner shall submit a complete permit application and request expedited application review with associated fees pursuant to South Coast AQMD Rule 301 to South Coast AQMD for the alteration/modification of Flare No.4 under Permit to Operate (R-G64402, A/N 618396), as described in Item No. 23 of the Variance Petition, as soon as possible but no later than Wednesday, August 28, 2024, not later than 5:00 pm PST via email to permitservicesonline@aqmd.gov. Petitioner shall carbon copy or provide record of this submittal to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov); Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov); Peter Homsey (phomsey@aqmd.gov), and Alisha Lewis

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(alewis@aqmd.gov). Petitioner shall respond in a timely manner to written requests for additional information related to this permit application submittal, and shall provide requested information via email to Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov) within the deadline(s) provided as part of the written request, unless an extension is requested and approved in writing by South Coast AQMD.

13. Starting October 11, 2024, Petitioner shall submit a written status report to the District every other Friday of the Regular Variance Period, not later than 5:00 pm PST via email to Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov). Each bi-weekly report shall contain at a minimum the following information:
    a. Records identified in Condition No. 9, in an editable spreadsheet format, with all units labeled;
        i. Readings and corrective action data gathered under Condition No. 9b and 9c shall be submitted with every other bi-weekly report, commencing with the bi-weekly report due on October 25, 2024.
    b. Records of each instance of GAC replenishment or change-out within the previous month, specifically the date, time, and the GAC that was replenished;
    c. Estimated schedule for any upcoming replacement of the GAC in the Landfill Gas Treatment System;
    d. Specifications of the equipment and materials used for the weekly colorimetric tests (only if there is a change from the previously provided specifications of the colorimetric instrumentation or method used);
    e. Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 9e.

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14. Petitioner shall submit a source test protocol consistent with this paragraph, by August 20, 2024, with expedited review requested, for the review and approval of South Coast AQMD, via email to sourcetesting@aqmd.gov, Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov), Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov). The source test protocol shall include, at a minimum, procedures for testing total sulfur compounds as H2S and speciated sulfur compounds pursuant to South Coast AQMD Method 307-91, and for speciated organic compounds pursuant to U.S. EPA Method TO-15, at both the inlet to Flare No. 4, and in the vapors in the headspace of at least one leachate tank, pursuant to Condition 15 below. Petitioner has fulfilled the initial submission deadline of August 20, 2024. Petitioner shall respond in a timely manner to written requests from South Coast AQMD related to review of the submitted source test protocol within the deadline provided in the written request, unless an extension is requested and approved in writing by South Coast AQMD.

15. Petitioner shall, within 45 calendar days of the approval of the submitted source test protocol (STID 24289), unless otherwise approved in writing by South Coast AQMD, conduct sampling and analysis of vapors in the headspace of at least one of leachate tank (No. T-104a, T-104b, or T-104c) under (Permit to Operate G61424, A/N 615966) and within the landfill gas combusted in Flare No. 4 under Permit to Operate (R-G64402, A/N 618396).
    a. The sampled leachate storage tank(s) shall be filled at least 2/3 full of leachate. Tank(s) to be sampled shall be preferentially selected to be those not connected/vented to the landfill gas collection system and/or landfill gas control systems.

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b. Vapor sampling and analysis for both the leachate tank vapor headspace, and the landfill gasl combusted in Flare No. 4 shall be conducted for total sulfur compounds as H2S and speciated sulfur compounds pursuant to South Coast AQMD Method 307-91, and for speciated organic compounds pursuant to U.S. EPA Method TO-15.

c. Sampling and analysis shall be performed by a South Coast AQMD Laboratory Approval Program (LAP) approved laboratory(ies), capable of sampling and analysis per South Coast AQMD Method 307-91 and U.S. EPA Method TO-15.

16. The final results of the source test required in Conditions 14 and 15 shall be submitted via email in a source test report(s) format to sourcetesting@aqmd.gov, Peter Homsey, Air Quality Inspector III (phomsey@aqmd.gov) Alisha Lewis, Supervising Air Quality Inspector (alewis@aqmd.gov), Duoduo Bao, Air Quality Engineer (dbao@aqmd.gov), and Travis Rohde, Senior Air Quality Engineer (trohde@aqmd.gov) within 3 weekdays of receipt of the final source test report(s), unless otherwise approved in writing by South Coast AQMD. Petitioner shall request and pay for expedited review of the final source test report.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

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Equation No. 1: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Equation No. 3: SOx Excess Emissions (lb/month) = {[Monthly Average TRS (ppmv) – 60 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/month) x 1.69×10^{-7}]}

Equation No. 4: SOx Excess Emissions (lb/month) = {[Monthly Average TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/month)] x [1.69×10^{-7}]} – [2810.4 (lb/month)]

Where:

LFG: landfill gas

Daily Total Sulfur as H2S: The Total Sulfur as H2S concentration reflected in the most recent lab result collected and received pursuant to Condition No. 4.

Monthly Average Total Sulfur as H2S: The average Total Sulfur as H2S concentration calculated based upon the sum of all samples received pursuant to Condition No. 4 in a calendar month divided by the number of samples analyzed in the calendar month.

lb/scf: pounds per standard cubic foot

lb/day: pounds per day

lb/month: pounds per month

Hunton Andrews Kurth LLP
550 South Hope Street, Suite 2000
Los Angeles, California 90071-2627

ppmv: parts per million by volume

TRS: total sulfur as H2S concentration using South Coast AQMD Method 307-91

SOx: oxides of sulfur expressed as sulfur dioxide

scf/day: standard cubic feet per day

18. Petitioner shall provide any additional records requested by South Coast AQMD that are reasonably related to the variance scope. The records shall be provided upon request within seven (7) calendar days, or a longer period if approved in writing by South Coast AQMD staff.
19. Any submittal deadline in these conditions that falls on a weekend or Federal or California holiday shall be extended to the next weekday.
20. Petitioner shall pay all applicable fees to the Clerk of the Hearing Board, or the variance shall be invalidated pursuant to Rule 303(k), except for excess emissions fees, which shall be paid within fifteen (15) days of notification in writing that the fees are due, unless otherwise ordered by the Hearing Board.
21. Petitioner shall notify the Clerk of the Board at clerkofboard@aqmd.gov in writing when final compliance has been achieved.
22. This variance shall terminate upon notification by the Petitioner to the Clerk of the Board that operation of all equipment for which a variance is granted is operating in compliance.

FOR THE BOARD: Robert Pearman

Robert Pearman

DATED: Nov 20, 2024

I VOTE NO: Mohan Balagopalan

Mohan Balagopalan

South Coast AQMD
550 South Hope Street, Suite 2000
Los Angeles, California 90071-2627

ATTACHMENT 3

El Sobrante Landfill
Variance Conditions 9(e) and 17
Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
8/6/2024	4,483,562	16.60	69.43	0.00	0.00
8/7/2024	5,921,709	22.30	69.43	0.00	0.00
8/8/2024	6,793,858	23.83	69.43	0.00	0.00
8/9/2024	5,663,413	20.57	69.43	0.00	0.00
8/10/2024	5,784,555	24.00	69.43	0.00	0.00
8/11/2024	6,534,008	24.00	69.43	0.00	0.00
8/12/2024	6,987,797	24.00	69.43	0.00	0.00
8/13/2024	6,065,408	24.00	66.59	0.00	0.00
8/14/2024	5,610,774	24.00	66.59	0.00	0.00
8/15/2024	5,229,819	24.00	66.59	0.00	0.00
8/16/2024	5,304,809	23.77	66.59	0.00	0.00
8/17/2024	6,009,412	24.00	66.59	0.00	0.00
8/18/2024	5,781,558	24.00	66.59	0.00	0.00
8/19/2024	6,406,420	24.00	66.59	0.00	0.00
8/20/2024	6,432,626	24.00	66.59	0.00	0.00
8/21/2024	6,269,767	24.00	76.76	0.00	0.00
8/22/2024	5,418,599	24.00	84.70	0.00	0.00
8/23/2024	6,077,322	24.00	84.70	0.00	0.00
8/24/2024	5,686,248	24.00	84.70	0.00	0.00
8/25/2024	5,499,869	24.00	84.70	0.00	0.00
8/26/2024	5,899,359	24.00	84.70	0.00	0.00
8/27/2024	5,186,337	21.27	78.46	0.00	0.00
8/28/2024	5,099,350	18.47	78.46	0.00	0.00
8/29/2024	7,138,793	24.00	78.46	0.00	2.26
8/30/2024	6,385,295	23.83	78.46	0.00	0.00
8/31/2024	5,712,808	24.00	78.46	0.00	0.00
9/1/2024	5,713,840	24.00	78.46	0.00	0.00
9/2/2024	5,723,644	24.00	78.46	0.00	0.00
9/3/2024	5,718,584	24.00	86.51	1.46	0.00
9/4/2024	5,736,359	24.00	86.51	1.46	0.00
9/5/2024	5,558,313	24.00	86.51	1.42	0.00
9/6/2024	4,738,684	24.00	86.51	1.21	0.00
9/7/2024	5,638,085	24.00	86.51	1.44	0.00
9/8/2024	4,132,991	17.33	86.51	1.05	0.00
9/9/2024	2,215,937	9.00	86.51	0.57	0.00
9/10/2024	5,418,659	24.00	83.16	0.00	0.00
9/11/2024	5,632,383	24.00	83.16	0.00	0.00
9/12/2024	5,578,613	24.00	83.16	0.00	0.00
9/13/2024	5,510,488	24.00	83.16	0.00	0.00
9/14/2024	5,398,749	24.00	83.16	0.00	0.00
9/15/2024	4,811,290	24.00	83.16	0.00	0.00
9/16/2024	5,083,321	23.67	83.16	0.00	0.00
9/17/2024	4,783,442	18.37	113.03	22.66	20.66
9/18/2024	5,746,447	24.00	113.03	27.22	17.37
9/19/2024	5,488,275	24.00	113.03	26.00	12.44
9/20/2024	5,617,567	22.23	113.03	26.61	21.71
9/21/2024	5,959,776	24.00	113.03	28.23	21.44

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
9/22/2024	5,772,372	24.00	113.03	27.34	17.86
9/23/2024	5,753,581	23.77	113.03	27.26	18.40
9/24/2024	5,834,602	24.00	84.47	0.00	0.00
9/25/2024	6,103,762	24.00	84.47	0.00	0.00
9/26/2024	6,488,657	24.00	84.47	0.00	0.23
9/27/2024	6,416,204	24.00	84.47	0.00	0.00
9/28/2024	6,715,925	24.00	84.47	0.00	3.47
9/29/2024	6,723,862	24.00	84.47	0.00	3.59
9/30/2024	3,698,597	14.03	84.47	0.00	0.00
10/1/2024	5,985,610	24.00	82.45	0.00	0.00
10/2/2024	6,542,493	24.00	82.45	0.00	0.00
10/3/2024	6,549,848	24.00	82.45	0.00	0.00
10/4/2024	6,739,766	24.00	82.45	0.00	1.51
10/5/2024	6,652,605	24.00	82.45	0.00	0.30
10/6/2024	6,645,843	24.00	82.45	0.00	0.20
10/7/2024	6,678,930	24.00	82.45	0.00	0.66
10/8/2024	5,823,318	23.00	82.45	0.00	0.00
10/9/2024	5,515,912	22.93	73.93	0.00	0.00
10/10/2024	6,296,212	24.00	73.93	0.00	0.00
10/11/2024	5,942,304	22.33	73.93	0.00	0.00
10/12/2024	6,103,086	24.00	73.93	0.00	0.00
10/13/2024	6,216,136	24.00	73.93	0.00	0.00
10/14/2024	6,232,991	24.00	73.93	0.00	0.00
10/15/2024	6,368,093	24.00	79.39	0.00	0.00
10/16/2024	6,323,362	24.00	79.39	0.00	0.00
10/17/2024	4,332,917	17.27	79.39	0.00	0.00
10/18/2024	5,781,345	24.00	79.39	0.00	0.00
10/19/2024	6,388,500	24.00	79.39	0.00	0.00
10/20/2024	6,746,009	24.00	79.39	0.00	0.00
10/21/2024	6,790,318	24.00	79.39	0.00	0.00
10/22/2024	6,977,334	24.00	78.13	0.00	0.00
10/23/2024	6,921,354	24.00	78.13	0.00	0.00
10/24/2024	2,993,681	10.90	78.13	0.00	0.00
10/25/2024	4,697,826	14.57	78.13	0.00	5.95
10/26/2024	5,848,043	19.07	78.13	0.00	3.81
10/27/2024	6,578,688	24.00	78.13	0.00	0.00
10/28/2024	6,397,379	24.00	78.13	0.00	0.00
10/29/2024	6,423,314	23.87	111.66	28.94	29.32
10/30/2024	6,521,774	23.83	111.66	29.38	31.31
10/31/2024	6,435,195	24.00	111.66	28.99	29.04
11/1/2024	6,477,657	24.00	111.66	29.19	29.84
11/2/2024	5,944,458	23.10	111.66	26.78	23.24
11/3/2024	211,567	0.83	111.66	0.95	0.78
11/4/2024	0	0.00	111.66	0.00	0.00
11/5/2024	3,022,867	18.30	99.19	7.25	0.00
11/6/2024	3,614,999	24.00	99.19	8.67	0.00
11/7/2024	3,509,990	24.00	99.19	8.42	0.00
11/8/2024	3,609,945	24.00	99.19	8.66	0.00
11/9/2024	3,579,808	24.00	99.19	8.58	0.00

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
11/10/2024	3,541,281	24.00	99.19	8.49	0.00
11/11/2024	2,432,385	17.10	99.19	5.83	0.00
11/12/2024	3,551,909	23.17	77.91	0.00	0.00
11/13/2024	4,426,831	23.77	77.91	0.00	0.00
11/14/2024	5,262,261	21.83	77.91	0.00	0.00
11/15/2024	3,820,822	16.87	77.91	0.00	0.00
11/16/2024	4,706,726	18.70	77.91	0.00	0.00
11/17/2024	5,814,138	24.00	77.91	0.00	0.00
11/18/2024	5,842,517	24.00	77.91	0.00	0.00
11/19/2024	5,950,620	24.00	52.32	0.00	0.00
11/20/2024	738,444	3.10	52.32	0.00	0.00
11/21/2024	0	0.00	52.32	0.00	0.00
11/22/2024	1,412,860	10.23	52.32	0.00	0.00
11/23/2024	3,029,176	24.00	52.32	0.00	0.00
11/24/2024	840,198	6.53	52.32	0.00	0.00
11/25/2024	0	0.00	52.32	0.00	0.00
11/26/2024	755,447	3.67	52.32	0.00	0.00
11/27/2024	2,371,444	12.63	52.32	0.00	0.00
11/28/2024	4,454,247	24.00	52.32	0.00	0.00
11/29/2024	4,422,212	24.00	52.32	0.00	0.00
11/30/2024	4,084,512	24.00	52.32	0.00	0.00
12/1/2024	4,079,639	24.00	52.32	0.00	0.00
12/2/2024	3,632,066	23.90	52.32	0.00	0.00
12/3/2024	3,315,356	23.47	85.86	0.48	0.00
12/4/2024	3,976,509	23.90	85.86	0.58	0.00
12/5/2024	3,410,981	16.23	85.86	0.50	0.00
12/6/2024	3,830,092	16.73	85.86	0.56	0.00
12/7/2024	5,212,992	24.00	85.86	0.76	0.00
12/8/2024	5,151,771	24.00	85.86	0.75	0.00
12/9/2024	5,304,338	24.00	85.86	0.77	0.00
12/10/2024	5,736,962	24.00	63.71	0.00	0.00
12/11/2024	5,885,248	24.00	63.71	0.00	0.00
12/12/2024	2,382,317	10.40	63.71	0.00	0.00
12/13/2024	5,786,860	24.00	63.71	0.00	0.00
12/14/2024	6,794,820	24.00	63.71	0.00	0.00
12/15/2024	7,149,786	24.00	63.71	0.00	0.00
12/16/2024	6,781,707	24.00	63.71	0.00	0.00
12/17/2024	6,977,667	24.00	87.01	2.37	10.20
12/18/2024	7,038,135	24.00	87.01	2.39	11.09
12/19/2024	7,004,395	24.00	87.01	2.38	10.60
12/20/2024	6,898,064	24.00	87.01	2.34	9.03
12/21/2024	6,763,995	24.00	87.01	2.30	7.06
12/22/2024	6,732,456	24.00	87.01	2.29	6.60
12/23/2024	4,476,930	18.10	79.78	0.00	0.00
12/24/2024	4,386,587	17.00	79.78	0.00	0.00
12/25/2024	6,471,665	24.00	79.78	0.00	0.00
12/26/2024	6,475,691	24.00	79.78	0.00	0.00
12/27/2024	6,550,803	24.00	79.78	0.00	0.00
12/28/2024	6,614,206	24.00	79.78	0.00	0.00

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
12/29/2024	6,524,379	24.00	79.78	0.00	0.00
12/30/2024	6,475,919	24.00	79.78	0.00	0.00
12/31/2024	6,727,284	24.00	79.78	0.00	0.00
1/1/2025	6,725,435	24.00	79.78	0.00	0.00
1/2/2025	6,216,281	22.00	79.78	0.00	0.00
1/3/2025	6,776,365	24.00	79.78	0.00	0.00
1/4/2025	6,711,919	24.00	79.78	0.00	0.00
1/5/2025	6,831,699	24.00	79.78	0.00	0.00
1/6/2025	5,002,329	19.97	79.78	0.00	0.00
1/7/2025	3,939,326	17.20	107.84	15.21	5.57
1/8/2025	6,239,473	24.00	107.84	24.08	21.31
1/9/2025	3,541,464	14.70	107.84	13.67	7.95
1/10/2025	5,873,307	24.00	107.84	22.67	14.64
1/11/2025	6,421,362	24.00	107.84	24.79	24.63
1/12/2025	5,764,491	24.00	107.84	22.25	12.66
1/13/2025	5,684,550	24.00	107.84	21.94	11.20
1/14/2025	3,700,104	15.73	105.69	12.94	5.52
1/15/2025	5,920,938	24.00	105.69	20.70	13.36
1/16/2025	6,583,523	24.00	105.69	23.02	25.19
1/17/2025	6,239,096	24.00	105.69	21.82	19.04
1/18/2025	6,201,541	24.00	105.69	21.68	18.37
1/19/2025	6,236,043	24.00	105.69	21.81	18.99
1/20/2025	6,256,788	24.00	105.69	21.88	19.36
1/21/2025	6,390,284	24.00	92.23	7.81	7.20
1/22/2025	6,421,130	24.00	92.23	7.85	7.69
1/23/2025	6,310,233	24.00	92.23	7.71	5.96
1/24/2025	6,277,993	24.00	92.23	7.67	5.45
1/25/2025	6,112,758	24.00	92.23	7.47	2.88
1/26/2025	6,097,480	24.00	92.23	7.45	2.64
1/27/2025	6,147,631	24.00	92.23	7.51	3.42
1/28/2025	6,166,099	24.00	92.23	7.53	3.71
1/29/2025	6,021,243	23.33	92.23	7.36	4.02
1/30/2025	4,825,673	19.40	92.23	5.90	0.53
1/31/2025	5,681,074	24.00	92.23	6.94	0.00
2/1/2025	5,569,037	24.00	92.23	6.80	0.00
2/2/2025	5,675,569	24.00	92.23	6.93	0.00
2/3/2025	5,874,835	24.00	92.23	7.18	0.00
2/4/2025	5,751,023	24.00	103.86	18.33	8.54
2/5/2025	5,803,489	24.00	103.86	18.50	9.46
2/6/2025	5,819,304	24.00	103.86	18.55	9.74
2/7/2025	5,724,477	24.00	103.86	18.25	8.08
2/8/2025	5,724,241	24.00	103.86	18.25	8.07
2/9/2025	5,761,930	24.00	103.86	18.37	8.74
2/10/2025	5,763,586	24.00	103.86	18.37	8.76
2/11/2025	5,777,587	24.00	103.46	18.02	8.62
2/12/2025	5,686,311	24.00	103.46	17.74	7.02
2/13/2025	5,695,519	24.00	103.46	17.77	7.18
2/14/2025	5,736,131	24.00	103.46	17.90	7.89
2/15/2025	5,768,243	24.00	103.46	18.00	8.46

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

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Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
2/16/2025	5,845,483	24.00	103.46	18.24	9.81
2/17/2025	5,606,379	24.00	103.46	17.49	5.63
2/18/2025	5,405,842	24.00	100.97	14.59	0.00
2/19/2025	5,923,367	23.43	100.97	15.99	10.86
2/20/2025	6,738,475	24.00	100.97	18.19	22.58
2/21/2025	6,120,366	24.00	100.97	16.52	12.04
2/22/2025	6,562,175	24.00	100.97	17.71	19.58
2/23/2025	6,677,340	24.00	100.97	18.02	21.54
2/24/2025	6,677,340	24.00	100.97	18.02	21.54
2/25/2025	6,691,271	24.00	96.92	13.48	17.20
2/26/2025	6,624,338	24.00	96.92	13.34	16.10
2/27/2025	6,235,743	24.00	96.92	12.56	9.74
2/28/2025	6,714,480	24.00	96.92	13.53	17.58
3/1/2025	6,721,206	23.90	96.92	13.54	18.07
3/2/2025	5,978,995	24.00	96.92	12.04	5.53
3/3/2025	5,791,341	24.00	96.92	11.67	2.46
3/4/2025	5,787,175	24.00	102.54	17.15	7.89
3/5/2025	6,284,439	24.00	102.54	18.63	16.50
3/6/2025	6,481,364	24.00	102.54	19.21	19.92
3/7/2025	6,120,676	24.00	102.54	18.14	13.67
3/8/2025	6,391,849	24.00	102.54	18.95	18.37
3/9/2025	6,202,104	23.00	102.54	18.38	18.93
3/10/2025	6,169,124	24.00	102.54	18.29	14.51
3/11/2025	6,372,383	24.00	100.26	16.43	15.57
3/12/2025	6,401,889	24.00	100.26	16.51	16.07
3/13/2025	6,371,149	24.00	100.26	16.43	15.55
3/14/2025	6,360,871	24.00	100.26	16.40	15.38
3/15/2025	6,420,697	24.00	100.26	16.56	16.39
3/16/2025	5,941,100	24.00	100.26	15.32	8.27
3/17/2025	5,938,991	24.00	100.26	15.32	8.23
3/18/2025	6,374,269	24.00	112.23	29.33	28.50
3/19/2025	6,392,788	24.00	112.23	29.42	28.85
3/20/2025	6,146,763	24.00	112.23	28.29	24.18
3/21/2025	6,393,352	23.90	112.23	29.42	29.25
3/22/2025	6,348,771	24.00	112.23	29.22	28.02
3/23/2025	6,289,724	24.00	112.23	28.94	26.90
3/24/2025	6,177,238	24.00	112.23	28.43	24.76
3/25/2025	6,347,974	24.00	107.27	23.89	22.68
3/26/2025	6,355,524	24.00	107.27	23.92	22.82
3/27/2025	5,839,600	24.00	107.27	21.98	13.46
3/28/2025	5,419,131	24.00	107.27	20.40	5.84
3/29/2025	5,963,769	24.00	107.27	22.45	15.71
3/30/2025	5,943,302	24.00	107.27	22.37	15.34
3/31/2025	4,719,343	18.10	107.27	17.76	15.87
4/1/2025	5,849,369	24.00	119.70	34.30	25.93
4/2/2025	5,806,538	24.00	119.70	34.05	25.06
4/3/2025	5,874,209	24.00	119.70	34.45	26.43
4/4/2025	6,286,134	24.00	119.70	36.86	34.76
4/5/2025	6,780,240	24.00	119.70	39.76	44.76

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_x Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]) – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
4/6/2025	6,841,022	24.00	119.70	40.12	45.99
4/7/2025	6,776,714	24.00	119.70	39.74	44.69
4/8/2025	6,887,002	24.00	96.82	13.76	20.29
4/9/2025	6,631,851	22.87	96.82	13.25	20.48
4/10/2025	7,082,866	24.00	96.82	14.15	23.49
4/11/2025	7,138,479	24.00	96.82	14.26	24.40
4/12/2025	6,472,006	24.00	96.82	12.93	13.50
4/13/2025	6,307,245	24.00	96.82	12.60	10.80
4/14/2025	6,198,030	24.00	96.82	12.38	9.02
4/15/2025	6,746,271	24.00	72.61	0.00	0.00
4/16/2025	6,789,717	24.00	72.61	0.00	0.00
4/17/2025	6,657,372	24.00	72.61	0.00	0.00
4/18/2025	6,773,323	24.00	72.61	0.00	0.00
4/19/2025	6,406,509	24.00	72.61	0.00	0.00
4/20/2025	6,361,954	24.00	72.61	0.00	0.00
4/21/2025	6,513,817	23.47	72.61	0.00	0.00
4/22/2025	7,002,946	24.00	83.16	0.00	6.02
4/23/2025	6,951,438	24.00	83.16	0.00	5.30
4/24/2025	6,857,921	24.00	83.16	0.00	3.98
4/25/2025	6,668,522	24.00	83.16	0.00	1.32
4/26/2025	6,619,359	24.00	83.16	0.00	0.63
4/27/2025	6,404,735	24.00	83.16	0.00	0.00
4/28/2025	6,510,169	24.00	83.16	0.00	0.00
4/29/2025	6,816,881	24.00	96.81	13.61	19.13
4/30/2025	6,435,946	22.60	96.81	12.85	18.29
5/1/2025	7,117,217	23.90	96.81	14.21	24.43
5/2/2025	6,752,631	24.00	96.81	13.48	18.08
5/3/2025	6,611,428	24.00	96.81	13.20	15.77
5/4/2025	6,283,136	24.00	96.81	12.54	10.40
5/5/2025	6,270,130	24.00	96.81	12.51	10.18
5/6/2025	6,292,097	24.00	98.96	14.84	12.83
5/7/2025	6,309,496	24.00	98.96	14.89	13.12
5/8/2025	6,398,330	24.00	98.96	15.10	14.61
5/9/2025	5,703,204	20.27	98.96	13.46	17.36
5/10/2025	5,884,603	22.27	98.96	13.88	12.69
5/11/2025	6,645,414	24.00	98.96	15.68	18.74
5/12/2025	6,667,031	24.00	98.96	15.73	19.10
5/13/2025	6,729,600	24.00	98.84	15.74	20.01
5/14/2025	7,154,151	24.00	98.84	16.73	27.10
5/15/2025	7,427,465	24.00	98.84	17.37	31.67
5/16/2025	6,504,396	24.00	98.84	15.21	16.25
5/17/2025	6,276,024	24.00	98.84	14.68	12.43
5/18/2025	6,272,013	24.00	98.84	14.67	12.37
5/19/2025	6,635,181	24.00	98.84	15.52	18.43
5/20/2025	6,855,074	24.00	Pending lab report		
5/21/2025	5,683,367	21.60			
5/22/2025	2,975,669	10.77			
5/23/2025	7,105,822	24.00			
5/24/2025	7,058,456	24.00			

Flare 4 Daily Excess Emission Calculations

9(e) Daily excess emissions in pounds (lb) of sulfur oxides (SOx) per day for Flare No. 4, pursuant to Condition No. 17, including any assumptions and supporting information. Records shall be cumulative including all dates from the beginning of the variance.

17. Excess emissions from Flare No. 4 shall be calculated using the following equations based on larger resultant excess emissions of the four following equations on a per month basis. All necessary supporting information shall be provided to South Coast AQMD staff pursuant to Condition Nos. 9e and 13e. Any feedback or requested changes to this methodology provided to Petitioner in writing by South Coast AQMD staff shall be incorporated and utilized in subsequent excess emission calculations.

Equation No. 1: SO_2 Excess Emissions (lb/day) = {[Daily TRS (ppmv) – 85 (ppmv)] x LFG Flow Rate to Flare No. 4 (scf/day) x 1.69×10^{-7}]}

Equation No. 2: SOx Excess Emissions (lb/day) = {[Daily TRS (ppmv) x LFG flow rate to Flare No. 4 (scf/day)] x [1.69×10^{-7}]} – [3.85 (lb/hr) x Actual Operating Hours of Flare No. 4 (hr)]

Date	Flare 4 Total Daily Flow (scf)	Flare 4 Actual Operating Hours (hr)	Daily TRS (ppm_v)	Eq. 1 Excess Emissions (lb/day)	Eq. 2 Excess Emissions (lb/day)
5/25/2025	7,014,702	24.00			
5/26/2025	6,994,634	24.00			
5/27/2025	7,009,443	24.00	Pending lab report		
5/28/2025	6,981,315	23.90			
5/29/2025	7,088,327	24.00			
5/30/2025	7,156,068	24.00			
5/31/2025	7,271,529	24.00			
6/1/2025	7,151,573	24.00			