

Facility Name: Chiquita Canyon Landfill

Facility ID: 119219

Case 6177-3 Regular Variance (Scheduled hearing: 5/3/2023 at 9am)

Proposed Conditions

1. Petitioner shall expedite, to the maximum extent feasible, replacement of granular activated carbon media in the Landfill Gas Treatment System (under Permit G55163, A/N 603249), including the execution of contracts, as well as the delivery, replacement, startup, and testing of any operation necessary to replenish and/or replace spent granular activated carbon media in the Landfill Gas Treatment System. Petitioner shall ensure adequate stock of all odor control products and supplies are maintained on site.
2. Petitioner shall prioritize and maximize the use and operation of the landfill gas flare No. 2 over landfill gas flare No. 1 (under Permit G23473, A/N 491442) to the maximum extent feasible when combusting landfill gas at the facility (FID 119219).
3. Petitioner shall sample, analyze, and record the landfill gas sulfur compounds combusted in each flare (as measured at sampling location FL-150 that is representative of the gas combusted in the flare under Permit G23473, A/N 491442) at least once each day using colorimetric tests for hydrogen sulfide (H₂S) and at least once each day sample for analysis for total sulfur compounds as H₂S using South Coast AQMD Method 307-91.

Petitioner shall record South Coast AQMD Method 307-91 analysis upon receipt of laboratory analysis report. Each recorded measurement or result shall be documented with the time and date of the measurement or sample collection was conducted, and initialed by the personnel that conducted the measurement or sample collection.

Sulfur compound readings and analysis shall be reported to South Coast AQMD pursuant to Condition No. 6.

- a. Tedlar bags used for Method 307-91 sampling and analysis shall not contain droplets or debris.
- b. Colorimetric tube readings shall be conducted by taking a reading from a 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, subsequent 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 lower concentration of the colorimetric tube concentration range or does not register a result, subsequent reading(s) shall be taken using a colorimetric tube with a concentration range that has a smaller lower 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 lower concentration of the colorimetric tube concentration range, or
 3. The colorimetric tubes does not register a result.

When the result is the lower concentration of the colorimetric tube concentration range or does not register a result, the lower 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 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.

4. Petitioner shall maintain adequate stock of appropriately ranged colorimetric tubes.
5. Petitioner shall maintain a record of the following information, and provide such records to the South Coast AQMD pursuant to Condition No. 6:
 - A. The hourly and daily flow of landfill gas combusted, in standard cubic feet, in each flare (No. 1 & No. 2 under Permit G23473, A/N 491442) and the total amount of landfill gas combusted at the facility;
 - B. The daily flow of landfill gas not flared, in standard cubic feet, , if applicable;
 - C. The results of the sulfur readings, sampling, and analyses, calculated as hydrogen sulfide (H₂S) with the time and date when each measurement or sample collection was conducted;
 - D. Daily excess emissions in pounds (lbs) of sulfur oxides (SO_x) per day for each flare (No. 1 and No. 2 under Permit G23473, A/N 491442) pursuant to Condition No. 9, including any assumptions and supporting information.
6. Petitioner shall submit a monthly written report on the progress of the status of the Landfill Gas Flares (under Permit G23473, A/N 491442), Landfill Gas Treatment System (under Permit G55163, A/N 603249), and efforts to resolve the total sulfur concentration in the landfill gas exceeding 150 ppmv calculated as H₂S. Monthly reports shall be submitted to the District on the third Monday of each subsequent month not later than 5:00pm via email to [Baitong Chen, Air Quality Engineer, (bchen@aqmd.gov); Nathaniel Dickel, Senior Air Quality Engineer,

(ndickel@aqmd.gov), and Gerardo Vergara, Air Quality Inspector, (gvergara@aqmd.gov)). The first report for May 2023 shall be due on June 19, 2023. Each monthly report shall contain at a minimum the following information:

- A. The landfill gas sulfur compounds measurements and laboratory analysis with the time and date of each measurement or sample collection, as identified in Condition No. 3.
 - B. The landfill gas records and calculations identified in Condition No. 5, in a Microsoft Excel sheet format.
 - C. The integrated landfill surface sample analysis and landfill surface monitoring readings identified in Conditions 7 and 8 (include the past 12 months in the Monthly Report due on June 19, 2023), in a Microsoft Excel spreadsheet format.
 - D. Estimated schedule for any replacement or refurbishment of granular activated carbon media in the Landfill Gas Treatment System (under Permit G55163, A/N 603249) identified in Condition No. 1.
 - E. Description of any problems or delays, if any, encountered or projected to occur pertinent to the execution of contracts, as well as the delivery, replacement, startup, and testing of any operation necessary to replenish and/or replace spent granular activated carbon media in the Landfill Gas Treatment System (under Permit G55163, A/N 603249).
 - F. Specifications of the equipment and materials used for the daily colorimetric tests (only if there is a change from the previously provided specifications of the colorimetric instrumentation or method used).
 - G. All wellhead temperature readings, lab analysis, and Draeger tube readings for landfill gas from the past month in a Microsoft Excel spreadsheet format.
 - H. Updates to the root cause analysis submitted on February 22, 2023, if any.
 - I. Updates on the investigation into 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, if any.
 - J. The excess emissions calculation method, necessary supporting information, and results.
7. Petitioner shall continue to collect integrated landfill surface samples for analysis at least every two weeks as specified in Rule 1150.1 Attachment A 2.0, the first round of which shall begin no later than 14 days after the variance is granted. In the event the Petitioner is unable to sample the landfill surface area or grid due to inaccessibility or dangerous conditions for a technician, Petitioner shall document the date and the conditions that do not allow the sampling of the area or grid.
8. Petitioner shall continue to conduct instantaneous landfill surface monitoring at least monthly as specified in Rule 1150.1, Attachment A 3.0, the first round of which shall begin no later than May 31, 2023. In the event the Petitioner is unable to monitor the landfill surface area or grid due to inaccessibility or dangerous conditions for a technician, Petitioner shall document the date and the conditions that do not allow the monitoring of the area or grid.
9. Petitioner shall pay all applicable fees to the Clerk of the Board or the variance shall be invalidated pursuant to Rule 303(k), except for excess emission 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. Petitioner shall pay excess emission fees from the combustion of landfill gas in the flares (under Permit G23473, A/N 491442) based on larger resultant excess emissions of the two following equations for each flare on a per day basis:

Equation no. 1: SO_x Excess Emissions for each flare (lb/day) = $[1.69 \times 10^{-7} \text{ (lb/scf)} \times [\text{TRS} - 150] \text{ (ppmv)} \times \text{flare LFG flowrate (scf/day)}]$

Equation no. 2: SO_x Excess Emissions for each flare (lb/day) = $[(1.69 \times 10^{-7} \text{ (lb/scf)} \times \text{TRS (ppmv)} \times \text{flare LFG flowrate (scf/day)})] - [2.5 \text{ lb/hr (Permit Limit per flare)} \times \text{Daily operating hours (hr/day)}]$

TRS: Total reduced sulfur concentrations calculated as H_2S using South Coast AQMD Method 307 – 91

lb/scf: pounds per standard cubic feet

scf/day: standard cubic feet per day

LFG: landfill gas

SO_x : oxides of sulfur expressed as sulfur dioxide

$1.69 \times 10^{-7} \text{ lb/scf}$: calculated based on SO_2 molecular weight as 64 lb/lb-mol and molecular volume of 379 scf/ lb-mol. ($= 64 / 10^6 / 379$)

10. The granting of relief pursuant to this variance shall not exempt Petitioner from complying with all other applicable South Coast AQMD Rules and Regulations, including those for nuisance per Rule 402.
11. Petitioner shall pay all applicable fees to the Clerk of the Board or the variance shall be invalidated pursuant to Rule 303(k), except for excess emissions fees (as calculated according to Table II of South Coast AQMD Rule 303), which shall be paid within fifteen (15) days of notification in writing that the fees are due, unless otherwise ordered by the Hearing Board.
12. This variance shall end as soon as Petitioner returns to compliance or February 8, 2024, whichever comes first, unless a modification is granted by the Hearing Board which establishes further increments of progress in accordance with Health and Safety Code § 42358(b).
13. Petitioner shall notify the South Coast AQMD (Attention: Kathryn Roberts, kroberts@aqmd.gov) and the Clerk of the Hearing Board in writing when final compliance has been achieved.