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

In the Matter of

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT,

Petitioner,

AMERESCO CHIQUITA ENERGY, LLC
[Facility ID No. 140373],

Respondent.

CASE NO. 6143-4

**FINDINGS AND DECISION FOR A
STIPULATED ORDER FOR
ABATEMENT
District Rules 431.1, 3002(c)(1), 203(b)**

Date: February 8, 2024
Time: 9:30 a.m.
Place: Hearing Board
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765

19 The petition for an Order for Abatement was heard on the consent calendar on February 8,
20 2024, pursuant to notice and in accordance with the provisions of California Health and Safety
21 Code Section 40823 and South Coast Air Quality Management District (“South Coast AQMD”)
22 Rule 812. The matter was placed on the Consent Calendar pursuant to the Joint Stipulation Re
23 Findings and Decision and Order Granting an Order for Abatement. The following members of
24 the Hearing Board were present: Cynthia Verdugo-Peralta, Chair; Robert Pearman, Esq., Vice
25 Chair; Mohan Balagopalan; Jerry P. Abraham, MD, MPH, CMQ; and Micah Ali. Petitioner,
26 South Coast AQMD, represented by Kathryn Roberts, Senior Deputy District Counsel, did not
27 appear. Respondent, Ameresco Chiquita Energy LLC (hereinafter “Ameresco” or “Respondent”),
28 represented by Aron Potash of the law firm of Latham & Watkins LLP, did not appear. The

1 Declaration of Andrew McClelland, Environmental Compliance Manager of Respondent, and the
2 Proposed Findings and Decision of the Hearing Board were received as evidence, and the case
3 submitted. The public was given the opportunity to testify, and the matter submitted. The Hearing
4 Board finds and decides as follows:

5 1. Petitioner is a body corporate and politic established and existing pursuant to
6 Health and Safety Code §§ 40000, *et seq.* and §§ 40400, *et seq.*, and is the sole and exclusive local
7 agency with the responsibility for comprehensive air pollution control in the South Coast Basin.

8 2. Respondent owns and operates a landfill gas-to-energy facility (“facility”), which
9 generates electricity using landfill gas, located at 29201 Henry Mayo Drive, Valencia, CA 91355.
10 Respondent’s facility is co-located with a municipal solid waste disposal site (“the landfill”),
11 which is owned and operated by a third party, not under common control with Respondent.
12 Respondent’s facility is located within the South Coast Air Basin and is subject to the jurisdiction
13 of the South Coast AQMD.

14 3. Respondent’s facility consists of, among other things, two landfill gas (“LFG”)
15 fueled turbine-generators and a LFG/waste gas flare supporting the LFG treatment system. Each
16 of these are permitted by the South Coast AQMD. Turbine-generator #1 operates under Permit
17 No. **G25211**; turbine-generator #2 operates under Permit No. **G25212**; LFG/waste gas flare
18 operates under Permit No. **G23448**. The facility also holds a Title V Permit.

19 4. **South Coast AQMD Rule 431.1(c)(2) and Respondent’s Title V Permit,**
20 **Facility Wide Condition 3** prohibit burning LFG with sulfur content greater than 150 parts per
21 million (“ppm”) averaged daily.

22 5. **Permit Nos. G25211 (Condition Nos. 11, 24) and G25212 (Condition Nos. 11,**
23 **24)** require compliance with South Coast AQMD Rule 431.1 and the LFG sulfur content
24 maximum of 150 ppm averaged daily.

25 6. **Permit Nos. G25211 (Condition No. 21) and G25212 (Condition No. 21)** limit
26 emissions from turbine #1 (G25211) and turbine #2 (G25212) each to 32 pounds per day of SOx
27 as SO2.

1 7. **Permit No. G23448, Condition No. 13** limits emissions from the flare to 14
2 pounds per day of SO_x as SO₂.

3 8. **South Coast AQMD Rules 203(b) and 3002(c)(1)** require compliance with all
4 applicable permit conditions at all times.

5 9. The South Coast AQMD alleges that Respondent is in ongoing violation of both
6 South Coast AQMD Rules and its permit limits relating to sulfur in landfill gas and that between
7 February and November 2023, Respondent exceeded its daily sulfur emission limits by
8 approximately 122 pounds per day on average.

9 10. Respondent currently operates under a Regular Variance (Case No. 6143-2), which
10 allows excess sulfur in both the incoming LFG and emitted by both turbine-generators and the
11 flare. The Hearing Board granted Respondent this variance, initially as an Interim Variance,
12 beginning on February 15, 2023. The Hearing Board granted the Regular Variance on May 3,
13 2023 and set a final compliance date of February 8, 2024.

14 11. The Hearing Board, in granting Respondent the current variance, found that “[a]s a
15 result of the ongoing reaction occurring in the landfill, the landfill gas that the landfill [] is
16 providing Ameresco has sulfur concentrations that regularly exceed 150 [parts per million].”
17 (Findings and Decision Granting a Regular Variance, p. 3, ¶ 2, Case No. 6143-2.) The Hearing
18 Board further found that “[a]s a result of the ongoing reaction occurring at the landfill, Ameresco
19 cannot continuously meet the permitted mass SO_x emission limits, and mass SO_x emissions have
20 regularly exceeded the limits since February 2023[.]” (*Id.* at p. 3, ¶ 3.) While considering granting
21 a variance to the landfill, evidence of which was incorporated by reference into the Regular
22 Variance hearing for Respondent, the Hearing Board found that “reactions are taking place within
23 the landfill that is either producing dimethyl sulfide or is causing hydrogen sulfide to be converted
24 into dimethyl sulfide.” (Findings and Decision Granting a Regular Variance, p. 4, ¶ 7, Case No.
25 6177-3.)

26 12. **California Health and Safety Code Section 42358(b)** allows a variance to extend
27 for longer than one calendar year only if the variance “includes a schedule of increments of
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1 progress specifying a final compliance date by which the air contaminants of a source for which
2 the variance is granted will be brought into compliance with applicable emission standards.”

3 13. On December 26, 2023, Respondent petitioned the Hearing Board for a
4 modification of its variance to change its final compliance date. (Modification Petition, at p. 1
5 ¶1(a).) In its Modification Petition, Respondent requested an extension with a final compliance
6 date of February 8, 2025. (*Id.* at p. 5, ¶ 9.) However, the Modification Petition also admits that
7 “because Ameresco neither owns nor operates the [l]andfill, Ameresco is unable to take direct
8 actions in the [l]andfill subsurface that will allow it to achieve compliance[.]” (*Id.* at p. 3, ¶ 5.)

9 14. South Coast AQMD concurred with Ameresco that there are no direct actions
10 Ameresco could take that would resolve the underlying cause of Ameresco’s non-compliance with
11 South Coast AQMD Rules and its permit conditions. Moreover, South Coast AQMD was not able
12 to state with any level of certainty that the underlying cause of Ameresco’s non-compliance (the
13 reaction at the landfill) will be fully abated on or before February 8, 2025. South Coast AQMD
14 contended that because a variance lasting another year (or longer) was not proper, an Order for
15 Abatement was needed to address Respondent’s ongoing violations of sulfur limits in its landfill
16 gas.

17 15. Respondent denies the allegations. Nonetheless, Respondent has agreed to
18 stipulate to issuance of this Order for Abatement pursuant to California Health & Safety Code §
19 42451.

20 21 **CONCLUSIONS**

22 1. The Stipulated Order for Abatement set forth herein is likely to assist in monitoring,
23 quantifying, and potentially lessening the impacts of potential violations.

24 2. Issuance of this Stipulated Order for Abatement upon a fully noticed hearing, would not
25 constitute a taking without due process of law.

26 3. There is good cause for adopting this Order for Abatement as stipulated to by the Parties.

27 **ORDER**

1 THEREFORE, based on the aforesaid facts and conclusions, and good cause appearing, the
2 Hearing Board hereby orders Respondent to refrain from violation of South Coast AQMD Rules
3 431.1, 3002, 203, and all applicable conditions of each of Respondent's permits. Additionally,
4 Respondent is hereby ordered to comply with the following conditions:

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6 1. Respondent shall expedite, to the maximum extent feasible, regular replacement of granular
7 activated carbon (GAC) media in each of the GAC adsorbers of the Landfill Gas Treatment
8 System (under Permit G58597, A/N 598260), including the execution of contracts, as well
9 as the delivery, replacement, startup, and testing of any operation necessary to replenish
10 and/or replace spent GAC media in the Landfill Gas Treatment System. Respondent shall
11 ensure adequate stock of new, un-used GAC media is maintained on site. Replacement of
12 the GAC media shall be conducted at least once every 240 operating days, and more
13 frequently as specified below:

14 a. Respondent shall conduct weekly colorimetric sampling for H2S at the outlet of the
15 sulfur removal system located within the Landfill Gas Treatment System. All
16 colorimetric sampling results shall be recorded. If the H2S concentration from
17 colorimetric testing is measured at 15 ppmv or greater, Respondent shall conduct a
18 second colorimetric test immediately. If the second colorimetric test confirms H2S
19 concentrations above 15 ppmv, replacement of the GAC media shall be performed as
20 soon as reasonably feasible, but not later than two weeks unless notice of the need for
21 a longer time is submitted to the South Coast AQMD (attn: Baitong Chen,
22 bchen@aqmd.gov; Nathaniel Dickel, ndickel@aqmd.gov; Christina Ojeda,
23 cojeda@aqmd.gov);

24 i. Respondent shall maintain adequate stock of appropriately ranged
25 colorimetric tubes. Colorimetric sampling shall be conducted using
26 appropriately ranged colorimetric tubes. The tubes should be ranged, at a
27 minimum, for readings up to 6 ppmv H2S, and, if the reading reaches the upper
28 range value, then a second tube shall be immediately used with a range capable

1 of reading 15 ppmv H2S, and up to a maximum of 60 ppmv H2S. If a reading
2 is not registered due to the lower detection limit or indicates 0 ppmv
3 concentration reading, results shall be reported as the lower range limit of the
4 colorimetric tube. All sampling shall be performed in accordance with the
5 operational manual for the Draeger Accuro sample collection pump.

6 ii. Respondent shall record and report the results of the H2S concentration
7 readings in ppmv, date and time of sampling when each measurement was
8 conducted, personnel name(s) who conducted the sampling, and colorimetric
9 tube specifications sheets (if not already provided to South Coast AQMD
10 pursuant to Condition No. 5) which include the H2S ppmv range. The H2S
11 results and supporting information shall be reported to the South Coast AQMD
12 pursuant to Condition No. 5.

13 2. Respondent shall manually monitor and record the landfill gas temperature at least daily at
14 the inlet of each GAC adsorber vessel of the Landfill Gas Treatment System on any day
15 when the facility operates. If the temperature of the landfill gas exceeds 160 degrees F,
16 Respondent shall pause operations until the temperature drops back below 160 degrees F,
17 unless otherwise approved in writing by the District. Temperature readings shall be
18 reported to South Coast AQMD pursuant to Condition No. 5.

19 3. Respondent shall sample, analyze, and record the landfill gas sulfur compounds combusted
20 in each turbine and the flare (as measured at sampling locations FLT 206 and FLT 321 that
21 are representative of the gas combusted in the turbines under Permits G25211, A/N
22 459539 and G25212, A/N 458540 and flare under Permit G23448, A/N 458542,
23 respectively) at least once each day sample for analysis for total sulfur compounds as H2S
24 using South Coast AQMD Method 307-91, on any day when the facility operates, or using
25 the modified sampling and analysis procedure approved by the District on June 9, 2023.

26 a. Respondent shall record South Coast AQMD Method 307-91 analysis upon receipt
27 of laboratory analysis report. Each recorded measurement or result shall be
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- 1 documented with the time and date of the measurement or sample collection was
2 conducted.
- 3 b. Method 307-91 sample collections at sampling locations FLT 206 and FLT 321
4 shall be conducted within 30 minutes of each other for each sampling event.
- 5 c. Sulfur compound readings and analysis shall be reported to South Coast AQMD
6 pursuant to Condition Nos. 4 and 5.
- 7 d. Tedlar bags used for Method 307-91 sampling and analysis shall not contain
8 droplets or debris.
- 9 4. Respondent shall maintain a record of the following information, and provide such records
10 to the South Coast AQMD pursuant to Condition No. 5:
- 11 a. The hourly and daily flow of landfill gas combusted, in standard cubic feet, in each
12 turbine (under Permits G25211, A/N 459539 and G25212, A/N 458540) and flare
13 (under Permit G23448, A/N 458542) and the total amount of landfill gas combusted
14 at Respondent's facility;
- 15 b. The daily flow of landfill gas to Respondent's facility not combusted, in standard
16 cubic feet, if applicable;
- 17 c. The results of the sulfur readings, sampling, and analyses, calculated as hydrogen
18 sulfide (H₂S) with the time and date when each measurement or sample collection
19 was conducted;
- 20 5. Respondent shall submit a monthly written report on the progress of the status of the Landfill
21 Gas Turbines (under Permits G25211, A/N 459539 and G25212, A/N 458540) and Landfill
22 Gas Flare (under Permit G23448, A/N 458542), Landfill Gas Treatment System (under
23 Permit G58597, A/N 598260), and efforts to resolve the total sulfur concentration in the
24 landfill gas exceeding 150 ppmv calculated as H₂S. Monthly reports shall be submitted to
25 the South Coast AQMD on the third Tuesday of each month for the immediately preceding
26 calendar month not later than 5:00pm via email to [Baitong Chen, Air Quality Engineer,
27 (bchen@aqmd.gov); Nathaniel Dickel, Senior Air Quality Engineer, (ndickel@aqmd.gov),
28 Christina Ojeda, Air Quality Inspector, (cojeda@aqmd.gov), and Gerardo Vergara, Air

1 Quality Inspector, (gvergara@aqmd.gov)]. The first report for January 2024 shall be due on
2 February 20, 2024. If a single instance of monthly reporting and/or required materials under
3 this section exceed 20 MB in size, Respondent shall submit such information via a file share
4 service (such as Google Drive or Dropbox) and include a link to such location via email to
5 the same listed personnel. Each monthly report shall contain at a minimum the following
6 information as relating to the immediately preceding month :

- 7 a. The landfill gas H2S and sulfur compounds measurements and laboratory analysis,
8 with the time and date of each measurement or sample collection, personnel name(s)
9 who conducted the sampling, and additional supporting information (if necessary),
10 as identified in Conditions No. 1 and No. 3.
 - 11 b. The landfill gas records and calculations identified in. Condition No. 4, in a
12 Microsoft Excel sheet format.
 - 13 c. Estimated schedule for any replacement or refurbishment of granular activated
14 carbon media in the Landfill Gas Treatment System (under Permit G58597, A/N
15 598260) identified in Condition No. 1.
 - 16 d. Description of any problems or delays, if any, encountered or projected to occur
17 pertinent to the execution of contracts, as well as the delivery, replacement, startup,
18 and testing of any operation necessary to replenish and/or replace spent granular
19 activated carbon media in the Landfill Gas Treatment System (under Permit G58597,
20 A/N 598260).
 - 21 e. Information identified in Condition No. 6.
 - 22 f. Landfill Gas Treatment System (under Permit G58597, A/N 598260) temperatures
23 recorded pursuant to Condition No. 2.
- 24 6. Whenever South Coast AQMD permitted Various Location equipment is brought or
25 operated on site to process, treat, or control the landfill gas, the Respondent shall:
- 26 a. Notify South Coast AQMD in writing of the date and time that the equipment is
27 brought to the facility in the corresponding monthly report per Condition No. 5 and
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1 include a copy of the various locations permit(s) in the corresponding monthly report
2 per Condition No. 5.

3 b. Maintain a daily log including the following information for each permit unit: permit
4 number, application number, equipment location, and start and end time of
5 equipment operation (as applicable). Respondent shall submit the daily log in the in
6 the corresponding monthly report per Condition No. 5.

7 c. Notify South Coast AQMD in writing of the date and time that the equipment is
8 removed from the facility in the corresponding monthly report per Condition No. 5.

9 7. Respondent shall, to the maximum extent feasible, prioritize the flow of landfill gas through
10 the GAC adsorber vessels of the Landfill Gas Treatment System, and limit the flow of any
11 landfill gas bypassing the GAC adsorber vessels (provided that Ameresco shall not be
12 required by this condition to limit the amount of gas it accepts from the Landfill).

13 8. Respondent shall, by March 5, 2024, submit an air dispersion modeling analysis protocol to
14 South Coast AQMD [Baitong Chen, Air Quality Engineer, (bchen@aqmd.gov); Nathaniel
15 Dickel, Senior Air Quality Engineer, (ndickel@aqmd.gov), Christina Ojeda, Air Quality
16 Inspector, (cojeda@aqmd.gov), and Gerardo Vergara, Air Quality Inspector,
17 (gvergara@aqmd.gov)] for review and approval. The modeling protocol shall analyze SOx
18 emissions to determine any impact zones of emissions from the permitted flare and turbines,
19 where concentrations of SOx are expected to be higher than National and California
20 Ambient Air Quality Standards. The protocol shall specify any modeling
21 programs/software, methods, modeling inputs and parameters, as well as all assumptions to
22 be used in the analysis proposed for the dispersion modeling analysis. A report of the air
23 dispersion modeling analysis shall be submitted to South Coast AQMD [Baitong Chen, Air
24 Quality Engineer, (bchen@aqmd.gov); Nathaniel Dickel, Senior Air Quality Engineer,
25 (ndickel@aqmd.gov), Christina Ojeda, Air Quality Inspector, (cojeda@aqmd.gov), and
26 Gerardo Vergara, Air Quality Inspector, (gvergara@aqmd.gov)] within 30 days of written
27 approval of the modeling proposal.

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1 9. Within 2 months of the issuance of the report on DMS removal specified in Condition
2 12(g)(i) of the Modified Order for Abatement issued in Case No. 6177-4 (January 17, 2024),
3 due April 30, 2024 Respondent shall prepare a proposal for lab-scale research and/or testing
4 that furthers the findings of such report. The proposal shall include cost estimates and
5 proposed length of study.

6 ~~8.10.~~ Respondent shall notify the South Coast AQMD (Attention: Kathryn Roberts,
7 kroberts@aqmd.gov) and the Clerk of the Hearing Board in writing when final compliance
8 has been achieved.

9 ~~9.11.~~ The Hearing Board may modify this Order for Abatement without the stipulation
10 of the parties upon a showing of good cause therefore, and upon making the findings required
11 by Health and Safety Code Section 42451(a) and District Rule 806(a). Any modification of
12 the Order shall be made only at a public hearing held upon 10 days published notice and
13 appropriate written notice to the Respondent.

14 12. The Parties shall return for a status/modification hearing on July XX, 2024.

15 ~~10.13.~~ The Hearing Board shall retain jurisdiction over this matter until August 7, 2025 and at
16 that time this Order shall no longer be of any force or effect, unless this Order is amended, modified,
17 or dissolved before then.

18 ~~11.14.~~ This Order for Abatement is not intended to be nor does it act as a variance. Respondent
19 is subject to all rules and regulations of the South Coast AQMD and to all applicable
20 provisions of California law. Nothing herein shall be deemed or construed to limit the
21 authority of the South Coast AQMD to issue Notices of Violation, to seek civil penalties or
22 injunctive relief, or to seek further Orders for Abatement or other administrative or legal
23 relief. The Findings of Fact are based on evidence presented by Petitioner and Respondent
24 as of the date of this Order.

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26 BOARD MEMBER: _____

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28 DATED: _____

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