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**BEFORE THE HEARING BOARD OF THE  
BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
STATE OF CALIFORNIA**

**FILED**  
**OCT 22 2024**  
HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

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In the Matter of the Application of  
REDWOOD LANDFILL, INC.  
For Interim and Short Variance from  
Regulation 2, Rule 1, Section 307; and Permit  
Conditions 25634, Section 5.a and 19867,  
Sections 16 and 18.c

) Docket No.: 3754  
)  
)  
) FINDINGS AND DECISION AND ORDER  
) GRANTING INTERIM AND SHORT  
) VARIANCES

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An application for both an Interim and Short Variance from the provisions of Regulation 2, Rule 1, Sections 307, of the Bay Area Air Quality Management District (District) and from Permit Conditions #25634, Section 5.a, #19867, Section 18.c, and #19867, Section 16, was filed on September 13, 2024. The matter was heard, in a combined hearing, on October 8, 2024, pursuant to notice and in accordance with the provisions of Health and Safety Code Sections 40824 and 40825. The Petitioner, Redwood Landfill, Inc., was represented by Malcom C. Weiss, Esq., and M. Clare Ellis, Esq., of Hunton Andrews Kurth LLP. Respondent, Air Pollution Control Officer (APCO) of the Bay Area Air Quality Management District, was represented by Misha Nishiki, Assistant Counsel at the Air District.

The Hearing Board provided the public an opportunity to testify at the hearing as required by the California Health and Safety Code, but no one did so. The Hearing Board heard evidence, testimony and arguments from the Applicant and the APCO. The APCO did not oppose the granting of either the interim or the short variance, so long as certain conditions set forth in the document designated Joint Exhibit 1 (modified during the hearing) were included. The Petitioner stated a willingness to comply with the conditions as revised.

At the outset of the hearing, the Petitioner withdrew its request for the portion of the petition related to Permit Condition 19867 Section 18.c since it was determined to not be in

1 violation.

2 The Hearing Board declared the hearing closed after receiving evidence, testimony and  
3 argument. After consideration of the evidence, the Hearing Board voted to grant the request for  
4 both an interim and a short variance, as set forth in more detail below.

5 **Nature of Business and Location of Facility**

6 Petitioner operates Redwood Landfill and Recycling Center (Facility) which includes a  
7 Class III landfill that is permitted for landfill gas (LFG) control or processing operations and  
8 receives non-hazardous municipal solid waste. The Facility covers 420 acres, with 222.5 acres  
9 dedicated to waste disposal and is located at 8950 Redwood Highway, Novato, California, 94948  
10 (Marin County).

11 **Equipment Subject to the Variance Petition**

12 Relevant to the variances, the Facility includes two flares (A-51 and A-60), two landfill gas  
13 treatment systems (S-71 and A-80) and two internal combustion (IC) engines (S-64 and S-65)  
14 operated at the onsite landfill gas-to-energy plant (energy plant). In addition, a project referred to  
15 as the “A-80 upgrade project” is commencing, which is intended to increase the treatment capacity  
16 of A-80 landfill gas treatment system and to re-configure the landfill gas collection and control  
17 system (GCCS).

18 Petitioner operates the Facility under a Bay Area Air Quality Management District  
19 (BAAQMD) Permit to Operate (PTO) which sets forth conditions for landfill operations, including  
20 operation of a landfill gas collection and control system (GCCS). LFG collected in the Facility’s  
21 GCCS is routed through one of two treatment systems (S-71 or A-80) to control total reduced sulfur  
22 (TRS) before the LFG is either routed to the energy plant engines S-64 and S-65, which supply  
23 power to the Pacific Gas & Electric (PG&E) electrical grid, or to one of the Facility’s two enclosed  
24 flares (A-51 and A-60). These enclosed flares are used as abatement devices for LFG generated by  
25 the waste decomposition process at the landfill. The S-64 and S-65 engines combust treated LFG  
26 routed through the S-71 treatment system and are used to power the onsite energy plant, which  
27 supplies power to the PG&E electrical grid.

**Background**

On August 22, 2024, the Facility initiated two-day scheduled source tests for engines S- 64 and S-65. During the source test for S-64, the engine generator malfunctioned and could not maintain operation long enough to complete testing. Petitioner determined that bearings in the engine’s generator had failed, causing significant damage to the rotating shaft inside the generator. These issues resulted in the engine shutting down in the middle of the test. The S-64 generator has been removed and sent to the East Coast for repairs.

During the testing for S-65, there was a power outage, requiring the test to be cancelled. It was discovered that there were issues with the urea injection system used for Nitrogen Oxides (NOx) control on the engine. On August 27, 2024, it was determined that the S-65 NOx control system was compromised to the point that the engine had to be shut down to avoid non-compliance with engine-related permit conditions.

With both energy plant engines offline, it was necessary to partially open the valve upstream of Flare A-60 (“east side valve”), which is normally kept closed during routine operations. Opening the valve was necessary to maintain a vacuum on the east side of the GCCS and to prevent fugitive LFG from being emitted. The east side valve is only opened during unforeseen circumstances that threaten proper operation of the GCCS. The routing of untreated LFG to the flare violates the requirement in PTO Condition 25634, Section 5.a. to route all flared gas through A-80. As of September 16, 2024, the east side valve closed.

On September 10, 2024, Petitioner had a technician from its NOx emission control system vendor, Johnson Matthey, onsite to evaluate S-65. It was determined that the engine’s NOx emission control system could not be repaired immediately. Petitioner is awaiting a replacement catalyst and other components needed for full repair. S-65 is expected to be out of service for several weeks. Because there is no immediate way for Petitioner to operate the GCCS in compliance with the permit terms, variance coverage is requested.

The engine equipment failures were unforeseeable and occurred despite the Petitioner’s use of good operation and maintenance practices for both engines. Petitioner acted quickly to contact third party technical support to undertake repairs and is working diligently on a technical solution

1 to the GCCS operational issues. The exigent circumstances could not have been anticipated in  
2 sufficient time to issue public notice.

3 Separately, for operational and emission control flexibility, Petitioner has initiated the A-80  
4 upgrade project. The A-80 upgrade project entails the addition of four 10,000-lb. treatment vessels  
5 containing activated carbon, resulting in a significant increase of the system's treatment capacity.  
6 It also requires upgrades and reconfiguration of GCCS piping. The A-80 upgrade project is being  
7 undertaken to increase the Facility's capacity to control sulfur in collected landfill gas (LFG).  
8 Petitioner anticipates that this work will result in periods of noncompliance with the permit  
9 conditions and regulations that are the subject of this variance request. To allow additional  
10 operational flexibility and gas treatment options in the event of future engine breakdowns,  
11 Petitioner re-established a preexisting line to serve as a connection point between the S-71 treatment  
12 system and the east side of the GCCS. This line allows Petitioner to move LFG from the east side  
13 of the GCCS through the carbon vessels at S-71 before flaring at control device A-60, in the event  
14 the A-80 treatment system is temporarily unavailable for maintenance or other reasons in the future.

15 Petitioner requested an interim and a short variance to allow it to address GCCS operational  
16 issues and to complete planned treatment and collection system upgrades without incurring  
17 penalties for non-compliance.

18 The Air Pollution Control Officer did not oppose the granting of either the interim variance  
19 or the short variance to the extent that the Petitioner was able to meet its burden of proof.

### 20 Findings of Fact and Conclusions

21 THE HEARING BOARD FINDS as to those matters in which findings are required:

#### 22 Interim Variance

23 Good cause exists to grant the interim variance because two engines had to be taken out of  
24 service at the Facility that caused non-compliance with all permit conditions. The breakdowns were  
25 beyond Petitioner's reasonable control, and it was necessary to undertake repairs quickly. Due to  
26 postponement of the hearing, the public had advance notice of variance request.

#### 27 Short Variance

28 Following are the facts and conclusions supporting the findings set forth in California Health

1 and Safety Code Section 42352(a) for the granting of a short variance.

2 **(1) That the Petitioner for a variance is, or will be, in violation of Health and Safety Code**  
3 **Section 41701 or of any rule, regulation or order of the District.**

4 1. The need for a variance exists because the Petitioner is in violation of Regulation  
5 2, Rule 1, Section 307 and Permit Conditions 25634, Section 5.a and 19867, Sections 16.  
6 Petitioner filed for the short variance in a timely manner.

7 **(2) That, due to conditions beyond the reasonable control of the Petitioner, requiring**  
8 **compliance would result in either (A) an arbitrary or unreasonable taking of property, or (B)**  
9 **the practical closing and elimination of a lawful business.**

10 1. Regular and appropriate maintenance has been done so the breakdown was beyond the  
11 reasonable control of the Petitioner and compliance would result in the closing or elimination of a  
12 service essential to the public without benefit to the environment and thus would be an arbitrary or  
13 unreasonable taking of property.

14 **(3) That the closing or taking would be without a corresponding benefit in reducing air**  
15 **contaminants.**

16 1. Closing the Facility would not reduce air contaminants and landfill gas will still be  
17 generated.

18 2. Transporting garbage elsewhere might increase air contaminants.

19 **(4) That the Petitioner for the variance has given consideration to curtailing operations of the**  
20 **source in lieu of obtaining a variance.**

21 1. The Petitioner has given consideration to curtailing operations.

22 2. There is a continual need to monitor the gas and attempt to avoid fugitive emissions.

23 3. Curtailing an essential public service is not feasible or desirable.

24 **(5) During the period that the variance is in effect, the Petitioner will reduce excess emissions**  
25 **to the maximum extent feasible.**

26 1. Excess emissions were not determined to be an issue in this situation.

27 **(6) During the period the variance is in effect, the Petitioner will monitor or otherwise**  
28 **quantify emission levels from the source, if requested to do so by the District, and report these**

1 **emissions levels to the District pursuant to a schedule established by the District.**

2 1. During the short variance period, the Petitioner will monitor and quantify emissions.  
3 The Petitioner has agreed to the conditions requested by the District.

4  
5 **Order**

6 THEREFORE, good cause appearing, THE HEARING BOARD ORDERS as follows:

7 The Petitioner is granted both an Interim and a Short Variance from Regulation 2, Rule 1,  
8 Sections 307 and from Permit Conditions 25634, Section 5.a and 19867, Section 16. Combined,  
9 the Variances cover the period from September 13, 2024 through December 12, 2024, or upon  
10 approval and commissioning of the A-80 upgrade project, whichever is earlier.

11 The Short Variance granted is subject to the following conditions set forth in modified Joint  
12 Exhibit 1 and replicated here:

- 13 1. Redwood shall provide three analyses of sulfur compounds in the landfill gas.
- 14 a. The first two analyses shall be of the landfill gas before it is abated by either S-71  
15 or A-80 (“pre-abated landfill gas”). Two pre-abated landfill gas samples shall be  
16 drawn from locations upstream of both S-71 and A-80.
- 17 b. The third analysis shall be of the landfill gas post-abatement. The post-abatement  
18 landfill gas to be analyzed shall be drawn from the sample point upstream from  
19 primary flare, A-60.
- 20 c. All samples shall be drawn on the same calendar day and shall be drawn within  
21 seven (7) calendar days from the date the Variance Order is issued, while the S-64  
22 and S-65 engines are offline and during the A-80 upgrade project while landfill gas  
23 is abated only by the existing 6,000-lb vessels in the A-80 treatment system and  
24 the existing vessels in the S-71 system.
- 25 d. The samples shall be analyzed by laboratory testing and the test results shall be  
26 reported to the District within three (3) calendar days from the date that lab results  
27 are received.
- 28 2. Redwood shall send the District weekly updates regarding the repair and operational

1 status of S-64 and S-65. Redwood shall submit the first update within seven (7)  
2 calendar days from the date the Variance Order is issued and on a weekly basis  
3 thereafter or as requested by the District.

4 3. Redwood shall notify the District within 24 hours of S-64 and S-65 each returning to  
5 full operation.

6 4. Redwood shall record the position (e.g., “open” or “closed”) of the East side valve and  
7 the S-71 valve whenever the position of the valves change, including the date and time  
8 of the change. Redwood shall begin recording the positions of the East side valve and  
9 S-71 valve – including dates and times of changes – within 24-hours of the issuance of  
10 the Variance Order. Redwood shall make these records available upon request by the  
11 District.

12 5. Redwood shall submit the requested information to the District via email to the  
13 following email addresses: lgriswold@baaqmd.gov, rmurray@baaqmd.gov,  
14 compliance@baaqmd.gov, and mnishiki@baaqmd.gov.

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16 Motion to Adopt Findings of Fact and Conclusions

17 Moved By: Peter Y. Chiu, M.D., P.E.

18 Second by: Barbara Toole O’Neil, MS, QEP

19 AYES: Peter Y. Chiu, M.D., P.E., Barbara Toole O’Neil, MS, QEP, Rajiv Dabir, P.E., and  
20 Valerie J. Armento, Esq., Chair.

21 NOES: None

22 ABSTAIN: None

23 ABSENT: Amelia Timbers  
24

25 Motion to Grant Interim and Short Variances

26 Moved By: Rajiv Dabir, P.E.

27 Seconded By: Barbara Toole O’Neil, MS, QEP

28 AYES: Peter Y. Chiu, M.D., P.E., Barbara Toole O’Neil, MS, QEP, Rajiv Dabir, P.E., and



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Valerie J. Armento, Esq., Chair.

NOES: None

ABSTAIN: None

ABSENT: Amelia Timbers



Valarie J. Armento, Esq., Chair



Date



