

# **Original Order for Abatement**

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

FILED

FEB 16 2024

HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

In the Matter of the

Docket No. 3747

AIR POLLUTION CONTROL OFFICER of  
the BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

**FINDINGS AND DECISION FOR  
ORDER OF ABATEMENT**

**DISTRICT REGULATION 8-34-301.1**

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Complainant,

Hearing Date: January 23, 2024 and

February 6, 2024

Time: 9:30 am

Place: Hearing Board  
Bay Area Air Quality Mgt Dist  
375 Beale Street  
San Francisco, CA 94105

vs.

BERKELEY LANDFILL

Respondent.

The Request of Complainant the Air Pollution Control Officer (hereinafter, the  
“APCO”) of the Bay Area Air Quality Management District (the “Air District”) for an Order of  
Abatement was heard on January 23 and February 6, 2024, in accordance with the provisions of  
California Health and Safety Code (“HSC”) § 40823 and Air District Hearing Board Rule §  
6.2. The following Members of the Hearing Board were present: Chair Valerie Armento and  
Members Amelia Timbers, Danny Cullenward, and Rajiv Dabir. Respondent Berkeley Landfill  
was represented by Marc Shapp, Deputy City Attorney, City of Berkeley. Complainant APCO  
of the Air District was represented by Joel Freid, Assistant Counsel II, Air District. The public  
was given the opportunity to testify, evidence was received, and the matter was submitted.

1 Testimony from the hearing on Respondent's application for a regular variance, Case No. 3741,  
2 was incorporated, without objection, into the record.

3 The Hearing Board finds and decides as follows:

4 **FINDINGS OF FACT**

5 1. The Air District is the governmental agency charged with the primary  
6 responsibility in the San Francisco Bay Area for controlling air pollution from all sources other  
7 than motor vehicles, for enforcing laws relating to air pollution, and for maintaining healthy air  
8 quality. The Air District is organized pursuant to the HSC Division 26, Part 3, Chapter 11.

9 2. The Complainant Air Pollution Control Officer ("APCO") is appointed by the  
10 Bay Area Air Quality Management District Board of Directors to enforce all orders, rules and  
11 regulations prescribed by the Air District Board. (HSC § 40750 *et seq.*) The APCO is  
12 authorized to request that the Hearing Board issue an Order of Abatement in accordance with  
13 HSC Section 42451(a).

14 3. Respondent Berkeley Landfill ("Landfill" or "Facility") is owned by the City of  
15 Berkeley (the "City"), operated by SCS Engineers ("SCS"), and subject to the jurisdiction of  
16 the Air District. Respondent owns the Landfill located at Cesar Chavez Park, at 11 Spinnaker  
17 Way, Berkeley, Alameda County, California.

18 4. Air District Regulation ("Reg.") 8-34-301.1, California Code of Regulations  
19 ("CCR") Title 17, Section 95464(b)(1)(A), a part of 17 CCR Sections 95460-94476, the State  
20 Landfill Methane Rule ("State LMR"), and the Landfill's Permit Condition ("P/C") 1826, Part  
21 3, each require continuous operation of the Landfill's landfill Gas Collection and Control  
22 System ("GCCS").

23 5. The Facility is located within the Air District's jurisdiction and subject to the  
24 Air District's regulations. The Landfill is a closed landfill owned by the City and currently

1 developed as Cesar Chavez Park. The City also owns the land in the Berkeley Marina adjacent  
2 to Cesar Chavez Park, including the site of an operating hotel, collects gases including Methane  
3 offsite, meaning off of Cesar Chavez Park, and feeds those gases to the City's flare in the Park  
4 for abatement.

5       6. The Landfill has been closed, i.e. not accepting any new solid waste, since 1983.  
6 As part of required post-closure operations, the Landfill operates a GCCS, which collects  
7 landfill gas from the decomposing material in the Landfill and combusts it in an enclosed flare.  
8 The Landfill has contracted with SCS for the operation and maintenance of the Landfill and its  
9 GCCS and for compliance monitoring and measures necessary to comply with Air District and  
10 CA State Regulations.

11       7. Landfill Gas ("LFG") is comprised of Methane which is a potent greenhouse  
12 gas, Carbon Dioxide ("CO<sub>2</sub>"), Carbon Monoxide ("CO"), Non-methane Organic Compounds  
13 ("NMOCs"), Toxic Air Contaminants ("TACs"), and other compounds which can be emitted  
14 when the Gas Collection System ("GCS") and flare are not operated continuously and when  
15 there are leaks of landfill gas from the landfill surface and/or from GCCS components.

16       8. Methane is a potent greenhouse gas more effective than CO<sub>2</sub> at trapping heat in  
17 the atmosphere.

18       9. LFG is extracted from the Landfill using a series of vertical landfill gas  
19 collection wells, lateral piping, and a vacuum system that comprise the GCS which feeds the  
20 collected LFG to a flare where the landfill gas is burned and thereby abated, as required by  
21 Regulation 8, Rule 34 ("Reg. 8-34") and the State LMR. The Landfill is required by its Air  
22 District permit to operate a GCS consisting of 42 vertical wells, 2 horizontal collectors, and 14  
23 trench collectors.

1       10. A landfill subject to Reg. 8-34 is required to continuously operate a Gas  
2 Collection System and flare (or other abatement or control system) unless Less Than  
3 Continuous Operation ("LTCO") is approved by the Air District. The state LMR also requires  
4 continuous operation of the GCS unless the Air District approves an alternative compliance  
5 option. Landfills that are granted approval for LTCO are required to request approval of the  
6 LTCO allowance from the Air District every 3 years, and the Air District has the authority to  
7 approve, reject, or modify terms of LTCO.

8       11. The Air District has issued 15 Notices of Violation ("NOVs") to the Landfill  
9 since November 22, 2021 for noncontinuous operation of its GCCS, in violation of Reg. 8-34-  
10 301.1, the State Landfill Methane Rule CCR Title 17 Section 95464(b)(1)(A), and the  
11 Landfill's P/C 1826, Part 3, among 5 other violations. Berkeley Landfill is not operating its  
12 GCCS continuously.

13       12. The Air District issued 14 NOVs to the Landfill over the past year, and 21  
14 NOVs since 2019, including the 10 NOVs issued for noncontinuous operation of the GCCS in  
15 2023. The cited violations include not operating required landfill gas collection wells, leaks of  
16 landfill gas in violation of applicable regulations, improper maintenance of the flare, the flare  
17 exceeding its 57.6 MMBTU/day limit in violation of Reg. 2-1-307 and P/C 1826, Part 2, late  
18 source test report submittal, and noncontinuous operation of its GCCS.

19       13. As part of its application for a Regular Variance, Respondent acknowledged and  
20 presented evidence to support a finding that the Landfill is operating in violation of Reg. 8-34-  
21 301.1 and P/C 1826, Part 3.

22       14. Because the Landfill closed before 1987 it is exempt under Reg. 8-34-119 from  
23 the 5% oxygen content limit of Reg. 8-34-305.4. Whether or not this limit applies, high oxygen  
24 readings indicate ambient air is being drawn into the GCS. In this case, oxygen readings of 20%

1 have been recorded, indicating that ambient air is being drawn into the GCS. The Air District  
2 believes that this oxygen intrusion is due to poor maintenance and disrepair of the Landfill's  
3 GCS.

4 15. When LFG is not collected adequately, it builds up pressure within the Landfill  
5 and can move offsite, outside the Landfill boundary, where the LFG can become a safety  
6 hazard, as well as eventually being emitted to the atmosphere. Monitoring probes offsite  
7 near Cesar Chavez Park now situated upon the former the Landfill have detected methane. The  
8 Air District and CalRecycle, the Landfill's Local Enforcement Agency ("LEA") have met to  
9 discuss and develop the chemical fingerprinting methodology in Sections 4, 4.1, and 4.2 of the  
10 Order of Abatement below aimed to determine whether the methane measured offsite of Cesar  
11 Chavez Park is originating from the Landfill.

12 16. On May 18, 2022, the Landfill petitioned the Air District for approval of an  
13 LTCO allowance for the Landfill's new smaller flare under Reg. 8-34-404. The Landfill  
14 claimed that it was not producing enough LFG to operate even the new smaller flare on a  
15 continuous basis.

16 17. At the end of 2022, Air District Engineering Staff met with CalRecycle,  
17 Berkeley LEA, SCS, and the City staff to discuss investigation into the offsite methane  
18 detections, and SCS/the City agreed to investigate. The City has been requested by CalRecycle  
19 to submit a work plan to conduct the investigation into the offsite methane detections by  
20 February 23, 2024.

21 18. On March 21, 2023, the City's Landfill and its consultant, SCS, withdrew the  
22 application seeking LTCO for the new flare after the Air District expressed concerns about  
23 poor landfill gas collection, ambient levels of oxygen being captured by the GCS, and possible  
24 offsite landfill gas migration, and stated that if system adjustments and repairs could not be

completed within 60 days to ensure that all vertical extraction wells reported oxygen concentrations below 5% then the LTCO petition would be denied..

19. The Landfill is in a well-populated area. Cesar Chavez Park, which is used by the public, is located on top of the Landfill and with an adjacent hotel. Accordingly, there is a strong public interest in bringing the Landfill into compliance with continuous operation requirements and in determining whether or not landfill gas is migrating off of the Landfill site.

## CONCLUSION

20. The Landfill is in violation of Reg.8-34-301.1, 2-1-307, State LMR Section 95464(b)(1)(A), and its P/C 1826, Part 3.

21. It is reasonable to require the Landfill to comply with District rules and its permit. Reg. 8-34 that applies in this case is a federally enforceable requirement.

22. The issuance of this Order of Abatement upon a noticed hearing does not constitute a taking of property without due process of law.

23. The Order of Abatement is not intended to act as a variance.

## **ORDER OF ABATEMENT**

Based on the aforesaid statements and good cause appearing, the Hearing Board hereby orders Respondent to immediately cease and desist from operating Respondent's closed Landfill in a manner that violates Air District Reg. 8-34-301.1 or that violates the Landfill's P/C 1826, which require both the continuous operation of its landfill gas (LFG) collection system, consisting of 42 vertical wells, 2 horizontal collectors, 14 trench collectors, and the proper maintenance of and continuous operation of Flare A-4 combusting the collected LFG at a temperature of at least 1,400 degrees Fahrenheit, unless and until the Air District determines that all of the following compliance action conditions and increments of progress 1 through 11

1 have been met.

2 **COMPLIANCE ACTION CONDITIONS AND INCREMENTS OF PROGRESS:**

3       1. Subject to Section 2 of this Abatement Order, locate all required vertical LFG  
4 collection wells pursuant to the BAAQMD Permit to Operate, Permit Condition 1826, Part 4  
and on the attached Landfill Gas System Plan topographical site map. (Reg. 8-34-301).  
5 Complete within 30 business days of issuance of this Abatement Order.

6       2. Once Wells 14, 29, 33, 34, and 35 are located, immediately monitor each located  
7 well to confirm operation, measure well gas in accordance with Regulation 8-34-604, and  
8 measure pressure in accordance with Regulation 8-34-608. Adjust each well as needed to  
9 collect LFG. Submit the monitoring results and description of adjustments to the Air District  
within 5 business days. If any of these wells cannot be located, repaired, or brought into  
compliance with section 3, then submit an application to the Air District proposing an alteration  
to the LFG collection system to address the missing, unrepairable, or non-compliant wells.  
(Reg. 8-34-301, Permit Condition 1826). Complete within 30 business days of completion of  
the requirements of Section 1.

10       3. To the extent necessary to achieve the performance criteria herein, repair the  
11 LFG collection system such that, subsequent to inspection, repairs, or modifications as  
12 described in subsections 3.1, 3.2, 3.3, 3.4, and 3.5, all vertical LFG extraction wells, horizontal  
13 collectors, and trench collectors are optimally collecting LFG and limiting air intrusion to 5  
percent oxygen by volume, except as otherwise provided in subsections 3.4 and 3.5, and ensure  
14 that each wellhead operates under a vacuum/negative pressure and LFG in each wellhead less  
than 55° C (131° F), and ensure all system components comply with all applicable  
15 requirements in Reg. 8-34-301.2, and ensure the gas collection system and landfill gas flare  
operate continuously as specified in Reg. 8-34-301.1 and meet the destruction efficiency  
requirement in Reg. 8-34-301.3. Complete the actions set forth in subsections 3.3, 3.4, and 3.5  
on an as-needed basis. (Reg. 8-34-301, Permit Condition 1826).

16       3.1 Within 90 business days of issuance of this Abatement Order, complete  
17 an inspection of the integrity of each vertical LFG extraction well, LFG horizontal collector,  
18 LFG trench collector, LFG collection system lateral, and piping, including physical inspection,  
total depth and liquid level sounding, video camera inspection, and any other method(s)  
19 necessary to demonstrate that there are no blockages due to damage or from liquid. Submit  
inspection results to the Air District within 30 business days of the completion of the  
inspection, including a timeline for any repairs that are necessary based on the inspection. If  
20 LFG collection system component replacements are needed, an application to the Air District  
proposing an alteration to the LFG collection system to replace unrepairable LFG collection  
21 system components shall also be submitted with the inspection results. (Reg. 8-34-301, Permit  
Condition 1826).

22       3.2 Within 90 business days of issuance of this Abatement Order, at all  
23 vertical LFG extraction wells, replace existing near surface bentonite well bore seal and install  
additional well bore HDPE liner boot seals. (Reg. 8-34-301, Permit Condition 1826).

1                   3.3     As needed, install additional supplemental LFG collection system below  
2 grade pipelines to maintain vacuum distribution in the wellfield. Submit an application to the  
3 Air District if the installation(s) are not allowed by the current permit to operate. If any  
4 additional supplemental LFG collection system below grade pipelines are needed under this  
subsubsection 3.3, the City of Berkeley shall install those pipelines within 120 business days of  
issuance of this Abatement Order or any approvals required from the District, whichever is  
later. (Reg. 8-34-301, Permit Condition 1826).

5                   3.4     After measures set forth in subsections 3.1, 3.2, and 3.3 have been  
6 completed, if any well gas data from vertical wells, horizontal collectors, and trench wells  
7 (collectively and individually, the Well Gas Data) show oxygen concentrations greater than 5  
percent by volume, submit to the Air District for approval a proposed Work Plan (WP) within  
8 60 business days of the last GCS repair done under subsections 3.2 or 3.3 for a site-wide drone  
survey across the landfill and nearby areas that could be pathways of LFG migration to the  
9 offsite probes with methane detections per EPA approved Other Test Method 51 (OTM-51) –  
Unmanned Aerial Systems (UAS) Application for Surface Emissions Monitoring of Landfills.  
10 City of Berkeley staff shall seek approval from the Berkeley City Council for any drone survey  
under this subsection 3.4, if Council approval be needed under the Acquisition and Use of  
11 Surveillance Technology Ordinance, Berkeley Municipal Code Ch. 2.99. Upon the Air  
District's approval of the drone survey WP, which shall not be unreasonably withheld, within  
12 30 business days complete the drone survey. At any identified location(s) of landfill gas  
leak(s), locate the GCS damage causing the leak(s) and identify new GCS component(s) needed  
13 to eliminate the leak(s). Submit an application to the Air District proposing an alteration to the  
LFG collection system to replace piping, replace landfill gas wells, horizontal collectors, trench  
14 wells, and/or install new landfill gas collection system components within 60 business days of  
completing the survey. (Reg. 8-34-301, Permit Condition 1826).

15                  3.5     If, after repairs of the GCS, the Well Gas Data at any well or collector  
16 continue to show an oxygen concentration greater than 5 percent by volume, develop a probe  
monitoring plan to measure LFG content in the area surrounding such well(s) or collector(s).  
17 Submit the probe monitoring plan, which shall include notice to the Air District to allow Air  
District personnel to attend the probe monitoring activity, to the Air District within 60 business  
18 days of the last GCS repair done under subsections 3.2, 3.3, or 3.4, for review, comment, and  
approval by the Air District. Complete the probe monitoring survey within 30 business days of  
19 Air District approval of the probe monitoring plan, which shall not be unreasonably withheld,  
and submit the probe monitoring survey results report to the Air District within 7 business days  
20 of Berkeley Landfill's receipt of the report and no later than 60 business days of District  
approval of the probe monitoring plan. If any such well(s) or collector(s) are determined by the  
21 Air District to be collecting gas that is not representative of the LFG in the surrounding waste  
mass, locate the GCS damage causing the leak(s) and identify new GCS component(s) needed  
22 to eliminate the leak(s). Submit an application to the Air District proposing an alteration to the  
LFG collection system to replace piping, replace landfill gas wells, replace collectors, and/or  
23 install new landfill gas components, in accordance with direction by the Air District, within 60  
business days of receiving such direction by the Air District. (Reg. 8-34-301, Permit Condition  
1826).

1           4. Within 60 business days of issuance of this Abatement Order submit to the Air  
2 District for approval, which shall not be unreasonably withheld, a proposed Work Plan (WP)  
3 for the collection of gas and laboratory analysis meeting all requirements of, and containing all,  
4 the information specified in subsections 4.1 and 4.2 below. (Reg. 8-34-301, Permit Condition  
5 1826). The WP will include details for:

6           4.1    Screening, collection, and testing gas at all existing permanent  
7 monitoring probes offsite of Cesar Chavez Park: Screening method to determine if methane is  
8 present and measure methane content. For locations at which methane is detected, a collection  
9 and test plan, including the number and size of representative gas samples collected and test  
10 methods to establish the source of the methane. The WP shall include at a minimum: collection  
11 protocols, advance notice to Air District of sampling to allow for Air District staff being  
12 present, type of approved-container, chain of custody, and deadlines for laboratory submittal;  
13 analysis of gas content, including methane, other gas fractions, and specific volatile organic  
14 compound (VOC) and toxic air contaminant (TAC) compounds by Methods ASTM D1946 and  
15 TO-15, and any other methods necessary to identify indicators of the source of methane gas.  
16 For locations at which methane is not detected, a follow up monitoring schedule, including  
17 frequency and duration; methane-containing gas from follow up monitoring shall be collected  
18 and submitted for testing. Deadlines for submittal of the initial field investigation report, results  
19 of ongoing monitoring, and laboratory analysis to the Air District. (Reg. 8-34-301, Permit  
20 Condition 1826).

21           4.2    Collection and testing of LFG from the Berkeley Landfill: Collection and  
22 test plan, including the number and size of representative LFG samples collected and well  
23 locations in proximity to each offsite probe. The plan shall include at a minimum: collection  
24 protocols, advance notice to the Air District of sampling to allow for Air District staff to be  
25 present, type of approved container, chain of custody, and deadlines for laboratory submittal;  
26 analysis of gas content, including methane, other gas fractions, and specific VOC and TAC  
27 compounds by Methods ASTM D1946 and TO-15, and any other methods necessary to  
28 establish a fingerprint of the landfill gas. Deadlines for submittal of the field investigation  
29 report and laboratory analysis to the Air District. (Reg. 8-34-301, Permit Condition 1826).

30           5.     Perform the sampling and collection of gas and initiate laboratory analysis in  
31 accordance with the approved WP. (Reg. 8-34-301, Permit Condition 1826). Complete within  
32 60 business days of receiving Air District approval of the WP.

33           6.     Submit laboratory analyses and field investigation report(s) to the Air District  
34 for the gases collected from the offsite monitoring probes and from the Berkeley Landfill by  
35 the deadlines specified within the approved WP. The field investigation report(s) shall contain  
36 all the information required in the approved WP. (Reg. 8-34-301, Permit Condition 1826).

37           7.     Schedule a full inspection and servicing of the onsite flare by the flare  
38 manufacturer. (Reg. 8-34-301, Permit Condition 1826). Complete within 60 business days of  
39 issuance of this Abatement Order.

40           8.     Submit results of flare inspection and details of the servicing to the Air District  
41 within 30 business days of the inspection and servicing, including all details of the flare's

1 compliance and/or non-compliance with regulatory requirements. (Reg. 8-34-301, Permit  
2 Condition 1826). Complete within 90 business days of issuance of this Abatement Order.

3 9. For a period of at least 3 months following any repair or replacement of any  
4 component of the LFG collection system required under subsections 2, 3, 3.1, 3.2, and 3.3 and  
5 until the Well Gas Data oxygen content at every well and collector has remained no more than  
6 5 percent by volume for at least 3 months, and for a period of at least 3 months following  
7 installation of all GCS components required by subsections 3.4 and 3.5, perform weekly  
8 monitoring of well gas at all vertical wells, horizontal collectors, and trench wells in  
9 accordance with Regulation 8-34-604, determine wellhead pressure in accordance with  
10 Regulation 8-34-608, and adjust or repair the wells and collectors as necessary to optimize gas  
11 recovery and minimize air intrusion. For a period of at least 6 months after weekly monitoring  
12 has ceased, perform monthly wellhead monitoring and continue to adjust wells and collectors to  
13 optimize gas recovery and minimize air intrusion. If the oxygen content exceeds 5 percent by  
14 volume at any well or collector, perform repairs and maintenance at those components to  
15 reduce oxygen content and revert to the weekly monitoring schedule. When all of Berkeley  
16 Landfill's Well Gas Data demonstrate 6 months of continuous oxygen concentrations that do  
17 not exceed 5 percent by volume, Berkeley Landfill may revert to the monitoring requirements  
18 in Regulation 8-34. Submit the monitoring results to the Air District within 5 business days  
19 following each monitoring event. (Regs. 8-34-301 and 8-34-303).

20 10. For the duration of the activities required under Section 9, perform monthly  
21 monitoring for landfill gas leaks at all components containing landfill gas and for landfill  
22 surface leaks in accordance with the procedures in Regulation 8-34-602 and 8-34-607.  
23 Immediately address and repair any leaks in excess of 8-34-301.2 and 8-34-303 standards and  
24 submit the results of the monitoring and repairs to the Air District within 2 weeks of the  
monitoring event. (Regs. 8-34-301 and 8-34-303).

25 11. Any downtime of the LFG collection and control system that is reasonable in the  
26 determination of the Air District and required to conduct the actions specified under this  
27 Abatement Order shall not constitute a violation of Reg. 8-34-301.1, provided the City of  
28 Berkeley provides documentation, if feasible in advance of the downtime events, including start  
29 and stop time, reason, and actions taken. Submit such documentation to the Air District, in  
30 compliance with Regulation 8-34-118 and no later than 5 business days following each  
31 downtime event if advance notice is not feasible. Nothing in this Section 11 exempts Permittee  
32 Berkeley Landfill from the requirements of Regs. 2-1-301 and 2-1-302.

33 A. The Hearing Board shall retain jurisdiction over this matter until February 5,  
34 2025 or until Respondent Berkeley Landfill has met all the Compliance Action Conditions and  
35 Increments of Progress set forth in Sections 1 through 11, whichever occurs first, unless this  
36 Order is amended or modified.

37 B. The Hearing Board may modify this Order without the stipulation of the parties

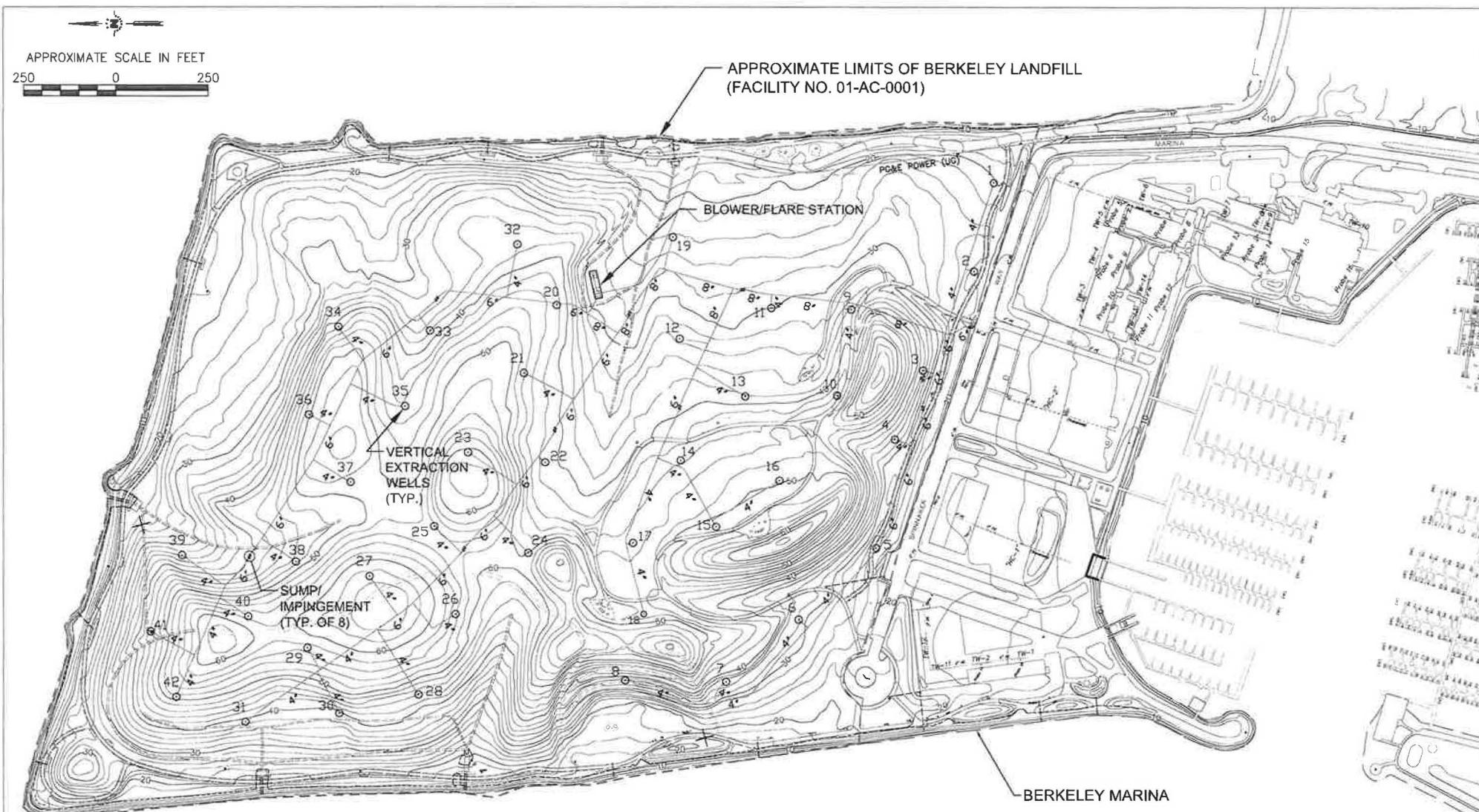
upon a showing of good cause, and upon making the findings required by HSC § 42451(a) and Hearing Board Rule § 4.13.

C. This Order is not and does not act as a variance. Respondent Berkeley Landfill is subject to all applicable rules and regulations of the Air District, and to all applicable California law. Nothing herein shall be deemed or construed to limit the authority of the Air District to issue Notices of Violation nor to seek civil or criminal penalties, or injunctive relief, or to seek further orders of abatement or other administrative or legal relief.

Dated: February 16, 2024

By: Valerie J. Armento

Valerie J. Armento, Esq.  
Hearing Board Chair  
Bay Area Air Quality Management District



#### LEGEND

- 40 (C) GAS COLLECTION HEADER/LATERALS (BELOW GRADE)
- Vertical LGF GAS EXTRACTION WELL
- TW-4 HORIZONTAL TRENCH WELL (MARINA PROPERTY)
- HC-1 HORIZONTAL COLLECTOR PIPE (MARINA PROPERTY)
- Probe 5 LGF MONITORING WELL (MARINA PROPERTY)

#### SCS ENGINEERS

Environmental Consultants and Contractors  
7011 Kolb Center Parkway, Suite 135  
Pleasanton, California 94566  
(925) 426-0080 FAX: (925) 426-0707

PROJ. NO.	01210112.02 T12	DRAW. BY	HLG/MLE	ACAD FILE	HB-1/LG.PLM.2011.08
DES. BY	JAH/MLE	CRW BY	MLE	APP. BY	J. MILLER

NOTE:  
ORIGINAL TOPOGRAPHY BY AERIAL METHODS  
1992, BASE MAP PROVIDED BY CITY OF  
BERKELEY.

#### LANDFILL GAS SYSTEM PLAN

PROJECT TITLE

BERKELEY LANDFILL  
CITY OF BERKELEY

NO.

REVISION

DATE

DATE:  
6/11/18  
SCALE:  
AS SHOWN  
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BEFORE THE HEARING BOARD  
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
STATE OF CALIFORNIA

In the Matter of the ) Docket No: 3747

AIR POLLUTION CONTROL OFFICER of )  
the BAY AREA AIR QUALITY )  
MANAGEMENT DISTRICT )

vs. )

BERKELEY LANDFILL )

STATE OF CALIFORNIA )

City and County of San Francisco ) ss.



I, Marcy Hiratzka, do hereby certify under penalty of perjury as follows:

That I am a citizen of the United States, over the age of 18 years and not a party to the above-entitled action; that I served a true copy of the attached **Findings and Decision for Order of Abatement** on:

Marc Shapp, Deputy City Attorney  
City of Berkeley  
2180 Milvia St., Ste. 4  
Berkeley, CA, 94704  
[mshapp@berkeleyca.gov](mailto:mshapp@berkeleyca.gov)

via email and USPS Certified Mail on February 16, 2024, and on:

Joel Freid, Esq., Assistant Counsel  
Bay Area Air Quality Management District  
375 Beale Street, 6<sup>th</sup> Floor  
San Francisco, California 94105  
[jfreid@baaqmd.gov](mailto:jfreid@baaqmd.gov)

via email on February 16, 2024

DATED: February 16, 2024

  
Marcy Hiratzka  
Clerk of the Boards

# **First Amendment to Original Order for Abatement**

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BEFORE THE HEARING BOARD OF THE  
BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
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In the Matter of the  
AIR POLLUTION CONTROL OFFICER of  
the BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

Complainant,  
vs.  
BERKELEY LANDFILL  
Respondent.

Docket No. 3747

**STIPULATED AMENDMENT TO ORDER  
OF ABATEMENT FOR BERKELEY  
LANDFILL**

Hearing Date: February 18, 2025  
Time: 9:30 am  
Place: Hearing Board  
Bay Area Air Quality Mgt Dist  
375 Beale Street, 1<sup>st</sup> Fl.  
San Francisco, CA 94105

In the Order of Abatement for Berkeley Landfill entered on February 16, 2024, the Hearing Board hereby replaces the following original Paragraph A on p. 10:19-23 of the Order of Abatement with the new Paragraph A below it.

The original Paragraph A on p. 10:19-23 to be replaced provided:

“A. The Hearing Board shall retain jurisdiction over this matter until February 5, 2025 or until Respondent Berkeley Landfill has met all the Compliance Action Conditions and Increments of Progress set forth in Sections 1 through 11, whichever occurs first, unless this Order is amended or modified.”

The new Paragraph A on p. 10:19-23 to replace the one above provides:

“A. The Hearing Board shall retain jurisdiction over this matter until Respondent Berkeley Landfill has met all the Compliance Action

FILED

FEB 19 2025

HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

1                   Conditions and Increments of Progress set forth in Sections 1  
2                   through 11, unless this Order is amended or modified."

3                   The effect of this amendment shall be retroactive to February 5, 2025.

4                   All other terms and conditions of the Order of Abatement shall remain the  
5                   same.

6                   IT IS SO ORDERED.

7

8

9                   Dated: February 18, 2025

10                  By: Valerie J. Armento  
11                  Valerie J. Armento, Esq.  
12                  Hearing Board Chair  
13                  Bay Area Air Quality Management District

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

In the Matter of the

AIR POLLUTION CONTROL OFFICER of  
the BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

vs.

BERKELEY LANDFILL

STATE OF CALIFORNIA

City and County of San Francisco

) Docket No: 3747

CERTIFICATE OF SERVICE

**FILED**

**FEB 19 2025**

HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

I, Marcy Hiratzka, do hereby certify under penalty of perjury as follows:

That I am a citizen of the United States, over the age of 18 years and not a party to the above-entitled action; that I served a true copy of the attached **Stipulated Amendment to Order of Abatement** on:

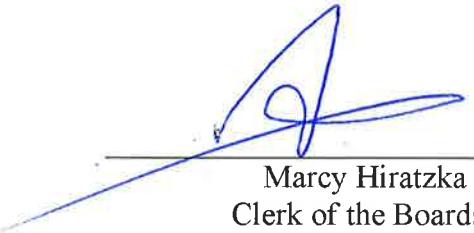
Marc Shapp, Deputy City Attorney  
City of Berkeley  
2180 Milvia St., Ste. 4  
Berkeley, CA, 94704  
[mshapp@berkeleyca.gov](mailto:mshapp@berkeleyca.gov)

via email and USPS Certified Mail on February 19, 2025, and on:

Joel Freid, Esq., Assistant Counsel  
Bay Area Air Quality Management District  
375 Beale Street, 6<sup>th</sup> Floor  
San Francisco, California 94105  
[jfreid@baaqmd.gov](mailto:jfreid@baaqmd.gov)

via email on February 19, 2025

DATED: February 19, 2025

  
Marcy Hiratzka  
Clerk of the Boards

**Second Amendment to Original Order  
for Abatement**

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

In the Matter of the

AIR POLLUTION CONTROL OFFICER of  
the BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

Petitioner,

vs.

## BERKELEY LANDFILL

Respondent.

Docket No. 3747



## **FINDINGS AND DECISION FOR SECOND AMENDED ORDER OF ABATEMENT**

## **DISTRICT REGULATION 8-34-301.1**

Hearing Date: November 18, 2025

Time: 9:30 am

Place: Hearing Board  
Bay Area Air Quality Mgt Dist  
375 Beale Street  
San Francisco, CA 94105

Petitioner, the Air Pollution Control Officer (hereinafter, the “APCO”) of the Bay Area Air Quality Management District (the “Air District”) and Respondent City of Berkeley Landfill filed a stipulated Motion for a Second Amendment to the Order of Abatement. The matter was heard on November 4, 2025, in accordance with the provisions of California Health and Safety Code (“HSC”) § 40823 and all applicable notice requirements. The following Members of the Hearing Board were present: Vice Chair Barbara Toole O’Neil, MS, QEP, Ch.E. and Members Jeffrey Maddox, P.E. and Wayne Farrens. Petitioner APCO of the Air District was represented by Joel Freid, Assistant Counsel II, Air District. Respondent Berkeley Landfill was represented by Marc Shapp, Deputy City Attorney, City of Berkeley. Respondent and Petitioner agree that this Second Amendment to the Order of Abatement does not affect the Air District’s ability to seek penalties under Health and Safety Code §§ 42401 – 42411 against the City of Berkeley for

1 violations of the Order of Abatement that occurred prior to this Second Amendment.  
2 Respondent and Petitioner agree that neither the stipulated Motion for a Second Amendment to  
3 the Order of Abatement nor this Second Amendment to the Order of Abatement constitute an  
4 admission by the City of Berkeley of any of the facts upon which the Hearing Board's Findings  
5 of Fact herein are based; nor does the City of Berkeley admit any violations of the Order of  
6 Abatement, nor does this Second Amendment to the Order of Abatement affect the City of  
7 Berkeley's ability to defend against any penalties. The public was given the opportunity to  
8 testify, evidence was received, and the matter was submitted.

9 The Hearing Board finds and decides as follows:

10 **FINDINGS OF FACT**

11 1. The Air District is the governmental agency charged with the primary  
12 responsibility in the San Francisco Bay Area for controlling air pollution from all sources other  
13 than motor vehicles, for enforcing laws relating to air pollution, and for maintaining healthy air  
14 quality. The Air District is organized pursuant to the HSC Division 26, Part 3, Chapter 11.

15 2. The Petitioner Air Pollution Control Officer ("APCO") is appointed by the Bay  
16 Area Air Quality Management District Board of Directors to enforce all orders, rules and  
17 regulations prescribed by the Air District Board. (HSC § 40750 *et seq.*) The APCO is  
18 authorized to request that the Hearing Board issue an Order of Abatement in accordance with  
19 HSC Section 42451(a).

20 3. Respondent Berkeley Landfill ("Landfill" or "Facility") is owned by the City of  
21 Berkeley (the "City"), operated by SCS Engineers ("SCS"), and subject to the jurisdiction of  
22 the Air District. Respondent owns the Landfill located at Cesar Chavez Park, at 11 Spinnaker  
23 Way, Berkeley, Alameda County, California.

24

1       4.     Air District Regulation (“Reg.”) 8-34-301.1, California Code of Regulations  
2 (“CCR”) Title 17, Section 95464(b)(1)(A), a part of 17 CCR Sections 95460-94476, the State  
3 Landfill Methane Rule (“State LMR”), and the Landfill’s Permit Condition (“P/C”) 1826, Part  
4 3, each require continuous operation of the Landfill’s landfill Gas Collection and Control  
5 System (“GCCS”).

6       5.     The Facility is located within the Air District’s jurisdiction and subject to the  
7 Air District’s regulations. The Landfill is a closed landfill owned by the City and currently  
8 developed as Cesar Chavez Park. The City also owns the land in the Berkeley Marina adjacent  
9 to Cesar Chavez Park, including the site of an operating hotel, collects gases including Methane  
10 offsite, meaning off of Cesar Chavez Park, and feeds those gases to the City’s flare in the Park  
11 for abatement.

12       6.     The Landfill has been closed, i.e. not accepting any new solid waste, since 1983.  
13 As part of required post-closure operations, the Landfill operates a GCCS, which collects  
14 landfill gas from the decomposing material in the Landfill and combusts it in an enclosed flare.  
15 The Landfill has contracted with SCS for the operation and maintenance of the Landfill and its  
16 GCCS and for compliance monitoring and measures necessary to comply with Air District and  
17 CA State Regulations.

18       7.     Landfill Gas (“LFG”) is comprised of Methane which is a potent greenhouse  
19 gas, Carbon Dioxide (“CO<sub>2</sub>”), Carbon Monoxide (“CO”), Non-methane Organic Compounds  
20 (“NMOCs”), Toxic Air Contaminants (“TACs”), and other compounds which can be emitted  
21 when the Gas Collection System (“GCS”) and flare are not operated continuously and when  
22 there are leaks of landfill gas from the landfill surface and/or from GCCS components.

23       8.     Methane is a potent greenhouse gas more effective than CO<sub>2</sub> at trapping heat in  
24 the atmosphere.

1       9.     LFG is extracted from the Landfill using a series of vertical landfill gas  
2 collection wells, lateral piping, and a vacuum system that comprise the GCS which feeds the  
3 collected LFG to a flare where the landfill gas is burned and thereby abated, as required by  
4 Regulation 8, Rule 34 (“Reg. 8-34”) and the State LMR. The Landfill is required by its Air  
5 District permit to operate a GCS consisting of 42 vertical wells, 2 horizontal collectors, and 14  
6 trench collectors.

7       10.    A landfill subject to Reg. 8-34 is required to continuously operate a Gas  
8 Collection System and flare (or other abatement or control system) unless Less Than  
9 Continuous Operation (“LTCO”) is approved by the Air District. The state LMR also requires  
10 continuous operation of the GCS unless the Air District approves an alternative compliance  
11 option. Landfills that are granted approval for LTCO are required to request approval of the  
12 LTCO allowance from the Air District every 3 years, and the Air District has the authority to  
13 approve, reject, or modify terms of LTCO.

14       11.    The Air District has issued 15 Notices of Violation (“NOVs”) to the Landfill  
15 since November 22, 2021 for noncontinuous operation of its GCCS, in violation of Reg. 8-34-  
16 301.1, the State Landfill Methane Rule CCR Title 17 Section 95464(b)(1)(A), and the  
17 Landfill’s P/C 1826, Part 3, among 65 other violations. Berkeley Landfill is not operating its  
18 GCCS continuously.

19       12.    The Air District issued 14 NOVs to the Landfill in 2023, and 21 NOVs from  
20 2019 through 2023, including the 10 NOVs issued for noncontinuous operation of the GCCS in  
21 2023. The cited violations include not operating required landfill gas collection wells, leaks of  
22 landfill gas in violation of applicable regulations, improper maintenance of the flare, the flare  
23 exceeding its 57.6 MMBTU/day limit in violation of Reg. 2-1-307 and P/C 1826, Part 2, late  
24 source test report submittal, and noncontinuous operation of its GCCS.

1           13. As part of its application for a Regular Variance, Respondent acknowledged and  
2 presented evidence to support a finding that the Landfill is operating in violation of Reg. 8-34-  
3 301.1 and P/C 1826, Part 3.

4           14. Because the Landfill closed before 1987 it is exempt under Reg. 8-34-119 from  
5 the 5% oxygen content limit of Reg. 8-34-305.4. Whether or not this limit applies, high oxygen  
6 readings indicate ambient air is being drawn into the GCS. In this case, oxygen readings of 20%  
7 have been recorded, indicating that ambient air is being drawn into the GCS. The Air District  
8 believes that this oxygen intrusion is due to poor maintenance and disrepair of the Landfill's  
9 GCS.

10           15. When LFG is not collected adequately, it builds up pressure within the Landfill  
11 and can move offsite, outside the Landfill boundary, where the LFG can become a safety  
12 hazard, as well as eventually being emitted to the atmosphere. Monitoring probes offsite near  
13 Cesar Chavez Park now situated upon the former the Landfill have detected methane. The Air  
14 District and CalRecycle, the Landfill's Local Enforcement Agency ("LEA") have met to  
15 discuss and develop the chemical fingerprinting methodology in Sections 4, 4.1, and 4.2 of the  
16 Order of Abatement below aimed to determine whether the methane measured offsite of Cesar  
17 Chavez Park is originating from the Landfill.

18           16. On May 18, 2022, the Landfill petitioned the Air District for approval of an  
19 LTCO allowance for the Landfill's new smaller flare under Reg. 8-34-404. The Landfill  
20 claimed that it was not producing enough LFG to operate even the new smaller flare on a  
21 continuous basis.

22           17. At the end of 2022, Air District Engineering Staff met with CalRecycle,  
23 Berkeley LEA, SCS, and the City staff to discuss investigation into the offsite methane  
24 detections, and SCS/the City agreed to investigate. The City has been requested by CalRecycle

1 to submit a work plan to conduct the investigation into the offsite methane detections by  
2 February 23, 2024.

3 18. On March 21, 2023, the City's Landfill and its consultant, SCS, withdrew the  
4 application seeking LTCO for the new flare after the Air District expressed concerns about  
5 poor landfill gas collection, ambient levels of oxygen being captured by the GCS, and possible  
6 offsite landfill gas migration, and stated that if system adjustments and repairs could not be  
7 completed within 60 days to ensure that all vertical extraction wells reported oxygen  
8 concentrations below 5% then the LTCO petition would be denied.

9 19. The Landfill is in a well-populated area. Cesar Chavez Park, which is used by  
10 the public, is located on top of the Landfill and with an adjacent hotel. Accordingly, there is a  
11 strong public interest in bringing the Landfill into compliance with continuous operation  
12 requirements and in determining whether or not landfill gas is migrating off of the Landfill site.

13 20. All of the aforementioned facts served as the basis for the issuance of the Order  
14 of Abatement dated February 16, 2024. Since then, circumstances changed requiring the  
15 Hearing Board to reconsider several of the compliance deadlines in that original order.

16 21. Radiation was discovered on the Berkeley Landfill site which necessitated a halt  
17 in the work necessary for compliance with the Order of Abatement until it was determined  
18 whether or not the work on the Landfill site was safe in the presence of the radiation. On  
19 January 18, 2024, the San Francisco Bay Regional Water Quality Control Board (RWB)  
20 required investigation of the radiation discovered on Berkeley Landfill. The radiation testing  
21 plan had to be developed and submitted to the RWB which it was on April 3, 2024. The RWB  
22 approved the plan on August 13, 2024.

23  
24

1       22. Some of the Order of Abatement compliance work, such as excavation activity  
2 and repairing underground wells was delayed due to the required investigation of radiation so  
3 that work was extended into the rainy season and thus could not be completed in wet weather.

4       23. Berkeley performed an inspection of system integrity to comply with Section 3.1  
5 of the Order of Abatement using a combination of liquid level sounding, video camera  
6 inspection, and physical inspection (by use of a method that Berkeley called vacuum profiling)  
7 and submitted a report of the results of its inspection to the Air District on August 2, 2024. In  
8 this report, the City informed the Air District that horizontal collection piping of each  
9 Horizontal Collector, Trench Well, as well as the header and lateral piping serving each  
10 extraction point, including the Vertical Extraction Wells, are buried and could not be  
11 effectively accessed to take measurements or to perform video inspections. The Parties engaged  
12 in communications regarding the City's concerns over the feasibility of additional video  
13 inspections without excavation. On August 16, 2024 the Air District notified the City that  
14 Condition 3.1 had not been adequately met and insisted a video inspection be performed for all  
15 sections of the landfill gas piping system. On August 28, 2024, the City responded to the Air  
16 District explaining its concerns over significant excavation that would be needed to perform  
17 video inspections on all sections of the landfill gas piping system.

18       24. The Parties continued discussions about additional video inspections while the  
19 radiation investigations were underway. Once the required investigations of radiation had been  
20 performed sufficiently to allow the work to proceed, in August and September 2025 the City  
21 performed a pilot test to test feasibility of video camera inspections through the above ground  
22 access points at the site without need for excavation. Berkeley had delays in complying with  
23 the Order of Abatement's requirements for system inspections and repairs. Section 3.1 of the  
24 Order of Abatement required a complete inspection of the integrity of the listed system

1 components. In January 2025, Berkeley informed the District that it could not locate six of the  
2 nine collection system LFG condensate sumps. These sumps are important to the functioning of  
3 the system of LFG laterals. Liquids management, a known, suspected problem at the Landfill,  
4 is a challenge and has a suspected impact on the City's ability to maintain continued  
5 compliance with the Landfill's permit to operate the LFG collection system.

6 25. Berkeley conducted extensive excavations in May and June of 2024 to perform  
7 other work related to compliance with the Order of Abatement, during which time the onsite  
8 vertical LFG collection wells and associated piping down to the main system lateral were  
9 replaced. During these excavations and piping replacements, the main system laterals were  
10 accessible for video camera inspection as confirmed by SCS field staff in January 2025. Video  
11 camera inspections were not performed at that time. After the District contacted a pipeline  
12 services company on behalf of the City, the system laterals were inspected by that company  
13 during the pilot test to the extent possible by accessing the system laterals through above-  
14 ground access points. Berkeley could have done more video inspections than were done if it  
15 had done so during the period of extensive excavation described in this paragraph when the  
16 underground components were accessible.

17 26. Berkeley timely submitted its first draft of the proposed gas speciation, also  
18 known as Fingerprinting, Work Plan in compliance with Condition 4 of the Order of  
19 Abatement. However, the proposed Work Plan has undergone multiple rounds of revision to  
20 address successive comments by the Air District asserting deficiencies and seeking to require  
21 additional work. On August 13, 2025, the Air District informed the City that the then-current  
22 version of the gas speciation Work Plan was approved.

23 27. Since the Order of Abatement issued on February 16, 2024, the Air District has  
24 issued three additional NOVs, Nos. A63090, A62621, and A62615, including one alleging

1 noncompliance with certain conditions of the Order of Abatement, and two alleging  
2 noncontinuous operation of Berkeley's Landfill Gas Collection System, respectively.

3 **CONCLUSION**

4 28. The Landfill is in violation of Reg. 8-34-301.1, 2-1-307, State LMR Section  
5 95464(b)(1)(A), and its P/C 1826, Part 3.

6 29. It is reasonable to require the Landfill to comply with District rules and its  
7 permit. Reg. 8-34 that applies in this case is a federally enforceable requirement.

8 30. The issuance of this Order of Abatement upon a noticed hearing does not  
9 constitute a taking of property without due process of law.

10 31. The Order of Abatement is not intended to act as a variance.

11 32. Pursuant to California Health & Safety Code § 42451(b), because this is a  
12 stipulated Order of Abatement, the Hearing Board need not make any finding of violation.

13 **ORDER OF ABATEMENT**

14 Based on the aforesaid statements and good cause appearing, the Hearing Board hereby  
15 orders Respondent to immediately cease and desist from operating Respondent's closed  
16 Landfill in a manner that violates Air District Reg. 8-34-301.1 or that violates the Landfill's  
17 P/C 1826, which require both the continuous operation of its landfill gas (LFG) collection  
18 system, consisting of 42 vertical wells, 2 horizontal collectors, 14 trench collectors, and the  
19 proper maintenance of and continuous operation of Flare A-4 combusting the collected LFG at  
20 a temperature of at least 1,400 degrees Fahrenheit, unless and until the Air District determines  
21 that all of the following compliance action conditions and increments of progress 1 through 11  
22 have been met.

## **COMPLIANCE ACTION CONDITIONS AND INCREMENTS OF PROGRESS:**

1. Subject to Section 2 of this Abatement Order, locate all required vertical LFG collection wells pursuant to the BAAQMD Permit to Operate, Permit Condition 1826, Part 4 and on the attached Landfill Gas System Plan topographical site map. (Reg. 8-34-301). Complete within 30 business days of issuance of this Abatement Order.

2. Once Wells 14, 29, 33, 34, and 35 are located, immediately monitor each located well to confirm operation, measure well gas in accordance with Regulation 8-34-604, and measure pressure in accordance with Regulation 8-34-608. Adjust each well as needed to collect LFG. Submit the monitoring results and description of adjustments to the Air District within 5 business days. If any of these wells cannot be located, repaired, or brought into compliance with section 3, then submit an application to the Air District proposing an alteration to the LFG collection system to address the missing, unrepairable, or non-compliant wells. (Reg. 8-34-301, Permit Condition 1826). Complete within 30 business days of completion of the requirements of Section 1.

3. To the extent necessary to achieve the performance criteria herein, repair the LFG collection system such that, subsequent to inspection, repairs, or modifications as described in sections 3.1, 3.2, 3.3, 3.4, and 3.5, all vertical LFG extraction wells, horizontal collectors, and trench collectors are optimally collecting LFG and limiting air intrusion to 5 percent oxygen by volume, except as otherwise provided in sections 3.4 and 3.5, and ensure that each wellhead operates under a vacuum/negative pressure and LFG in each wellhead less than 55° C (131° F), and ensure all system components comply with all applicable requirements in Reg. 8-34-301.2, and to ensure the gas collection system and landfill gas flare operate continuously as specified in Reg. 8-34-301.1 and meet the destruction efficiency requirement in Reg. 8-34-301.3. Complete the actions set forth in sections 3.3, 3.4, and 3.5 on an as-needed basis. (Reg. 8-34-301, Permit Condition 1826).

3.1 By September 26, 2025, complete an inspection of the integrity of each vertical LFG extraction well, LFG horizontal collector, LFG trench collector, LFG collection system lateral, and piping, including physical inspection, total depth and liquid level sounding, video camera inspection to the extent excavation is not required to perform such video inspection, and any other method(s) necessary to demonstrate that there are no blockages due to damage or from liquid. Submit inspection results to the Air District by November 10, 2025, including a timeline for any repairs that are necessary based on the inspection and a proposal for any additional inspection. If LFG collection system component replacements are needed, an application to the Air District proposing an alteration to the LFG collection system to replace unrepairable LFG collection system components shall also be submitted with the inspection results. The application should include plans to camera as much additional LFG collection system piping (not installed as a result of the conditions of this Abatement Order and not previously video camera inspected under this Abatement Order) as possible while the excavations are open. Additional camera footage that is collected during the excavation shall be submitted to the Air District within 10 business days. (Reg. 8-34-301, Permit Condition 1826).

3.2 Within 90 business days of issuance of this Abatement Order, at all vertical LFG extraction wells, replace existing near surface bentonite well bore seal and install additional well bore HDPE liner boot seals. (Reg. 8-34-301, Permit Condition 1826).

3.3 As needed, install additional supplemental LFG collection system below grade pipelines to maintain vacuum distribution in the wellfield. Submit an application to the Air District if the installation(s) are not allowed by the current permit to operate. If any additional supplemental LFG collection system below grade pipelines are needed under this section 3.3, the City of Berkeley shall install those pipelines by April 13, 2026. (Reg. 8-34-301, Permit Condition 1826).

3.4 After measures set forth in subsection 3.1, 3.2, and 3.3 have been completed, if any well gas data from vertical wells, horizontal collectors, and trench wells (collectively and individually, the Well Gas Data) show oxygen concentrations greater than 5 percent by volume, submit to the Air District for approval a proposed Work Plan (WP) within 60 business days of the last GCS repair done under subsections 3.2 or 3.3 for a site-wide drone survey across the landfill and nearby areas that could be pathways of LFG migration to the offsite probes with methane detections per EPA approved Other Test Method 51 (OTM-51) – Unmanned Aerial Systems (UAS) Application for Surface Emissions Monitoring of Landfills. City of Berkeley staff shall seek approval from the Berkeley City Council for any drone survey under this section 3.4, if Council approval be needed under the Acquisition and Use of Surveillance Technology Ordinance, Berkeley Municipal Code Ch. 2.99. Upon the Air District's approval of the drone survey WP, which shall not be unreasonably withheld, within 30 business days complete the drone survey. At the identified location(s) of landfill gas leak(s), locate the GCS damage causing the leak(s) and identify new GCS component(s) needed to eliminate the leak(s). Submit an application to the Air District proposing an alteration to the LFG collection system to replace piping, replace landfill gas wells, horizontal collectors, trench wells, and/or install new landfill gas collection system components by September 25, 2025. (Reg. 8-34-301, Permit Condition 1826).

3.5 If, after repairs of the GCS, the Well Gas Data at any well or collector continue to show an oxygen concentration greater than 5 percent by volume, develop a probe monitoring plan to measure LFG content in the area surrounding such well(s) or collector(s). Submit the probe monitoring plan, which shall include notice to the Air District to allow Air District personnel to attend the probe monitoring activity, to the Air District by October 17, 2025. If Berkeley submits a probe monitoring plan in which the Air District identifies insufficiencies, then Berkeley will submit a revised probe monitoring plan to the District within 30 days of receipt of the District's comments identifying the insufficiencies. Complete the probe monitoring survey and submit the probe monitoring survey results report to the Air District by the dates set forth in the approved probe monitoring plan. If any such well(s) or collector(s) are determined by the Air District to be collecting gas that is not representative of the LFG in the surrounding waste mass, locate the GCS damage causing the leak(s) and identify new GCS component(s) needed to eliminate the leak(s). Submit an application to the Air District proposing an alteration to the LFG collection system to replace piping, replace landfill gas wells, replace collectors, and/or install new landfill gas components, in accordance with direction by the Air District, within 60 business days of receiving such direction by the Air District. (Reg. 8-34-301, Permit Condition 1826).

4. Within 60 business days of issuance of this Abatement Order, submit to the Air District for approval, which shall not be unreasonably withheld, a proposed Work Plan (WP) for the collection of gas and laboratory analysis meeting all requirements of, and containing all,

1 the information specified in sections 4.1 and 4.2 below. (Reg. 8-34-301, Permit Condition  
2 1826). The WP will include details for:

3       4.1     Screening, collection, and testing gas at all existing permanent  
4 monitoring probes offsite of Cesar Chavez Park: Screening method to determine if methane is  
5 present and measure methane content. For locations at which methane is detected, a collection  
6 and test plan, including the number and size of representative gas samples collected and test  
7 methods to establish the source of the methane. The WP shall include at a minimum: collection  
8 protocols, advance notice to Air District of sampling to allow for Air District staff being  
9 present, type of approved-container, chain of custody, and deadlines for laboratory submittal;  
10 analysis of gas content, including methane, other gas fractions, and specific volatile organic  
11 compound (VOC) and toxic air contaminant (TAC) compounds by Methods ASTM D1946 and  
12 TO-15, and any other methods necessary to identify indicators of the source of methane gas.  
13 For locations at which methane is not detected, a follow up monitoring schedule, including  
14 frequency and duration; methane-containing gas from follow up monitoring shall be collected  
15 and submitted for testing. Deadlines for submittal of the initial field investigation report, results  
16 of ongoing monitoring, and laboratory analysis to the Air District. (Reg. 8-34-301, Permit  
17 Condition 1826).

18       4.2     Collection and testing of LFG from the Berkeley Landfill: Collection and  
19 test plan, including the number and size of representative LFG samples collected and well  
20 locations in proximity to each offsite probe. The plan shall include at a minimum: collection  
21 protocols, advance notice to the Air District of sampling to allow for Air District staff to be  
22 present, type of approved container, chain of custody, and deadlines for laboratory submittal;  
23 analysis of gas content, including methane, other gas fractions, and specific VOC and TAC  
24 compounds by Methods ASTM D1946 and TO-15, and any other methods necessary to  
establish a fingerprint of the landfill gas. Deadlines for submittal of the field investigation  
report and laboratory analysis to the Air District. (Reg. 8-34-301, Permit Condition 1826).

5.     Perform the sampling and collection of gas and initiate laboratory analysis in  
accordance with the approved WP. (Reg. 8-34-301, Permit Condition 1826). by January 29,  
2026.

6.     Submit laboratory analyses and field investigation report(s) to the Air District  
for the gases collected from the offsite monitoring probes and from the Berkeley Landfill by  
March 12, 2026. The field investigation report(s) shall contain all the information required in  
the approved WP. (Reg. 8-34-301, Permit Condition 1826).

7.     Schedule a full inspection and servicing of the onsite flare by the flare  
manufacturer. (Reg. 8-34-301, Permit Condition 1826). Complete within 60 business days of  
issuance of this Abatement Order.

8.     Submit results of flare inspection and details of the servicing to the Air District  
within 30 business days of the inspection and servicing, including all details of the flare's  
compliance and/or non-compliance with regulatory requirements. (Reg. 8-34-301, Permit  
Condition 1826). Complete within 90 business days of issuance of this Abatement Order.

1       9. For a period of at least 3 months following any repair or replacement of any  
2 component of the LFG collection system required under sections 2, 3, 3.1, 3.2, and 3.3 and  
3 until the Well Gas Data oxygen content at every well and collector has remained no more than  
4 5 percent by volume for at least 3 months, and for a period of at least 3 months following  
5 installation of all GCS components required by sections 3.4 and 3.5, perform weekly  
6 monitoring of well gas at all vertical wells, horizontal collectors, and trench wells in  
7 accordance with Regulation 8-34-604, determine wellhead pressure in accordance with  
8 Regulation 8-34-608, and adjust or repair the wells and collectors as necessary to optimize gas  
9 recovery and minimize air intrusion. For a period of at least 6 months after weekly monitoring  
has ceased, perform monthly wellhead monitoring and continue to adjust wells and collectors to  
optimize gas recovery and minimize air intrusion. If the oxygen content exceeds 5 percent by  
volume at any well or collector, perform repairs and maintenance at those components to  
reduce oxygen content and revert back to the weekly monitoring schedule. When all of  
Berkeley Landfill's Well Gas Data demonstrate 6 months of continuous oxygen concentrations  
that do not exceed 5 percent by volume, Berkeley Landfill may revert back to the monitoring  
requirements in Regulation 8-34. Submit the monitoring results to the Air District within 5  
business days following each monitoring event. (Regs. 8-34-301 and 8-34-303).

10     10. For the duration of the activities required under Section 9, perform monthly  
11 monitoring for landfill gas leaks at all components containing landfill gas and for landfill  
12 surface leaks in accordance with the procedures in Regulation 8-34-602 and 8-34-607.  
13 Immediately address and repair any leaks in excess of 8-34-301.2 and 8-34-303 standards and  
14 submit the results of the monitoring and repairs to the Air District within 2 weeks of the  
15 monitoring event. (Regs. 8-34-301 and 8-34-303).

16     11. Any downtime of the LFG collection and control system that is reasonable in the  
17 determination of the Air District and required to conduct the actions specified under this  
18 Abatement Order shall not constitute a violation of Reg. 8-34-301.1, provided the City of  
19 Berkeley provides documentation, if feasible in advance of the downtime events, including start  
20 and stop time, reason, and actions taken. Submit such documentation to the Air District, in  
21 compliance with Regulation 8-34-118 and no later than 5 business days following each  
22 downtime event if advance notice is not feasible. Nothing in this Section 11 exempts Permittee  
23 Berkeley Landfill from the requirements of Regs. 2-1-301 and 2-1-302.

24     A. The Hearing Board concludes that Respondent Berkeley Landfill has completed  
the Compliance Action Conditions and Increments of Progress set forth in Sections 1, 2, 3.2, 7  
and 8. Notwithstanding the inclusion herein of Compliance Action Conditions and Increments  
of Progress in Sections 1 through 11 above, Respondent is not hereby required to repeat any  
work to satisfy Compliance Action Conditions and Increments of Progress Sections 1, 2, 3.2, 7  
and 8.

25     B. The Hearing Board shall retain jurisdiction over this matter until Respondent

1      Berkeley Landfill has met all the Compliance Action Conditions and Increments of Progress set  
2      forth in Sections 1 through 11, unless this Order is amended or modified.

3            C.      The Hearing Board may modify this Order without the stipulation of the parties  
4      upon a showing of good cause, and upon making the findings required by HSC § 42451(a) and  
5      Hearing Board Rule § 4.13.

6            D.      This Order is not and does not act as a variance. Respondent Berkeley Landfill  
7      is subject to all applicable rules and regulations of the Air District, and to all applicable  
8      California law. Nothing herein shall be deemed or construed to limit the authority of the Air  
9      District to issue Notices of Violation nor to seek civil or criminal penalties, or injunctive relief,  
10     or to seek further orders of abatement or other administrative or legal relief.

11     IT IS SO ORDERED.

12  
13     Dated: November 25, 2025

14            By: Barbara Toole O'Neil  
15                    Barbara Toole O'Neil, MS, QEP, Ch.E.  
16                    Hearing Board Vice Chair  
17                    Bay Area Air Quality Management District

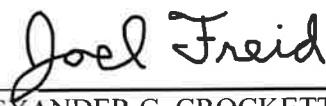
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1 SO STIPULATED AND RESPECTFULLY SUBMITTED.

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BAY AREA AIR QUALITY MANAGEMENT  
DISTRICT, OFFICE OF THE GENERAL  
COUNSEL

Dated: November 18, 2025

By:   
ALEXANDER G. CROCKETT  
JOEL FREID  
*Attorneys for Complainant*  
AIR POLLUTION CONTROL OFFICER of the  
BAY AREA AIR QUALITY MANAGEMENT  
DISTRICT

CITY OF BERKELEY

Dated: November 18, 2025

By:   
MARC SHAPP  
DEPUTY CITY ATTORNEY  
*Attorney for Respondent*  
CITY OF BERKELEY

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

In the Matter of the ) Docket No.: 3747

AIR POLLUTION CONTROL OFFICER of )  
the BAY AREA AIR QUALITY )  
MANAGEMENT DISTRICT )

Complainant, )

vs. )

BERKELEY LANDFILL )

Respondent. )

STATE OF CALIFORNIA ) ) ss.

City and County of San Francisco ) )

I, Marcy Hiratzka, do hereby certify under penalty of perjury as follows:  
That I am a citizen of the United States, over the age of 18 years and not a party to the above-  
entitled action; that I served a true copy of the attached **Findings and Decision for Second  
Amended Order for Abatement** on:

Marc Shapp, Deputy City Attorney  
City of Berkeley  
2180 Milvia St., Ste. 4  
Berkeley, CA, 94704  
[mshapp@berkeleyca.gov](mailto:mshapp@berkeleyca.gov)

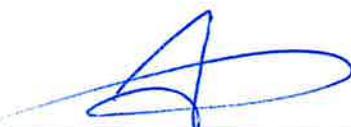
via email on December 1, 2025 and on:

Joel Freid, Esq., Assistant Counsel  
Bay Area Air Quality Management District  
375 Beale Street, 6<sup>th</sup> Floor  
San Francisco, California 94105  
[jfreid@baaqmd.gov](mailto:jfreid@baaqmd.gov)

via email on December 1, 2025

DATED: December 1, 2025



  
Marcy Hiratzka  
Clerk of the Boards