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**MAR 30 2005**

HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

MARY ROMAIDIS  
CLERK  
HEARING BOARD  
BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

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

In the Matter of the Application of	)	
	)	
REDWOOD LANDFILL, INC.	)	No. 3484
	)	
For a Variance from Regulation 8, Rule 34,	)	<u>ORDER GRANTING IN PART AND</u>
Sections 301.1, 301.3, 303, and 305;	)	<u>DENYING IN PART VARIANCE</u>
Regulation 2, Rule 2, Section 112	)	
_____	)	

The above-entitled matter is an Application for an Interim and Regular Variance from the provisions of Regulation 8, Rule 34, Sections 301.1, 301.3, 303, and 305, and Regulation 2, Rule 2, Section 112, filed on January 13, 2005.

Karen Nardi, Bingham McCutchen, appeared as Counsel for Redwood Landfill, Inc., Novato, California ("Applicant"). Patrick Sullivan, SCS Engineers, and Ramin Khany, Redwood Landfill, Inc., also appeared on behalf of the Applicant.

Adan Schwartz, Esq. appeared as Counsel for the Air Pollution Control Officer ("APCO").

The Clerk of the Hearing Board provided notice of this hearing on the Application for the Regular Variance in accordance with the requirements of the California Health and Safety Code.

The Variance application requested Interim and Long-Term (Regular) relief for the period January 13, 2005 through July 11, 2005. The Hearing Board heard the request for Interim Variance on January 27, 2005. Following presentation of Applicant's evidence, the Hearing Board

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1 dismissed the Interim Variance portion of the Application for lack of proof pursuant to  
2 Section 8.1.c of the Hearing Board Rules. An amendment to the Application was submitted to the  
3 Hearing Board on January 25, 2005 ("Amended Application"). The Hearing Board heard the  
4 request for the Regular Variance on March 10, 2005. At the hearing, the District represented that  
5 no variance was required from Regulation 2, Rule 2, Section 112. On the basis of this  
6 representation, Applicant withdrew its request for a Variance from Regulation 2-2-112.

7 The Hearing Board provided the public an opportunity to testify at the hearing, as required  
8 by the California Health and Safety Code. No member of the public offered testimony. The  
9 Hearing Board heard evidence and argument from both the Applicant and the APCO. The APCO  
10 was partially in support and partially opposed to the granting of the Variance.

11 Following completion by Applicant and the APCO of evidentiary presentations and  
12 argument, the Hearing Board voted to grant in part and deny in part the Variance, as set forth in  
13 more detail below:

#### 14 BACKGROUND

15 Applicant operates a solid waste landfill located at 8950 Redwood Highway, Novato,  
16 California ("Facility"). The Facility has been issued a Major Facility Review ("MFR") permit  
17 from the Bay Area Air Quality Management District ("District"). Applicant is not considered a  
18 small business as described by California Health and Safety Code Section 42352.5(b)(2) and emits  
19 more than 10 tons per year of air contaminants.

20 The Application concerns past and anticipated future violations at the Facility. The  
21 primary pollution control device at the Facility is an enclosed flare, denoted A-50 in the MFR  
22 permit, which is used to combust landfill gases and maintain compliance with District  
23 Regulation 8, Rule 34, and the MFR permit. According to the Application and testimony offered  
24 at the hearing, Applicant made physical modifications and operational adjustments to the flare as a  
25 result of a failed source test conducted by the District in February, 2004. Following these changes,  
26 the Applicant conducted a formal source test in July, 2004 and notified the District that the flare

1 was in compliance with District regulations. In late July, Applicant testified that it learned from  
2 the manufacturer of the flare, which was a custom piece of equipment, that the flare might not be  
3 able to handle the quantity of gas generated at the landfill without risking serious damage to the  
4 flare by running it at a higher throughput. Because of this, and based on an engineering evaluation  
5 conducted in August, 2004 and September, 2004, the Applicant made a decision to replace the  
6 flare in late September, 2004. The Applicant also reduced the flare throughput to levels it deems  
7 consistent with good operational practices; however, it subsequently became apparent to the  
8 Applicant that operation at this level affects the Facility's ability to control surface emissions and  
9 maintain compliance with the wellhead standards of Regulation 8, Rule 34. The Application lists  
10 the gas generation rate of the landfill at 2390 scfm. The Facility began running the flare S-50 at  
11 reduced rates, in the range of 1200 scfm, a rate it believes can be achieved without posing undue  
12 risk of severe and irreparable malfunction of the flare. Because the landfill is active and receiving  
13 waste, gas generation is gradually increased over time.

14 Applicant also asserts that it has made all reasonable efforts to address flare problems  
15 through maintenance as soon as possible after they were discovered, and that the problems with  
16 the flare, and therefore the resulting violations, were beyond its reasonable control to avoid. This  
17 capacity shortfall has already manifested itself in wellhead exceedences, and it is anticipated that  
18 surface emission leaks are likely to follow. Applicant testified at the hearing that its initial  
19 expectations were that compliance with Regulation 8, Rule 34 could be achieved while operating  
20 the flare in the range of 1200 scfm. Flare throughput was lowered to between 1238 and  
21 1310 scfm in October, 2004. In late December, 2004, Applicant began to experience problems  
22 meeting the wellhead standards of Regulation 8-34-305. Applicant testified that in early  
23 January, 2005, it concluded that these wellhead problems were caused by insufficient capacity of  
24 the flare, that it was now in violation of District regulations and that, accordingly, other violations  
25 could be expected. This conclusion prompted Applicant to apply for variance relief.

26 Applicant expects delivery of a new enclosed flare in May, 2005. A variance is requested

1 to cover violations anticipated during the interim period as the flare is operated at the current  
2 throughput level. Specifically, Applicant requests that it be relieved of liability for continuous  
3 operation of the landfill gas system (8-34-301.1), surface emission leaks (8-34-303), and wellhead  
4 standards (8-34-305). Applicant proposes various measures to mitigate excess emissions during  
5 the variance period, which, in general, consist of increased surveillance for surface leaks and  
6 wellhead emissions, and increased corrective actions designed to prevent or mitigate excess  
7 emissions from these events.

8 Through its Amended Application submitted on January 25, 2005, and through its  
9 presentation at the March 10, 2005, hearing, Applicant requested that it also be granted a variance  
10 from the requirement to abate landfill emissions by using an enclosed flare (8-34-301.3). The  
11 purpose of this request is to allow the use of an open (candlestick) flare to supplement the capacity  
12 of the current enclosed flare during the interim period before the new enclosed flare is operating.  
13 Applicant represents, and the District confirms, that the Amended Application was submitted at  
14 the suggestion of District staff. The District expressed its support for the granting of a variance  
15 from 8-34-301.3 in its March 2, 2005, letter to the Hearing Board, and again at the  
16 March 10, 2005, hearing.

#### 17 DISCUSSION: PART I

18 Pursuant to Health and Safety Code Section 42352, the Hearing Board may grant a  
19 Variance upon a finding that the criteria of that section are met. The discussion in Part I of this  
20 Order addresses the portion of the Application that is being denied. Part II of this Order addresses  
21 the variance that is being granted to allow the temporary use of a candlestick flare.

22 Regarding the request for variance relief from 8-34-301.1, 8-34-303, and 8-34-305,  
23 Applicant has not carried its burden of proving that these violations were beyond its reasonable  
24 control to avoid. The Hearing Board heard testimony from Carol Allen, a Senior Permit Engineer  
25 for the District with substantial experience in permitting and reviewing compliance plans for most  
26 landfills in the Bay Area. Ms. Allen offered her opinion that a landfill running its flare at 50% of

1 the gas generation capacity of the facility would likely experience surface leaks and non-  
2 compliance with wellhead standards of Regulation 8, Rule 34. While acknowledging that there is  
3 no distinct line defining a percentage at which non-compliance can be expected, Ms. Allen stated  
4 her opinion that compliance has typically correlated with an efficiency of 60% or better, with 75%  
5 being a proper benchmark at which compliance can be expected with a margin of safety.  
6 Patrick Sullivan, a consultant for the Applicant, possessing considerable experience in the field of  
7 air pollution control at landfills, testified that, in his experience, an efficiency of 50% may be  
8 consistent with an expectation of compliance, particularly if corroborated by an absence of surface  
9 leaks and wellhead problems.

10 Applicant testified that it understood that it would have been necessary to obtain a variance  
11 before a candlestick flare could be used. Applicant cited that its reason for not pursuing the  
12 candlestick flare option in January, 2005 when it filed the variance, was that it had assumed that  
13 the District would deem the candlestick flare undesirable from an air pollution control standpoint.  
14 However, Ms. Allen testified at the hearing that, as between the options of allowing landfill gas to  
15 be emitted directly to the atmosphere and combusting the gas in a candlestick flare, the District's  
16 preference was for use of the candlestick flare.

17 The Hearing Board finds credible the District's opinion that an efficiency of 50% should  
18 have been a cause for concern. Even at an efficiency of 60%, which was the case as early as  
19 September, 2004, Applicant should have been alert to the fact that it was operating at the margins  
20 of compliance. Applicant took appropriate action to address this in September, 2004 when it  
21 began the process to install a new enclosed flare. Despite its responsible actions aimed at  
22 maintaining long term compliance, the Hearing Board finds that the Applicant did not take all  
23 reasonable steps to avoid compliance problems in the short term. Applicant could have  
24 approached the District to discuss the problems before there was data showing the landfill did not  
25 comply with emission limitations in Regulation 8, Rule 34 which the Applicant discovered in late  
26 December 2004/early January 2005. The Applicant did not discuss the matter with the District

1 until the filing of its Application for Variance in January, 2005. There is at least a reasonable  
2 likelihood that such earlier discussions while the landfill was still in compliance with District  
3 regulations might have led to earlier employment of a temporary candlestick flare and avoidance  
4 of the violations for which Applicant seeks relief through this Variance Application. Accordingly,  
5 the Hearing Board finds that the conditions leading to non-compliance were not beyond  
6 Applicant's reasonable control.

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8 SPECIFIC FINDING: PART I

9 The Hearing Board finds pursuant to Health and Safety Code Section 42352(a)(2) that the  
10 conditions leading to noncompliance with District Regulations 8-34-301.1, 8-34-303, and  
11 8-34-305, were not beyond Applicant's reasonable control, and that the Findings pursuant to this  
12 section cannot be made to support the issuance of a Variance.

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14 DISCUSSION: PART II

15 District Regulation 8-34-301.3 requires, among other things, that a flare used to abate  
16 emissions from a landfill be of an enclosed type. The Amended Application requests that a  
17 variance be issued allowing the use of an open, or candlestick flare, to supplement the existing  
18 enclosed flare during the interim period before a new enclosed flare is operating. The District  
19 supports this portion of the Application. For the reasons explained below, the Hearing Board finds  
20 that the criteria of Health and Safety Code Section 42352 are met for this portion of the  
21 Application.

22 The District testified regarding the benefits of combusting landfill emissions rather than  
23 allowing those emissions to be released to the atmosphere. Combustion at an open flare is, for  
24 organic pollutants, somewhat less efficient than an enclosed flare. However, from the District's  
25 standpoint, inefficient combustion is preferable to allowing organic, toxic emissions, and hydrogen  
26 sulfide emissions to be released directly to the atmosphere. Ms. Allen testified that landfill gas

1 generated at Redwood Landfill is higher in hydrogen sulfide content than other landfills in the Bay  
2 Area, that hydrogen sulfide emissions pose a risk of creating an odor nuisance, and that hydrogen  
3 sulfide undergoes complete combustion (and transformation to sulfur dioxide) even in an open  
4 flare. Ms. Allen also addressed the public health risks associated with toxic emissions which can  
5 be reduced or eliminated through operation of the candlestick flare.

6 The Hearing Board hereby finds pursuant to Health and Safety Code Section 42352 the  
7 following:

- 8 1. That, upon operation of a candlestick flare, Redwood Landfill will be in violation of  
9 provisions of Regulation 8, Rule 34, Section 301.3.
- 10 2. That, due to conditions beyond the reasonable control of the Applicant, requiring  
11 compliance would result in the practical closing and elimination of a lawful business.  
12 It is beyond Applicant's reasonable control to operate a candlestick flare in a manner  
13 consistent with 8-34-301.3, and beyond Applicant's reasonable control during the  
14 variance period to operate the landfill, and adequately abate emissions without using  
15 the candlestick flare. The Hearing Board notes that Redwood Landfill serves a  
16 substantial number of residents and municipalities in Sonoma County.
- 17 3. That the closing or taking would be without a corresponding benefit in reducing air  
18 contaminants. Operation of the candlestick flare will reduce air contaminants that  
19 would otherwise be released from the landfill directly into the ambient air. Abating  
20 these air contaminants using a candlestick flare is preferable to allowing their direct  
21 release.
- 22 4. That Applicant has given consideration to curtailing operations of the source in lieu of  
23 obtaining a variance. Curtailing operations at the landfill will not prevent emissions of  
24 landfill gas.  
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5. During the period the variance is effect, the Applicant will reduce excess emissions to the maximum extent feasible. Allowing the use of a candlestick flare is the most effective approach to reducing excess emissions during the variance period.

6. During the period the variance is in effect, Applicant will monitor and estimate excess emissions from the candlestick flare. The Hearing Board expects that Applicant will consult with District staff regarding the appropriate methodology for estimating excess emissions.

THEREFORE, THE HEARING BOARD ORDERS:

The Application for Variance from Regulation 8, Rule 34, Sections 301.1, 303, and 305 for the period January 13, 2005 through and including March 15, 2005 is denied.

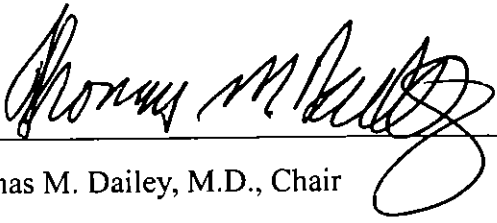
The Application for Variance from Regulation 8, Rule 34, Section 301.3 is granted for the period March 16, 2005, through and including July 11, 2005.


Moved by: Allan R. Saxe, Esq.

Seconded by: Julio Magalhães, Ph.D.

AYES: Julio Magalhães, Ph.D., Jeffery R. Raines, P.E., Allan R. Saxe, Esq., and Thomas M. Dailey, M.D.

NOES: Terry A. Trumbull, Esq.

  
Thomas M. Dailey, M.D., Chair

  
Date