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DEC 16 2004

**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**

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In the Matter of the Application of)
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DUBLIN SAN RAMON SERVICES)
DISTRICT)
)
For a Variance from Regulation 2,)
Rule 1, Section 307 (Permit Condition No.)
17263, Item No. 3))
_____)

NO. 3479

ORDER GRANTING VARIANCE

The above-entitled matter is an Application for Variance from District Regulation 2-1-307 and from the provisions of operating Permit Condition No. 17263, Item No. 3 (Carbon Monoxide emission limit of 2.1 g/bhp-hr), for Source S-22, Plant A1371, located at 7399 Johnson Drive, Pleasanton, California. The Application for Variance was filed on November 12, 2004, and requested short-term relief for the period from the date of filing through and including January 12, 2005.

Rob E. Fowler, and Carl P. A. Nelson, Assistant General Counsel, appeared on behalf of Dublin San Ramon Services District (DSRSD) ("Applicant").

Alexander Crockett, Assistant Counsel, appeared for the Air Pollution Control Officer ("APCO").

The Clerk of the Hearing Board provided notice of this hearing on the Application for Variance in accordance with the requirements of the California Health and Safety Code. The Hearing Board heard the request for variance on December 2, 2004. The Application was amended at the hearing to request a variance through and including February 2, 2005.

ARB

1 The Hearing Board provided the public opportunity to testify at the hearing as required by
2 the California Health and Safety Code, but no one did so. The Hearing Board received
3 documentary evidence, and heard testimony and argument from the Applicant and the APCO.
4 The APCO did not oppose the granting of this variance.

5 After hearing argument, the Hearing Board took the matter under submission for decision.
6 After consideration of the evidence, the Hearing Board voted to grant the request for variance,
7 subject to six conditions as set forth in more detail below.

8 BACKGROUND

9 Applicant operates a publicly owned treatment work ("POTW") that treats wastewater
10 from approximately 115,000 customers in the area of Dublin, Pleasanton, and San Ramon, in
11 Alameda and Contra Costa Counties. The POTW separates solid material out of the incoming
12 wastewater, and then treats the organic solids in a 2 million gallon biological solids digestion
13 process. The treatment process is designed to meet pathogen and vector regulations, to reduce
14 odors that could cause a nuisance, and to render the solid material suitable for disposal.

15 The digestion process produces digester gas, composed of approximately 60% methane
16 and 40% CO₂, as a byproduct of the organic solids digestion process. The facility uses the
17 digester gas (blended with natural gas, as needed) to power two identical 706 hp internal
18 combustion engines. The engines have been assigned Source Nos. S-13 and S-22 by the District.
19 Source S-22, the second engine, is the subject of DSRSD's variance application.

20 DSRSD's engines serve three critical functions at the POTW. First, they generate heat to
21 keep the solids digestion process at an optimal process temperature of 98° F. Without adequate
22 heat, the digestion process would fail, causing a number of adverse effects, including: ineffective
23 treatment of wastewater causing violations of water quality discharge standards; a digester gas
24 stream of poor quality that could not be properly combusted and would have to be emitted without
25 abatement, causing odors and potential public nuisances; and the failure of sludge lagoons
26 downstream of the digestion process, causing further odors that could cause public nuisances up to

1 a mile or more away.

2 Second, these engines combust the digester gas so that it does not have to be abated in a
3 flare. The facility has a flare that would have to be used to abate the digester gas if one or more of
4 the engines became unavailable for any reason. Third, the engines generate electricity to provide
5 power for the facility, reducing the facility's demand on the electricity grid, thereby reducing
6 utility-produced emissions.

7 District regulations require that Applicant use the Best Available Control Technology
8 ("BACT") to control CO emissions from its engines (among other pollutants). The level of
9 emissions control required by BACT is determined at the time the District issues permits for the
10 engines. The BACT emission limit can be established in either of two ways.

11 BACT can be established as the level of emissions control that has been actually achieved
12 in practice by other similar sources. (See District Regulation 2-2-206.2.) This level of emissions
13 control is known as "BACT 2 - Achieved in Practice", and can be thought of as the "industry
14 standard" level of control. This is the level of control made applicable to Source S-13.

15 A more stringent level of control, known as "BACT 1," may be applied if it is determined
16 to be "Technologically Feasible & Cost Effective" for a particular facility. (See District
17 Regulation 2-2-206.3.) This level of control may or may not be appropriate depending on a
18 detailed, facility-specific review of the feasibility and cost effectiveness on a case-by-case basis.
19 This is the level of control made applicable to Source S-22.

20 DISCUSSION

21 Current permit conditions require Applicant to comply with a BACT 1 permit requirement
22 that CO emissions from Source S-22 not exceed 2.1 g/bhp-hr. The November 4, 2004 source test
23 was the first indication that Source S-22 was out of compliance with the above CO emissions limit.
24 (Even in the failed source tests, Source S-22 has always been in compliance with the CO emission
25 limit of 2.65 g/bhp-hr that is applicable to Source S-13.)

26 The other engine operated by Applicant – not the subject of the variance application

1 here – is Source S-13; the District adopted a BACT 2-based CO emission limit of 2.65 g/bhp-hr
2 for that engine, based on emissions performance actually achieved in practice by other similar
3 engines, in part because the manufacturer stated that the engine could not reliably achieve a more
4 stringent limit. Source S-13 continues to be subject to the BACT 2-based limit under its current
5 permit conditions.

6 Applicant has accordingly submitted an application for review of the current CO permit
7 condition for Source S-22, and has submitted evidence from the manufacturer of the two engines
8 stating that the engines cannot reliably achieve a more stringent limit of CO emissions. During the
9 requested variance period the CO emissions will be 20.9 pounds per day of unabated emissions in
10 excess of District Regulation limits for Source S-22. Applicant shall pay the excess emission fees
11 for such excess emissions as required by, and in accordance with, District Regulation 3.

12 13 SPECIFIC FINDINGS

14 The Hearing Board finds pursuant to Health and Safety Code Section 42352 that:

15 1. Applicant will be in violation of District Regulation 2, Rule 1, Section 307 (Permit
16 Condition No. 17263, Item No. 3) (requiring a Carbon Monoxide (“CO”) emission limit of
17 2.1 g/bhp-hr.), for Source S-22 during the variance period.

18 2. Due to conditions beyond the reasonable control of the Applicant, requiring compliance
19 with District Regulation 2, Rule 1, Section 307 (Permit Condition No. 17263, Item No. 3) would
20 impose an unreasonable burden upon an essential public service and thereby result in (A) an
21 arbitrary and unreasonable taking of property, and/or (B) the practical closing and elimination of
22 an otherwise lawful business. Compliance during the period of the variance would require
23 Applicant to shut down the engine. Because the digestion process cannot be adequately heated
24 without heat from the engine, shutting down the engine would essentially disable the facility,
25 preventing it from properly treating incoming wastewater properly, and causing a number of
26 adverse effects, including the potential for violations of water quality discharge standards and

1 odor nuisances. This shutdown of the facility's ability to operate properly would constitute the
2 effective closure of a lawful business. Furthermore, if Applicant shuts down the engine it will
3 have to purchase electrical power purchased from the electric grid to replace the power that would
4 have been generated by the engine, at a cost of approximately \$40,000 for 2 months of supply.
5 Under the circumstances, such a cost would constitute an unreasonable taking of property.

6 After failing the November 4, 2004 source test performed by a District inspector,
7 Applicant hired a source test firm, Blue Sky Environmental ("Blue Sky"), to independently verify
8 the source test results. Despite making numerous adjustments and instituting a more rigorous
9 maintenance program on the engine identified as Source S-22, Applicant was unable to reduce the
10 CO emissions sufficiently to comply with the emission limit of 2.1 g/bhp-hr for Source S-22,
11 although the source test would have complied with the CO emissions limit of 2.65 g/bhp-hr
12 (applicable to Source S-13, an identical engine). Accordingly, non-compliance with District Rules
13 was beyond Applicant's reasonable control. Once Applicant discovered that Source S-22 was
14 exceeding the CO emissions limit, the only way it could have complied with the regulatory limit
15 would have been to shut down the engine.

16 3. The hardship due to requiring immediate compliance with District Regulation 2, Rule 1,
17 Section 307 (Permit Condition No. 17263, Item No. 3) would be without a corresponding benefit
18 in reducing air contaminants. Although shutting down the engine would eliminate the emissions
19 from the engine, around 20 lbs. of excess CO per day, it would also require the methane gas that
20 is normally burned in the engine to be sent to a flare, which could involve greater emissions than
21 burning it in the engine. Furthermore, the extra electricity that Applicant would have to purchase
22 would have to be generated elsewhere, increasing emissions at the alternate generation site.
23 Finally, shutting down the engine would ultimately cause failure of the facility's treatment
24 process, which would cause significant unabated odor emissions. (As noted above, such a failure
25 would impose an unreasonable burden upon an essential public service.) It is, therefore, likely
26 that denying the variance and requiring DSRSD to shut down the engine would actually cause

1 greater emissions than granting a variance requiring DSRSD to operate the engine in compliance
2 with a BACT 2 standard pending a permit review.

3 4. Applicant has carefully considered possibilities for curtailing operations of the
4 source in lieu of obtaining a variance. However, for the reasons described earlier, Applicant does
5 not believe that it would be reasonable or warranted under the circumstances, given the costs and
6 emission consequences of doing so. Furthermore, unlike water, electrical or natural gas service,
7 each of which can be shut off at a meter, there is no effective way to prevent inflows into a
8 wastewater collection system without significant adverse health and safety impacts. Applicant has
9 no direct control over those who contribute wastewater to the system, and in any event those who
10 contribute wastewater could not completely curtail their wastewater production during the period
11 covered by the variance application even if Applicant did have direct control over them.

12 5. Applicant has identified steps that it will take to keep CO emissions as low as
13 possible, including those identified in its variance application (increasing gas sulfide monitoring
14 from 2X/week to every other day, increasing tune up, oil, lube and filter frequency from 1000
15 hours to 500 hours, maintaining engine load to minimize emissions, and increasing monitoring of
16 engine cylinder temperatures and adjust as needed) and will continue to identify others. During
17 the period the variance is in effect, Applicant will undertake to reduce excess emissions by
18 implementing the above steps.

19 6. Except for the submission of the results of the December 1, 2004 source test as
20 required by Condition 4, District staff has not requested Applicant to monitor or otherwise further
21 quantify any emission levels beyond what is already required by the Permit.

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1 THEREFORE, THE HEARING BOARD ORDERS:

2 A variance from Regulation 2, Rule 1, Section 307 (Permit Condition No. 17263,
3 Item No. 3) is hereby granted from November 12, 2004 to and including February 2, 2005, subject
4 to the following conditions:

- 5 1) Applicant shall continue to process its application for review of the current CO
6 permit condition for Source S-22.
- 7 2) Applicant shall take all feasible steps to keep CO emissions as low as possible,
8 including those identified in its variance application (increasing gas sulfide
9 monitoring from 2X/week to every other day, increasing tune up, oil, lube and filter
10 frequency from 1000 hours to 500 hours, maintaining engine load to minimize
11 emissions, and increasing monitoring of engine cylinder temperatures and adjust as
12 needed) and any others identified by the District.
- 13 3) Applicant shall not operate engine S-22 with CO emissions in excess of
14 2.65 g/bhp-hr.
- 15 4) Applicant shall, by December 15, 2004, report, in writing, to the Hearing Board
16 and the District, the results of the source test on Source S-22 conducted by Blue
17 Sky on December 1, 2004. The report shall be submitted to the Clerk of the
18 Hearing Board in an original plus nine copies.
- 19 5) Applicant shall permanently mark the respective exterior of each of the engine
20 panels to clearly identify which is Source S-13, and which is Source S-22.
- 21 6) Applicant shall provide to the Hearing Board and the District the serial number,
22 make, and model of the engine identified as Source S-13 and the engine identified
23 as Source S-22.
- 24 7) Applicant shall pay excess emission fees pursuant to District Regulation 3,
25 Schedule A.

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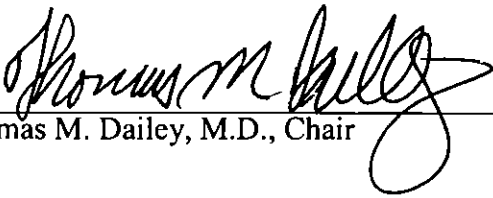
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Moved by: Allan R. Saxe, Esq.,

Seconded by: Terry A. Trumbull, Esq.

AYES: Christian Colline, P.E., Julio Magalhães, Ph.D., Allan R. Saxe, Esq.,
Terry A. Trumbull, Esq., Thomas M. Dailey, M.D.

NOES: None.



Thomas M. Dailey, M.D., Chair

12-16-04
Date