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JAN 10 2005

HEARING BOARD
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

MARY ROMAIDIS
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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 Application of)	
)	
SILICON VALLEY POWER – PICO)	No. 3481
POWER PLANT, CITY OF SANTA)	
CLARA, CALIFORNIA)	<u>ORDER GRANTING INTERIM VARIANCE</u>
)	
For a Variance from Regulation 2,)	
Rule 1, Section 307 (Permit Condition)	
#11) and Regulation 2, Rule 2, Section 419)	
_____)	

The above-entitled matter is an Application for Interim and Short Term Variance from the provisions of Regulation 2, Rule 1, Section 307, (Permit Condition # 11) and Regulation 2, Rule 2, Section 419, filed on November 29, 2004.

Scott A. Galati, Esq. and Leslie J. Ward appeared on behalf of Silicon Valley Power, the City of Santa Clara’s municipal utility and owner of the Pico Power Project (“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 Interim Variance in accordance with the requirements of the California Health and Safety Code.

The Variance application requested Interim and Short-Term Variance relief for the period December 1, 2004 to and including February 28, 2005. Interim Variance relief was requested to

ABB

1 February 28, 2005, until the Short-Term Variance is heard, but for no more than 90 days as limited
2 by California Health and Safety Code Section 42351. The Hearing Board heard the request for
3 Interim Variance on December 16, 2004. The hearing upon the Short-Term Variance has been set
4 for 9:35 A.M., Thursday, January 27, 2005.

5 The Hearing Board provided the public opportunity to testify at the hearing as required by
6 the California Health and Safety Code, but no one did so. The Hearing Board heard evidence and
7 argument from the Applicant and the APCO. The APCO did not oppose the granting of the
8 Interim Variance.

9 The Hearing Board took the matter under submission for decision. After consideration of
10 the evidence, the Hearing Board voted to grant the request for Interim Variance, as set forth in
11 more detail below:

12 BACKGROUND

13 Applicant is a publicly owned municipal utility. Applicant has received a license to
14 construct and operate the Pico Power Project, a 122 MW nominally rated combined cycle power
15 plant, by the California Energy Commission (CEC). Applicant is not considered a small business
16 as described by California Health and Safety Code Section 42352.5(b)(2) and will, when
17 operational, emit more than 10 tons per year of air contaminants. In granting the license, the CEC
18 adopted the provisions contained in the Bay Area Air Quality Management District's (District)
19 Final Determination of Compliance (FDOC). The FDOC was prepared by the District as part of
20 its New Source Review process. The Pico Power Project was designed to provide approximately
21 25 percent of Applicant's generation resources and will help Applicant meet its expected load
22 growth by replacing power obtained via long term power sales agreement due to expire on
23 December 31, 2004.

24 Construction of the Pico Power Project is nearing completion and the Applicant is
25 currently engaging in "Commissioning Activities". These activities are designed to allow
26 operation of the various components of the project to facilitate synchronization, fine-tuning and to

1 make adjustments prior to declaring the project "Commercially Operable". The FDOC and the
2 CEC license include conditions applicable during Commissioning Activities. Specifically,
3 Condition # 11 sets daily and hourly limits for emissions of oxides of nitrogen (NOx).

4 5 DISCUSSION

6 Condition # 11 sets daily and hourly limits for emissions of oxides of nitrogen and other
7 criteria pollutants during Commissioning Activities. Condition # 11, therefore, is applicable
8 during the time commencing upon the first firing of either turbine and ending when the facility is
9 ready for commercial operation. In addition to Condition # 11, the permit limits the total amount
10 of time the turbines can be operated during the Commissioning Period to 300 hours per each (2)
11 turbine trains. Condition # 11 was drafted into the permit because the District staff, Applicant and
12 CEC staff all agreed that during portions of the Commissioning Activities, pollution control
13 equipment would be inoperable, thereby rendering it impossible for the emissions to meet the
14 stringent operational emission limits. In addition, the District staff, Applicant, and CEC staff all
15 agreed that it is impossible to fully complete construction of the facility without the ability to fire
16 the turbines and conduct fine-tuning, adjustments, repairs and further construction activities.
17 Therefore, Condition # 11 was included in the permit to allow these activities for a specified
18 period of time with the understanding that pollution control equipment would not be operational
19 during some of that time.

20 Applicant testified that during the initial stages of Commissioning, it discovered that
21 during low load operations, water injection for the turbine could not be performed without risking
22 damage to the equipment. Without water injection, the NOx emissions would exceed the daily
23 limit set by Condition # 11. After double-checking its data, the Applicant ceased Commissioning
24 Activities and sought the Interim and Short-Term Variance relief. Applicant further testified that
25 the NOx emission limits contained in Condition # 11 were based on a manufacturer's guarantee
26 that the turbines would operate at 25 ppm NOx. It was recently discovered by the Applicant

1 during Commissioning Activities that the 25 ppm NOx guarantee was applicable only to turbine
2 operations with water injection. Higher concentrations would occur without water injection. This
3 information was corroborated with data obtained during Commissioning Activities of the Los
4 Esteros Power Project, which had completed Commissioning Activities after the FDOC and CEC
5 license for the Pico Power Project was issued. Applicant proposed a Commissioning Schedule
6 that would enable it to continue Commissioning Activities with up to 120 hours of operation at
7 emission levels above those contained in Condition # 11, and proposed specific emission limits
8 with which it would comply during that time period. Applicant also testified that it would incur
9 substantial additional costs that would, in turn, be passed along to the rate paying public if the
10 Interim Variance was not granted. Specifically, the Applicant testified that amending its license
11 would take months, thereby causing it to incur the cost of securing additional power supply
12 contracts exceeding \$500,000 per month, in addition to the overhead and expense of contractors,
13 consultants and engineers associated with the delay.

14 The APCO did not oppose the Interim Variance and testified that Applicant's Proposed
15 Commission Schedule was reasonable and would likely have been found adequate and
16 incorporated in the original FDOC had it been proposed at that time.

17 SPECIFIC FINDING

18 The Hearing Board finds pursuant to Health and Safety Code Section 42351 that good
19 cause exists to issue the Interim Variance, and that such good cause is specifically to avoid the
20 delay in completing the Commissioning Activities which will allow the project to begin
21 commercial operation and deliver power to the utility consumers as scheduled, without incurring
22 the costs associated with a permit modification.

23 24 THEREFORE, THE HEARING BOARD ORDERS:

25 An Interim Variance from Regulation 2, Rule 2, Section 419 and Regulation 2, Rule 1,
26 Section 307 and specifically from the Final Determination of Compliance, Condition #11 is hereby

1 granted from December 1, 2004, to and including February, 28, 2005, or until a decision is made
2 by this Hearing Board on the Short Term Variance for this matter, whichever is sooner, subject to
3 the following conditions:

- 4 1. The remainder of the Commissioning Activities shall be conducted in accordance with
5 the Commissioning Schedule that was proposed in Attachment 3 of the Application for
6 Variance which is hereby attached to this Order. The emission limits for NOx
7 contained in the Commissioning Schedule shall supersede the emissions limits for NOx
8 contained in FDOC Condition #11.
- 9 2. Applicant will continue to monitor NOx and CO as required in the FDOC.
- 10 3. Applicant will submit to the District and the Hearing Board monthly reports of NOx
11 and CO emissions. Monthly reports will be due on or before the 10th day of the month
12 for emissions occurring during the preceding month. Monthly reports will summarize
13 CEM readings for every hour and every calendar day.

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Moved by: Allan R. Saxe, Esq.

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Seconded by: Julio Magalhães, Ph.D

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AYES: Allan R. Saxe, Esq.; Julio Magalhães, Ph.D; Thomas M. Dailey, M.D.

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NOES: Terry A. Trumbull, Esq.

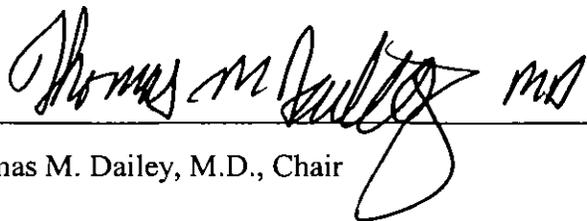
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ABSENT: Christian Colline, P.E.

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24 Thomas M. Dailey, M.D., Chair

1-6-05

25 Date

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1 COMMISSIONING SCHEDULE

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3 **Part Load to Full Load Tests** – These tests will occur during 15 days of operation with the SCR
4 and CO catalysts installed but not fully operational. The total testing period will be 60 hours per
5 turbine for the part and full load tests. During this series of tests, the gas turbine water injection
6 system will be initiated and tuned to help minimize NO_x emissions but NO_x concentrations could
7 approach upwards of 100 ppm for short-periods of time. The mass emissions of NO_x will be 51
8 lb/hr with total testing time at 30 hours per turbine for a total emissions rate of 3,060 pounds. The
9 maximum daily emissions will be 1,224 lb/day.

10
11 Following tuning of the water injection system the SCR Ammonia injection system will be
12 energized and tuned to minimize NO_x emissions. The average NO_x emission concentration for the
13 period is assumed to be 40 ppm at 15 percent oxygen (due to water injection control) or 41 lb/hr
14 per gas turbine. Total testing for each gas turbine is estimated to last 30 hours each, for a total of
15 2,460 pounds of NO_x. The maximum daily emissions will be 984 lb/day.

16
17 The total NO_x emissions from commissioning two turbines over the 15-days of operation will be
18 5,520 pounds.

19
20 **Full Load Tests (SCR Fully Operational)** – These tests will occur during 15 days of operation.
21 By the beginning of this test period the control systems will be tuned and achieving NO_x and CO
22 control at design levels. During the tests, the heat input to the gas turbine will be approximately
23 460 MMBtu/hr or 100 percent of the maximum heat input rating. The hourly and daily emissions
24 from this series of testing are expected to comply with existing permit limits of 18 lb/hr per
25 turbine.