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6 **BEFORE THE HEARING BOARD OF THE**  
7 **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
8

9 **In the Matter of**

10 CITY OF PASADENA  
WATER AND POWER DEPARTMENT  
11

12 Order Granting a Regular Variance

13 Section 42350 of the California  
14 Health and Safety Code  
15  
16

CASE NO. 2244-36  
Facility ID No. 800168

Hearing Date: February 29, 2024  
Time: 9:30 a.m.  
Place: Hearing Board Room  
South Coast Air Quality  
Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

17  
18 **[PROPOSED] FINDINGS AND DECISION OF THE HEARING BOARD**

19 This Petition for a Regular Variance was heard on the Hearing Board’s Consent Calendar  
20 on February 29, 2024, pursuant to notice and in accordance with the provisions of the California  
21 Health and Safety Code section 40826 and South Coast Air Quality Management District  
22 (“South Coast AQMD”) Rule 510. The following members of the Hearing Board were present:  
23 Cynthia Verdugo-Peralta, Chair; Robert Pearman, Vice Chair; Mohan Balagopalan; Jerry P.  
24 Abraham, MD, MPH, CMQ; Micah Ali; and Mohan Balagopalan. City of Pasadena Water and  
25 Power Department (“Petitioner”), represented by Lisa J. Hosey, Assistant City Attorney, did not  
26 appear. South Coast AQMD (“Respondent”), represented by Mary Reichert, Senior Deputy  
27 District Counsel, did not appear.

28 The matter was submitted for consideration on the Consent Calendar. The public was

1 given an opportunity to testify. The Declaration of Arturo Silva was received as evidence, and  
2 the [Proposed] Findings and Decision of the Hearing Board was received. The Parties have  
3 stipulated by Joint Stipulation to Place Matter on Consent Calendar and to the issuance of this  
4 Order. The Hearing Board finds and decides as follows:

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

7 The City of Pasadena Water and Power Department (“PWP”) is a municipal utility  
8 responsible for providing safe and reliable water and electricity at reasonable rates to its  
9 customers. PWP’s local generation units are located at a single facility, Glenarm Power Plant,  
10 located at 72 E. Glenarm St., Pasadena, CA 91105. There are four simple cycle gas turbine  
11 units, GT-1, GT-1, GT-2, and GT-4 and one combined cycle gas turbine unit, GT-5. GT-5  
12 consists of one combustion gas turbine generator and a steam turbine generator. The California  
13 Independent System Operator (“CAISO”) controls the power plant's generating units.

14  
15 **Equipment that is the Subject of the Variance Petition**

16 GT-5 is a combined cycle electrical generating unit fueled with natural gas. The unit  
17 consists of one LM6000 gas turbine (D56), CO oxidation catalyst (C66), and selective catalytic  
18 reduction (C67). Continuous emission monitoring system (CEMS) monitors and records air  
19 emissions. Selective catalytic reduction reduces nitrogen oxides (NOx) emissions using a  
20 catalyst and ammonia injection. This unit has been operating in accordance with the PWP’s Title  
21 V permit issued on November 3, 2022.

22  
23 **SUMMARY**

24 An Interim Variance was granted by the Hearing Board on January 25, 2024, for 90 days  
25 or until February 29, 2024, whichever comes first. Petitioner was unable to comply with the  
26 emissions testing rules required to be performed in the fourth quarter of 2023 due to equipment  
27 failure. As such, Petitioner is in violation of South Coast AQMD Rule 1134 (e)(2)(C)(iii), which  
28 requires the Facility to perform an annual ammonia (NH<sub>3</sub>) source test (“slip test”) every calendar

1 year; Rules 203(b), 2004(f)(1) and 3002(c)(1), which require compliance with permit conditions;  
2 and the Facility’s Permit to Operate Condition No. D29.7. Petitioner was unable to conduct the  
3 required ammonia slip test and RATA for the Facility’s Unit D56 by the end of December 2023  
4 as the unit is inoperable due to a suspected gas turbine bearing failure. A regular variance is  
5 necessary to allow the Petitioner time to complete repairs and reschedule the ammonia slip and  
6 RATA tests.

7  
8 **FINDINGS OF FACT AND CONCLUSIONS**

9 The following are the facts and conclusions supporting the findings set forth in Health  
10 and Safety Code Section 42352 necessary to grant the variance requested. The Executive Officer  
11 did not oppose the granting of the variance.

12  
13 **(a)(1) The petitioner for a variance is or will be in violation of a rule, regulation, or order of**  
14 **the South Coast AQMD.**

15 Petitioner is in violation of South Coast AQMD Rule 1134(e)(2)(C)(iii) and Rules  
16 203(b), 2004(f)(1) and 3002(c)(1), which require compliance with permit conditions, because  
17 Unit D56 is inoperable and could not be repaired in time to perform the required ammonia slip  
18 test by the end of the calendar year, December 31, 2023, as set forth in Section D, Condition No.  
19 29.7 of Petitioner’s Title V/RECLAIM facility Permit to Operate No. 800168. The unit is not  
20 currently in operation. The gas turbine engine was removed on February 19, 2024 and is  
21 currently undergoing repairs at the General Electric JPort Aero Service Depot in Houston, TX.

22  
23 **(a)(2) Due to conditions beyond the reasonable control of the Petitioner, requiring**  
24 **compliance would result in either (A) an arbitrary or unreasonable taking of property, or**  
25 **(B) the practical closing and elimination of a lawful business.**

26 Petitioner conducts annual inspection and maintenance on the unit each year. The  
27 inspection and maintenance consist of the following items: External engine inspection, replacing  
28 lube oil and hydraulic oil in various pieces of equipment and systems, replacing engine and

1 generator oil filters, replacing water filters, lubricating fans and motors, greasing all fitting,  
2 check alignments, checking foundation bolts for tightness, generator visual inspection, inspecting  
3 piping and checking for leaks, and water washing the engine. The annual maintenance was last  
4 conducted on December 5th, 2022. In addition, a borescope inspection was performed by a GE  
5 field core technician on May 18th, 2023. The inspection did not note any indication of an  
6 impending bearing failure. Lube oil samples were collected and analyzed by Condition  
7 Monitoring Services Inc. on May 23, 2023. The report indicates the lubricant for the GT-5 gas  
8 turbine was in a normal condition. The bearing failure was an unexpected event and beyond the  
9 Petitioners reasonable control and has created a situation that prevents the Petitioner from  
10 complying with District Rules and Permit conditions.

11 Immediate compliance is not possible because the unit is inoperable and requires repairs  
12 to be completed before it can be returned to service. Requiring immediate compliance would  
13 impose an unreasonable burden upon the City's ability to provide electricity, an essential public  
14 service. Once the unit returns to service the Petitioner will promptly schedule and perform the  
15 required testing to attain compliance.

16  
17 **(a)(3) The closing or taking would be without a corresponding benefit in reducing air**  
18 **contaminants.**

19 The City of Pasadena Water and Power Department ("PWP") is a municipal utility  
20 agency responsible for providing safe, reliable and reasonably priced water and electric power to  
21 its municipal customers. PWP's local generation units are located at the Glenarm Power Plant  
22 (the "Facility"). Out of the five units located at the Facility, GT-5 is the largest and most  
23 efficient. The unit is currently in an inoperable condition. Closing or taking the generation unit  
24 would not result in a corresponding benefit in reducing air contaminants during the variance  
25 period because the unit will not operate and generate any contaminants or emissions.  
26 Conversely, the closing or taking would impact PWP's ability to serve its municipal customers.

27  
28 **(a)(4) The petitioner has given consideration to curtailing operations of the source in lieu of**

1 **obtaining a variance.**

2 The inability to operate GT-5 is the cause of Petitioners request for a regular variance,  
3 and as such there is no operation that can be curtailed in lieu of obtaining a variance.

4  
5 **(a)(5) During the period the variance is in effect, the Petitioner will reduce excess emissions**  
6 **to the maximum extent feasible.**

7 Unit GT-5 will not be operated until repaired, which will be followed promptly by  
8 ammonia slip testing. Thus, no emissions will result from the granting of the regular variance  
9 requested.

10  
11 **(a)(6) During the period the variance is in effect, Petitioner will monitor or otherwise**  
12 **quantify emission levels from the source, if requested to do so by the South Coast AQMD,**  
13 **and report these emission levels to the South Coast AQMD pursuant to a schedule**  
14 **established by the South Coast AQMD.**

15 The Continuous Emissions Monitoring System ("CEMS") will monitor the exhaust from  
16 the Gas Turbine GT-5 (Device No. D56 & C67) and record all required parameters (i.e. NOx  
17 concentration, oxygen content, and fuel flow) pursuant to Rule 2012, Appendix A, Chapter 2 for  
18 the duration of the variance period, including showing valid zeros for all parameters when the  
19 turbine is not operating. In lieu of the of the abovementioned requirement, the Petitioner may  
20 choose to comply with the requirements in Rule 2012(c)(2)(D) and 2012 (c)(2)(E), as amended  
21 on November 3, 2023.

22  
23 **ORDER**

24 THEREFORE, good cause appearing, the Hearing Board orders as follows:

- 25 A. Petitioner is granted a regular variance from South Coast AQMD Rules 203(b),  
26 2004(f)(1) and 3002(c)(1) {from Section D, Permit Condition No. D.29.7 of Facility  
27 Title V Permit No. 800168}, commencing February 29, 2024, and continuing through  
28 December 31, 2024, or until Petitioner demonstrates compliance with the ammonia

1 slip limits, whichever occurs first.

2 B. The variance granted herein is subject to the following conditions:

- 3 1. Petitioner shall complete the repair of Gas Turbine GT-5 (Device No. D56 &  
4 C67) expeditiously and provide a notification when the repair is complete to the  
5 South Coast AQMD via email to AQ Engineer Philip Nguyen  
6 ([pnguyen2@aqmd.gov](mailto:pnguyen2@aqmd.gov)), AQ Inspector II Patricia Ramirez ([pramirez@aqmd.gov](mailto:pramirez@aqmd.gov)),  
7 and Supervising AQ Inspector Thomas Lee ([tlee2@aqmd.gov](mailto:tlee2@aqmd.gov)).
- 8 2. Petitioner shall conduct the ammonia slip test in accordance with permit condition  
9 D29.7 within 14 days after reaching normal operating conditions (after the cold  
10 start-up period) but no later than December 31, 2024. ([sourcetesting@aqmd.gov](mailto:sourcetesting@aqmd.gov))
- 11 3. Petitioner shall notify the South Coast AQMD by calling 1-800-CUT-SMOG and  
12 by sending an email to AQ Inspector II Patricia Ramirez ([pramirez@aqmd.gov](mailto:pramirez@aqmd.gov)),  
13 Supervising AQ Inspector Thomas Lee ([tlee2@aqmd.gov](mailto:tlee2@aqmd.gov)), and AQ Engineer  
14 Philip Nguyen ([pnguyen2@aqmd.gov](mailto:pnguyen2@aqmd.gov)) at least 24 hours prior to starting the  
15 ammonia slip test.
- 16 4. Petitioner shall submit a complete source test report showing preliminary  
17 compliance with ammonia slip conditions to the South Coast AQMD Source  
18 Testing ([sourcetesting@aqmd.gov](mailto:sourcetesting@aqmd.gov)), AQ Inspector II Patricia Ramirez  
19 ([pramirez@aqmd.gov](mailto:pramirez@aqmd.gov)), and Supervising AQ Inspector Thomas Lee  
20 ([tlee2@aqmd.gov](mailto:tlee2@aqmd.gov)) within 45 calendar days after the test date.
- 21 5. Petitioner shall operate the Continuous Emissions Monitoring System (CEMS) to  
22 continuously monitor the exhaust from the Gas Turbine GT-5 (Device No. D56 &  
23 C67) and record all required parameters (i.e. NOx concentration, oxygen content,  
24 and fuel flow) pursuant to Rule 2012, Appendix A, Chapter 2 for the duration of  
25 the variance period, including showing valid zeros for all parameters when the  
26 turbine is not operating. In lieu of the of the abovementioned requirement, the  
27 Petitioner may choose to comply with the requirements in Rule 2012(c)(2)(D) and  
28 2012 (c)(2)(E), as amended on November 3, 2023.

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6. Petitioner shall notify the Clerk of the Board at [clerkofboard@aqmd.gov](mailto:clerkofboard@aqmd.gov) in writing when final compliance is achieved.

FOR THE BOARD: \_\_\_\_\_

DATED: \_\_\_\_\_