

**FILED**  
NOV 14 2022  
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 } Docket No.: 3738  
Chevron Products Company } ORDER GRANTING EMERGENCY  
For Emergency Variance from Air District } VARIANCE  
Permit Condition #24136, Parts 14a and 16a }

The above-entitled matter, being an Application for Emergency Variance (EV) from the provisions of Air District Permit Condition #24136, Parts 14a and 16a, was filed on November 2, 2022, after initial contact by telephone at 4:56 p.m. on November 1, 2022, and having been considered by the Hearing Board,

THE HEARING BOARD STATES as the reasons for its decision and FINDS as to those matters in which findings are required:

A. Applicant filed an application under the EV procedures, Hearing Board Rules, Section 2.5. Pursuant to Health and Safety Code Sections 42359 and 42359.5, and the Hearing Board determined that this Application properly could be ruled upon without notice and hearing. Prior to making this determination, and in accordance with Hearing Board Rules Section 2.5.d.2, the Hearing Board requested and received a response to this Application from the Executive Officer/Air Pollution Control Officer for the Bay Area Air Quality Management District (Air District). The Air District staff response recommended the Application for EV be denied but for reasons detailed below, the EV is being granted.

B. Applicant is Chevron Products Company, operator of an oil refinery located at 841 Chevron Way, Richmond, CA 94801. The equipment involved is the Hydrogen Plant Train

1 2 Reformer Furnace F-2100 (Source 4472) selective catalytic reduction (SCR) abatement  
2 system (A-303) which began operating on December 17, 2018 as part of a plant modernization  
3 project. The Hydrogen Train 2 SCR has two anhydrous ammonia injection blowers (intentional  
4 for redundancy) known as the Alpha Blower (CP-2185 A) and the Bravo Blower (CP-2185 B)  
5 used to abate NOx emissions, essential for the fuel production operation.  
6

7 C. Applicant experienced an equipment malfunction when, due to intense  
8 vibrations, it attempted to switch from its Bravo Blower to its Alpha Blower; the valve to the  
9 Alpha Blower was stuck in a closed position. The Applicant is seeking relief from Air District  
10 Permit Condition 24136, parts 14a and 16a which pertain to NOx excess emissions and  
11 ammonia injection interruption.

12 D. Applicant requested an EV period of November 2, 2022 and estimated it would  
13 take three hours to complete repair, with a possible 600 lbs. per day of NOx emissions. Applicant  
14 was able to complete repairs within one hour and determined there were only 19 lbs. of NOx  
15 emissions. Applicant stated that more emissions would result from the shut down and re-start of  
16 the facility than the estimated 600 lbs., and that successful repair avoided flaring.

17 E. Both Applicant and District acknowledge the November 2022 incident did not  
18 create a public nuisance and that no complaints were received. Applicant notes there were no  
19 toxic air contaminants (TAC).  
20

21 F. Applicant asserted the November 2022 incident was sudden and unforeseen and  
22 that there were no indications the valve on the Alpha Blower would fail. In contrast, District  
23 staff points to the fact there have been several vibration-related problems since April 2020 and  
24 expressed concern about recurrent aspects of vibration issues with the blowers and that the  
25 requested EV only addressed preventive maintenance.

26 G. Close review of incidents since April 2020 reveals the following:  
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1           1.       April 1, 2020, Breakdown 07S88 due to vibration at Bravo Blower; both blowers  
2 experienced vibration problems to the extent that Bravo Blower sustained severe damage  
3 and Alpha Blower had to be shut down for emergency maintenance. Cause of vibration  
4 was broken impeller in blower. An impeller is a rotor used to increase the pressure and  
5 flow of a fluid.  
6

7           2.       Late 2020/early 2021 vibration problems with Alpha Blower but able to switch to  
8 Bravo Blower. Routine maintenance and installation of jack under turning gear motor for  
9 support resolved problem and there were no violations. Underlying cause was bearing  
10 failure.  
11

12          3.       November 2022 vibration problem with Bravo Blower, root cause not yet  
13 identified. Vibration prompted attempted switch from Bravo Blower to Alpha Blower,  
14 but valve on Alpha Blower was stuck closed, resulting in request for EV. Vibration  
15 situation resolved by removing turning gear motor on Bravo Blower.  
16

17          H.       Applicant noted that in June 2021, the refinery transferred load from Alpha  
18 Blower to Bravo Blower without incident, using the same valve it attempted to use in  
19 November 2022. Applicant further asserts the equipment is maintained properly.  
20

21          I.       The April 2020 incident was centered on the Bravo Blower and vibrations were  
22 caused by a broken impeller while the late 2020/early 2021 incident was centered on the  
23 Alpha Blower and caused by a bearing failure.

24          J.       It is unclear whether vibrations have any relation to the valve being stuck closed  
25 in November 2022. The current incident was expeditiously addressed and had a minimal  
26 environmental impact.  
27  
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1 K. The Applicant meets the good cause standard for issuance of an EV.

2 THEREFORE, THE HEARING BOARD ORDERS:

3 An Emergency Variance from Air District Permit Condition #24136, Parts 14a and 16a,  
4 for the oil refinery located at 841 Chevron Way, Richmond, CA 94801 be and is hereby granted  
5 from November 3, 2002, at 8:10 a.m. to November 3, 2022, at 9:10 a.m.  
6

7 THE HEARING BOARD FURTHER CAUTIONS APPLICANT to take steps to ensure  
8 vibration issues are prevented in the future, including engaging with the equipment  
9 manufacturer or re-evaluating the design of the blowers or blower foundations relative to  
10 vibration.  
11  
12  
13

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15 Hearing Board Chair, Valerie J. Armento, Esq.  
16 Hearing Board Member  
17 Bay Area Air Quality Management District

11/14/2022

Date

