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

In the Matter of the Application of NEW UNITED MOTOR MANUFACTURING, INC. For a Variance from Regulations: Regulation 2, Rule 6, Section 307; Regulation 2, Rule 1, Section 307; Manual of Procedures, Vol. II, Part 3, § 411; Standard Condition 1.B.2. of New United Motor Manufacturing, Inc.'s Major Facility Review Permit (Insofar as It Applies to Condition No. 10320 of Applicant's Major Facility Review Permit); Condition No. 10320, Parts 10,16, 17; and Regulation 8, Rule 13, Section 307.	DOCKET NO. 3449 ORDER GRANTING VARIANCE

The above-entitled matter is an Application for Variance ("Application") from the provisions of Bay Area Air Quality Management District ("District") Regulation 8, Rule 13, Section 307; Regulation 2, Rule 6, Section 307; Regulation 2, Rule 1, Section 307; Manual of Procedures, Vol. II, Part 3, § 411; Standard Condition 1.B.2. of New United Motor Manufacturing, Inc.'s ("NUMMI's") Major Facility Review Permit (insofar as that Condition applies to Condition No. 10320 of Applicant's Major Facility Review Permit); and Condition No. 10320, Parts 10, 16 and 17 of the Permit to Operate and Major Facility

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Review Permit for NUMMI's automotive and truck-manufacturing plant located at 45500 Fremont Boulevard, Fremont, CA 94538. The Application was filed on December 10, 2003, and was revised by an Amended and Restated Application filed on January 15, 2004.

Operations at NUMMI emit more than 10 tons per year of air contaminants, and Applicant is not a small business as defined by California Health and Safety Code Section 42352.5(b)(2).

The Clerk of the Hearing Board provided notice of the hearing on the Application in accordance with the requirements of the California Health and Safety Code. The Hearing Board heard the request for variance on January 22, 2004.

David R. Farabee and Diana J. Graves of Pillsbury Winthrop LLP, appeared for NUMMI.

Kathleen Walsh, Assistant District Counsel, appeared for the Air Pollution Control Officer ("APCO").

The Hearing Board provided the public an opportunity to testify at the hearing as required by the California Health and Safety Code, but no members of the public testified. The Hearing Board heard NUMMI's testimony. The APCO did not oppose the granting of the variance. The APCO introduced into evidence a letter dated January 8, 2004 in which NUMMI described events relevant to this Application and that NUMMI had submitted to the District's Director of Enforcement in accordance with the requirement in NUMMI's Major Facility Review Permit to report deviations from permit conditions.

The Hearing Board declared the hearing closed after receiving testimony and took the matter under submission for decision.

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BACKGROUND

NUMMI operates an automotive stamping, painting, assembly and parts manufacturing facility. NUMMI operates two assembly lines at the facility: a passenger automobile assembly line and a light-truck assembly line. NUMMI is the only manufacturer in the United States of Toyota Corolla cars and the only manufacturer in North America of the Pontiac Vibe automobile and the Toyota Tacoma truck. NUMMI manufactures and paints the plastic bumpers and the plastic bumper covers (collectively, "bumpers") that are installed on the passenger cars and light trucks, respectively, manufactured at the plant. If NUMMI were unable to manufacture and paint plastic bumpers, it would have to shut down its car and truck assembly lines at a cost of approximately $1.4 million per day. Even if an alternate source of bumpers could be located or developed, the alternate source could not be available soon enough to provide bumpers during the repair period for the Concentrator.

Prior to being installed on a vehicle, each bumper is painted with a prime coat and one or a combination of various topcoats. The prime coat is applied to each bumper in the Bumper Prime Booth (District Source No. S59). After the prime coat is applied, the paint is cured in the Prime Oven (District Source No. S65). This process is repeated for topcoats in the Topcoat Booth and Topcoat Oven (District Source Nos. S57 and S58, respectively).

NUMMI abates volatile organic compound ("VOC") emissions from these sources in accordance with its permit conditions and District regulations. The exhaust from the paint booths, which has a high flow of air but contains a relatively low concentration of VOCs, is sent to the Carbon Rotor Desorb Air Heater ("Concentrator") (District Abatement Device No. A592), and then a lower volume of air with a more concentrated VOC stream is sent from the Concentrator to the Plastics Regenerative Thermal Oxidizer ("RTO") (District Abatement Device No. A571) where the VOCs are incinerated. The exhaust from the

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ovens is sent directly to the RTO because the airflow from the ovens is lower than from the booths and concentration of the VOCs in the exhaust gas is not necessary.

In addition to the abatement requirements of NUMMI's permits, District Regulation 8-13-307 requires that NUMMI abate VOC emissions from the prime booth. Regulation 8-13-307 sets forth limits for the VOC content of paint coatings applied to flexible parts, such as plastic bumpers. The coatings used in NUMMI's bumper prime coating operations contain more than 4.1 lbs/gal of VOCs, exceeding the pertinent regulatory limit; therefore, NUMMI must abate VOC emissions to an equivalent level through the use of an abatement device that operates at a minimum 90% abatement device efficiency. Regulation 8-13-307 does not require NUMMI to abate emissions from the bumper topcoat coating operations because the VOC content of the topcoat coatings is below the applicable regulatory limits. NUMMI filed this Application because the Concentrator was not abating the prime booth at 90% abatement device efficiency as required by Regulation 8-13-307.

The Concentrator consists of a series of carbon beds, three carbon wheels and a hot air desorption heater. The exhaust from the paint booths flows into the Concentrator through the carbon beds and VOCs are adsorbed by the carbon wheels.[1] A lesser volume of heated air (from the hot air desorption heater) flows through the sections of the carbon wheels that have become saturated with VOCs. The VOCs are desorbed from the wheels and move with the heated airflow into the RTO for incineration. The Concentrator is essential because the RTO does not have the capacity to receive the high volume/low concentration flow of VOC-laden air directly from the bumper paint booths. The

[1] As a result of remedial actions taken by NUMMI to restore the Concentrator's abatement efficiency, NUMMI has removed the carbon from the carbon beds, and has replaced the carbon wheels with zeolite wheels. Despite the change in materials, the Concentrator functions as described here.

Concentrator reduces the volume of airflow from the paint booths by a factor of ten, which allows the RTO to efficiently abate the booth's VOC emissions.

During a voluntary source test of the Concentrator in October 2003, NUMMI discovered that the Concentrator was operating at less than 90% abatement device efficiency. This was an unexpected result because, according to previous testing, the Concentrator had consistently operated at greater than 90% efficiency. Testing for all of the other concentrators at the facility showed that they consistently operated at greater than 90% efficiency. NUMMI promptly inspected the Concentrator and the source test records for the Concentrator and determined that it was possible that the source test was incorrect. Therefore, NUMMI immediately scheduled a follow-up source test to verify the Concentrator's actual abatement device efficiency.

Upon receiving confirmation in early December 2003 that the Concentrator was in fact operating at less than 90% efficiency, NUMMI undertook a complete and thorough inspection of the Concentrator. It appeared that the only possible reason for the decreased efficiency was decreased efficiency of the carbon wheels. Therefore, NUMMI promptly placed an order for, and expedited delivery of, replacement adsorption wheels.

The new zeolite adsorption wheels arrived at NUMMI on January 12, 2004 and NUMMI installed the wheels during a planned facility shutdown over the three-day weekend of January 17-19, 2004. NUMMI continued to test and readjust the operating parameters for the Concentrator and as of the afternoon of the variance hearing, NUMMI estimated that the Concentrator was achieving approximately 91% abatement device efficiency.

Because the efficiency of the Concentrator immediately increased after installation of the new wheels, any excess emissions ceased as of January 16, 2004.

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DISCUSSION

NUMMI could not have detected nor prevented the Concentrator's reduced abatement efficiency. NUMMI had regularly inspected and maintained the Concentrator. To verify compliance with the requirement to operate the Concentrator at 90% abatement device efficiency and the permit requirements to abate the bumper booths, NUMMI relied on source tests performed by Best Environmental ("Best"), a source testing firm it has engaged for over 10 years to conduct annual source tests on all of the abatement devices at NUMMI's facility, including the Concentrator. This self-assessment of compliance is voluntary; it is not required by District regulations or by NUMMI's Major Facility Review Permit. Historically, Best's testing has been accurate and reliable, as demonstrated by independent District source tests that verified the results of previous testing conducted by Best.

Best tested the efficiency of the Concentrator in October 2003. According to the results of that test, received by NUMMI on November 13, 2003, the Concentrator was operating at 46% efficiency. Based on NUMMI's experience and operation of other concentrators at the facility, the apparently sudden decrease in efficiency was a completely unexpected result. Since the result was so unexpected, NUMMI hired a different source test firm, Blue Sky Environmental ("Blue Sky"), to independently verify the results. In test results received by NUMMI in early December, 2003, Blue Sky confirmed that the Concentrator was operating at a level below 90% efficiency. NUMMI and the manufacturer thoroughly inspected the Concentrator and found no obvious defects or malfunctions. The manufacturer's recommended solution was for NUMMI to order and install new adsorption wheels for the Concentrator. The new wheels were installed and operating by January 20, 2004.

Once the new wheels were installed, NUMMI ceased generating emissions in excess of the Regulation 8-13-307 limit. According to data regarding the VOC coating content of

paint used in the bumper line sources, even if the Concentrator was operating at 0% abatement, NUMMI has at no time exceeded the overall annual VOC emissions limit for the bumper line sources. Therefore, the hardship that would be created if NUMMI were denied variance protection and required to comply with the 90% abatement requirement would be without a corresponding benefit in reducing air contaminants. Curtailment of bumper line production would not resolve the violation because the regulation requires 90% abatement instead of a fixed emission or production limit. Therefore, whether NUMMI painted one or one hundred bumpers, it would not have been able to satisfy the regulation because the Concentrator was not operating at 90% abatement device efficiency. The only possible means of curtailing operations would be to completely shut down the bumper line. If NUMMI ceased production of bumpers, it would also have to shut down all passenger car and truck production because NUMMI cannot paint bumpers elsewhere or purchase finished bumpers from an outside source. This magnitude of economic hardship was not warranted based on NUMMI's diligent actions in maintaining the Concentrator and resolving the problem once it was discovered.

In January 2004, NUMMI received source test results from Blue Sky that indicated that the Concentrator was operating at approximately 27.2% efficiency. Based on 27.2% efficiency, NUMMI calculated that it was emitting 29 pounds per day of VOCs in excess of the limit in Regulation 8-13-307. These excess emissions totaled 609 pounds (0.3 tons) for the 21 days that NUMMI operated during the period from December 10, 2003, the date it filed this Application, through January 16, 2004, the day it shut down the bumper line to install the new wheels.

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SPECIFIC FINDINGS

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

1. During the period from December 10, 2003 to January 16, 2004, NUMMI was in violation of Regulation 8, Rule 13, Section 307; Regulation 2, Rule 6, Section 307; Regulation 2, Rule 1, Section 307; Manual of Procedures, Vol. II, Part 3, § 411; Standard Condition 1.B.2. of New United Motor Manufacturing, Inc.'s ("NUMMI's") Major Facility Review Permit (Insofar as It Applies to Condition No. 10320 of Applicant's Major Facility Review Permit); and Condition No. 10320, Parts 10, 16 and 17 of the Permit to Operate and Major Facility Review Permit. While it is making the necessary adjustments and testing the new Concentrator wheels to ensure that the Concentrator is operating properly, NUMMI may continue to be out of compliance until April 1, 2004.

2. The reduced efficiency of the Concentrator was beyond NUMMI's reasonable control. NUMMI could not reasonably have known or anticipated that it was not in compliance with the applicable regulatory and permit requirements. Despite voluntary source testing and a rigorous maintenance program, NUMMI did not discover that the Concentrator's abatement device efficiency was decreasing until the Concentrator's abatement efficiency was already well below the regulatory requirement. Accordingly, non-compliance with District Rules was beyond NUMMI's reasonable control. Once NUMMI discovered that it was operating the Concentrator below the required abatement device efficiency, the only way NUMMI could have complied with the regulatory limit would have been to shut down the bumper line. An alternate source of bumpers would not have been available for the time needed to complete the Concentrator wheel replacement and tuning. If NUMMI had been forced to close the bumper line, and hence shut down the car and truck assembly lines, it would have cost the company as much as 25 million dollars, for less than a month of idling the plant.

3. The hardship that would have resulted if NUMMI had shut down the bumper line and therefore also shut down the car and truck assembly lines would have been without corresponding benefit in reducing air contaminants because the Concentrator continued to operate and abate emissions to a certain degree, and because the RTO was abating the bumper ovens. Therefore, NUMMI has not exceeded the overall VOC mass emissions limit for the bumper line. During the period from December 10, 2003, the date it filed this Application, through January 16, 2004, NUMMI emitted 29 pounds per day in excess of the VOC limit in Regulation 8-13-307 for prime coatings. Shutting down the facility, at an approximate cost of $1.4 million per day, was not justified by this level of excess emissions.

4. NUMMI considered curtailing operations in lieu of obtaining a variance, but curtailment was not feasible to bring NUMMI into compliance. Regulation 8-13-307 is not simply an emissions limit, but requires the Concentrator to operate at a certain rate, 90% abatement efficiency. The Concentrator's efficiency could not be increased by curtailing operations. The only effective means of curtailing operations to come into compliance would be to shut down all operations at the bumper line, and hence shut down the car and truck assembly lines. As discussed, because NUMMI did not exceed its overall VOC emission limits, the limited emissions benefit from such extreme action would not outweigh the detriment to NUMMI of the economic impact of shutting down the entire facility.

5. NUMMI has reduced excess emissions to the maximum extent feasible by expediting delivery of, and promptly installing the new adsorption wheels in the Concentrator. NUMMI continues the tuning process, i.e., adjusting the Concentrator to maximize the efficiency of the newly installed wheels.

6. NUMMI will continue to monitor the amount of coatings applied in the bumper paint booths and the efficiency of the Concentrator and report the VOC emissions to the

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District as it does every month as part of its normal reporting requirements. The District did not request any additional monitoring.

THEREFORE, THE HEARING BOARD ORDERS:

A variance is granted from District Regulation 8, Rule 13, Section 307; Regulation 2, Rule 6, Section 307; Regulation 2, Rule 1, Section 307; Manual of Procedures, Vol. II, Part 3, § 411; Standard Condition 1.B.2. of New United Motor Manufacturing, Inc.'s ("NUMMI's") Major Facility Review Permit (Insofar as It Applies to Condition No. 10320 of Applicant's Major Facility Review Permit); and Condition No. 10320, Parts 10, 16 and 17 of the Permit to Operate and Major Facility Review Permit. The variance shall be for the period from December 10, 2003 through April 1, 2004. The variance is subject to the following conditions:

1. NUMMI shall pay excess emissions fees for VOC emissions as required by, and in accordance with, District Regulation 3.

2. Except as specified in No. 4. below, NUMMI shall submit all information and reports required by these conditions both to the District (Carol Lee with a copy to (1) Kathleen Walsh, (2) Compliance and Enforcement Division, and (3) Source Test Manager) and to the Hearing Board.

3. NUMMI shall conduct a source test on the Concentrator and submit the results by March 1, 2004.

4. No later than 14 days prior to any source test required by this Order Granting Variance, NUMMI shall provide the District Source Test Manager with the source test protocol, and no later than 7 days prior to any source test required by this Order, NUMMI shall notify the District Source Test Manager of the date of the source test. NUMMI shall allow the District to observe any required source test.

5. If by March 1, 2004, NUMMI has not submitted the results of a source test demonstrating the Concentrator's compliance with the requirement for 90% abatement

device efficiency, then NUMMI shall submit an alternative compliance plan by April 1, 2004.

6. NUMMI shall conduct source tests on all concentrators at the facility by March 31, 2004, using a District-approved protocol, and shall submit the test results by April 30, 2004.

7. NUMMI shall label all source test ports on the Concentrator and on all concentrators that regularly vent to the atmosphere and submit source test protocols for the A-592 Concentrator by February 15, 2004.

8. Beginning February 6, 2004, NUMMI shall submit biweekly reports, due the following week, of all maintenance and adjustments made to the Concentrator, until such time as a source test report is submitted that demonstrates compliance with the applicable permit conditions and regulations.

9. NUMMI shall conduct an engineering evaluation of the Concentrator to determine why it ceased functioning at 90% abatement efficiency. NUMMI shall complete the evaluation and submit the results by May 15, 2004.

10. Beginning with the month of February, 2004 and continuing for the duration of the variance, NUMMI shall conduct monthly sampling of the outlet exhaust duct VOC concentration for each concentrator at the facility that vents to the atmosphere, and provide the results of the sampling within 15 days.

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Moved by: Allan R. Saxe, Esq.

Seconded by: Thomas M. Dailey, M.D.

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

NOES: None.

ABSENT FROM VOTE: Terry A. Trumbull, Esq.

NON-PARTICIPATING: None.

Thomas M. Dailey, M.D., Chair

2-12-04

Date