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**BEFORE THE HEARING BOARD OF THE**

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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| **In the Matter of**<br><br>THERMAL SOLUTIONS MANUFACTURING, INC. [Facility ID No. 172808]<br><br>Petitioner.<br><br>vs.<br><br>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.<br><br>Respondent. | CASE NO. 6255-3<br><br>**[PROPOSED] FINDINGS AND DECISION AND ORDER GRANTING REGULAR VARIANCE**<br><br>Hearing Date: July 9, 2024<br>Time: 9:30 a.m.<br>Place: Hearing Board<br>South Coast Air Quality Management District<br>21865 Copley Drive<br>Diamond Bar, CA 91765 |

This Petition for a Regular Variance was heard on the Hearing Board's Consent Calendar on July 9, 2024, pursuant to notice and in accordance with the provisions of the California Health and Safety Code section 40826 and South Coast Air Quality Management District ("South Coast AQMD") Rule 510. The following members of the Hearing Board were present: Micah Ali, Chair; Robert Pearman, Vice Chair; Mohan Balagopalan; Jerry P. Abraham, MD, MPH, CMQ; Cynthia Verdugo-Peralta; and Mohan Balagopalan. Thermal Solutions Manufacturing, Inc. ("Petitioner"), did not appear. South Coast AQMD ("Respondent"), represented by Mary Reichert, Senior Deputy District Counsel, did not appear.

The matter was submitted for consideration on the Consent Calendar. The public was given an opportunity to testify. The Declaration of Mr. Bill Winchester was received as evidence, and the [Proposed] Findings and Decision of the Hearing Board was received. The Parties have stipulated by Joint Stipulation to Place Matter on Consent Calendar and to the issuance of this Order. The Hearing Board finds and decides as follows:

**Nature of Business and Location of Facility**

Thermal Solutions Manufacturing manufactures radiator cores for commercial and industrial vehicles. The facility is located at 1390 S. Tippecanoe Avenue, Suite B, San Bernardino, California 92408. Thermal Solutions Manufacturing operates two permitted equipment units at the facility including a Heat Treatment Oven under SCAQMD Permit to Operate Number G30863 and a Lead Pot Furnace under SCAQMD Permit to Operate Number G26164. The facility manufactures radiator cores at a rate of approximately 15-20 units per day. Radiator cores are built by hand and are then loaded onto a conveyor where they are wetted with a weak solution of Hydrochloric Acid flux and pre-dried to about 110°F before passing through the Heat Treatment Oven, which heats the units to about 600°F to complete the fusing operation. Once fused, the radiator cores are sent to the Lead Pot Furnace, which is the final step in the manufacturing process. The Lead Pot Furnace is used to seal the header to the tubes of the radiator. A brass header is placed over the brass tubes on each end of the radiator core and are hammered/crimped into place. The unit is coated in a soldering flux and dipped into the Lead Pot Furnace. Once the header is removed from the dip pot, the solder cools and solidifies rapidly, thereby sealing the header to the tubes. This process is repeated on both ends of the radiator. The dip pot process is manual. The operator physically dips the radiator header into the dip pot using mechanical lifting devices if necessary. Once sealed, the radiators are hoisted into a large water bath where they are leak checked for quality assurance.

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

The Lead Pot Furnace consists of a dip pot to which lead-containing ingots of metal are added regularly to maintain sufficient dip media for the soldering process. Nine (9) pound metal ingots consisting of 70% lead (Pb) and 30% tin are added to the bath as needed. The solder

material is heated to between 600 and 650°F at which the solder is in a liquid state using electric heating elements. With sufficient dip media at the appropriate temperature, the Lead Pot Furnace is ready to accept radiator cores. This unit has been operated in accordance with Permit to Operate Number G26164 and SCAQMD Rule 1420 since 2019, when an initial source test demonstrated that the Lead Pot Furnace complied with the 0.0003 pounds per hour lead standard in Rule 1420. However, a subsequent source test conducted in March of 2024 yielded results that indicated the Lead Pot Furnace exceeded the lead emission standard in the Rule. A variance is needed to continue operating this equipment until a subsequent source test can be conducted to demonstrate compliance with the Rule 1420 lead emission standard. Thermal Solutions Manufacturing has issued a Purchase Order for a new lead filter system and has submitted permit applications to SCAQMD to modify the Lead Pot Furnace and to add the filter system. Once the new and modified permits have been issued by SCAQMD, Thermal Solutions Manufacturing will add the filter system to the Lead Pot Furnace exhaust to abate lead emissions. A source test will then be conducted to verify compliance with Rule 1420 lead emission standards.

**SUMMARY**

An Interim Variance was granted by the Hearing Board on May 23, 2024, for 90 days or until July 9, 2024, whichever comes first. Petitioner has complied with all the Interim Variance conditions since it was granted, including maintain the equipment in good working condition, submittal of expedited permit applications to SCAQMD, limiting the metal ingot charge rate to the Lead Pot Furnace, demonstrating compliance with charge rate limits through recordkeeping and periodic reporting to SCAQMD, and cleaning the roof top monthly. Furthermore, the Petitioner has removed the rain cap from the Lead Pot Furnace exhaust stack and has confirmed the Rule 1401 health risk assessment results for the maximum lead emissions during the Interim Variance period. The nearest residential receptor to the stack location is 439 meters south. The nearest worker receptor is 25 meters away at an adjacent commercial property. Based on an hourly mass emission rate for Lead (Pb) of 0.00051 lbs/hour, an operating schedule of 9 hours per day, 4 days per week, and 52 weeks per year, the Tier 2 risk assessment was run for a point source using a stack height of 35 feet. A 30-year project duration was also used. The results of the health risk

assessment indicate that the maximum individual cancer risk (MICR) for a resident exposed to the lead emissions is 1.25E-08, and that the MICR for an off-site worker is 5.87E-07.

Petitioner was unable to demonstrate compliance with the Rule 1420 lead emission standards during the Interim Variance period because it needs to procure add-on air pollution control equipment to abate lead emissions and time was needed to review vendor quotes and other options before issuing a Purchase Order for a new filter system. This Purchase Order was created for a Ship & Shore Environmental filter system on June 28, 2024. It may take up to 90-days to have the filter system installed and at least another 30 days thereafter to conduct a source test and get results back from the lab to confirm compliance with the Rule 1420 lead emission standards. A Regular Variance is necessary to allow the Petitioner time to install the new filter system and complete source testing to confirm compliance.

## FINDINGS OF FACT

**A. The petitioner for a variance is, or will be, in violation of Section 41701 or of any rule, regulation or order of the District or any federally enforceable permit terms and conditions that are based on Section 41701 or of any applicable rule or regulation of the District.**

The Petitioner is in violation of SCAQMD Rule 1420 and Rule 203(b), which required compliance with permit conditions, because the Lead Pot Furnace was source tested in March of 2024 and results indicated the device was emitting lead at a rate exceeding the applicable Rule 1420 lead emission standard of 0.0003 pounds per hour.

**B. Non-compliance with District Rule(s) is due to conditions beyond the reasonable control of the petitioner, and requiring compliance would result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business**

Thermal Solutions Manufacturing cannot afford to shut down the Lead Pot Furnace since it is integral to its manufacturing process. If Thermal Solutions Manufacturing must shut this equipment down for any amount of time, it will present hardship to the business, and could

ultimately lead to the permanent closure of the facility if it cannot finish parts. Thermal Solutions Manufacturing may be able to operate some distribution for a very short period, but without the ability to produce radiator cores locally, the facility would be looking at a potential closure within 2 to 3 weeks if they are unable to continue operating the Lead Pot Furnace. The potential economic losses for any closure period would be approximately $113,514 in expected gross revenue per week, or $491,517 per month. Additionally, Thermal Solutions Manufacturing would need to lay off 11-18 employees depending on the length of the closure. Without the local manufacturing business, Thermal Solutions Manufacturing would likely lose the distribution business within a matter of days as well. This would force the San Bernardino facility to close completely, and if that were to occur, the facility would probably not reopen, as the production would be transferred to another regional location.

**C. The closing or taking would be without a corresponding benefit in reducing air contaminants.**

The maximum daily potential emissions from the Lead Pot Furnace is approximately 0.0046 pounds per day, of which 0.0027 pounds per day is allowable under Rule 1420. A Tier 2 health risk assessment was prepared using the SCAQMD Risk Calculator Tool using the full 0.0046 pounds per day lead emission rate. The results of the analysis show that MICR would not exceed 1.25E-08 for a residential receptor, or 5.87E-07 for an off-site worker receptor. Based on the extremely small quantities of emissions, and the modeled health risk impacts on actual receptors, the closing of the business would have a negligible benefit in reducing air contaminants.

**D. The applicant for the variance and has given consideration to curtailing operations of the source in lieu of obtaining a variance.**

No production is possible without the Lead Pot Furnace. For the facility to avoid significant financial hardship and possibly permanent closure, it cannot afford to curtail operations for any amount of time while it procures an add-on control device and source tests to demonstrate compliance with Rule 1420 lead emission standards.

**E. During the period the variance is in effect, the applicant will reduce excess emissions to the maximum extent feasible.**

During the Interim Variance period, Thermal Solutions Manufacturing has limited its usage of the Lead Pot Furnace by limiting the lead ingot charge rate into the device to no more than 54 pounds per day or 972 pounds per month. Meanwhile the SCAQMD permit to operate for the Lead Pot Furnace allows for up to 2,000 pounds per month of lead ingot charging. In this way, Thermal Solutions Manufacturing has limited its operations during the Interim Variance period, but still requires a Regular Variance to continue operating at the reduced level until compliance with the Rule 1420 lead emissions standard can be achieved.

**F. During the period the variance is in effect, the applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the district, and report these emission levels to the district pursuant to a schedule established by the district.**

Thermal Solutions Manufacturing will continue to keep track of the number of hours it operates the Lead Pot Furnace each day during the variance period. It will multiply the number of hours operated by the average Pb emissions rate during the March 2024 source test (0.00051 lbs/hr) to quantify actual Pb emissions. This calculation will be done on any day the Lead Pot Furnace is used. Furthermore, Thermal Solutions Manufacturing will monitor and record the number of lead ingots it charges into the Lead Pot Furnace on each operating day. Logs will continue to be maintained to document the dates of operation, daily hours of operation, and the daily lead ingot charge rate. This information will continue to be reported to SCAQMD monthly during the variance period. Thermal Solutions Manufacturing will continue to manage ongoing housekeeping requirements for Rule 1420 and will keep the appropriate records to demonstrate compliance.

## CONCLUSION AND ORDER

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

Petitioner is granted a variance commencing July 9, 2024, through May 20, 2025, or until Petitioner comes into compliance with District Rules, whichever occurs first.

The variance is subject to the following conditions:

1. Respondent shall limit the total quantity of material charged into the lead pot furnace to 54 pounds in any one day (lb/day) or 972 pounds in any calendar month (lb/mo) during the Variance period.
2. Respondent shall maintain a daily and monthly throughput log, beginning May 24, 2024, for the lead pot furnace and shall send the records to South Coast AQMD by email to AQ Inspector Kenneth Dudash (kdudash@aqmd.gov) with a cc to Supervising AQ Inspector Alisha Lewis (alewis@aqmd.gov) on the first Tuesday of each month starting on June 4, 2024. The throughput log shall list all the following areas and include updates to the increments of progress:
    a. Date and hours of operation of the lead pot furnace; and
    b. Total quantity of material charged into the lead pot furnace in lb/day and lb/mo.
3. If Respondent conducts a subsequent source test, the final results and report for which demonstrate that the lead pot furnace complies with the lead emission requirements of Rule 1420, such source test report and results shall be submitted to South Coast AQMD for review. If South Coast AQMD reviews the source test report and confirms the results are correct, then the variance shall conclude as of the date of South Coast AQMD's final determination, and no subsequent recordkeeping, monitoring, or reporting as required by the variance conditions would be required thereafter.
4. The lead pot furnace shall be properly maintained and kept in good operating condition at all times.
5. The petitioner shall pay excess emissions fees by August 15, 2024, for the period from April 23, 2024, to July 31,2024. Thereafter, Petitioner shall pay the excess emission fees quarterly, by the 15th day of each new quarter, for the previous quarter's emissions. The subsequent due dates shall be October 15, 2024, January 15, 2025, and April 15, 2025. The excess emission fee shall be calculated based on Lead emission fee in Rule 303 Table I. If the fees that are due are not paid, the

variance shall be invalidated pursuant to Rule 303 – Hearing Board Fees, subsection (k).

FOR THE BOARD: _____

DATE SIGNED: _____