

January 26, 2016



Via: Email and Certified mail

Mr. Todd Zynda

Air Quality Division
Michigan Department of Environmental Quality
Detroit Field Office
Cadillac Place
3058 West Grand Boulevard, Suite 2-300
Detroit, MI 48202-6058

SUBJECT: TOWER INTERNATIONAL – PLYMOUTH, MI
Response to Notice of Violation – Odor Complaint

Dear Mr. Zynda:

Tower International is in receipt of a January 5, 2016 Notice of Violation (NOV) letter related to odor complaints the MDEQ attributes to the Tower facility at 43955 Plymouth Oaks Boulevard in Plymouth, Michigan. Tower is committed to working with the MDEQ to resolve the MDEQ's concerns with respect to this issue. This letter describes the actions taken by Tower to date to investigate the source of the odors, planned additional activity and timeline for completion.

Background

Tower assembles frames, partial frames, and other metal structures for automobiles. In addition to metal assembly, Tower coats frames and metal structures through an electrodeposition (E-Coat) process line. The facility is located at 43955 Plymouth Oaks Boulevard, east southeast of the intersection of M-14 and Sheldon Road. The nearest residential property is approximately 450 feet to the southwest of the facility. Currently the facility has 358 employees and operates 24 hours a day (3 shifts), 5 days a week. Weekend production is conducted as needed. The facility operates the E-Coat line under permit to install (PTI) 103-02B

The facility utilizes an E-Coat process line and natural gas 8.7 million British thermal units per hour (MMBtu/hr) curing oven. During the E-Coat process, the metal to be coated is conveyed over the coating line and dipped into various E-Coat tanks. Initially, the parts are dip cleaned, conditioned, phosphate, and then dip E-Coated. In the electro-coating tank, electrically grounded parts are slowly coated with paint by passing a low voltage DC current, generated in a nearby rectifier through the tank. After electro-coating, the parts are cured in a natural gas oven at approximately 370 degrees Fahrenheit.

Tower understands that odors have been detected in residential areas to the south of the plant over the past few years. Most of the complaints were non-specific and not attributed to any particular location or source. The NOV referenced the E-Coat process as the likely source of the odors. In order to evaluate the potential source of the odors (if any) at these locations, Tower has taken the actions described below.

Actions Taken

The MDEQ AQD provided Tower with a list of complaint dates, times, and approximate locations. Tower cross-referenced those dates and times to their operations schedule and confirmed that the E-Coat line was operating at some time on the day of each Complaint. Next, Tower utilized available weather information (from Weather Underground (<http://www.wunderground.com/>)) to attempt to correlate wind direction and speed on the days of the complaints. This is considered a generic review as wind speeds and directions may vary from the weather station data, given its distance from the site and geographical differences. Wind direction and speed were considered because the MDEQ AQD has reported that the complaints are mostly from the residential area south of the plant. Weather patterns from the weather data were generally directionally near or towards the residences, but not in all cases.

Tower then reviewed the current material use in the E-Coat process and evaluated any changes and the date of such changes. The majority of the products in use have stayed consistent since 2012. The current coating product has been in use since 2012. The manufacturer was contacted and confirmed that no changes to the formulation have recently been made. The pastes and resins used in the E-Coat process were also evaluated. No changes to the pastes and resins have been made since 2012. In addition, there has been no change to the oil in the past few years and the chain oil is changed weekly. Tower did note that the bearing grease product used has recently been changed. The main bearings are currently greased on a weekly basis. In addition, a cleaner was also changed in September 2015. Lastly, Tower noted that deionized water was used in the E-Coat process from 2011 to 2013. In 2013, a change was made to utilize water treated by reverse osmosis (RO water).

Tower then evaluated the current operation of the E-Coat line. Tower noted an increase in operating hours (a third shift was added) for the E-Coat process at the plant since November 19, 2015. The operating temperature of the E-Coat oven has remained at 370 degrees Fahrenheit. Tower reviewed the oven exhaust diagrams and designed exhaust velocity. Three exhaust stacks are utilized for the E-Coat process. The entrance door exhaust fan is designed for variable speed, between 0 and 10,000 cubic feet per minute (CFM), the oven at 16,000 CFM, and the roof exhauster at 12, 000 CFM. The exhaust parameters appear to be consistent since 2012.

Oven cleaning records were reviewed; Cleaning of the oven was confirmed to be performed annually in December. Cleaning is accomplished through physical vacuuming, scraping, and chipping of material from the oven walls and floor. Carrier cleaning records were also reviewed and found to be completed approximately every 6 months. Carrier cleaning is performed off-site and no anomalies were noted in the review. In addition, stack maintenance records were reviewed and nothing unusual was noted. Stack maintenance is performed on an as-needed basis. Volatile organic compound (VOC) calculations were also reviewed and Tower confirmed that rolling 12-month averages were within permit limits.

In addition to the above-described activities, Tower has engaged the services of Amec Foster Wheeler to assist in evaluating the situation and evaluating the potential source of the odor. As the activities completed to date did not conclude a likely source for odor, Tower is proposing to take additional actions, as described below.

Proposed Actions

Tower is committed to working proactively with the MDEQ AQD to review the odor complaint issue.

The following tasks are planned at this time to further identify potential source(s) of the odor:

- Evaluate the differences in chemical composition for materials where changes have recently been made.
- Perform additional research into odors, odor thresholds, and associated plant product constituents to evaluate the potential process and chemical that could cause an odor.
- Perform dispersion modeling to better understand if a material or process change may be related to the number or location of odor complaints.
- Further evaluate the E-Coat process and operational status to determine if the system is operating as designed. This may include collection and analysis of source samples or exhaust velocity to correlate with odor thresholds and update dispersion models.
- Provide a written update to the MDEQ AQD by March 28, 2016 with additional information obtained.

Should you have any questions or need any further information, please do not hesitate to contact me.

Best Regards.



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