

N7871

Mawila

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

N787132414

FACILITY: TOWER AUTOMOTIVE		SRN / ID: N7871
LOCATION: 43955 PLYMOUTH OAKS BLVD, PLYMOUTH		DISTRICT: Detroit
CITY: PLYMOUTH		COUNTY: WAYNE
CONTACT: James Pace, Engineer - EH & S		ACTIVITY DATE: 12/03/2015
STAFF: Todd Zynda	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Scheduled Inspection

INSPECTED BY: Todd Zynda, AQD

PERSONNEL PRESENT: James Pace, Engineer EH & S; Mark Mooney, EHS Area Manager; Todd Gibbish, E-Coat Supervisor

FACILITY PHONE NUMBER: 734-414-3100

FACILITY FAX NUMBER: 734-414-3102

FACILITY WEBSITE: www.towerinternational.com

FACILITY BACKGROUND

Tower Automotive Operations, LLC (Tower) manufactures frames, partial frames, and other metal structures for FCA US LLC. In addition to metal manufacturing, 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 permit includes enforceable limits for hazardous air pollutants (HAPs) to restrict the facility's potential to emit (PTE) to less than the National Emission Standards for Hazardous Air Pollutants (NESHAP), Part 63, Subpart M and less than the major source threshold to opt out of the Renewable Operating Permit (ROP) program.

PROCESS OVERVIEW

The facility operates frame, partial frame, and metal structure manufacturing lines. The facility currently manufactures frames for the Jeep Wrangler, partial frames for the Chrysler 200 and Dodge Dart, and the "stow and go" tub for the Dodge Caravan. The manufacturing lines contain manual and automated steps (robotic) in a continuous process. The lines contain welding stations where employees or robotic welding is conducted to construct the frames or metal structures. Emissions from welding stations are either released to the general in-plant environment or captured by a central ventilation system and exhausted uncontrolled to ambient air.

The facility also operates 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 the various E-Coat tanks. Initially, the parts are dip cleaned, conditioned, phosphated, 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 (°F).

The E-Coat process line was previously operated by Metokote Corporation (Metokote). On February 14, 2011 Tower provided a letter notifying the AQD that Metokote was purchased by Tower, and the equipment under PTI 103-02 will be operated under Tower ownership. On October 2, 2012, PTI 103-02B was issued to Tower for the E-Coat process line.

INSPECTION NARRATIVE

On December 3, 2015 the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) inspector, Mr. Todd Zynda, conducted an inspection of Tower. During the inspection, Mr. James Pace, Engineer

H & S, Mr. Mark Mooney, EHS Area Manager, and Mr. Todd Gibbish, E-Coat Supervisor, provided information and a tour of facility operations relating to air quality permits and regulations. The inspection was conducted to determine the facility's compliance with the Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 55 and PTI 103-02B.

At 1:00 PM, AQD staff, Mr. Todd Zynda, arrived onsite and was greeted by Mr. Pace, Mr. Mooney, and Mr. Gibbish. During the opening meeting the facility operations and permit requirements were discussed. At this time, the facility provided some of the records required per PTI 103-02B. The volatile organic compound (VOC) tracking spreadsheet was discussed. The spreadsheet included monthly VOC emissions, but not 12-month rolling emission records. Tower agreed to revise the records to include VOC 12-month rolling records. The remaining records were discussed. Tower provided the required records on December 9, 2015 via email.

During the opening meeting, the recent complaints regarding offsite odors originating from Tower were discussed. Tower was informed that the AQD has been out on two separate incidents where offsite E-Coat odors were detected in the residential area south of the facility. Mr. Gibbish stated that production has increased during the last three months and that Tower will assess possible areas of production that may be responsible for an increase in odors.

At this time, Mr. Mooney stated that Tower is likely pursuing a new PTI for an increased VOC emission limit as production is increasing. Additionally, a new PTI may be necessary as the E-Coat used may be modified to meet customer specifications. It was recommended that the facility evaluate the potential odor impacts during the PTI application process.

Additionally, during the opening meeting, Consent Order No. 33-2002 issued to Metokote on November 1, 2002, was discussed. The AQD does not have any documentation on the termination of the consent order. It was discussed that Tower is the responsible party for the consent order through the purchase of Metokote. Per Stipulation 23, the consent order can be terminated through written notice to the AQD Chief. It appears that all the requirements of the consent order have been met and that the consent order can be terminated. A copy of the consent order was provided to Tower.

During review of AQD facility files, Wayne County Department of Environment Air Quality Management Division (WCAQMD) Consent Order 0015-00 was identified. According to AQD files, the Consent Order 0015-00 was never finalized and appears to be in draft form. It is likely that the MDEQ AQD issued the final consent order (No. 33-2002) as described above after the MDEQ received delegation of the Wayne County air program. The draft WCAQMD consent order will be included in the AQD void files.

During the opening meeting, Tower was also notified that they are required to report emissions annually to the Michigan Air Emission Reporting System (MAERS). Previously, the facility has not reported to MAERS, but since PTI 103-02B is a Title V Opt Out permit, the facility is required to report emission annually. Mr. Pace stated that he would be the facility contact person for submitting MAERS going forward.

Following discussion of permit conditions, Consent Order No. 33-2002, recent citizen complaints, and MAERS, a walk through inspection of the facility was conducted.

The facility tour began with observation of the frame, partial frame, and metal structure manufacturing lines. During the inspection, production was occurring. Welding fumes are either released to the general in-plant environment or ducted and released uncontrolled to ambient air through stacks at roof level. Welding is performed both manually, by employees, and by using robotics. Once frames are completed, they are staged for E-Coating.

Next the cold cleaner at the facility was observed. The cold cleaner lid was closed at the time of inspection. The operating procedures for the cold cleaner were difficult to read. The facility was provided with "DEQ Cold Cleaner Operating Procedure" stickers.

Following observation of the frame production areas, the stacks were observed at roof level. Stacks associated with welding exhaust did not contain visible emissions. While standing near the E-Coat line curing oven stack (located in the southwest corner of the facility), a moderate to strong (level 3 to 4) E-Coat odor was detected. Tower was notified that this odor was identified during a recent complaint investigation on November 27, 2015. While standing near the stack, AQD showed Tower the residential area located immediately south of the facility. The odor decreased in intensity and duration when moving north across the roof away from the stack.

Following observation of the stacks, the inspection continued inside the facility with observation of the wastewater treatment area and the E-Coating line. According to Mr. Gibbish, the wastewater treatment is conducted to meet water discharge requirements. According to the "Pretreatment Paint Line Process Flow" (see attached flow diagram), wastewater treated originates from the "alkaline city water rinse" and "acidic city water rinse".

Finally, the E-Coat line was observed from the mezzanine observation deck. The mezzanine area includes the E-Coat line control room in addition to a small analytical laboratory. During observation of the E-Coat line, a paint sample was obtained for Method 24 analysis. Tower also collected a sample for comparison. The E-Coat line was shut down for sample collection. During inspection of the E-Coat line, paste and resin storage containers were closed. According to Mr. Gibbish the E-Coat line operates anywhere from 13 hours to 22 hours per day, depending on production needs. Additionally, the curing oven is cleaned out annually during the winter break between Christmas and the New Year.

At the closing meeting, the records required were discussed. Tower agreed to provide the requested records within five business days. AQD agreed to notify Tower of any future complaints at the time of complaint investigation. In the meantime, Tower plans to investigate possible operational issues that may be causing offsite odors.

APPLICABLE RULES/PERMIT CONDITIONS

PTI 103-02B was issued on October 2, 2012. The Special Conditions (SC) are listed as appropriate. For brevity, permit conditions and the language of federal and state rules have been paraphrased.

EUELECTROCOAT

An electrodeposition coating process and an associated 8.7 MMBtu/hr natural gas fired curing oven.

SC I. 1, and SC VI. 1. **COMPLIANCE.** VOC emissions shall not exceed 12.1 ton per year on a 12-month rolling basis. The facility provided records for January 2013 through December 2015. The highest reported 12-month rolling VOC emissions in tons per year (tpy) occurred in November 2015 at 10.59 tpy.

SC II. 1. **COMPLIANCE:** E-COAT shall not contain VOCs greater than 0.6 pound per gallon (minus water) as applied. Application data provided by the facility indicates that FrameCoat II Black has a VOC content of 0.62 pounds per blended gallon, minus water. Using monthly VOC reporting data, AQD calculations for November 2015 also demonstrate compliance with the limit using the below equation:

$$((1341 \text{ gallons} \times 2.21 \text{ lb/gal minus water}) + (9,030 \text{ gallons} \times 0.32 \text{ lb/gal minus water})) / (1341 \text{ gal} + 9,030 \text{ gal}) = 0.56 \text{ pounds per gallon, minus water}$$

Additionally, during the inspection a sample was collected for Method 24 analysis. Sample results indicate reports the VOC content as zero. According to the analysis, the discrepancy between %volatiles and %water (1.4%) is well within the precision parameters of the methods, therefore the VOC content is reported as zero (see attached analytical results).

SC III. 1. **COMPLIANCE.** Shall capture all waste coatings and shall store them in closed containers. The facility appeared to meet this condition based on visual inspection.

SC III. 2. **COMPLIANCE.** Shall handle VOC and HAP containing material in a manner to minimize the generation of fugitive emissions. Shall keep containers covered at all times except when operator access is necessary. During the inspection, the facility appeared to meet this condition. Storage containers of resin and paste storage containers were closed.

SC III. 3 and SC VI. 4. **COMPLIANCE.** Shall implement a frame carrier cleaning program that includes the following.

- A. The carriers shall be cleaned every six months.
- B. If odors problems develop, the carrier cleaning frequency shall be increased to a frequency approved by the AQD District Supervisor.
- C. Shall prevent excess paint from accumulating on oven floor.

The facility currently implements a carrier cleaning program (exchange program). The facility provided records indicating the date of last service, and the 6 months due date. At this time the AQD is not requesting an increased frequency of the program, but if complaints increase or continue, an increase in cleaning frequency will be requested. On December 17, 2015, a phone call was held with Mr. Pace. The AQD notified the company that if complaints continue, or increase in the future, the AQD will be requesting an increase in frequency of the carrier cleaning program.

SC VI. 2. **COMPLIANCE.** Shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component, VOC content and density of any material. The facility provided the safety data sheet (SDS) for the Framecoat II Black Paste and Framecoat II Resin.

SC VI. 3. **COMPLIANCE.** Shall keep the following records on a calendar month basis. A. Gallons (with water of each VOC containing material. B. VOC content (minus water and with water) of each material. C. Monthly VOC mass emission calculations. D. 12-month rolling VOC mass emission calculations.

The facility maintains the above listed information as required. The information is included in the VOC Reporting spreadsheet for January 2013 through December 2015.

SC VIII. **COMPLIANCE.** Exhaust gases from stacks shall be discharge unobstructed vertically upwards and shall meet the following dimensions. SVELECTROCOAT1: 30 inches in diameter, 54 feet above ground; SVELECTROCOAT2: 30 inches in diameter, 57 feet above ground; SVELECTROCOAT3: 30 inches in diameter, 54 feet above ground.

During the inspection, the stacks appeared to meet the specified dimensions. Measurements were not collected. Stacks were verified that exhaust gas discharges unobstructed vertically to ambient air.

FGFACILITY - COMPLIANCE

Conditions under FGFACILITY relate to tracking HAP emissions at the facility. The facility currently uses a frame coat that does not contain HAPs as demonstrated by the FrameCoat II Black Application Data. The documentation indicates the coating is a "Non-HAP coating".

The facility operates a cold cleaner which uses Crystal Clean 106 Mineral Spirits that contains HAPs. The SDS provided by the facility indicates the following HAPs: toluene (0.08 to 0.8%), naphthalene (0.08 to 0.4%) and ethylene (0.08 to 0.4%). According to the facility records, the 18 gallon cold cleaner has the solvent changed out approximately every 2 months. Based on the HAP content and frequency of use of the material, AQD does not require records for HAP usage for the cold cleaner.

PERMIT TO INSTALL EXEMPT EQUIPMENT

Welding

The facility welding operations area appears to be exempt from PTI requirements under the following rule.

R336.1285(i): "The requirement to obtain a PTI does not apply to brazing, soldering, welding, or plasma coating equipment."

On July 25, 2007, Tower provided calculations showing that actual emissions from welding operations are below significance levels per R336.1278(1)(b). Please see the facility file for further information.

Wastewater Treatment

The wastewater treatment at the facility appears to be exempt from PTI requirements under the following rule.

R336.1285(m): "The requirement to obtain a PTI does not apply to... lagoons, process water treatment equipment, wastewater treatment and sewage treatment equipment."

According to the "Pretreatment Paint Line Process Flow" diagram provided by the facility, the wastewater treatment processes water from rinse stages prior to E-Coating (see attached flow diagram). It does not appear that the wastewater treatment is used to treat VOCs.

Cold Cleaner

The cold cleaner at the facility is exempt from PTI requirements under the following rule.

R336.1281(h): "The requirement to obtain a PTI does not apply to cold cleaners that have an air/vapor interface of not more than 10 square feet."

The facility provided the SDS for the cold cleaner. The cold cleaner is not heated during use and has a vapor pressure of less than 1 millimeters mercury (mmHg) or 0.019 pounds per square inch [psi]. During the inspection the cold cleaner appeared to be in compliance with the applicable requirements of R336.1707.

E-Coat Laboratory

The analytical laboratory associated with the E-Coat line appears to be exempt from PTI requirements under the following rule.

R336.1283(b): "The requirement to obtain a PTI does not apply to laboratory equipment."

40 CFR Part 63, Subpart M – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

Tower is not subject to the Subpart M per §63.3881(b) as the facility is not major for HAPs. PTI 103-02B contains enforceable conditions limiting Tower's PTE to less than 10 tpy for individual HAPs and less than 25 tpy for any combination of HAPs.

40 CFR Part 63, Subpart T – National Emission Standards for Halogenated Solvent Cleaning

The cold cleaner at the facility is not subject to Subpart T. The solvent used in the cold cleaner does not contain any of halogenated HAPs as defined in §63.460.

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

Not applicable.

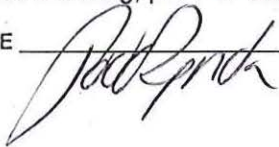
MAERS REPORT REVIEW

The facility has not submitted MAERS. During the inspection Tower was notified that going forward the facility will be required to submit MAERS as PTI 103-02B is a Title V opt-out permit.

FINAL COMPLIANCE DETERMINATION

At the time of the inspection, this facility appears to be in compliance with applicable state and federal regulations and PTI 103-02B. If offsite odors persist in the future, AQD may request an increased frequency of carrier cleaning, per PTI 103-02B SC III.3.b.

NAME



DATE

12/21/15

SUPERVISOR

JK