

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
**ACTIVITY REPORT: On-site Inspection**

A581458749

<b>FACILITY:</b> Centennial Coatings, LLC		<b>SRN / ID:</b> A5814
<b>LOCATION:</b> 371 N CENTENNIAL, ZEELAND		<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> ZEELAND		<b>COUNTY:</b> OTTAWA
<b>CONTACT:</b> Paul Mac Vane , President		<b>ACTIVITY DATE:</b> 06/30/2021
<b>STAFF:</b> Chris Robinson	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> FY'21 inspection to determine the facility's compliance status with respect to PTI no. 219-15 and any other applicable air quality rules and regulations.		
<b>RESOLVED COMPLAINTS:</b>		

The purpose of this report is to document findings of an onsite inspection for Centennial Coatings (Centennial, SRN A5814) located at 371 North Centennial in Zeeland, Michigan. The inspection was conducted by AQD staff Chris Robinson (CR) on June 30, 2021, to determine the facility's compliance status with the requirements of the federal Clean Air Act; Part 55 (Michigan's Air Pollution Control Rules) of Act 451 (Natural Resources and Environmental Protection Act (NREPA)); and the requirements established in Permit to Install (PTI) No. 219-15.

Due to the Covid19 pandemic and to ensure proper staff were onsite CR attempted to contact the facility prior to the inspection. However, CR was unable to reach anyone; therefore, the inspection was conducted unannounced. CR met with the President of Centennial, Paul MacVane. Identification was provided and the intend of the visit was explained.

The Weather conditions on June 30, 2021, were approximately 79°F, mostly cloudy with calm winds ([www.weatherunderground.com](http://www.weatherunderground.com)). Although, powder coating activities were taking place the burn-off oven was not operating. No odors or visible emissions were observed.

Centennial is a metal powder coating facility that utilizes a burn-off oven for removing cured powder coating from racks/hangers used in the process. The powder coating operations consist of a three-stage wash system that utilizes a zirconium wash solution and water along with an infrared and convection oven for curing the powder coat. Powder coating along with associated wash equipment and ovens is typically exempt from permitting requirements per Rule 287(2)(d) which requires any particulate matter (PM) emissions from the powder coating process to be adequately controlled using filters, which Centennial uses. Based on observations and discussions this equipment appears to be exempt.

Occasionally parts need to be touched up. This is done through the use of 12-ounce aerosol spray cans. A large amount of spray cans was present at the time of the inspection. Although a PTI exemption for spray cans exists the can size is limited to 8 ounces. Since these are all 12 ounces this exemption would not apply. CR discussed this with Mr. McVane. Centennial uses approximately 1 can per every two weeks. That equates to approximately 2.6 gallons per year, which is well within the 200 gallon/month usage limit specified in air permitting exemption Rule 287(2)(c) for coating lines.

12 ounces = 0.094 gallons

0.094 / 2 wks. = 0.05 gallons/wk.

0.05 \* ~52 = ~2.6 gallons / yr.

The burn-off oven is a Pollution Control Products Model PCR-211. This oven is covered under PTI No. 219-15. The PTI includes several material limits for EUBURNOFF which include: limiting the chlorine content of materials processed to 0.0015 pounds per coating (SC II.1); a per batch limit of 750 parts (SC II.2); the use of natural gas only (SC II.3); and a restriction to not process any material other than cured paints, varnishes, powders, polymer coatings, oil or grease on metal parts, racks and/or hangers (SC II.4). Per Mr. MacVane and observations made during the inspection it appears as though the facility only combusts cured powder coating from the metal racks/hangers used at this facility, none of which contain chlorine. The unit is only designed to operate on natural gas for fuel. The facility is not tracking the number of batches processed. However, as discussed with Mr. MacVane the facility typically only processes one batch in the burn-off oven per day but occasionally two (2). The facility is not capable of processing more than two (2) batches per day because the facility only operates one (1) shift per day and the batches take approximately four (4) hours. Mr. MacVane indicated they only work five (5) days per week. Considering the hours of operation and the amount of time each batch takes the most batches the facility could process in a given 12-month period would be approximately 520 batches (10 per week with 52 weeks/year). Therefore, with current operations it is not possible that the 750-batch limit can be exceeded. CR informed Mr. MacVane that they are required to track batches and should start doing so.

In addition, the facility is prohibited from using the burn-off oven to remove uncured paints or any materials containing non-chlorine halogens nor any transformer cores containing PCB's; material containing lead rubber; or any waste material such as paint sludge or waste powder (SC III.1 & III.2). As noted above only cured powder coating is combusted in the oven.


The burn-off oven must be equipped with an afterburner (SC IV.1) that is kept at a minimum temperature of 1,400°F and has a retention time of 0.5 seconds, meaning that any air passing through the afterburner must remain in contact with the afterburner for at least 0.5 seconds, which is taken into consideration by the manufacturer. Otherwise, there is no way to verify the retention time during the inspections. The afterburner though, is installed. Although, records were not available the manufacturer builds safety & environmental controls into the unit's logic. As noted on the unit, it is designed such that the primary chamber's burner will not ignite until the afterburner reaches 1,500°F. Special Condition IV.4 requires an interlock system that shuts down the primary chamber's burner whenever the afterburner is not operating properly. When this PTI was drafted AQD's intent with this requirement was that whenever the afterburner temperature drops below 1,400°F the primary chamber's burner would shut down. In recent years it has come to AQD's attention that the interlock systems built into these units only engages a cooling mode whenever the unit becomes too hot. It does not shut the unit down. However, if the unit's logic detects an issue with the afterburner, it will complete the cycle but prevent the unit from operating again until the issue is addressed. Based on AQD's current understanding of how these units work Centennial appears to be operating EUBURNOFF as intended by the manufacturer.

Special Condition VI.2 requires the installation, calibration, maintenance, and operation of a device to continuously monitor and record afterburner temperatures. Although a digital display has been installed for monitoring purposes, no device has been installed to record the data continuously. In addition, the monitoring device/thermocouples have never been calibrated since installed in approximately 2015. Special Condition III.3 requires annual calibrations. Per Mr. MacVane temperature records had consisted of manually recorded data taken several times per batch which,

per Mr. McVane, had not been completed in some time. At the time of the inspection no records could be located. The lack of calibrations, continuous temperature data, and the installation of a device to record the afterburner temperatures continuously (at least every 15 minutes) are violations of the facility's PTI (SC III.3, VI.1, and VI.2). Special condition VI.1 requires records to be completed by the 15<sup>th</sup> day of the calendar month for the previous month.

Automatic temperature controllers are installed and operating for both the main chamber and afterburner as required by SC IV.2. Maintenance is being logged as required by SC VI.3 and Safety Data sheets are maintained onsite as allowed by SC VI.4. The stack height and diameter was not verified but appeared to meet the requirements in SC VIII.1 of the PTI.

Based on the observations and discussions made during the inspection Centennial Coatings is not in compliance with PTI No. 219-15, EUBURNOFF SC III.3 for not conducting necessary thermocouple calibrations, SC VI.1 and VI.2 for not maintaining afterburner temperature records, and SC VI.2 for not installing a device to continuously record afterburner temperatures. A violation notice will be issued.

NAME 

DATE 7/8/2021

SUPERVISOR 