

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

N375167011

<b>FACILITY:</b> DECC CO INC	<b>SRN / ID:</b> N3751
<b>LOCATION:</b> 1266 WALLEN SW, GRAND RAPIDS	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> GRAND RAPIDS	<b>COUNTY:</b> KENT
<b>CONTACT:</b> Mark Piersma , Engineering Manager	<b>ACTIVITY DATE:</b> 03/07/2023
<b>STAFF:</b> April Lazzaro	<b>COMPLIANCE STATUS:</b> Non Compliance
<b>SUBJECT:</b> Unannounced, scheduled inspection.	<b>SOURCE CLASS:</b> SM OPT OUT
<b>RESOLVED COMPLAINTS:</b>	

**AQD staff, April Lazzaro arrived at the facility at approximately 9:00 AM on March 7, 2023 to conduct an unannounced, scheduled inspection.**

**Prior to my arrival at the facility, I drove around the area to conduct visual observations and to determine the presence or absence of odors. As I drove around the area and in front of the facility, I smelled a hot burning odor typically associated with a burn-off oven and noted that I could see heat waves exiting both burn-off oven stacks. I also smelled a mild paint odor directly adjacent to the facility, but it did not extend further away.**

**I parked the car and as I walked toward the building entrance I was engulfed with smoke, odor and moisture originating from a burn-off oven. The smoke and odors were extremely strong, and I took visual evidence of the emissions episode which lasted for over six minutes. I also noted a worker on the roof during the emissions episode who appeared to be changing an air filter for a different piece of equipment.**

**As the emissions event began to subside, I entered the facility where I learned that my typical contact, Mark Piersma was not in the office, however Matt Foster, Manufacturing Engineer was available to assist me.**

**Upon meeting with Mr. Foster, I informed him of the purpose of the inspection and told him that I had observed smoke and odors from the burn-off oven which is a violation of the permit. Additional details related to the oven and permit conditions are discussed below.**

### **FACILITY DESCRIPTION**

**The Decc Company, Inc. is a specialty coater of metal parts using dry film lubricants such as Teflon (PTFE), anti-corrosive coatings and decorative coatings. The company has conveyORIZED coating lines with electro-static robotic spray applicators, electrostatic hand spray booths and tumble-barrel coating machines used to apply water and solvent based coatings. The facility currently operates under four permits; Permit to Install (PTI) No. 183-93 which covers an Ace burn-off oven model # RKG 240 (EURBO1), PTI No. 87-09 which is a General PTI for coating operations, PTI No. 167-18 which covers a Jackson Oven Supply, Inc. Model 8604 with a 300,000 BTU/hr oven and afterburner (EURBO2), and PTI No. 7-07B which is a facility-wide Opt-out for Hazardous Air Pollutants.**

### **COMPLIANCE EVALUATION**

**PTI No. 183-93**

**PTI No. 183-93 covers the EURBO1 burn-off oven and states that there shall be “no visible emissions from the oven”. The oven was in operation at the time of the inspection, and no visible emissions were observed. During a previous visit, I met with Brent Hudson, Maintenance Supervisor who is the main operator of the burn-off ovens. During that visit, Brent initiated a cold start, and both the afterburner and main chamber started up 40 seconds later. Brent had installed a thermocouple on the stack to see the afterburner temperature and right away it was up to 1,250°F. He stated that when the oven comes up to temp which is 950°F the afterburner peaks at about 1,800°F. A view of the temperature charts of the main chamber indicates that the temperature is very steady once it reaches the programmed temperature. Since there are no temperature requirements in the permit, this method of operation appears acceptable.**

#### **PTI No. 167-18**

**PTI No. 167-18 covers the EURBO2 burn-off oven which was installed in 2019. This is the burn-off oven that was generating smoke, odors and steam when I arrived on-site. The permit contains an emission limit for hydrogen fluoride (HF) which is generated when plastisol coatings are burned off and has a limit requiring that there be no visible emissions. The HF limit is 4.5 pounds per hour (pph), and compliance is determined by a stack test if requested by the AQD. A stack test has not been requested at this time. Since there were visible emissions from the oven during the inspection, a Violation Notice will be issued.**

**The permit also contains material limits of 26.6% by weight fluorine content and 1.0% chlorine content of any material removed from the parts. The permittee shall not process more than 4.3 pounds of fluorine per batch processed, which is demonstrated through recordkeeping. The company indicated a need to improve the recordkeeping on the weight of product removed and have already implemented that.**

**During the inspection, we met with Mr. Hudson, who indicated that EURBO2 had gotten too hot, and the quench cycle initiated, which ended the burn and caused the smoke, odors and steam I observed. I requested an evaluation of the oven loading and other conditions because this is not considered proper operation. In an email, the company stated that there was a worn oven seal, allowing too much oxygen into the chamber causing increased temperatures inside the oven. The quench cycle is a response to this condition, and it appears as though this had occurred a few times in the weeks leading up to my observation. I noted in an email to the company that the oven temperature appears to maintain at or around 900°F longer than the afterburner is above 1,400°F. I was informed that the afterburner and oven burners are turned off at the same time, but that there seems to be continued combustion in the oven occurring that allows for the temperature to maintain the 900°F temperature. This is not how the oven should be operated, as it would indicate that there are uncontrolled emissions occurring. As such, this is a violation of PTI No. 167-18 SC IV.1. This was discussed via email with the company, and they were having the manufacturer out on March 31, 2023, to discuss programming, and I stated this needed to be corrected. I also noted that the current burn cycle which is around 2.5 hours, is much shorter than any other properly operating burn-off oven I am familiar with and should be re-assessed. Additional work has been done on EURBO2 to reset the operations to the correct settings according to the manufacturer. The Violation notice will also request the submittal of a Preventative Maintenance and Malfunction Abatement Plan (PM/MAP) submittal and implementation pursuant to Rule 911. The plan should**

address proper operation of both the afterburner and oven to ensure the afterburner remains on while the oven is at temperatures that generate emissions.

#### **General PTI No. 87-09**

General PTI No. 87-09 has been modified since the last inspection and covers EULINE4 (4 booths, 2 ovens, RTO), EULINE5 (2 booths, 1 oven, RTO) and EULINE6 (2 booths) as well as associated ovens. It also contains a 30 ton per year limit, based on a 12-month rolling time period on Volatile Organic Compound (VOC) emissions associated with all coating lines and associated purge and clean-up operations at the stationary source. This limit applies to any coating line covered by this or any other general permit or any PTI and any exempt coating line. Each line is limited to 2,000 lbs VOC per month and the 12-month rolling total limit is 30.0 tons VOC. The reported total VOC emissions from all coating lines at the facility through February 2023 is 10.53 tons. The records indicate compliance with the limit, and individual line emissions are noted below.

EULINE4 is a high usage line that has emissions ducted to a regenerative thermal oxidizer (RTO). Historically, the facility has turned the unit on and off, depending on emissions so that they are below the 2,000 lbs/month limit. This practice continues, and the coating records were reviewed closely during the months that this occurred. The integrated recordkeeping system tracks the times where the RTO is not operational and uses a zero (0) destruction efficiency during these times. The temperature of the RTO at the time of the inspection was 1,508°F which is above the minimum requirement of 1,400°F. This line has four booths and uses the integrated database for recordkeeping. The color changes on this line can be extensive – up to 20 per day and the database helps to accurately track usage of each coating used by weight. The three stacks of the booths are connected overhead in a common duct, and then go to the RTO for destruction. Information on how cleanup and purge solvent usage is tracked was requested. Mr. Piersma stated that they utilize a SB3 product, acetone and occasionally cyclohexanone for flushes, which is reclaimed into a bucket or flushed into the filters. General PTI 87-09 requires that the facility track the VOC content, in pounds per gallon of any purge/clean-up solvent used, however this was not provided in the recordkeeping. Additionally, during the last inspection in 2019, AQD discussed with the company that spraying solvent to the filters is not an appropriate disposal method. This appears to be still occurring. As such, these are a violation of General PTI 87-09, Special Conditions No. VI.3 and III.1. The highest reported monthly emissions in the previous 12-month period were in June 2022 at 1,882 lbs, however if the solvent is not correctly being tracked this value may not be accurate.

EULINE5 has two booths and one oven and currently utilizes hand spray applicators, Booth 2 has been switched to a rotary applicator. It is not vented to the RTO at this time, however there is talk of replacing the existing RTO with a larger one and adding emissions from this line to the control device. Due to the location of the existing RTO, there would be a period of time where it would be removed, and the new unit installed, and the company will need to work with AQD field staff and permit section staff if there are any emissions and permitting issues expected. The highest reported monthly emissions in the previous 12-month period were in August 2022 at 1,504 lbs.

**EULINE6 is a continuous conveyor spray line with one booth that utilizes an electrostatic applicator, as well as a booth with a turn table that utilize two spray applicators. These booths share a stack, and have a combined monthly VOC limit of 2,000 lbs. The highest reported monthly emissions in the previous 12-month period were in February 2022 at 216.56 lbs.**

**EUTUMBLE is an area with multiple tumble coaters that join and are emitted through one of two stacks. These date back to the late 1970's. The highest reported monthly emissions in the previous 12-month period were in August 2022 at 8.71 lbs.**

**Batch Oven #6 and #9 have been added to the general permit and they are shared ovens that are used for a variety of curing options.**

**Records related to the operation and maintenance of the RTO were requested and reviewed. It was noted that on the day of the inspection, the fan motor sounded like it was in need of repair, and it was noted that quite a bit of grease was being used, as it was on the ground below the unit. Additionally, during the 2022 inspection by an outside company (attached) several items should be repaired during 2024. These items can impact destruction efficiency. A destruction efficiency test on the RTO will be required if the repairs are not made in the future.**

#### **PTI No. 7-07B**

**This Opt-out PTI No. 7-07B includes limits on individual and aggregate HAPs. Individual HAP emissions are limited to less than 9.0 tons on a 12-month rolling time period. The highest single reported HAP was methyl isobutyl at 2.44 tons. Aggregate HAP emissions are limited to less than 22.5 tons on a 12-month rolling time period. The reported aggregate HAP emissions are 6.98 tons. During the previous inspection, I mentioned to Mr. Piersma that if the new oven has HF emissions, the existing oven also has HF emissions. Hydrogen fluoride is a HAP, and as such these emissions must be included in the facility-wide HAPs limit of 22.5 tons per year on a 12-month rolling time period. The emissions of HF from both burn-off ovens were not added to the recordkeeping, and as such this is a violation of PTI No. 7-07B, Special Condition VI.2. The addition of HAP as HF from the burn off ovens are not anticipated to lead to an exceedance of the HAP limits contained in Opt-out PTI No. 7-07B.**

#### **EXEMPT EQUIPMENT**

**There is a facility WWTP pre-treatment system and a new alkaline soap parts washer in the treatment area. These are exempt from permitting pursuant to Rule 285(2)(m) and Rule 285(2)(l)(iii) respectively.**

**In the solvent storage room, there is an acetone distillation unit with a capacity of about 25 gallons. This meets the permit exemption Rule 285(2)(u) because it has a capacity of less than 55 gallons. The unit was not observed during this inspection.**

**EUAREA10 Booths A & B and as well as a separate Area 10 tumble spray unit utilize the Rule 287(2)(c) permit exemption. The highest recorded monthly usage in the previous 12 months for Booth A was during November 2022 at 29.60 gallons. The highest recorded monthly usage in the previous 12 months for Booth B was during March 2022 at 37.3 gallons. The highest recorded monthly usage in the previous 12 months for Area 10 tumble spray was during March 2022 at 2.2 gallons.**

## ODOR COMPLAINTS

In the past few months, the AQD has received two odor complaints from a resident who exercises in the area surrounding the facility. The complainant indicated the smell was similar to burning plastic off a frying pan. Since the two burn-off ovens basically do burn-off a type of plastic, and PFTE is similar to Teflon that coats some frying pans, it is possible that the complaints can be attributed to this facility, however additional odor surveillance must be conducted to determine the source of the odors.

## COMPLIANCE SUMMARY

Decc, Co. was in non-compliance at the time of the inspection.

NAME April Lazzaro

DATE 04/13/2023

SUPERVISOR HH