

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

N076046802

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| FACILITY: FASTENER COATINGS, INC. | | SRN / ID: N0760 |
| LOCATION: 1111 RIVER ROAD, THREE RIVERS | | DISTRICT: Kalamazoo |
| CITY: THREE RIVERS | | COUNTY: SAINT JOSEPH |
| CONTACT: Joy Garvey , Owner | | ACTIVITY DATE: 10/30/2018 |
| STAFF: Dennis Dunlap | COMPLIANCE STATUS: Non Compliance | SOURCE CLASS: SM OPT OUT |
| SUBJECT: Scheduled inspection. | | |
| RESOLVED COMPLAINTS: | | |

This was not an announced inspection. Joy Garvey was not at the facility at the time of the inspection. Tim from Fastener Coatings conducted the walkthrough. Dennis Dunlap was the inspector for AQD. Fastener Coatings employs about 16 people and operates one 8-hour shift per day 5 days per week. The facility coats the head of screws using a primer and polyurethane paint, or with a water-based paint.

A new burn-off oven was installed in February of 2016 covered by permit 171-03A. This permit also covers synthetic minor limits for HAPs. The old burn-off oven was removed. The new permit requires that the temperature of the afterburner be recorded at least once per burn-off cycle. There are temperature readouts for the afterburner and primary chamber. The burn-off was coming off of a cycle so the gauges were reading low. No visible emissions were seen coming from the stack. The facility is not recording the afterburner temperature at least once per cycle and this will be included in a violation notice (VN). Also, calibration of the afterburner and primary chamber thermocouples are required once per year. Records were not available to show that this is being done and will be included in the VN. The facility is doing visible emission checks of the stack during each run and recording this on a sheet. It was mentioned to Tim that they could add the afterburner temperature to this sheet. The burn-off oven is used to burn-off the layers of paint on the trays which hold the screws when they are coated. After the trays are taken out of the oven they are power-washed in a special booth before using again. It appears that this booth may be exempt by Rule 281(2)(e). Although there is a fan in the booth that exhausts outside, no contaminants were seen outside. During the last inspection on July 2, 2015, there were violations of the old burn-off oven that were included in a VN.

There are 8 spray booths in two rooms that are used to coat screws or fasteners. These are numbered 1, 2, 3, 5, 6, 7, 8, and 9. The coating operation is covered by permit 216-00. At each booth the screws are placed in shakers that allow the screws to fall into trays so that the heads are facing up. The trays are placed in the spray booths and are then coated. Most screw are coated with a water-based primer and then a polyurethane paint. Some may just receive a water-based paint. The filters are in the back of the booth. There is manometer for each booth. The filters are changed when the manometer reaches a certain mark or every 2-3 hours if necessary. The trays are the put in an electric oven at about 350-375 degrees F for about 13 min. The screws are the put into boxes. At each spray booth there is a monthly sheet for the operator to record paint used each day. Each mark stands for one quart of paint. The coatings on the sheet are: Primer; Polane White; Polane Black; Polane Mixed; Waterborne White; and Waterborne Black. These sheets are then sent to a consultant for tabulation. The booths are cleaned periodically with a booth stripper. Some very faint emissions (less than 5% opacity) were seen coming from one stack. The filters were in good condition. The opacity limit in the permit is 20%. At the previous inspection visible

emissions were seen coming from several stacks. No action is deemed necessary for the present episode.

There is powder coating booth in a separate room. It has cartridge-type filters and no outside emissions. It was in use. There is a small oven that cures the screws for 400 degrees for 18 minutes. Used filters are placed in plastic bags and disposed of. Powder coating is exempt by Rule 287(2)(d).

There is a paint room where paints are mixed and stored, spray guns are cleaned, and waste is disposed of. Polane white and Polane black polyurethanes are used the most. A catalyst is added to the paints before spraying. Polane mixed is used when different colors are needed. This begins with Polane white (Polane Strobe White was on hand) and this is mixed according to a formula which includes colorants. Polane B clear and Polane flattening base may be added along with a reducer. Paints are mixed in this room and taken out to the spray booths. There are 2 cleaning stations for spray guns containing MEK. The lids were closed. Waste paint is placed in a 55-gallon drum that is periodically hauled away by Superior.

RECORDKEEPING

Each month three different recordkeeping sheets are compiled. They are entitled "Paint Consumption Worksheet", "Emissions Summary Report-Booth Running Totals", and "Emissions Summary Report". Each spray booth has a monthly VOC limit (1,500 pounds) and a 12-month rolling time period VOC limit (9 tons). These records are being kept and the spray booths are well inside these limits. The spray booths combined have a calendar day VOC limit (672 pounds) and a 12-month rolling time period VOC limit (29 tons). These records are being kept and the spray booths are well inside these limits. Individual and aggregate monthly and 12-month rolling time period HAP records are being kept. Emissions of HAP are under the 9 ton individual and 22.5 aggregate 12-month rolling time period emission rates. Some coating constituents that contain toluene (HAP) were not included with the HAP Summary Data. These include Polane B Clear, Polane Flatting Base, Booth Strip, and Phoenix colorants. This will be part of a VN.

Permit 216-00 requires Method 24 testing of coatings to determine VOC content unless prior approval is given by AQD to use the manufacturer's formulation data. A record of prior approval could not be found. This will be included in a VN. Based on SDS's at the facility, the VOC content of Polane White and Polane Black was calculated to be higher by the AQD inspector than what is used in the recordkeeping sheets. Method 24 testing will be required for Polane White, Polane Black, and Polane Mixed (color with the most VOC content).

The amounts of cleanup solvents, catalyst, and reducer is being kept monthly. The amount of cleanup solvents used per month is determined on how much coatings are used according to a formula. Information on how the monthly amount of catalyst and reducer is determined is being obtained. This was included in a list sent to the facility (see below):

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1. The temperature of the afterburner needs to be recorded at least once during the burn-off cycle. See Special Condition VI.1. of permit 171-03A.

2. Thermocouples for the afterburner and primary chamber need to be calibrated at least once per year. See Special Condition VI.2. of permit 171-03A.
3. VOC content of coatings need to be determined by Method 24. This may be required for Polane White, Polane Black, and Polane mixed (worst case). See Special Condition 7 of Permit 216-00.
4. How is the monthly amounts of Polane reducer, catalyst, and clean-up solvents determined?
5. Based on SDS's for KenAqua Wash Primer semi-transparent green, Polane Strobe White, Polane 1500 White, and Polane Black, I calculated higher VOC amounts for the last three than that used in MAERS calculations. The primer was lower.
5. Is Polane white reduced with MEK before using?
6. According to the SDS's Polane B Clear, Polane Flattening base, and Phoenix colorant contain toluene which is a HAP. These do not appear in the monthly HAP summary table nor or they included with the Polane Mixed.
7. What ingredients are included with Polane Mixed and how is the density determined?
8. Need SDS for Primer, Polane White, and Polane Black.
9. Primer A and B are included in the monthly recordkeeping sheet, but they may not be used anymore.
10. How is the use of Polane B Clear and Polane Flattening base accounted for in the recordkeeping?
A response to this list has not been received as of 11/13/18.

The VN will contain the following: not keeping afterburner temperature records for the burn-off oven; records not available for calibrations of the thermocouples for the burn-off oven primary chamber and afterburner; Method 24 testing; and not including all HAP containing materials in the recordkeeping.

NAME Dennis Dumbay

DATE 11/13/18

SUPERVISOR MA 11/13/2018

