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

P032825695

FACILITY: PREFIX COATINGS, LLC		**SRN / ID:** P0328
LOCATION: 3500 JOSLYN ROAD, AUBURN HILLS		**DISTRICT:** Southeast Michigan
CITY: AUBURN HILLS		**COUNTY:** OAKLAND
CONTACT: Ken Siuda , Paint Process Quality Engineer		**ACTIVITY DATE:** 06/17/2014
STAFF: Rebecca Loftus	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

On June 17, 2014, I, Rebecca Loftus, Air Quality Division (AQD), conducted an unannounced inspection of Prefix, SRN: P0328, located at 3500 Joslyn Road, in Auburn Hills, Michigan. The purpose of this inspection was to determine the facility's compliance with the Federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, Michigan's Air Pollution Control Rules, Permit to Install (PTI) No. 40-12, and PTI No. 133-12.

Upon arriving at the facility, I met with Mr. Siuda, Facility Manager. Mr. Siuda escorted me through the building and provided me with company records.

Company Overview

Prefix has been in business at their Rochester Hills location (P0204) for over 38 years; the business includes engineering prototypes and designs for the automotive industry (e.g. show cars and concept cars).

At 3500 Joslyn Road (P0328), Prefix coats body panels as part of the production paint program for the Chrysler V1 (Viper). At full production of the Viper, Prefix intended to coat approximately 12 cars (car = two 12ft x 18ft racks) a day. The products on each rack consisted of mostly plastic or composite material; some parts were also aluminum.

Mr. Siuda explained that through October 2013, the facility was completing approximately 12 cars per day. Based on a drop in demand, Prefix dropped production to approximately 6 cars per day through December 2013; and then dropped to approximately 4 cars per day from January through March 2014. After Fiat purchased Chrysler, the production of the Viper was dramatically reduced. Mr. Suida explained From April 21, 2014 through June 23, 2014 Chrysler's Viper production is on idle; they will be online for 4 weeks after that, and then down again through September 2014.

Due to the drop in Viper production, Prefix is looking to acquire new customers for this facility; including things such as specialty parts, add-ons, auxiliary, and plastic bumpers.

Permits No. 40-12 and No. 133-12

On March 8, 2012, Prefix applied for a General Permit to Install for six coating lines. On March 16, 2012, the AQD issued a general permit, PTI No. 40-12, for coating operations. After an AQD inspection in 2012, before operations at this facility had commenced, Prefix applied for PTI No. 133-12 to restrict the facility's emissions for Hazardous Air Pollutants (HAPs) to less than major source thresholds.

PTI No. 40-12 is a general coating permit and establishes the following emission limits:

Pollutant	Limit	Time Period	Equipment
VOC	2000 lbs/month	Calendar month	Each coating line plus all associated purge and clean-up operations.
VOC	10 tpy	12-month rolling	Each coating line plus all associated purge and clean-up operations.
VOC	30 tpy	12-month rolling	Facility-wide

PTI No. 133-12 establishes the following emission limits:

Pollutant	Limit	Time Period	Equipment
Each Individual HAP	9 tpy	12-month rolling	Facility-wide
Aggregate HAPs	22.5 tpy	12-month rolling	Facility-wide

On May 14, 2014, Prefix submitted a permit application (see attached) to add another down draft booth (Booth #7). Because PTI No. 40-12 is a general coating permit, permits section return the application and told Prefix the booth may be installed under this permit as long as Prefix can maintain compliance with the permit limits.

Inspection Observations

While walking me through the facility, Mr. Siuda explained the following:

Prefix receives raw parts which are hand sanded in the prep area and "priming room". In this area, the parts are also wiped down with isopropyl alcohol wipes and areas of the hoods are taped off before painting. Some of sanding/buffing equipment have attached dust collection vacuums and the room has an associated dust collector; these operations appears to be exempt from obtaining a PTI pursuant to Rule 285(l)(vi)(C).

After the parts are prepped, they can go to one of the six coating lines; each line has a 14ft x 48ft down draft booth and associated curing oven. Booths #1 and #2 are designated as priming booths/repairs, booths #3 through #6 are used for color, strips and clear coat. At the time of the inspection, Booth #1 and #2 were not in use. Booths #3, #4, #5, #6 were being used to paint repairs. Mr. Scott France, Paint Process Manager, provided the AQD with a sample of the black paint, Parts A and B.

During the inspection, I noted that the booths appeared to be properly equipped with filters. Mr. Siuda explained that between each spray booth is a paint mixing area (one mixing area for every two booths) and that employees use HVLP spray guns. This was verified during the inspection and this equipment appears to comply with the conditions of the general permit.

The new booth, Booth #7, was being installed during my inspection. This booth and an associated mixing room, is located in a separate area from the six other booths and will be designated as repairs/repaints only.
While inspecting the mixing areas, I noted the orange AQD stickers were posted near the parts washers (three in total). Previously, employees were using the cleaning solvent in uncovered mixing cups to soak parts and transfer the waste solvent. Currently employees keep all open containers in the mixing rooms and when finished use the new flammable waste drums with covers, located just outside each mixing room. In addition to the new waste drums, Mr. Suida pointed out the new electric paint shakers and the flammable paint storage cabinets located in between the booths.

After coating, the parts are cured in the natural gas ovens. Depending on the product the oven has two settings: the first is the typical oven settings and the second is on Booth #2 for Primer and door pieces with the hem sealer (see attached MSDS).

Typical Oven Settings (3 stages)
1st: 120°F for 20 mins
2nd: 170°F for 20 mins
3rd: 230°F for 45 mins
cool down: 100°F for 5 mins

Primer and Hem Sealer
1st: 300°F for 20 mins
2nd: 300°F for 20 mins
3rd: 300°F for 20 mins
Doors Only: 245°F for 20 mins
cool down: 100°F for 20 mins

After the oven, parts are sent to the staging area to fully cure (72 hours). Then they are completed in polishing and the finished parts are sent to Chrysler for assembly.

The building also has office space, a paint storage room, rack storage space, and approximately 30,000 ft^2 of space used for staging parts.

Record Keeping/Emissions
During the inspection Mr. Siuda showed me the daily record keeping sheets (see attached example) and on June 27, 2014, Mr. Siuda emailed me copies of the monthly spreadsheets calculated by his consultant, Mary Mello, NTH (see attached CD). Based on the provided records, Prefix has started to include VOC emissions from the IPA Wipes.

Based on the 2013 MAERS report, prefix recorded a total of 26.4 Tons VOC emissions:

Booth	Coatings used (gals)	VOC emissions (lbs)	Thinner/ Solvent (gals)	VOC emissions (lbs)
1	1406	6313	79.55	539
2	762	3461	61.56	417
3	1597	7525	145.96	990
4	1913	8949	160.75	1090
5	1971	9294	99.19	673
6	1586	3546	80.33	545
Total (1-6)	9,236	43,048	627	4,253

IPA Wipes		
Number of Wipes Used	Emission Factor (lbs/wipe)	VOC emissions (lbs)
109,500	0.041	5,450

From January through June 2014 (Only Jan-Feb Production), Prefix recorded the following:

Booth	Coatings used (gals)	VOC emissions (lbs)
1	140	628
2	67	302
3	42	202
4	131	613
5	46	211
6	180	832
Total (1-6)	606	2,788

The highest 12-month rolling Aggregate HAP emissions occurred in December 2013 at 4.03 Tons; with Toluene and Xylene as the highest individual HAPs.

Note: Based on the 2013 MAERS data, Prefix was approaching the 30 ton facility-wide limit, reporting 26.4 tons VOC. Based on the much lower production rates in 2014, Prefix should be able to maintain compliance with the PTI limits. In the future, as production increase, Prefix needs to be aware of the individual line limits and the facility-wide limits.

Coatings

Prefix uses several different coatings (see list in file, each MSDS is available on-site). All paints (primer, eight base colors, and a clear coat) are activated by a shared harder. The VOC content of the coatings range from 3.25 lbs/gallon to 5.44 lbs/gallon; with an average of 4.71 lbs/gallon. PTI No. 40-12 is a general permit, therefore, no VOC lbs per gallon limits have been established in the permit.

The two-part sample taken during the inspection was Akzo Nobel Black paint, MB9040. The samples were sent to Advanced Technologies of Michigan (AToM) to be analyzed for VOC content. On June 27, 2014, I received a report from AToM indicating the following:

Part A: 5.23 lbs/gallon VOC
Part B: 4.98 lbs/gallon VOC
Mixed at a 2.5 A to 1.0 B ratio: 5.13 lbs/gallon VOC

These results are consistent with the information provided in the Manufacturer's Environmental Data Sheets. According to the datasheets Part A is 5.11 lbs/gallon VOC and Part B is 8.04 lbs/gallon VOC (minus exempt solvents: 4.96 lbs/gallon).

Federal Regulations

Prefix may be subject to the following Federal Regulations:

1. The National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, Title 40 of the CFR, Part 63, Subpart MMMM (NESHAP MMMM).
2. The National Emission Standards for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, Title 40 of the CFR, Part 63, Subpart HHHHHH (NESHAP HHHHHH).

I provided Mr. Siuda with information on both regulations during my 2012 inspection. As an Opt-Out source Prefix may be subject to Subpart HHHHHH; if in the future Prefix applies for a Title V permit and becomes a major source of HAPs, they may be subject to Subpart MMMM.

Additional Information

Mr. Siuda mentioned that Prefix is still looking into a new technology for coating. His concern is a higher HAP content of the coatings. I explained that Prefix can change coatings as long as they keep the proper record keeping, however, if Prefix could not meet the VOC limits in PTI No. 40-12 or HAP limits in PTI No. 133-12, they would most likely have to add some type of control and/or apply for a new permit.

Conclusions

Based on my inspection and review of company records, currently, Prefix appears to be in compliance with the Federal Clean Air Act, Michigan's Air Pollution Control Rules, PTI No. 40-12, and PTI No 133-12.

PREFIX
COATINGS
excellence is expected
(when Ken's not available

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