

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

N704742572

FACILITY: Hilco Technologies		SRN / ID: N7047
LOCATION: 15211 Laethem Drive, ARMADA		DISTRICT: Southeast Michigan
CITY: ARMADA		COUNTY: MACOMB
CONTACT: Leonard Gilbert, Production Manager		ACTIVITY DATE: 11/30/2017
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS:		

On Thursday, November 30, 2017, I, Michigan Department of Environmental Quality-Air Quality Division Staff Sebastian Kallumkal, conducted a scheduled inspection at the Hilco Technologies (previously Xenon, LLC.) located at 15211 Laethem Drive, Armada, Michigan. The purpose of the inspection was to verify facility's compliance with requirements of Article II, Air Pollution Control, Part 55 of Act 451 of 1994, the requirements of the Permit to Install (PTI) No. 219-02A (issued February 1, 2017) and to verify whether facility uses ethylene oxide sterilizers.

I arrived at the facility at about 10:30 AM. At the facility, I met Mr. Roger Neslre, Plant Manager and Mr. Leonard Gilbert, Production Manager. I introduced myself, provided my credentials for identification and stated the purpose of the visit. I also provided them a copy of the MDEQ-AQD "Entry for Inspections" brochure. During the pre-inspection meeting, they explained about the facility's operations. They informed me that they don't own or use ethylene oxide sterilizers at their facility.

The facility is involved in the clear coating of automotive plastic parts such as lenses on the automotive headlight and other lighting assemblies. It uses clear abrasion resistant coatings. The facility consists of two dry-filter type, self-controlled robotic paint spray booths (EUCHAINONEDGE, EUINDEXTABLE) that share a common curing oven and another newly installed dry-filter type, self-controlled robotic paint spray booth ((EULINE3) with cure oven. The cure ovens consist of both an infrared (IR) curing zones and an ultraviolet (UV) curing zone. The booths use HVLP robotic spray guns.

The facility uses isopropanol to wipe molded parts for coating in EUCHAINONEDGE and EUINDEXTABLE spray booths and acetone to clean/purge all coating spray guns and spray lines. The spent solvent is hauled off-site by Safety Kleen, Inc. The parts coated in the new coating line, EULINE3 (CHAINONEDGE), are not cleaned because the molded parts are directly placed in the conveyer to the booth for coating while for the other two booths, molded parts are stored in boxes prior to coating. This causes the parts to be dusty.

The facility operates 5 days a week and 3 shifts per day; sometimes 1 shift on Saturdays. It has about 72 employees.

Each coating line consists of a single self-contained robotic spray booth, followed by curing ovens. Paint overspray from the coating operations are captured by dry filters associated with each coating line. We also reviewed the permit conditions.

Next, Mr. Gilbert provided me a tour of the facility. I observed that the parts are initially rag wiped using isopropanol (rags were sprayed with IPA from kept in bottles). We went around the both booths and the IR and UV curing ovens. These booths have two UV curing ovens built in series.

We also inspected the new coating line. This line was temporarily out of service at the time of the inspection. It was two molding machines directly connected. They mold polycarbonate, poly propylene and nylon parts. Some of the molded parts are annealed (dried) in a natural gas fired oven. The injection molding is exempt from permit to install requirements pursuant to R336.1286(2)(b). The molded and annealed parts were dropped to the conveyers for the coating line.

Next, we visited the injection molding machines which provide parts for the other two coating lines. Facility has 6 injection molding machines (2 electric and 4 hydraulic). They mold polycarbonate (eg:

lenses), poly propylene and nylon parts (tubing). Some of the molded parts are annealed (dried) in a natural gas fired oven. The injection molding is exempt from permit to install requirements pursuant to R336.1286(2)(b).

The facility also has a steam cleaning machine (mask washer) to clean the part holders used in the coating process. The cleaner used in the process is an aqueous solution of "Challenge". The part washer is used once a week. The cleaning solution is recycled. The steam exhaust is vented out to the atmosphere. This process appears to be exempt from permit to install requirements pursuant to R336.1281(2)(k)-Aqueous based Parts Washers. The facility has no other parts washers. The facility also recycles the unused plastic molds by an outside company.

Later we visited the waste storage area. All waste materials are stored in closed, marked containers. We also visited the coatings and solvent storage areas. Mr. Gilbert informed me that they are using the coating as received. From the receiving containers (55-gal barrel or 5-gal pail) the coating is transferred to a pressure pot which has no or minimum solvent loss during usage.

He told me that the spent electric bulbs and the mercury having IR Bulbs are picked up by Safety Kleen, Inc.

Compliance

EUSOLVENT:

The plastic parts are hand wiped prior to coating using IPA and the fluid lines associated with the spray booth equipment are purged and cleaned using solvents (acetone). The wiped rags are put in drums and picked up by Safety Kleen, Inc.

SC I.1: The VOC and acetone emissions combined are limited to 7.0 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Solvent usages and VOC and Acetone emissions for 2016 were:

2015 (gal/yr)	Usage	Density (lb/gal)	Emissions (lb/yr)	Total (lb)
IPA (VOC)	440	6.55	2882	
Acetone	990	6.60	6534	9416 (4.71 TPY)
2016				
IPA (VOC)	440	6.55	2882	
Acetone	990	6.60	6534	9416 (4.71 TPY)
2017				
IPA (VOC)	495	6.55	3242	
Acetone	550	6.60	3630	6892 (3.45 TPY)

Mr. Gilbert informed me that the usage for 2015 and 2016 are same because they report the amount purchased instead of the usage which is difficult to track.

SC III. 1 & 2: I observed that the coatings, solvents and waste materials are kept in closed containers. Safety Kleen hauls away the waste materials. Condition 1.4 and 1.5.

SC V.1: Requires the facility to determine VOC Content, Water content and density of the coatings using USEPA Method 24 or using manufacturer's formulation data if approved by AQD District Supervisor. On March 4, 2014, AQD approved the facility's request to use formulation data in lieu of Method 24 testing. Facility is keeping records of the amount of solvent used and the VOC emissions.

SC VI.1 requires that the permittee complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless

otherwise specified in any monitoring/recordkeeping special condition. Mr. Gilbert told me that he collects all the solvent and coatings usage information for the previous year and provides to the consultant at the beginning of the next year to calculate emissions to be used in the annual emissions reporting. I told them that the permit condition requires that the emissions need to be calculated on a monthly basis. They agreed to do comply with the permit condition and keep monthly emissions records.

SC VI. 2 and 3: The facility maintains Safety Data Sheets for all materials used in parts wiping, cleaning and coating (See attached). The permittee maintains records of solvent used, VOC and acetone content of solvents used, and calculates monthly and annual emission rates of VOC and Acetone. (See attached report)

FGCOATING: Includes three plastic parts coating lines: EUCHAINONEDGE, EUINDEXTABLE, and EULINE3.

The new coating line, EULINE3 was installed in March 2017, but started production in May 2017.

SC I.1 limits VOC emissions to 26.5 tons per year based 12-month rolling time period as determined at the end of each calendar month. The 2016 calculations show that the annual VOC emissions as of December 2016 were 20.62 tons. Jan-Nov, 2017 VOC emissions were 16.67 Tons (33334 pounds).

SC I.2 limits the VOC emissions from EULINE3 to 10.8 TPY. This line went into production in May 2017. VOC emissions from this line was not calculated. Compliance will be verified at a later time.

SC III.1, 2 & 3: I observed that the coatings, solvents and waste materials are kept in closed containers. Safety Kleen hauls away the waste materials.

SC IV.1 & 2: I observed from outside of the booths that the booths are equipped with exhaust filters. The booths are enclosed and were operating at the time of my inspection, so it was not accessible for inspection. Gilbert informed me that the filters are replaced every two weeks and the used filters are picked by Safety Kleen, Inc. He also informed me that the robotic arms are equipped with HVLP applicators.

SC V.1- requires the facility to determine VOC Content, Water content and density of the coatings using USEPA Method 24 or using manufacturer's formulation data if approved by AQD District Supervisor. On March 4, 2014, AQD approved the facility's request to use formulation data in lieu of Method 24 testing. Facility is keeping records of the amount of solvent used and the VOC emissions.

SC VI.1 requires that the permittee complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Mr. Gilbert told me that he collects all the solvent and coatings usage information for the previous year and provides to the consultant at the beginning of the next year to calculate emissions to be used in the annual emissions reporting. I told them that the permit condition requires that the emissions need to be calculated on a monthly basis. They agreed to do comply with the permit condition and keep monthly emissions records.

SC VI.2 -requires facility to maintain a current listing of the chemical composition, including the weight percent of each component, of each material. The facility is keeping SDS for all coatings and other related solvents. I reviewed and received copies of the SDS for the few most used coatings. The facility also provided technical data sheets for these coatings.

SC VI.3- requires the facility, on a monthly basis, to keep records of gallons (with water) of each material used, VOC content (with water) of each material, as applied, VOC mass emission calculations determining the monthly emission rate in tons per calendar month and VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. The facility is keeping satisfactory records of the required data.

SC VII.1 required that within 30 days after completion of the installation, construction, reconstruction, relocation, or modification of EULINE3 authorized by PTI No. 219-02A, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. The permittee did not comply with this requirement. During the inspection, I informed them of this deviation of the permit condition. On December 12, 2017, Mr. Gilbert sent a notification letter via email to the district supervisor indicating that the emission unit was installed in May 2017. A violation notice won't be sent at this time for this deviation.

SC VIII.1-9 specifies the stack dimensions which were not verified during the inspection. They told me the stack dimensions comply with the requirements. The stacks appear to comply with the required dimensions.

FGFACILITY: Includes all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

SC I.1 limits VOC emissions to less than 30 tons per year (TPY) based on a 12-month rolling time period as determined at the end of each calendar month. The total annual VOC emissions for 2016 from EUSOLVENT (2882 pounds) and FGCOATING (41242 pounds) are 22.06 Tons (44124 pounds). The VOC emissions for Jan-Nov, 2017 is 18.29 TPY (36576 pounds). This complies with the emission limit.

SC I.2 and 1.3 limit the individual and aggregate HAP emissions to 8.9 TPY and 22.4 TPY based on a 12-month rolling time period as determined at the end of each calendar month. Mr. Gilbert told me that their solvents and coatings do not contain HAPs, so HAP emissions were not calculated. The reviewed MSDS for the coatings and solvents do not seem to contain HAPs. The facility appears to comply with HAP emission limits.

SC V.1- requires the facility to determine VOC Content, Water content and density of the coatings using USEPA Method 24 or using manufacturer's formulation data if approved by AQD District Supervisor. On March 4, 2014, AQD approved the facility's request to use formulation data in lieu of Method 24 testing. Facility is keeping records of the amount of solvent used and the VOC emissions.

SC V.2 requires the permittee to determine the HAP content of any material as applied and as received, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. The permittee appears to comply with this requirement.

SC VI.1 requires that the permittee complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Mr. Gilbert told me that he collects all the solvent and coatings usage information for the previous year and provides to the consultant at the beginning of the next year to calculate emissions to be used in the annual emissions reporting. I told them that the permit condition requires that the emissions need to be calculated on a monthly basis. They agreed to do comply with the permit condition and keep monthly emissions records.

Mr. Gilbert emailed (December 11, 2017) me the January-November 2017 usage of the coatings and IPA and Acetone usage (December 13, 2017).

SC VI.2-requires facility to maintain a current listing of the chemical composition, including the weight percent of each component, of each material. The facility is keeping SDS for all coatings and other related solvents. I reviewed and received copies of the SDS for the few most used coatings. The facility also provided technical data sheets for these coatings.

SC VI.3- requires the facility, on a monthly basis, to keep records of gallons (with water) of each material used, VOC content (with water) of each material, as applied, VOC mass emission calculations determining the monthly emission rate in tons per calendar month and VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. The facility is keeping satisfactory records of the required data.

SC VI.4- requires the facility, on a monthly basis, to keep records of gallons of each HAP containing material used, HAP content of each material, individual and aggregate HAP emissions determining the

monthly in tons per calendar month and annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. The permittee claims that the materials used at this facility do not contain HAPs. The reviewed SDS also does not show HAP contents. I informed him that starting 2018, they need to keep records of HAP emissions even if the numbers are zero. He agreed to comply with the requirement.

Discussion:

Facility needs to calculate and keep records of monthly and 12-month rolling VOC emissions for EULINE3 (SC I.2) for each month before the end of the next month.

Facility needs to calculate and keep records of monthly and 12-month rolling VOC and Acetone emissions for EUSOLVENT, monthly and 12-month rolling VOC emissions for FGCOATING and FGFACILITY for each month before the end of the next month.

Facility needs to calculate and keep records of monthly and 12-month rolling individual and aggregate HAP emissions for FGFACILITY for each month before the end of the next month.

Conclusion: The facility appears to be in compliance with applicable air quality requirements.

Attachments: Tables for Coatings Used, IPA used, Acetone used, VOC emission calculations, Copies of MSDS, and technical data sheets.

NAME Sebastiany Kallumbal

DATE 4/18/2018

SUPERVISOR [Signature]