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

N704760861

FACILITY: Hilco Technologies		**SRN / ID:** N7047
LOCATION: 15211 Laethem Drive, ARMADA		**DISTRICT:** Warren
CITY: ARMADA		**COUNTY:** MACOMB
CONTACT: Leonard Gilbert , Plant Manager		**ACTIVITY DATE:** 11/19/2021
STAFF: Sebastian Kallumkal	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Targeted inspection to verify compliance with PTI No. 219-02A		
RESOLVED COMPLAINTS:		

On Friday, November 19, 2021, I, Michigan Department of Environment, Great Lakes and Energy (EGLE)-Air Quality Division (AQD) Staff Sebastian Kallumkal, conducted a scheduled inspection at the Hilco Technologies (SRN N7047; 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.

I arrived at the facility at about 11:00 AM. At the facility, I met Mr. Leonard Gilbert, Plant Manager. I introduced myself, provided my credentials for identification and stated the purpose of the visit. During the pre-inspection meeting, we discussed facility and PTI conditions. The facility operates 5 days a week and 3 shifts (24 hours) per day. It has about 48 employees.

Gilbert inquired about the new AQD rules to be promulgated due to the Ozone non-attainment status for Macomb County. I informed him that new rules are to be promulgated to achieve attainment status and offered to provide him more details later. I provided further details about this on Monday, November 22, via email

The facility is involved in the clear coating of plastic parts (poly carbonate) used in the production of lenses of automotive headlights (mostly F-150) and other lighting assemblies. It uses clear abrasion resistant, solvent based, coatings. The coated lenses are sent to North American Lighting or Flex-N-Gate for lighting assembly.

Hilco Tech has two dry-filter type, self-controlled robotic paint spray booths (EUCHAINONEDGE, EUINDEXTABLE) that share a common curing oven and another 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 clean/purge solvents are sprayed into the collection area around the robots. Once every three months, the spent solvents are collected from the bottom and hauled off-site by Safety Kleen, Inc. The parts coated in the EULINE3 (CHAINONEDGE), are not wiped 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.

Each coating line consists of a single self-contained robotic spray booth, followed by curing ovens. Overspray paint from the coating operations is captured by dry filters associated with each coating line.

Next, Mr. Gilbert provided me a tour of the facility. I observed that the parts are initially rag wiped using isopropanol (rags were sprayed or wet using a plunger with IPA from kept in bottles). We went around both booths and the IR and UV curing ovens. These booths have two UV curing ovens built in series. At the time of the inspection, only Chain on Edge booth was operating; the Index Table was not operating.

We also inspected the new coating line. This line was operating at the time of my inspection. It has 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.

The coatings are used as received. The coatings from the drums are transferred to buckets, and then to pressure pots. The coatings are sprayed from the pressure pots. Next, we inspected the pressure pots for the EUCHAINTONEDGE, EUINDEXTABLE and EULINE3. I observed that the coatings around the EULINE3 pressure pots. I advised Gilbert about good house practices related coatings to reduce VOC emissions. He agreed to find the issue and clean out the area. Similarly, in the booths, the spent acetone after purging/cleaning coating tube lines are sprayed into the booth and the solvents are evaporated to the atmosphere. I inquired if the solvent can be sprayed into a container, so the solvent emissions can be reduced. He agreed to look into it.

Next, we visited the injection molding machines which provide parts for the other two coating lines. Facility has 11 portable injection molding machines plus one stationary molding machine. They mold polycarbonate (e.g.: 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. They are using a Mask Washer (GF MASK COTE 485S) and Mask Washer Antifoam (CWF-89) in the cleaning process. The SDSs show these are non-VOC cleaners. 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.

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 2019-2020 were:

2019	Usage (gal/yr)	Density (lb/gal)	Emissions (lb/yr)	Total (lb)
IPA (VOC)	440	6.55	1320	
Acetone	880	6.60	2882	5808 (2.90 TPY)
2020				
IPA (VOC)	330	6.55	2162	
Acetone	770	6.60	5082	7244 (3.62 TPY)
2021 (Jan-October)				
IPA (VOC)	330	6.55	2162	
Acetone	660	6.60	4356	6518 (3.26 TPY)

Mr. Gilbert informed me that they are not tracking the usage of acetone and IPA; instead, they are tracking the purchase records.

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 purchased. They emissions are below the limits, so this is acceptable.

SC VI.1 requires the permittee to 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.

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.

SC I.2 limits the VOC emissions from EULINE3 to 10.8 tons per year based 12-month rolling time period as determined at the end of each calendar month. Facility is keeping track of coating usages for each coating. The submitted records are the calculations submitted for annual MAERS report. The records show that the combined annual VOC emissions from all three lines as of December 2019 were 16,761 pounds (8.38 tons); and as of December 2020, were 13868 pounds (6.93 tons). The combined VOC emissions are less than the VOC emission limits.

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 pre-filters are replaced every week and back filters are replaced every two weeks. Upon my request, he opened one of the exhaust filter covers. The filter appeared to be not dirty and was in place. The spent filters are placed in barrels and 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 the permittee to 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.

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 usage records of the coatings used. The permit condition requires that the emissions to be calculated on a monthly basis and on a 12-month rolling period. The facility needs to calculate and keep the emissions records on a monthly and 12-month rolling basis.

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. 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.

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 2019 (EUSOLVENT= 1320 pounds and FGCOATING -16761 pounds) were 9.04 Tons (18081 pounds). The VOC emissions for Jan-December 2020 were 8.02 TPY (16030 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. From reviewing the SDSs, out of the 8 coatings the facility uses, SH50NHN6 (Scratch Resistant Topcoat for Poly Carbonate) contains about 5% Toluene. Facility rarely used this coating (4 gal in 2019, 5.3 gal in June 2020 and does not appear to be used in 2021). Based on the usage of this coating, the HAP emissions appears to be in compliance with the emissions 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 the permittee to 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 him that the permit condition requires that the emissions to be calculated on a monthly basis and on a 12-month rolling basis.

On Friday, November 11th, Mr. Gilbert emailed me the 2019, 2020, and 2021 coating usage and solvent (solvent and IPA) usage records and annual emission records. Facility also had submitted SDS for all coatings and solvents. Compared coating usages, SDS and emission calculations.

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 permit condition requires that the emissions to be calculated on a monthly basis and on a 12-month rolling period. The facility needs to calculate and keep the emissions records on a monthly and 12-month rolling basis.

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. The facility needs to keep records of HAP emissions even if the numbers are zero.

Discussion:

Facility is required to calculate and keep records of monthly and 12-month rolling VOC emissions for EUCHAINONEDGE and EUINDEXTABLE (FGCOATING, SC I.1) and EULINE3 (SC I.2) for each month before the end of the next month.

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

Facility is required to calculate and keep records of monthly and 12-month rolling VOC emissions for 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.

Facility is required to start these emission calculations and recordkeeping beginning January 2022.

Conclusion: The facility appears to be in compliance with the requirements of PTI No.219-02A and other applicable air quality requirements.

NAME Sebastian Kallemkal DATE 11/24/2021 SUPERVISOR Joyce