DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

P045729927

FACILITY: HICKS PLASTICS COMPANY LLC		**SRN / ID:** P0457
LOCATION: 51308 INDUSTRIAL DRIVE, MACOMB		**DISTRICT:** Southeast Michigan
CITY: MACOMB		**COUNTY:** MACOMB
CONTACT: Peter Murphy , Human Resources Manager		**ACTIVITY DATE:** 06/16/2015
STAFF: Sebastian Kallumkal	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS:		

On June 16, 2015, I conducted a self-initiated inspection at Hicks Plastics Company, LLC located at 51308 and 51335 Industrial Drive, Macomb, 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.

Initially, I arrived at the facility located at 51308 Industrial Drive at about 1:20 PM. I met Mr. Peter Murphy, Human Resources Manager (586 786 5640 x222), and Mr. Nick Mora, Paint Engineer (586 630 6404). I introduced and identified myself and stated the purpose of my inspection. The facility has two buildings. This building at 51308 Industrial Drive has 17 plastic injection molding machines, one metalizing chamber, and one solvent cleaner. The facility uses thermoplastic and thermosetting plastic materials. I did not inspect this building as it has no air quality concerns.

Mr. Murphy and Mr. Nora accompanied me to the building across the street located at 51335 Industrial Drive. I provided Mr. Murphy my credentials and the DEQ Environmental Inspections: Rights and Responsibilities brochure.

During the pre-inspection meeting, Mr. Murphy explained the facility's operations and products. Facility produces plastic injection molded parts and performs "vacuum metalizing" and decorative coating for the parts. Decorative finishes include thermal and UV cure basecoat, topcoat, etc. The metalized parts are used in the automotive lamp housings (automotive headlamps, tail lamps, brake lights, etc.) This building houses 8 metallizing chambers, 4 paint booths and 6 plastic injection molding machines. The facility started its operation at this location in 2003, and has about 69 employees. It operates 24 hours and 5 days per week

For the metallizing process, the parts are placed in the chamber, vacuum the atmosphere, and fill the chamber with argon. Next, Aluminum or other metal cathode is charged, and the metal plasma is generated using magnets. The aluminum (metal) plasma is coated on the plastic parts. The process takes about 4-6 minutes per load. The metallizing chambers are operated 5 days per week and 24 hours per day. The exhaust from vacuum process is released to the atmosphere via stacks. The facility has five metallizing chambers of various sizes.

The facility also performs basecoat and topcoat painting. The basecoat application is performed to enhance metallizing. Topcoat application is done for parts longevity. The facility has four paint booths (Paint Line #2, Paint Line #3, Paint Line 4 and Paint Line #5). Paint Line #5 is a small stand-alone, portable, open spray coating station used for painting inside of very small parts. The outside is covered using masks. Paint Line 4 is a UV coating booth equipped with robotic gun, water wash and IR oven. Paint Lines 2 and 3 are equipped with exhaust filters for particulate control. The facility is keeping log of coating materials used per day. Mr. Nora told me that they are using the coating as received. The facility is using HVLP guns for the coating applications. Lacquer thinner is used for the surface cleaning of plastic parts inside the metallizing booths, cleaning guns in the parts washer, etc. The spent solvent is stored with other liquid waste and collected in 55 gal drums which are disposed by Safety Kleen Corp.

Mr. Murphy and Mr. Nora accompanied me for the inspection of the facility. We inspected the metallizing chambers, paint booths, solvent cleaner, plastic injection molding machines, curing ovens, etc. The exhaust filters in the paint booths 2 and 3 are replaced weekly and intake air filters are replaced monthly. The spent filters are bagged and discarded in to the trash. The facility has two natural gas fired curing

ovens for painted parts. The two natural gas fired curing ovens were operated at 356°F (anneal) and 450°F (bake). Both ovens are manufactured by Wisconsin Oven Corp.

The UV/IR coating line has water wash control system. The booth was operating at the time of our inspection. I observed that covers for two containers for the clear coats were kept open while pumping the coating. I advised them to keep them closed as much as practical. Mr. Nora told me that they use denatured alcohol to wipe the parts before coating in this booth.

Paint Booth 5 only uses Paint-1370 which contains 5-15% xylenes. Paint line 4 uses mostly Paint-1090 which uses 3.18% Toluene, 6.51% xylenes and 5-10% MIBK. The coatings uses in Booth 4 do not contain any HAPs. Paint Booths 2 and 3 uses mostly Paint-1100 which contains about 37% toluene and Paint 1110 (reducer) which contains about 99% toluene.

The facility has a mask washer which cleans masking parts used in the painting parts. The washer uses a water-based cleaner, operates daily about 1-1/2 hours and the exhaust is vented outside. The facility has also one solvent based parts washer. This parts washer is serviced by Safety Kleen Corp. I did not inspect this parts washer at this time.

The processes or equipment at the facility may be exempt from permit to install (R336.1201) requirements pursuant to following exemption rules.

Process	Exemption Rule
Plastic Injection Molding	R336.1286(b)-Plastic injection, compression, and transfer molding equipment and associated plastic resin handling, storage and drying equipment
Vacuum Metalizing	R336.1285(i)-Brazing, Soldering, Welding, or plasma coating equipment
Solvent Parts Washer	R336.1281(h)-Cold cleaners that have an air/vapor interface of not more than 10 square feet
Mask Washer	R336.1281(e)- Equipment used for washing or drying materials, where the material itself cannot become and air contaminant, if no volatile organic compounds that have a vapor pressure greater than 0.1 mm of Hg at STP conditions are used in the process and no oil or solid fuel is burned.
Paint Booths and Ovens	R336.1287(c)-A surface coating line if all of the following conditions are met: i) The coating usage rate is not more than 200 gallons, as applied, minus water, per month ii) Any exhaust system that serves only coating spray equipment is supplied with a properly installed and operating particulate control system iii) Monthly coating use records are maintained on file for the most recent 2-year period and made available to the air quality division upon request

R336.1103(k)- Coating line means an operation which is a single series in a coating process and which comprised of 1 or more of coating applicators and any associated flash-off areas, drying areas, and ovens wherein 1 or more surface coatings are applied and subsequently dried or cured.

R336.1632-Emission of Volatile Organic Compounds from existing automobile, truck and business machine plastic part coating lines

Facility is keeping track of the coating usage and volatile organic compounds (VOC) emissions. From the submitted records the facility's VOC emission per coating line does not appear to be more than 2000 pounds per month or 10 tons per year or 30 tons per year from all coating lines at the facility. Therefore the facility is currently exempt from complying with the requirements of R336.1632 except R336.1632(7).

R336.1632 requires that the facility obtain current information and maintain daily records necessary for the determination of compliance with the provisions of R336.1632, as required in R336.2041 (determine VOC content of the coatings and to calculate VOC emissions).

R336.1707- The solvent cleaner (Parts Washer) is subject to R336.1707.

Mr. Nora provided me copies MSDS for the coatings, lacquer thinner, denatured alcohol, etc.He provided me copies of the 2014 and Jan-May, 2015 coating usage records and emission rates. The facility is keeping records of the coating usage for each booth and VOC emissions calculations.

The submitted records show that facility has used less than 200 gallons coatings in each month in each paint booth. Facility's potential to emit for a single HAP (toluene) appears to be below 10 tons per year and aggregate HAPs emissions less than 25 tpy. On June 23, 2015, during a meeting at the facility with Mr. Jeff Ward, General Manager, Peter Murphy and Nick Mora, I suggested that because the facility's potential to emit is about 8.3 tons per year for a single Hazardous air pollutant (HAP) which is toluene, the facility needs to obtain an Opt-Out Permit for the coating operations. I explained that getting an opt-out permit would provide the facility the flexibility to use more than 200 gallons in any booth provided they don't go over the permit limits. Accepting HAP (hazardous air pollutants) emission limits to less than major source threshold would opt out the facility from the federal NEHSAP (National Emission Standards for Hazardous Air Pollutants) requirements.
I explained to them about how to apply for a permit. They agreed to apply for a permit for the coating operations. Mr. Ward told me that within next 5 years they will cease the coating operations.

Conclusion: Based on the information gathered during the inspection and the records review, the facility appears to be in compliance with applicable air quality rules. The facility is advised to obtain a permit for its coating booths with opt out limits for HAPS.

NAME Sebastian Kallumbo DATE 6/24/15 SUPERVISOR CJE