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

N559938955

FACILITY: LYONS INDUSTRIES		**SRN / ID:** N5599
LOCATION: 30000 M-62 WEST, DOWAGIAC		**DISTRICT:** Kalamazoo
CITY: DOWAGIAC		**COUNTY:** CASS
CONTACT: Nikki Bisnett , Purchasing Materials Manager		**ACTIVITY DATE:** 03/16/2017
STAFF: Amanda Chapel	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On March 16, 2017, AQD's Amanda Chapel (staff) went to conduct an unannounced inspection of Lyons Industries, Inc. (facility) located in Dowagiac, Cass County. The purpose of the inspection was to determine compliance with Renewable Operating Permit (ROP) MI-ROP-N5599-2017 and all applicable state and federal air regulations. The following will summarize plant operations and facility's compliance status.

I arrived at the facility at 10:30am. I drove around the facility and there were no visible emissions or odors coming from the facility. I entered the front door and made contact with the woman sitting at the front desk. I stated I was here to perform an unannounced air quality inspection and asked for Ms. Nikki Bisnett. She called Ms. Bisnett who came out and met me in the lobby and we went back to a conference room. I introduced myself, provided a business card, and stated I was there to complete an unannounced air quality inspection.

The last inspection was completed by Dennis Dunlap in 2015 and the facility was in compliance. The facility employs about 150 people and they run 2 shifts per day. Operating hours are Monday to Friday, 6am to 3:30 pm. The facility uses a vacuum and thermoform molding process to make the molds and then it goes through a booth where the resin is applied and cured. There are no boilers or cold cleaners at the facility. There is an emergency generator which was installed in 2015. It is subject to NESHAP ZZZZ and it is included in the ROP.

First, Ms. Bisnett and I reviewed the facility's records. Ms. Bisnett informed me they stopped using acetone at the facility in 2008 and now use Acrastrip. They also no longer use Gel Coat and only use vac machines and resin. EUDUSTCOLLECTOR has been replaced since the last inspection. It is all a self-contained system now. The dust collected goes straight into a dumpster which is hauled away. The dust collector appeared to be in good working order at the time of the inspection. No visual emissions were observed. A daily inspection and visual emission check of the dust collector is required by the permit. Ms. Bisnett provided me with a daily inspection log which satisfies this permit requirement.

FGBOOTHSUMMARY includes both EUACRBOOTH1 and EUGELBOOTH. Only EUACRBOOTH1 is in use at the facility. There are limits for pounds per hour and tons per year for VOC, Styrene, and Acetone. Acetone is no longer in use at the facility. The VOC limits are being calculated to include the Resin, Catalyst, and Acrastrip. No cleanup solvent is reclaimed from the operation.

VOC:
The VOC limit is 124.2 pounds per hour, calculated monthly. The current monthly pounds per hour average for 2016 is 29.76 lbs/hour. The highest it reached in 2016 is 37.03 lbs/hour in January 2016. This is well under the VOC limit. The tons per year VOC limit is 98.5 tons. The current tons per year calculated for 2016 on a 12-month rolling time period is 77.02 tons/year. The highest tons per year in 2016 was in November at 77.07 tons/year. This is within the permitted VOC tons per year limit.

Styrene:
The Styrene limit is 123.9 pounds per hour, calculated monthly. The current monthly pounds per hour average for 2016 is 25.82 lbs/hour. The highest it reached in 2016 is 33.17 in January 2016. This is well under the allowed Styrene pounds per hour permit limit. The tons per year Styrene limit is 98.2 tons/ The current tons per year calculated for 2016 on a 12-month rolling basis is 69.21 tons/year. The highest tons per year in 2016 was in November 2016 at 69.25 tons/year. This is below the permitted Styrene tons per year limit.

Copies of the SDS for the resin, catalyst, and Acrastrip were obtained during the inspection.

Recordkeeping documents show the weight percent of VOC and free styrene in each of the above mentioned materials. Monthly operating hours are kept along with monthly and 12-month rolling time period total usage in both pounds and tons. Monthly and 12-month rolling total mass emissions are being calculated. Filters are visually inspected daily. Differential pressure readings should be recorded daily and not just checked they are within an acceptable range.

There was discussion in the previous inspection about the need to track vinyl toluene as part of the VOC calculations from the resin. The facility is required to equip and maintain all booths with HVLP spray guns or equivalent technology. They use MVP ATC-4000 low pressure, nonatomized external mix chop guns. This meets this requirement. Differential pressure readings and filters are checked daily. Filters are usually replaced at least one time per day. Ms. Bisnett provided me a copy of the daily inspection sheet from February 2017. All waste is stored in closed containers. No open containers were observed during the inspection.

The facility is subject to NESHAP WWWW. They are considered Mechanical resin application because they use an open molding process which composite materials are applied to the mold by using mechanical tools such as spray guns, pressure fed rollers, and flow coats and then rolled out by non-mechanical tools before curing. This limits the facility to 88 lb/ton resin of Organic HAP. The catalyst does contain an Organic HAP, Dimethyl phthalate, but it does not need to be included in the calculation since it is not part of the resin as received by the supplier. The emission factor for open molding nonatomized mechanical resin application is 0.107x%HAPx2000. The resin contains 32% styrene according to the SDS. This equates to 0.107x0.32x2000 =68.48 pounds of organic HAP (styrene) emitted per ton of resin used. This is below the limit of 88 lbs of organic HAP/ton resin. The facility appears to be in compliance with NESHAP WWWW permit limits.

The facility's generator is subject to NESHAP ZZZZ. This needs to be included in future semiannual reports and annual certification of compliance.

Next, Ms. Bisnett led me on a facility tour. First we observed the vac machines. These form the initial plastic sheeting to the proper mold shape. The facility has eight vacuum thermoform machines set up into two sets of four. A bulk resin tank is outside the facility. They receive two tanker loads of resin per week, about 38,000 lbs of resin per load. The resin is mixed inside 6 mixers or shears inside the building. Styrene odors were strong in the mixing area. Filler and titanium are added to the resin during the mixing process.

The ACRBOOTH1 was in use during the inspection. The molds are placed onto carts and wheeled into one side of the booth. A barcode on the mold is scanned and the information is sent to the computer. The mechanical arm receives the information about the mold type and the programming determines the strokes needed to cover the mold. There are four mechanical arms in the booths and multiple parts can be worked on at a time. Workers wear respirators. The catalyst and resin are mixed as they come out separately from the spray gun. Once the parts are sprayed, they are reinforced, sprayed again, and moved into a curing area.

There is an outside dust collector. This was observed during the inspection. No issues were noted. The dust collector is hooked up to the individual machines in the sawing/cutting area. This area was dusty but there did not appear to be any fugitive emissions from the area. In this area, excess plastic is trimmed off the molds and they are sanded. Once the product is complete, it is transferred to the shipping area to be boxed and shipped.

The generator, subject to NESHAP ZZZZ is located along the west side of the building. Ms. Bisnett said it kicked on for a total of 3 days last year.

We went back to the conference room for the closeout meeting. I told Ms. Bisnett that I would go back to the office to thoroughly review the records and MSDS from the inspection. Visually, everything looked to be in compliance with the permit in the production area. Ms. Bisnett said that she was going to follow up with the supplier of the resin to determine if vinyl toluene was an ingredient. I thanked her for her help and left the facility at 12:20 pm.

An email was sent to Ms. Bisnett on March 20, 2017 requesting the certified product analysis sheet to determine if the new resin from AOC contains vinyl toluene. On March 30, I spoke with Mr. Frank Sizemore, the Director of Regulatory Affairs for AOC. In an email, he confirmed that the trade secret

ingredient in the Resin C515-IIA-06 is a VOC. This will need to be included in any future VOC tracking numbers for the facility.

NAME [illegible] DATE 3/30/17 SUPERVISOR 4/3/2017