

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

N757830135

FACILITY: EAGLE INDUSTRIES INC		SRN / ID: N7578
LOCATION: 30926 CENTURY DR, WIXOM		DISTRICT: Southeast Michigan
CITY: WIXOM		COUNTY: OAKLAND
CONTACT: Tom Robertson , EHS Coordinator		ACTIVITY DATE: 06/24/2015
STAFF: Samuel Liveson	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection of a Major Source with AQD Staff Erik Gurshaw.		
RESOLVED COMPLAINTS:		

On Wednesday, June 24, 2015, AQD Environmental Quality Analyst Erik Gurshaw and I conducted an unannounced, scheduled, level 2 inspection of Eagle Industries, Inc. (Eagle), located at 30926 Century Drive in Wixom, 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, 1994 PA 451, as amended, and the conditions of MI-ROP-N7578-2012b.

We arrived on site around 10:30 AM. We met with Mr. Tom Robertson, EHS Coordinator. Mr. Robertson provided records and explained equipment and operations. I provided Mr. Robertson with my contact information and a copy of the pamphlet "DEQ Environmental Inspections: Rights and Responsibilities."

Opening Meeting

Eagle is a Tier I automotive supplier of foam products such as head rests. The company has approximately 160-180 employees. Production is run Monday through Thursday, Friday is reserved for overflows of production, and maintenance is run Saturdays and Sundays. The facility runs two 10-hour shifts.

To make foam products, resins are mixed together with a chemical base and heated to approximately 130°F and compressed into shape in reaction injection molding machines. A mold release is sprayed into these machines before the resin is input. The facility is major for VOCs due to the mold release product associated with these reaction injection molding machines. The mold releases used are PU-16214, PU-16224, and PU-16148. The facility is minor for hazardous air pollutants (HAPs).

According to Mr. Robertson, there are no cold cleaners, boilers, or emergency generators on site.

Facility Walk-Through

EUCELL1 was operating during the inspection. EUCELL1 was using mold release PU-16214. Grid filters appeared to be in place and operating properly per FGPLYFOAM Special Condition (S.C.) IV.1. Mold release appears to be applied using high volume low pressure (HVLP) applicators per S.C. IV.2. According to Mr. Robertson, pressure test caps are available for pressure testing. I did not ask Mr. Robertson to measure the pressure of the applicators. I collected a sample of mold release PU-16214 from EUCELL1 to test using USEPA Method 24 Analysis.

EUCELL2 was not operating during the inspection. Mr. Robertson explained that when running, it uses mold release PU-16224. The type of mold release used on each cell depends on the product being manufactured. Line EUCELL2 appears to be equipped with HVLP

applicators.

EUCCELL3 was operating during the inspection. This line produces Eagle's own line of foam pillows. Mold release PU-16224 is used on the line. Filters appear to be in place and operating properly per S.C. IV.1, and mold release is applied by hand with what appear to be HVLP applicators per S.C. IV.2.

EUCCELL5 was operating using mold release PU-16148. Filters appear to be in place and operating properly per S.C. IV.1, and HVLP applicators appear to apply mold release per S.C. IV.2.

EUCCELL6 was operating with mold release PU-16148 out of a 400 gallon container at the line. Filters appear to be in place and operating properly per S.C. IV.1. HVLP applicators appear to be used per S.C. IV.2.

EUCCELL8 was not operating during the inspection. Mr. Robertson explained that this line is being used to test prototype molds.

EUCCELL9 was operating during the inspection. The line uses mold release PU-16148 from a 55 gallon drum at the line. Filters appear to be in place and operating properly per S.C. IV.1. HVLP applicators appear to be used per S.C. IV.2.

EUCCELL10 was operating during the inspection. This line appears to have filters in place per S.C. IV.1, and HVLP applicators per S.C. IV.2.

EUCCELL12 is permitted separately from FGPLYFOAM in MI-ROP-N7578-2012a. This line is in the warehouse part of Eagle, separated from the other lines by a hallway. According to Mr. Robertson, eventually Eagle plans to move its warehouse to another address nearby, and construct additional reaction injection molding lines around EUCCELL12. EUCCELL12 began operating several weeks ago. The line uses mold release PU-16148, applied by hand using what appeared to be HVLP applicators per S.C. IV.2. Filters appear to be in place and operating properly per S.C. VI.1.

Waste Storage Area

Mr. Robertson showed us the storage area for hazardous and nonhazardous waste material before it is disposed. All containers appeared to be covered and no odors were discernable per S.C. III.1. Materials are disposed weekly by Resource Restoration. Mr. Robertson provided a Manifest of Disposal for hazardous waste per S.C. III.1.

Recordkeeping

According to Mr. Robertson, Eagle updated its mold release tracking system last year so that a meter tracks the amount of gallons of mold release removed from three main tanks for mold release PU-16148, PU-16214, and PU-16224. Also tracked is on which cell the mold release is used.

Mr. Robertson provided updated Material Safety Datasheets (MSDSs) for mold releases PU-16224, PU-16214, and PU-16148 per FGPLYFOAM S.C. VI.2 and VI.3(b). The MSDS for the water-based paint used on site is found in the manila folder. Also provided were Certificates of Analysis (COA) for VOC content for all mold releases per S.C. V.1.

For mold release PU-16214, the COA VOC content is 6.07 pounds (lbs) VOC/gallon of mold release. The result of the sample I collected and sent for analysis provided a VOC content of

6.01 lbs VOC/gallon of mold release. The similarity of these results appears to confirm the COAs provided by Eagle.

The VOC content in mold releases is limited to 6.3 lb VOC/gal (minus water) in EUCELL12 and to 6.7 lb VOC/gal (minus water) in FGPLYFOAM per S.C. II.1 and S.C. II.2 respectively. All mold releases are solvent-based and do not appear to contain water. The mold releases and the water-based paint appear to be below the limits as shown in this table.

Mold Release / Paint	Density	lb VOC/ (gal – water)	EUCELL12 Limit (lb VOC/ (gal-water))	FGPOLYFOAM Limit (lb VOC/ (gal-water))	Compliance
PU-16148	6.36	6.23	6.3	6.7	Y
PU-16224	6.38	6.10	6.3	6.7	Y
PU-16214	6.57	6.07	6.3	6.7	Y
AQD Lab Result for PU-16214	6.56	6.01	6.3	6.7	Y
Black Paint	--	0.46	NA	0.50	Y

EUCELL12

On July 6th, Mr. Robertson provided emissions records for both EUCELL12 and FGPLYFOAM through May of 2015 per S.C. VI.1. Cell 12's highest emission rate was 0.08 tons per 12 month rolling time period in May of 2015 per S.C. VI.3(d), well below the permit limit of 25.0 tons per year (tpy) per EUCELL12 S.C. I.1.

Mr. Kevin Burwell, Maintenance Manager, provided a log of weekly maintenance and process filter change logs for May of 2015 per S.C. VI.4. Until production increases on EUCELL12, filters are changed as needed. Records show that filters were changed on the control cab of EUCELL12 twice the week of May 25th. As production increases, the filters will be changed weekly.

FGPOLYFOAM

Eagle provided records of gallons and emissions of each mold release and paint used on a monthly and 12-month rolling basis per S.C. VI.3(a), VI.3(c), and VI.3(d) through May of 2015. The maximum monthly emissions of VOCs for FGPLYFOAM were in April of 2015, and were 133.82 tons per 12-month rolling time period. This is below the facility's limit of 142.1 tpy per S.C. I.1.

Monthly records of VOC emissions for each cell were provided through May of 2015. Below is the maximum 12-month rolling VOC emission rates for each applicable cell. Emissions from individual cells appear to be below their emission limit of 36.4 tpy per S.C. I.2.

Cell	Emissions (tpy)
EUCELL1	4.73 in May of 2014
EUCELL3	5.78 in November of 2014
EUCELL6	20.62 in February of 2014

EUCCELL9	26.09 in March of 2014
EUCCELL10	11.09 in December of 2013

Below is the maximum 12-month rolling VOC emission rates for EUCCELL2 and EUCCELL8. Emissions from individual cells appear to be below their emission limit of 46.2 tpy per S.C. 1.3.

Cell	Emissions (tpy)
EUCCELL2	22.54 in July of 2014
EUCCELL8	0.96 in May of 2014

Additionally, EUCCELL5 has a maximum 12-month rolling VOC emission rate of 53.98 tpy in April of 2015. This is below its limit of 56 tpy per S.C. 1.4.

Mr. Kevin Burwell, Maintenance Manager, provided a log of weekly maintenance and process filter change logs for May of 2015 per S.C. VI.4. Records show that filters are changed several times per week for each cell.

FGPOLYFOAM Hydrocarbon Naphtha (CAS No. 64742-47-8) Exceedance

To calculate hydrocarbon naphtha and naphthalene emissions, Mr. Robertson has VOC breakdowns provided by ChemTrend for each mold release. These VOC breakdowns show the lbs of hydrocarbon naphtha and naphthalene per gallon of coating per S.C. 4(b).

Upon review of the VOC breakdowns, it was discovered that Eagle Industries does not account for all of the hydrocarbon naphtha in its mold release. Eagle Industries does not account for 6.0 lbs hydrocarbon naphtha/gal of mold release in PU-16214; Eagle Industries considered that 0 lbs of hydrocarbon naphtha were present per gallon of mold release PU-16214. While hydrocarbon naphtha was under calculated in mold release PU-16214, the amount of hydrocarbon naphtha was over calculated in mold release PU-16224 as 4.2 lbs/gal. The corrected amount of hydrocarbon naphtha in PU-16224 is 1.8 lbs/gal. On July 14, Mr. Robertson provided records of hydrocarbon naphtha emissions with these corrections made for mold releases PU-16214 and PU-16224. **These records show that the rolling 12-month total of hydrocarbon naphtha emissions for FGPOLYFOAM appear to exceed the emission limit of 49,020 pounds per year from March of 2012 through June of 2015 per S.C. 1.5.**

Hydrocarbon naphtha is a Toxic Air Contaminant (TAC) but it is not a HAP. According to AQD Senior Permit Engineer Julie Brunner, the emission limit of 49,020 pounds per year in S.C. 1.5 was established in accordance with R 225 modeling. I spoke with Mr. Robertson over the phone on July 14, 2015, about the discrepancy. The facility appears to have misunderstood terminology in the VOC breakdowns provided by ChemTrend. In CAS 64742-47-8 is described in both the PU-16214 and PU-16224 ChemTrend analyses as "Petroleum distillates, hydrotreated light", instead of as hydrocarbon naphtha.

FGPOLYFOAM Naphthalene

The maximum emissions of naphthalene appear to be 75.18 lbs of naphthalene per 12-month rolling time period in April of 2015. This is below the permit limit of 178.1 pounds per year per S.C. 1.6.

Compliance

Based on the AQD inspection and records review, it appears that Eagle is in compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the conditions of MI-ROP-N7578-2012b except for the annual emission rate of hydrocarbon naphtha. A Violation Notice shall be issued to address this exceedance.

NAME *Ann L...*DATE 7/15/2015SUPERVISOR CTE