

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

N757836766

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: 08/16/2016
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of a major source.		
RESOLVED COMPLAINTS:		

On Wednesday, August 16, 2016, 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.

I arrived on site around 9:20 AM. I 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, engine covers, and foam pillows. Parts go through a reaction injection molding process. 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 (RIM) 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-16241, PU-16259, and PU-16224. Mold release PU-14211 is being added to EUCELL12 this month. The facility is minor for hazardous air pollutants (HAPs).

According to Mr. Robertson, there are no cold cleaners on site.

Facility Walkthrough

EUCELL12 – MI-ROP-N7578-2012b

We visited EUCELL12. The line was operating during the facility walkthrough. EUCELL12 is permitted separately from FGPLYFOAM in MI-ROP-N7578-2012a. This line is in a building adjacent to the other cells and attached to the other building by a hallway. Starting in July, EUCELL12 began using a new mold release, PU-14211. Two high volume low pressure (HVLP) applicators are used per S.C. IV.2 to manually apply mold release into a spray booth system. Filters appear to be in place to control overspray per IV.1 and are changed twice a week according to filter logs provided per S.C. VI.4. Molded parts are trimmed in electronic machining operations that release into the general in-plant environment. These appear to be exempt from obtaining a permit per R 285(l)(vi)(B).

EUCELL1 & EUCELL10 – MI-ROP-N7578-2012b

EUCELL1 & EUCELL10 are the two cells on site that include paint coating application. All cells besides cell EUCELL12 are permitted under ~~FG~~ FGPLYFOAM.

We visited EUCELL1, which was operating during the facility walkthrough. Mold release is applied to the line using a manual HVLP applicator, and paint is applied using an HVLP paint applicator per S.C. IV.2. Filters appear to be in place per S.C.IV.1, and are held in place by a metal grate. Filters are changed twice a week according to filter logs.

We visited EUCELL10, which was operating during the facility walkthrough. Mold release appears to be applied via manual HVLP applicators per S.C. IV.2. Paint is applied robotically using an HVLP applicator. Paint usage is determined by Mr. Jim McLaughlin based on purchase records. Filters appear to be in place per S.C. IV.1 and are changed daily according to filter logs.

EUCELL3 – MI-ROP-N7578-2012b

We visited EUCELL3, which was operating during the facility walkthrough. This cell creates foam pillows for retail. Two HVLP applicators are used to apply mold release per S.C. IV.2. Filters appear to be in place to control mold release overspray per S.C. IV.1, and are changed twice a week according to filter logs.

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 including lightbulbs are disposed by Resource Restoration.

Additional Equipment

We visited a small natural-gas fired boiler for service water heating on site. The boiler has a capacity of 50 gallons and appears to be exempt from obtaining a Permit to Install per R 282 (b)(i).

Emergency Generator

Eagle has a natural-gas fired emergency generator that was installed two years ago according to Mr. Robertson. The emergency engine appears to be exempt from obtaining a Permit to Install per R 285(g); however it appears to be subject to federal standard 40 CFR Part 60 Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. As of the date of this staff report I have not received confirmation of engine certification, non-resettable hours meter, and usage records. I will follow up with Mr. Robertson and Mr. Kevin Burwell, Maintenance Manager, to evaluate emergency engine compliance with 40 CFR Part 60 Subpart JJJJ.

Recordkeeping

According to Mr. Robertson, to track mold release usage a meter tracks the amount of gallons of mold release removed from each mold release main tank. Mold release main tanks have a 400 gallon capacity. Also tracked is on which cell the mold release is used. Mr. Robertson provided an example handwritten log of this mold release tracking system. All mold release tanks are closed per S.C. III.3.

VOC Content

Mold releases PU-16259 and PU-16241 started being used in January of 2016 and March of 2016 respectively. At this point Mr. Robertson is using VOC contents of the old (previous) mold releases to determine VOC emissions. These VOC contents are larger than the new mold releases, but the VOC contents are no longer valid. I asked Mr. Robertson to update records with new VOC contents of current mold releases. Below are the VOC contents of the current mold releases and the old mold releases.

Current Mold Release	VOC Content of Current Mold Release based on Formulation Data (lb/gal minus water)	Previous Mold Release	VOC Content of Previous Mold Release based on Certificate of Analysis (lb/gal minus water)
PU-16259	5.8	PU-16214	6.07
PU-16241	6.2	PU-16148	6.23

Of the three mold releases used (PU-16259, PU-16224, and PU-16241), Mr. Robertson provided a Certificate of Analysis for PU-16224, but does not have Method 24 results for mold releases PU-16259 and PU-16241, which started being used in January of 2016 and March of 2016 respectively. Mr. Robertson provided formulation data for all mold releases used. The formulation data shows the VOC breakdown into individual compounds, and the water content in these mold releases is approximately zero according to Ms. Karen Kuroda, Materials Compliance Management Specialist at Chem-Trend.

Per S.C. V.1, the facility shall determine the VOC content, water content and density of any paint coating and mold release agent using federal Reference Test Method 24 (Method 24). I asked Mr. Robertson to acquire Method 24 results for mold releases by the end of the year. If Method 24 results are not acquired timely, MDEQ-AQD may issue a Violation Notice to Eagle per S.C. V.1.

Material Safety Datasheets (MSDSs) for mold releases PU-16224, PU-16214, and PU-16148 were collected during the previous facility inspection per FGPLYFOAM S.C. VI.2 and VI.3.b and EU-CELL12 S.C. VI.2 and VI.3.b, and are located in the facility manila folder. The Environmental Data Sheet for the water-based paint used on site is also provided. Because the paint is water-based, MDEQ-AQD accepts VOC content based on formulation data.

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. The table below shows the total amount of VOC per gallon in mold releases based on current VOC breakdowns provided by Mr. Robertson. Paint VOC content is based on the paint Environmental Data Sheet. The mold releases and the water-based paint VOC contents appear to be below the limits as shown in this table.

Mold Release / Paint	lb VOC/ (gal – water)	EUCELL12 Limit (lb VOC/ (gal-water))	FGPLYFOAM Limit (lb VOC/ (gal-water))	Compliance
PU-16259	5.8	6.3	6.7	Y
PU-16224	6.0	6.3	6.7	Y
PU-16241	6.2	6.3	6.7	Y
Black Paint	0.48	NA	0.50	Y

EUCELL12 VOC Emissions Records

On August 18th, Mr. Robertson provided emissions records for both EUCELL12 and FGPLYFOAM through June of 2016 per S.C. VI.1. Cell 12's highest VOC emission rate was

6.91 tons per 12 month rolling time period in June of 2016 per S.C. VI.3.d, below the permit limit of 25.0 tons per year (tpy) per EUCELL12 S.C. I.1.

On September 6, Mr. Robertson provided weekly logs of maintenance and process filter changes for the month of August of 2016 per S.C. VI.4. Records show that filters are changed twice a week on EUCELL12.

FGPOLYFOAM VOC Emissions Records

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 on FGPOLYFOAM through July of 2016. The maximum monthly emissions of VOCs for FGPOLYFOAM 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 June of 2016. Below is the maximum 12-month rolling VOC emission rates since January of 2015 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	VOC Emissions (tpy)
EUCELL1	3.47 in April of 2015
EUCELL3	5.69 in April of 2016
EUCELL6	14.16 in August and September of 2015
EUCELL9	24.95 in March of 2015
EUCELL10	9.19 in April of 2015

Below is the maximum 12-month rolling VOC emission rates for EUCELL2 and EUCELL8 since January of 2015. Emissions from individual cells appear to be below their emission limit of 46.2 tpy per S.C. I.3.

Cell	Emissions (tpy)
EUCELL2	21.54 in January of 2015
EUCELL8	0.37 in January of 2015

Additionally, EUCELL5 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. I.4.

On September 6, Mr. Robertson provided weekly logs of maintenance and process filter changes for the month of August of 2016 per S.C. VI.5.

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

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

Eagle exceeded its hydrocarbon naphtha emission limit through October of 2015. Eagle received a violation notice for these exceedances, and in response reformulated its mold releases. Mold release PU-16259 use began, and mold release PU-16148 was discontinued.

Since October of 2015, hydrocarbon naphtha 12-month rolling emissions have decreased and are below the emission limit of 53,679 pounds per year per S.C. I.5. Hydrocarbon naphtha emissions were 43.267 pounds per year in the most recently recorded month of July of 2016.

FGPOLYFOAM Naphthalene (CAS No. 91-20-3)

The maximum emissions of naphthalene appear to be 75.18 pounds 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. I.6.

Compliance

Eagle appears to be in compliance. I will follow up with Mr. Robertson on emergency engine compliance with federal standards, and on the Method 24 VOC content analysis.

NAME Jan [Signature] DATE 9/27/2016 SUPERVISOR SK