

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

N757840830

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: 07/10/2017
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of a Title V source.		
RESOLVED COMPLAINTS:		

On July 10, 2017, Air Quality Division (MDEQ-AQD) staff Robert Joseph 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 (NREPA); the Air Pollution Control Rules; the conditions of Renewable Operating Permit (ROP) MI-ROP-N7578-2012c; and the conditions of Permit to Install (PTI) PTI No. 4-06E.

We arrived on site around 10:50 AM. We met with Mr. Tom Robertson, Engineering Design. Mr. Robertson provided records and explained equipment and operations. We provided Mr. Robertson with our DEQ identification and explained the purpose of the inspection.

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 injected. The facility is a Title V major source for volatile organic compounds (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, and PU-14211. The facility is a true minor for hazardous air pollutants (HAPs). According to Mr. Robertson, there are no cold cleaners on site.

The facility is planning to submit a PTI application for a new RIM machine (likely EUCELL14). The facility's proposed Renewable Operating Permit (ROP) MI-ROP-N7578-2017 finished its 45-day review by the United States Environmental Protection Agency (USEPA) on July 8, 2017. The ROP has yet to be finalized by the MDEQ-AQD.

Facility Walk-Through

EUCELL12 – PTI No. 4-06E

We visited EUCELL12. The line was operating during the facility walkthrough. EUCELL12 is permitted separately from FGPLYFOAM in MI-ROP-N7578-2012c. This line is in a building adjacent to the FGPLYFOAM cells and attached to the building that houses FGPLYFOAM by a hallway. Starting in July of 2016, EUCELL12 began using a new mold release, PU-14211. Manual high volume low pressure (HVLP) applicators are used per Special Condition (S.C. IV.2) to apply mold release into a spray booth system. A mold release wax is also brushed onto parts. We observed mesh filters in place snug and tight per S.C. IV.1, which are

changed twice a week according to filter logs provided per S.C. VI.4. Mr. Robertson showed us new replacement filters available on site. An area of shelves has one shelf for each RIM line that holds replacement filters of the size dimensions required for that RIM line.

FG-POLYFOAM - MI-ROP-N7578-2012c

We visited EUCELL10, which was operating during the inspection. This cell has HVLP applicators for manual mold release application and for automatic paint application per S.C. IV.2. We observed mesh filters in place per S.C. IV.1, held in place by a metal grate.

We visited EUCELL3, which was not operating. However we observed mesh filters in place and a manual HVLP applicator. This line produces foam pillows via RIM. Lines EUCELL5, EUCELL6, and EUCELL 9 were also visited. Lines EUCELL5 and EUCELL6 were operating and had mesh filters in place. EUCELL9 was not operating. HVLP applicators are connected to closed containers of mold release at each RIM cell.

Mold Release Sample – PU 14211

I provided Mr. Robertson with a sample jar to collect mold release PU-14211, which a co-worker collected. Laboratory results of USEPA Method 24 testing by Advanced Technologies of Michigan (AToM) demonstrated a VOC content of 6.05 pounds VOC per gallon of coating solids. This appears to corroborate a VOC content of 6.04 pounds per gallon as provided in facility formulation data within a margin of error. 6.04 pounds VOC per gallon is the facility material limit per PTI No. 4-06E S.C. II.1. The material limit for EUCELL12 is based upon the VOC content of mold release PU-14211.

In December of 2016, Eagle Industries had received a violation notice because formulation data from their mold release provider ChemTrend showed a VOC content of 8.0 lbs VOC/gallon of coating for mold release PU-14211. The VOC material limit at the time was 6.3 lbs VOC/gallon. In response, Eagle Industries verified that it had received incorrect formulation data from ChemTrend, and that the actual VOC content was 6.04 pounds VOC per gallon of coating. The violation was resolved on June 20, 2017. The Method 24 analysis provided by AToM from a sample collected during this inspection appears to verify ChemTrend's corrected VOC content of mold release PU-14211.

Waste Storage Area

Mr. Robertson showed us the storage area for hazardous and nonhazardous waste material before it is disposed. Rags with mold release are considered hazardous waste. Waste is labeled and stored in 55 gallon containers. Containers appear to be covered per EUCELL12 and FG-POLYFOAM S.C. III.1. Materials including lightbulbs are disposed by Resource Restoration.

Emergency Engine

Eagle has one natural gas-fired emergency engine on site which was manufactured July 29, 2013 and is subject to 40 CFR Part 60 Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. I observed the engine on site. On July 25, Mr. Kevin Burwell, Maintenance Manager, provided a picture of the non-resettable hours meter per §60.4237. The engine has operated for a total of 32.2 hours. Because it has not operated greater than 100 hours, or for more than 500 hours per 12-month rolling time period, I did not request records of hours of operation.

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. All mold release tanks are closed per EUCELL12 and FG POLYFOAM S.C. III.3.

Method 24 VOC Contents

On July 17th, Mr. Robertson provided Method 24 results for all mold releases used at the facility (PU-14211, PU-16244, PU-16241, and PU-16259) per EUCELL12 and FG-POLYFOAM S.C. V.1. VOC contents and their permit limit are listed below.

Mold Release	Method 24 VOC Content	Material Limit	Special Condition
PU-14211	6.1 lb/gal	6.04 lb/gal	PTI 4-06E S.C. II.1
PU-16244	6.1 lb/gal	6.7 lb/gal	MI-ROP-N7578-2012c FG-POLYFOAM S.C. II.2
PU-16241	6.2 lb/gal	6.7 lb/gal	MI-ROP-N7578-2012c FG-POLYFOAM S.C. II.2
PU-16259	5.9 lb/gal	6.7 lb/gal	MI-ROP-N7578-2012c FG-POLYFOAM S.C. II.2

The Method 24 test result provided by Eagle Industries for mold release PU-14211 shows 6.1 pounds VOC per gallon of coating solids compared with the expected mold release VOC content of 6.04 pounds VOC per gallon of coating solids. Because of a margin of error in Method 24 VOC content, MDEQ-AQD will use discretion to avoid issuing a violation notice for this Method 24 result.

EUCELL12 VOC Emissions Records

On July 11th, Mr. Robertson provided emissions records for both EUCELL12 and FG POLYFOAM through June of 2017 per S.C. VI.1. Cell 12's highest VOC emission rate was 23.31 tons per 12 month rolling time period in June of 2017 per S.C. VI.3.d, below the permit limit of 43.0 tons per year (tpy) per EUCELL12 S.C. I.1.

On July 25, Mr. Kevin Burwell, Maintenance Manager, provided weekly logs of maintenance and process filter changes for the weeks of July 3 and July 10, 2017, 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 for FG POLYFOAM through June of 2017. The maximum monthly emissions of VOCs for FG POLYFOAM have steadily decreased since April of 2015 when 133.82 tons of VOC had been emitted over a 12-month rolling time period. This is below the facility's limit of 142.1 tpy per S.C. I.1. The most recent month of June had 72.55 tons of VOC emitted over a 12-month rolling time period.

Monthly records of VOC emissions for each cell were provided through June of 2017. Below is the maximum 12-month rolling VOC emission rates since January of 2016 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)
EUCCELL1	3.38 in December of 2016
EUCCELL3	5.88 in October and December of 2016
EUCCELL6	13.77 in March of 2016
EUCCELL9	18.10 in January of 2016
EUCCELL10	12.83 in June of 2017

Below is the maximum 12-month rolling VOC emission rates for EUCCELL2 and EUCCELL8 since January of 2016. Emissions from individual cells appear to be below their emission limit of 46.2 tpy per S.C. I.3.

Cell	Emissions (tpy)
EUCCELL2	14.64 in February of 2016
EUCCELL8	0.36 in January and February of 2016

Additionally, EUCCELL5 had a maximum 12-month rolling VOC emission rate of 47.29 tpy in January of 2016. This is below its limit of 56 tpy per S.C. I.4.

On July 25, Mr. Kevin Burwell, Maintenance Manager, provided weekly logs of maintenance and process filter changes for the weeks of July 3 and July 10, 2017, per S.C. VI.4.

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).

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 31,248 pounds per 12 month rolling time period in the most recently recorded month of June of 2017.

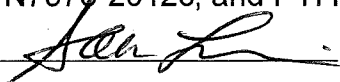
FGPOLYFOAM Naphthalene (CAS No. 91-20-3)

The maximum emissions of naphthalene since January of 2016 are 59.38 pounds of naphthalene per 12-month rolling time period in January of 2016. This is below the permit limit of 178.1 pounds per year per S.C. I.6.

Compliance

Based on the AQD inspection and records review, it appears that Eagle Industries is in compliance with the federal Clean Air Act, NREPA, the Air Pollution Control Rules, ROP MI-ROP-N7578-2012c, and PTI No. 4-06E.

NAME



DATE

7/26/17

SUPERVISOR

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