

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

N211543733

FACILITY: CREATIVE FOAM CORP		SRN / ID: N2115
LOCATION: 300 N ALLOY DR, FENTON		DISTRICT: Lansing
CITY: FENTON		COUNTY: GENESEE
CONTACT: James Vargo , Engineering Manager		ACTIVITY DATE: 03/21/2018
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The following Partial Compliance Evaluation (PCE) activities were conducted as part of a Full Compliance Evaluation (FCE): 1.) scheduled inspection; and 2.) review of facility recordkeeping.		
RESOLVED COMPLAINTS:		

On 3/21/2018, the Michigan Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted a scheduled inspection of Creative Foam Corporation's facility on Alloy Drive identified as their Alloy Plant. This inspection was a Partial Compliance Evaluation (PCE) activity, conducted as part of a Full Compliance Evaluation (FCE). Also conducted was a review of facility recordkeeping, which was another PCE activity.

Synthetic minor sources, such as a this facility, must undergo a FCE once every four years, at a minimum, under the Environmental Protection Agency's Compliance Monitoring Strategy, which the AQD complies with.

Environmental contacts:

James Vargo, Engineering Manager; 810-936-2215; jpvargo@creativefoam.com

Facility description:

Creative Foam makes products which are used by the auto industry to prevent rattles and squeaks in their vehicles. These products are primarily pre-expanded dense foams with an adhesive backing. Typical uses for these products are liners for small storage areas on vehicle dashboards.

Emission units:

Emission unit	Emission unit description	Permit number or exemption rule	Operating status
Profile cutter, deck slicers	Tools for cutting foam, which exhaust into in-plant environment	Rule 285(l)(vi)(B)	Compliance
EU-Adhesive Line	A coating line consisting of a paper let off, an adhesive roll coater, hot air dryer/vent system exhausting to outside air, foam lay-up table, nip rollers, and a blank/rewind station	PTI No. 159-95B; Rule 285(2)(b)	Compliance
Tool room	Various tools, including wood cutting process, controlled by mat/panel filter systems which exhaust to in-plant environment	Rule 285(l)(vi)(B)	Compliance
Small machine area	Various small machining operations exhausting to in-plant environment	Rule 285(l)(vi)(B)	Compliance
Die-cutting operations	Multiple die cutting operations, exhausting to in-plant environment	Rule 285(l)(vi)(B)	Compliance
2 hot melt adhesive stations	Stations where 2 different types of hot melt adhesive are applied to surfaces	Rule 287(l)	Compliance

Regulatory overview:

This facility has an opt-out permit, which contains limits to restrict the facility's Potential to Emit (PTE) for both criteria pollutants and Hazardous Air Pollutants (HAPs) to less than major source levels. Therefore, this opts the facility out of the Renewable Operating Permit (ROP) program. Criteria pollutants include carbon monoxide, nitrogen oxides, sulfur dioxide, lead, particulate matter smaller than 10 microns (PM-10), particulate matter smaller than 2.5 microns (PM2.5), and volatile organic compounds (VOCs). The opt-out permit, Permit to Install (PTI) No. 159-95B, limits VOC emissions to 38.0 tons per year (TPY), and limits HAP emissions to 9 TPY for a single HAP, and 22.5 TPY for aggregate

HAPs.**Fee status:**

This facility is not considered fee-subject, for the following reasons. Because it is not a major source for criteria pollutants, it is not classified as Category I. Additionally, because it is not a major source for Hazardous Air Pollutants (HAPs), and is not subject to federal New Source Performance Standards, it is not classified as Category II. Finally, because it is not subject to federal Maximum Achievable Control Technology standards, it is not classified as Category III. The facility reports each year through the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is at the north end of an industrial park. It is surrounded by industries to the south, east, and west. To the north are a freeway ramp, and small businesses. The closest residences are about 1,500 feet to the east and northeast. There are presently two other Creative Foam facilities within this industrial park.

Safety attire required:

Safety glasses with side shields.

Recent history:

Since the 7/30/2014 inspection, AQD has been unaware of any changes related to air quality. AQD has no record in our database of a complaint ever being received regarding Creative Foam's Alloy Plant.

Arrival:

Accompanying me on the inspection today were two DEQ Student Interns, Mr. Tyler Hines, and Mr. Drew McRae, for educational purposes. This was not an unannounced inspection, as AQD guidance for bringing interns in the field is to plan the inspection in advance. This assures that appropriate personnel are available at the facility to safely escort DEQ staff through the industrial site.

Although Creative Foam has a parking lot off of Alloy Drive, on the north side of the site, the most convenient place to park is in their parking lot off of Fenway Drive, immediately east of the Alloy Plant and its office. Mr. Vargo had provided a map to the site (please see attached).

I could not detect any odors, as we approached the site with the windows rolled down, about 9:36 AM. Winds were out of the northeast or east northeast at 15-20 miles per hour, the sky was overcast, and the temperature was about 40 degrees F. We were downwind of the Alloy Plant, at this time.

Mr. Tyler Hines and I arrived in the Alloy Street facility's east parking lot at 9:38 AM. We soon met with our other DEQ Student Intern, Mr. Drew McRae,. There were no odors detected by the office, nor were there any visible emissions.

We entered the plant, and met with Mr. James Vargo, Engineering Manager. We discussed the purpose of the inspection, and the purpose of facilities having an opt-out permit., to opt out of the ROP program.

It was explained to us that Creative Foam does not actually produce foam. They apply water-based adhesives to various urethane foam materials which are manufactured elsewhere. In the 1990s, they used solvent-based adhesives, Mr. Vargo informed us, but have moved to water-based adhesives. The only solvent-based glues they have are in the tape they use onsite, which is manufactured elsewhere, we were told. They currently have such low actual and potential emissions, we were informed, that they may qualify as a true minor source, and no longer need an opt-out permit. We then began a walk through inspection of the facility.

PCE activity no. 1: inspection:

Receiving department:

The start of the production process is when rolls and buns of foam enter the receiving department. The foam products they receive have done practically all of their off-gassing before they ever reach Creative Foam, we were informed. They will not accept foam from a supplier before it has had a certain number of days to off-gas, Mr. Vargo explained.

Profile cutter and deck slicers; Rule 285(l)(vi)(B):

A profile cutter and deck slicers cut roll stock and buns of foam to the desired size and thickness. I did not see any visible emissions from these processes. Scrap foam pieces are recycled. Rule 285(2)(l)(vi)(B) exempts processes for cutting and/or machining certain materials, which exhaust into the general in-plant environment. The rule does not specifically mention foam, but does mention rubber and plastics. I consider foam to be a material which could qualify for this exemption. Because these processes were installed before the 12/20/2016 effective date of Rule 285(2)(l)(vi)(B), they would actually be covered by the previous version of this exemption, Rule 285(l)(vi)(B), which was in place at that time. The exemption criteria are the same in either case, however.

EU-Adhesive Line; PTI No. 159-95B; Rule 285(2)(b):

Mr. Vargo explained that the original adhesive application system for their coating line had been designed with solvent-based adhesives in mind, so when Creative Foam used it to apply water-based coatings, it was not as efficient. He explained that this resulted in a lot of glue being wasted. He advised us that in 2017, however, they replaced the old application system with an application system that is friendlier, or more conducive, to working with water-based coatings. The process is so effective, that now they have no adhesive waste, we were told, and because there is less adhesive used, there are less VOC and HAP emissions. It was explained that the process no longer has the capability to go back to solvent-based adhesives, so.

There are three adhesives currently used by the company, all water-based. They are:

- Henkel 2628 "V"
- Aptec AP-131H
- CTI 4520 "W"

Adhesive was being pumped to the roll coater, and then applied to a silicone coated release liner. The liner was then applied to a rolled foam material. A nip roller applied pressure to the product to ensure a good bond was obtained, and the edge of the product was trimmed. A customer would remove the liner, to apply the finished product, we were told.

It is my understanding that their natural gas-fired oven, where the adhesives are cured, is their only emission source directed to the outside air, other than their heating, ventilation, and cooling system. There are 2 curing zones, and the second zone has a higher temperature.

Rule 285(2)(b) exempts:

(b) Changes in a process or process equipment which do not involve installing, constructing, or reconstructing an emission unit and which do not involve any meaningful change in the quality and nature or any meaningful increase in the quantity of the emission of an air contaminant therefrom.

Based on the description of the change and examination of the adhesive line and the new coating application system, I did not see any reason to disagree with the proposed use of the Rule 285(2)(b) exemption. The day after the inspection, a Rule 285(2)(b) exemption demonstration was received from Mr. Vargo, indicating the exempt status of the change made to the adhesive line.

In the plant, they also apply adhesive to rolled foam via adhesive transfer tapes (about 30 types), we were informed.

Tool room; Rule 285(2)(l)(vi)(B), and 285(2)(l)

They have a small tool room, where various tools exhaust indoors. These would qualify for the Rule 285 (l)(vi)(B) exemption, for machining processes which exhaust to the general, in-plant environment. It is my understanding that they have at least one welding unit. Welding processes are considered exempt from needing an air use permit under Rule 285(2)(i).

Small machine area; Rule 285(l)(vi)(B):

Across from the tool room was a small machine area, where small machining operations exhausted into the in-plant environment. I did not see any visible emissions. We observed new dies being made. Each process for cutting wood or metal appeared to be controlled by its own fabric filter, before exhausting to the in-plant environment. These appeared to satisfy the Rule 285(2)(l)(vi)(B) criteria for metal or wood working processes exhausting to the in-plant environment. No visible emissions could be seen from the bag filters. I could not see any fugitive emissions from the machining or cutting activities being carried out.

Die-cutting operations; Rule 285(l)(vi)(B):

There were a number of die-cutting operations, where presses cut foam backed with adhesive to shape. There are two types of cutting: full cutting, where the foam and adhesive liner are cut, and kiss cutting, where foam is cut, but not the liner. The presses are exhausted into the in-plant environment. I did not see any visible emissions. The processes began shutting down at 11:15 AM, for the lunch break for plant employees.

Hot melt adhesive stations; Rule 287(2)(i):

There were at least 2 robotic stations, each of which applied a hot melt adhesive to parts which were then assembled. Hot melt adhesives are considered exempt under Rule 287(2)(i).

PCE activity no. 2: recordkeeping:

Mr. Vargo provided AQD with a copy of their spreadsheets tracking their adhesive usage rates, and resulting emissions; please see attached.

The MAERS report for the 2017 operating year was electronically submitted immediately after AQD met with the company today. They had held off on submitting it due to some MAERS issues, which we discussed. The report is not being considered late, for this reason. Facility used AQD calculated emissions in their report. The reported 0.39 tons of VOC for the 2017 operating year were below the facility VOC limit of 38.0 TPY. If 100% of the VOC emissions were HAPs, they would still be below the permit's single HAP limit of < 9.0 TPY, and the aggregate HAPs limit of < 22.5 TPY.

Conclusion:

No instances of noncompliance were detected. The facility was very clean and neat. We left the facility at 12:15 PM.

Note: A Rule 285(2)(b) exemption demonstration was received by e-mail from Mr. Vargo, on 3/22/2018. Based upon the change as described, and examination of the coating line and the adhesive application system during the 3/21 inspection, I saw no reason to disagree with the use of the exemption.

NAME [Signature]

DATE 8/7/2018

SUPERVISOR B.M.