

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

U25160424734341

FACILITY: Soroc Products		SRN / ID: U251604247
LOCATION: G-4349 S. Dort Highway, Burton		DISTRICT: Lansing
CITY: Burton		COUNTY: GENESEE
CONTACT: Dave Richard, Plant Manager		ACTIVITY DATE: 04/26/2016
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Unannounced, self-initiated inspection of Soroc Products, which has never been visited by AQD before.		
RESOLVED COMPLAINTS:		

On 4/26/2016, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an unannounced, self-initiated inspection of Soroc Products.

Environmental contact:

Dave Richard, Plant Manager; 810-743-2660; drichard@sorocproducts.com

Facility description:

This facility is a manufacturer of custom thermoformed dunnage.

Emission units:

- Plastic extrusion process; Rule 286(a)
- 6 plastic thermoforming processes; Rule 286(d)
- Wax application process; Rule 287(c)
- Reaction injection molding; Rule 286(e), and possibly 40 CFR Part 63, Subpart OOOOOO
- Plastic grinding/recycling process; Rule 285(l)(vi)(B)
- Manufacturing of tooling from metal and wood

Regulatory overview:

This facility has not previously been inspected by AQD. It appears to operate a number of exempt emission units, for extruding and thermoforming plastic. Plastic molding processes tend to have very low emissions of Volatile Organic Compounds (VOCs). VOCs are one of the *criteria pollutants*, pollutants for which a National Ambient Air Quality Standards (NAAQS) exists, along with carbon monoxide, nitrogen oxides, sulfur dioxide, lead, particulate matter smaller than 10 microns (PM-10), and particulate matter smaller than 2.5 microns (PM2.5).

In addition to having low actual emissions, plastic forming facilities tend to have a very low Potential to Emit (PTE). PTE is used to determine whether an air emission source is a major or minor source. A facility is considered to be a major source of criteria pollutants if it has a PTE of 100 TPY or more of any one of the criteria pollutants. At this time there is no reason to believe that Soroc Products has the PTE to be a major source of criteria pollutants, given the low emissions associated with plastic forming.

A facility is considered to be a major source for Hazardous Air Pollutants (HAPs) if it has a PTE of 10 TPY or more for a single HAP, or a PTE of 25 TPY or more for aggregate HAPs. A facility which is not major for HAPs is said to be an area, or minor, source of HAPs. Soroc Products is not known to be a major source of HAPs at this time.

Manufacturing of products from a self skinning rubber may emit some HAPs, however, so it may be necessary to calculate potential emissions. It is not presently known if the self skinning rubber is a flexible polyurethane foam. Manufacturing and/or making products from such a foam would subject the facility to 40 CFR Part 63, Subpart OOOOOO, *National Emissions Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources*. The AQD does not have delegation of authority from the U.S. Environmental Protection Agency (EPA) for this federal regulation,

but the company should be aware that this may apply to them.

Fee status:

This facility is not a Category I fee subject source, because it is not a major source for criteria pollutants. It is not a Category II fee-subject source because it is not a major source for Hazardous Air Pollutants (HAPs), nor is it subject to federal New Source Performance Standards. Additionally, it is not Category III fee-subject, because it is not subject to federal Maximum Achievable Control Technology standards. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is located on Dort Highway in Burton, a short distance south of Flint. It is located in an area with a mixture of industrial and commercial facilities.

Arrival:

This was an unannounced inspection, at a facility which AQD has never visited before. The DEQ was represented by myself, and by Ms. Rebekah Banash, a DEQ Student Intern, who was later hired by AQD.

We drove past the facility, to check for odors offsite, and found none. We parked immediately south of the plant office, and detected neither odors nor visible emissions. Weather conditions were cloudy, humid, and 50 degrees F, with winds out of the north at 5-10 miles per hour.

We introduced ourselves to facility staff, and met with Mr. Dave Richard, Plant Manager and by Mr. Craig Hafner. I provided my credentials, and a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, per AQD procedures.

I inquired if there were any boilers onsite, regarding the federal boiler NESHAP regulation for area sources of HAPs. I was informed that there are no boilers, nor any furnaces. They have 2 overhead heaters, plus the heat of their plastic working processes, to heat the building, we were informed. For heating water, we were advised that they have three residential hot water heaters, each 55 gallons in capacity.

Inspection:

We were accompanied through the plant by Mr. Richard and Mr. Hafner. I did not see any visible emissions from plastic processes inside the plant.

As their website states, they specialize "in high-density polyethylene trays, pallets, custom thermoforming, custom fabricating of corrugated rack & tote cells." It is my understanding that their trays are designed to transport metal parts, while protecting them from damage. They also make plastic pallets and lids.

Plastic extrusion process; Rule 286(a):

We were shown a plastic extrusion process which extrudes sheets to the desired length, width, and thickness, we were informed.

6 plastic thermoforming processes; Rule 286(d)

It is my understanding that the thermoforming processes use vacuum forming to make heated plastic conform to the desired shape. Plastic sheets go through a pre-heat oven and then a final heat oven, before vacuum forming.

Wax application process; Rule 287(c):

They apply wax, to delaminate parts from molds, we were informed. We were advised that the wax may be either applied by machine, or brushed on. The mechanical application is not a spraying process, but rather a pouring process, we observed.

We were informed that they retain purchasing records for the year, for the wax release agent. AQD will request a record showing how much was purchased or used in 2015, to compare with the 200 gallon per month exemption threshold of Rule 287(c).

(c) A surface coating line if all of the following conditions are met:

- (i) The coating use rate is not more than 200 gallons, as applied, minus water, per month.
- (ii) Any exhaust system that serves only coating spray equipment is supplied with a properly installed and operating particulate control system.
- (iii) Monthly coating use records are maintained on file for the most recent 2-year period and are made available to the air quality division upon request.

Reaction injection molding; Rule 286(e); and possibly 40 CFR Part 63, Subpart OOOOOO:

They have reaction injection process which mixes an isocyanate compound with a resin, to produce polyurethane foam. The foam mixture creates a "skin" when it contacts the surface of the mold. The inside of the molded product consists of open cells, and we were shown this, in a cut example of a formed product. The material was fairly firm, and it was unknown to the company or myself if this material qualifies as a flexible polyurethane foam.

It is possible that this process may be subject to 40 CFR Part 63, Subpart OOOOOO, *National Emissions Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources*, AQD does not have delegation of authority from EPA for this federal regulation. I advised the facility that they may be subject to this regulation. I will provide them with a link to Subpart OOOOOO, so that they may determine whether it applies to them or not.

40 CFR Part 63, Subpart OOOOOO, Section 63.11414 (a) indicates that a facility is subject to Subpart OOOOOO if they own or operate an area (minor) source of HAPs that meets either of the following criteria:

1. The facility owns or operates a plant that produces flexible polyurethane foam or rebond foam as defined in Section 63.1292 of Subpart III.*
2. The facility owns or operates a flexible polyurethane foam fabrication facility, as defined in Section 63.11419.**

**Flexible polyurethane foam* is defined as a flexible cellular polymer containing urea and carbamate linkages in the chain backbone produced by reacting a diisocyanate, polyol, and water. Flexible polyurethane foams are open-celled, permit the passage of air through the foam, and possess the strength and flexibility to allow repeated distortion or compression under stress with essentially complete recovery upon removal of the stress.

**Rebond foam* is defined as the foam resulting from a process of adhering small particles of foam (usually scrap or recycled foam) together to make a usable cushioning product. Various adhesives and bonding processes are used. A typical application for rebond foam is for carpet underlay.

***A flexible polyurethane foam fabrication facility* is defined as a facility where pieces of flexible polyurethane foam are cut, bonded, and/or laminated together or to other substrates.

We observed this process in operation. At the point of mixing is where the foam is released into the mold. I observed no visible emissions.

Plastic grinding/recycling process; Rule 285(l)(vi)(B):

It was explained that waste plastic first goes into a shredder, which sends the shredded plastic to a Cumberland unit. The Cumberland process grinds the plastic, using a bag system to capture particulate matter. The processes were running. They exhausts into the general, in-plant environment. I saw no visible emissions from the shredder, nor any from the Cumberland.

They have two plastic storage siloes, we were advised; one for virgin plastic, and the other for regrind/recycled plastic.

Manufacturing of tooling from metal or wood; Rule 285(l):

Metal working and wood working equipment to manufacture tooling is most likely exempt under Rule 285(l)(vi) which exempts from the requirement of Rule 201 to obtain a permit to install the following:

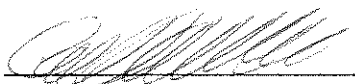
- (l) The following equipment and any exhaust system or collector exclusively serving the equipment:
- (vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper stock, wood, or wood products which meets any of the following:
 - (A) Equipment used on a nonproduction basis.
 - (B) Equipment has emissions that are released only into the general in-plant environment.
 - (C) Equipment has externally vented emissions controlled by an appropriately designed and operated fabric filter collector that, for all specified operations with metal, is preceded by a mechanical precleaner.

Conclusion:

I did not find any instances of noncompliance. I will ask for a copy of their wax use/purchase records, to verify that they are below the Rule 287(c) exemption threshold of 200 gallons per month.

It is not presently known if the self-skinning rubber that they mold into parts is classified as a flexible polyurethane foam, which would subject the facility to 40 CFR Part 63, Subpart OOOOOO, the NESHAP for Flexible Polyurethane Foam Products. AQD does not have delegation of authority for this federal regulation, but will provide the facility with a link to the regulation, so that they may determine whether or not it applies to them.

NAME



DATE

9/29/2016

SUPERVISOR

