

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

N182430161

FACILITY: Delta Faucet Company; a Masco Company		SRN / ID: N1824
LOCATION: 693 SOUTH COURT STREET, LAPEER		DISTRICT: Lansing
CITY: LAPEER		COUNTY: LAPEER
CONTACT: Don King , Product Engineer		ACTIVITY DATE: 07/07/2015
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-initiated inspection.		
RESOLVED COMPLAINTS:		

On 7/7/2015, the DEQ, AQD, conducted a self-initiated inspection of Delta Faucet, a Masco Company. This facility formerly operated as as Masco Bath.

**Facility environmental contacts:**

Don King, Product Engineer; 810-664-8501, ext. 2218; [Don.King@deltafaucet.com](mailto:Don.King@deltafaucet.com)

Stephanie Cole; Manufacturing and EHS Engineer; 810-664-2212; [Stephanie.Cole@deltafaucet.com](mailto:Stephanie.Cole@deltafaucet.com)

**Facility description:**

Delta Faucet manufactures plastic parts for bathtubs, showers, and surrounding walls. They do this by blending and melting High Impact Polystyrene (HIP) beads, and extruding sheets of plastic. The plastic sheets are heated and shaped with vacuum form molds (thermoforming).

**Emission units:**

Emission unit description	Applicable exemption rule	Operating status, at time of inspection
2 plastic extrusion processes	Rule 286(a)	Compliance
11 plastic thermal/vacuum forming processes	Rule 286(d)	Compliance
Plastic cutting, trimming, routing, sanding, grinding, drilling, and carving processes; interior exhaust, some with particulate controls	Rule 285(l)(vi) (B)	Compliance
Spray on adhesive process	Rule 287(c)	Compliance
Hot melt glue process	Rule 287(i)	Compliance
Two plastic grinding/recycling machines, larger unit with cyclone control, venting to plant interior	Rule 285(l)(vi) (B)	Compliance
Machine shop; machining equipment used on nonproduction basis, and vents to plant interior	Rule 285(l)(vi) (A) and (B)	Compliance
Small parts washer	Rule 281(h)	Compliance

**Regulatory background:**

This facility is classified as a minor source. It once had an air use permit, Permit to Install (PTI) No. 85-88, for a process which sprayed polyisocyanurate foam. The permit was voided in 2002, when the company ceased using it, and the equipment was removed. The production processes currently at the plant are exempt from the requirement to obtain a PTI.

**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 is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

**Location:**

The facility is in a triangular shaped industrial park, within the City of Lapeer. It is on the north side of the triangle, along McCormick Street, which runs east and west. This industrial park is surrounded by private residences, apartment complexes, and a high school and community recreation center, to the east.

**Recent history:**

Occasionally, over the last several years, residents in the City of Lapeer have mistakenly attributed paint odors to the operations of Delta Faucet. It has been my understanding that Delta Faucet does not paint any of their products, except there was brief confusion on my part, when I visited the plant on 11/6/2014, and misunderstood a reference to painting safety striping on floors. This is discussed under the section of this activity report titled *Arrival*. This misunderstanding was what prompted my inspection today, to see if a painting or coating process had been installed.

**Arrival:**

Prior to arrival, I drove around the triangular industrial park, where the facility is located along the northern edge. I did not identify any odors which I believe were associated with Delta Faucet, except a barely perceptible plastic odor in the parking lot on the west side of the plant, when I arrived, at 1:21 PM. I did not see any visible emissions coming from the plant.

I met with Mr. Aaron Theut, Plant Manager, Mr. Don King, Product Engineer, and Ms. Stephanie Cole, Manufacturing and EHS Engineer, who was new to this facility. I provided company representatives with a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, per AQD procedure. I also provided a copy of the new Boiler MACT card, which was developed so that facilities could determine what, if any, requirements might be applicable to them. I was informed that they are working with the same raw materials as when AQD conducted the previous inspection, in 2014, but they have developed new styles of products since that time.

It was made clear to me today that Delta Faucet does not conduct any painting of products here. I was told that the only paint that has been used here has been for painting stripes/lines on the floor, for safety purposes, for walkways. On 11/6/2014, during an odor complaint investigation, when I had been informed that the facility had been painting lines, I misunderstood, and thought this had meant that lines were being painted onto their products. Today, a little maintenance/floor painting had been done, I was advised, and I observed the freshly painted area during the course of this inspection.

**Inspection:**

**Plastic extrusion processes, Rule 286(a):**

We walked throughout the plant, starting with their two plastic extrusion processes. Neither were running at this time, due to equipment breaking. Rule 286(a) exempts plastic extrusion, rotocasting, and pultrusion equipment, and associated plastic resin handling, storage, and drying equipment from the need to obtain a permit to install.

In a 7/9/2014 inspection report, AQD's Brian Culham noted the following: barrel or screw extruders compress HIP beads, causing an increase in temperature. At over 200 degrees F, HIP starts to flow and can be rolled into a continuous plastic sheet. In some applications a clear acrylic may be added over the sheet to increase luster. The plastic ribbon is cut into sheets, of the desired dimensions. HIP becomes liquid at 464 degrees F and decomposes at 575 degrees F. Temperatures at Delta Faucet can reach 400

degrees F, but the plastics are still maintained as a soft solid.

It is my understanding that the film adheres from static and heat, rather than a glue. The film is used to protect the product, I was told, and the customer removes this film when they are ready to use it.

**Plastic thermal/vacuum forming processes, Rule 286(d):**

These processes take sheets of plastic, heat them, and apply vacuum, to make them conform to the shape of an aluminum tool. These processes exhaust into the general, in-plant environment. Although most plant employees were finishing their 2 PM break, at this time, I was able to observe one process in operation. Rule 286(d) exempts plastic thermoforming equipment from the need to obtain a permit to install.

**Plastic cutting, trimming, routing, sanding, grinding, drilling, and carving processes; interior exhaust, some with particulate controls; Rule 285(l)(vi)(B):**

Sheets of plastic are cut to desired dimensions. Plastic is trimmed from parts in a variety of locations. These processes are located throughout the plant and either exhaust into the interior atmosphere of the plant, or through particulate control devices which exhaust to the interior atmosphere of the plant. These appear to satisfy the exemption criteria for Rule 285(l)(vi)(B), for plastic cutting trimming, routing, sanding, grinding, drilling, and carving processes which exhaust into the general in-plant atmosphere.

An example of the processes mentioned above is the CNC grout and tile engraving machine. It takes plastic sheets, and engraves a grid pattern, to look like grout in between individual tiles. A cyclone catches large particulates (and also large particulate from saw and router), and vents the cleaned air to the plant's interior. For fine particulate, there is a small baghouse, which also vents to the plant interior.

**Spray on hot melt adhesive process, Rule 287(c):**

There is a web spray booth, for spraying a hot melt adhesive onto sheets of plastic and foam, which are then pressed together. The booth exhausts to the general, in-plant environment. They keep the adhesive use below 200 gallons per month, to satisfy the Rule 287(c) exemption. Because the glue is hot melt adhesive, it would also qualify for the Rule 287(i) exemption for hot melt adhesives.

**Hot melt adhesive processes, Rule 287(i):**

For gluing packaging together, they have a number of hot melt glue processes throughout the plant, which are exempt under Rule 287(i). Each one heats a small vat which contains small "pillows", of glue, melting it. The glue is solid, at room temperature, and is amber colored. These processes exhaust into the general, in-plant environment. I had received an MSDS for this glue, in 2011.

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

They have two rotary cutters, which grind up any wasted plastic, to be recycled and reused in the extrusion processes. The smaller one exhausts to the general, in-plant environment. The second one is larger, and is controlled by a cyclone, which also exhausts into the general, in-plant environment.

**Machine shop, Rules 285(l)(vi)(A) and (B):**

They have a maintenance shop, with metal and wood working machines. These are used intermittently (non-production basis), and exhaust to the general, in-plant environment, so they are exempt under both Rule 285(l)(vi)(A) and (B). They were not operating, at the time of the inspection.

**Small parts washer, Rule 285(l)(iii) or 285(r)(iv):**

They have recently installed an aqueous parts washer, to replace a small cold cleaner, which used

recycled mineral spirits. It could be considered exempt under more than one exemption, such as Rule 285(l)(iii) or 285(r)(iv).

I only noticed light plastic odors, inside the plant. No odors nor visible emissions were detectable from the facility when I left the site, at 2:40 PM.

**Conclusion:**

I could not find any instances of noncompliance, nor any areas of concern. The facility was very clean, neat, and orderly.

NAME [Signature]

DATE 9/24/2015

SUPERVISOR [Signature]