

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

P084049657

<b>FACILITY:</b> Saint-Gobain Performance Plastics		<b>SRN / ID:</b> P0840
<b>LOCATION:</b> 3910 Terry Diane Street, BEAVERTON		<b>DISTRICT:</b> Saginaw Bay
<b>CITY:</b> BEAVERTON		<b>COUNTY:</b> GLADWIN
<b>CONTACT:</b> Greg Reno , Environmental, Health and Safety Specialist		<b>ACTIVITY DATE:</b> 07/24/2019
<b>STAFF:</b> Meg Sheehan	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled site inspection for FY19		
<b>RESOLVED COMPLAINTS:</b>		

**On Wednesday, July 24, 2019, a scheduled site inspection was conducted by AQD District staff at Saint-Gobain Performance Plastics (SGPP) in Beaverton, Gladwin County. Mr. Greg Reno (EHS Specialist) was onsite to answer questions and provide a tour of the facility. Site inspection activities were conducted with the intent of confirming compliance with Permit to Install (PTI) No. 125-17.**

### **FACILITY DESCRIPTION**

SGPP is an existing true minor source for all criteria pollutants, specifically VOCs. The facility manufactures silicone rubber tubing and other components primarily for the medical/pharmaceutical industry. This SGPP location employs approximately 300 people, but worldwide employs over 170,000 people with locations in 67 countries, many manufacturing very different types of products – from silicone rubber tubing at this location, to roof shingles at other locations. This facility is located on Terry-Diane Street in an industrial park with residential properties located in the surrounding areas. Adjacent roads include Glidden Road to the North, Ross Street (M-18) to the West, and Blades Road to the South.

### **FACILITY HISTORY**

SGPP was first inspected on March 17, 2017. This was also the most recent inspection conducted prior to this one. After receiving additional requested information, the facility was determined to be in compliance with Michigan's Air Pollution Control Rules. At that time, the use of isopropyl alcohol (IPA) was identified as exempt pursuant to Rule 290. When the facility realized their IPA usage was eventually going to exceed Rule 290 levels, they applied for a PTI (No. 125-17), which was issued on September 21, 2017.

No complaints or violation notices are of record. The facility is not required to report to MAERS as a minor source. No odors or visible emissions were noted during this inspection.

### **PROCESS DESCRIPTION**

SGPP operates two clean rooms at this facility, where two types of silicone rubber items are fabricated. One type uses hydrogen peroxide as a catalyst, and the other uses a platinum-based catalyst. The silicone is first milled to create the desired consistency for the product. It is then fed into an extruder where it is heated by an attached electric cure oven and x-rayed to exam the thickness of the produced tubing. The extruded tubing is then either molded into a desired shape or goes directly to an electric post-cure oven for the final treatment.

IPA is used to clean equipment surfaces and finished products prior to packaging, as well as a lubricant during the manufacturing process to prevent the rubber from sticking to the dies. The IPA is purchased as one-gallon bottles, and the bulk quantity of it is stored in fire-proof lockers in the packaging and storage area. Only small amounts are brought out to use in production, and then the containers are stored in smaller, more easily accessible fire-proof lockers. Two concentrations of IPA are used exclusively – 70% and 99% (see attached SDS's). Both are applied after the extrusion process via hand-held wash bottles. 70% is used where a longer-term disinfectant is required, and 99% is used as a strong but short-term disinfectant.

The use of IPA at the facility is the primary source of VOC emissions and the only permitted activity. It is assumed 100% of the IPA used is emitted as fugitive emissions through the facility's HVAC system. Stacks are only associated with the extrusion processes and post cure ovens.

In addition to the clean rooms where the products are manufactured, there is a maintenance area, packaging and stock storage area, and a mold setup work area where various tools are taken apart and cleaned.

### **EXEMPT EMISSION UNITS**

During the 3/17/17 inspection, an audit conducted for the facility by Conestoga-Rovers (now GHD Services) was

reviewed. At that time, SGPP was operating under Rule 290 for the IPA usage. On March 23, 2017, a formal request was made for Rule 278/278a demonstrations for the Rule 290 exempt equipment, as well as clarification of "other" exempt equipment onsite that was identified in the audit. A response was submitted to the AQD on April 27, 2017, and identified the exemptions for the following emission units:

- R 336.1286(2)(a) – Six extruders extruding silicone rubber. Parts are cured in an integral, electrically heated cure oven.
  - o The response explained that while silicone rubber is often viewed as a rubber-like material, both silicone rubber and plastic share the definition of polymerized organic compounds. Hawley's Condensed Chemical Dictionary defines plastic as: "A high polymer, usually synthetic, combined with other ingredients, such as curatives ... etc. Typical forms include ... silicones."
  - o While this exemption is for plastic extrusion, the response claims that all the equipment associated with the molding equipment and extruders (such as the milling equipment and electric cure ovens) would also be covered by this exemption because they are functionally related in their operations.
- R 336.1286(2)(a) and (b) – Six electrically heated post-cure ovens. The response claims these ovens are also functionally related to the above extruding processes.
- R 336.1283(2)(b) and (d) – Materials laboratory where finished products are QA/QC'd and new products are developed and tested

The response also included a Rule 278 demonstration for the exempt equipment. It appeared to indicate the exempt equipment onsite complies with the rule. Please see the 3/17/17 inspection report for additional details.

The following apparently exempt emission units were also noted during the 3/17/17 inspection after a review of the previously mentioned audit:

- R 336.1281(2)(h) – Cold cleaner located in the mold prep area which appears to have an air/vapor interface less than 10 square feet.
- R 336.1285(2)(l)(vi) – Machining units in the maintenance room are self-contained units with no emissions into the general work environment, and no stacks to the outside atmosphere.
- R 336.1287(2)(c) – An inkjet style printer used to label tubing in the clean rooms. Mr. Reno reported the facility uses significantly less than 200 gallons of ink per month in this process.

## COMPLIANCE EVALUATION

PTI No. 125-17 has relatively minimal conditions – a facility-wide emission limit of 1,500 lb of IPA per month and recordkeeping requirements. Records were provided the day of the inspection and may be found attached to this report in the District file. The facility remained below the emission limit for all months reviewed.

## FUTURE PERMITTING

SGPP is currently in the process of adding 85,000 square feet to their existing building. The new area will have additional office space and house the maintenance room as well as additional clean rooms. SGPP is predicting their IPA emissions will increase past the current permit limit of 1,500 lb/month within 1.5 years. As of this inspection, the company is planning on applying for a modification to their PTI at the beginning of 2020. There are no plans to add additional different processes, just to expand the current silicone rubber production to meet increased demand.

## COMPLIANCE DETERMINATION

At this time, Saint-Gobain Performance Plastics appears to be in general compliance with PTI No. 125-17.

NAME Meg Sheehan DATE 7/31/19 SUPERVISOR C. Hare