

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

N223324934

FACILITY: ROTO PLASTICS CORP	SRN / ID: N2233
LOCATION: 1001 DIVISION ST, ADRIAN	DISTRICT: Jackson
CITY: ADRIAN	COUNTY: LENAWEE
CONTACT: Barry Kafer , Plant Manager	ACTIVITY DATE: 04/16/2014
STAFF: Erik Gurshaw	COMPLIANCE STATUS: Compliance
SUBJECT: 2014 Targeted Inspection	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

SRN: N2233

COMPANY: Roto Plastics Corporation

COMPANY ADDRESS: 1001 Division St.; Adrian, MI 49221

PURPOSE OF INSPECTION: Targeted

CONTACT PERSON: Mr. Barry Kafer, Plant Manager (Ph: 517-263-8981; Fax: 517-263-2542; E-mail: barrykafer@rotoplastics.com)

COMPANY PHONE NUMBER: 517-263-8981

INTRODUCTION

On April 16, 2014, AQD staff, Erik Gurshaw conducted a targeted, unannounced inspection at Roto Plastics Corporation located at 1001 Division St. in Adrian, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) Rules.

Upon arriving at the facility, AQD staff introduced themselves and stated the purpose of the visit to Mr. Barry Kafer, Plant Manager. Mr. Kafer indicated that Roto Plastics Corporation operates from Monday through Thursday from 6:00 AM until 4:00 PM and employs 20 people. Roto Plastics fabricates plastic parts from powdered polyethylene, liquid PVC, and polyethylene foam. The parts produced from powdered polyethylene and liquid PVC are generated through a rotational molding process. Parts produced from polyethylene foam are generated by the compressional molding of foam in an air pod press. Some of the parts made by the company include the following: plastic tanks; compressor components (guards, shields, and cylinders); Disney costume components; sporting goods; foam belts for air filtration; and foam neck braces for medical facilities. In addition to the rotational and compressional molding equipment, the company also has a parts washer, two CNC machines, two mills, one lathe, two drill presses, two horizontal band saws, one wire welder, and two stick welders. The parts washer appeared to be properly operated and maintained and uses a mineral spirits cleaning solvent. The CNC machines and other metal working machinery vent to the general plant environment and are exempt from Permit-To-Install (PTI) requirements pursuant Rule 285(I)(vi) (B). The welding machines are exempt from PTI requirements pursuant Rule 285(i). The CNC machines are used to make aluminum molds and the other metal working machinery is used to modify or repair molds. The welding machines are only used for repair purposes.

PROCESS DESCRIPTION

The process by which powdered polyethylene and liquid PVC are molded into plastic parts is the same with the exception of the difference in the type of raw material used to fabricate the parts. In either case, raw material (powdered polyethylene or liquid PVC) is weighed, placed into an appropriate mold, mechanically rotated/tumbled, heated in a natural gas-fired convection oven, water or air cooled, removed from the mold, packaged, and sent to the customer. Powdered polyethylene is purchased from Icco Schulman Company. Liquid PVC is purchased from Lakeside Polymers. Mechanical rotation and heating of parts generated from powdered polyethylene typically takes place for 15 minutes at 400 to 500 degrees Fahrenheit although the duration and temperature is dependent upon the type of part being produced. Parts produced from liquid PVC are typically only mechanically rotated for 8 minutes

at 400 to 500 degrees Fahrenheit, but, once again, the temperature and duration can vary depending upon the type of part being produced. The heating of the material in the molds takes place in one of the company's six natural-gas fired convection ovens. The oven with the highest rated BTU input is 1 MBTU/hour. Therefore, these ovens are exempt from PTI requirements pursuant Rule 282(b)(i). The rotational molding process is exempt from PTI requirements pursuant Rule 286(a).

The company also fabricates plastic parts from foam polyethylene. In this process, polyethylene foam purchased from Armacell Company or Vulcan Products is heated in an electric infrared oven for 2 to 4 minutes at 200 to 225 degrees Fahrenheit. After being heated, the foam is placed into a mold and pressed with an air pod press. After being pressed, the final product is trimmed, removed from the mold, and sent to the customer. The compressional molding process is exempt from PTI requirements pursuant Rule 286(b).

The company applies a mold release agent to the inside of the molds prior to the mechanical rotation and heating of the powdered polyethylene and liquid PVC in them. The agent is either applied manually with a rag or sprayed into the molds prior to the raw material being added to them. Two different types of mold release agent are being used. Mr. Kafer said that the company orders approximately 5 gallons of mold release agent 2 to 3 times a year. He also indicated that the mold release agent is water-based and contains a low amount of VOC. AQD staff asked Mr. Kafer to provide mold release purchase records and the MSDS sheets for the two mold release agents by April 22, 2014. An evaluation of the company's use of mold release agent will be made once this information is received. AQD staff received MSDS sheets for the mold release agents and mold release purchase records in an April 18, 2014, E-mail from Mr. Kafer. As previously mentioned, the company uses two mold release agents (TraSys420 produced by DuPont and Mono-Coat E255 produced by Chem-Trend Limited Partnership). Records indicate that the company purchased 11 gallons of TraySys420 and 10 gallons of Mono-Coat E255 during 2013. The MSDS sheet for these products indicate that neither contains any hazardous compounds.

COMPLIANCE DETERMINATION

As a result of this inspection, it was determined that the processes and process equipment used by Roto Plastics Corporation are exempt from PTI requirements. The MSDS sheets for the parts washing cleaning solvent, the mold release agents, powdered polyethylene, and liquid PVC are attached to this report. The MSDS sheets indicate that none of the products used by the company contains hazardous compounds. 2013 mold release purchase records are also attached to this report.

NAME Erik Swoshaw

DATE 4/21/14

SUPERVISOR 