

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P036167338

FACILITY: ANDRONACO INDUSTRIES		SRN / ID: P0361
LOCATION: 4855 BROADMOOR AVENUE, KENTWOOD		DISTRICT: Grand Rapids
CITY: KENTWOOD		COUNTY: KENT
CONTACT: Kevin DeGraves, Quality/Safety Manager		ACTIVITY DATE: 04/06/2023
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, self-initiated inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division staff April Lazzaro conducted an unannounced scheduled inspection of Andronaco Industries Plant 1. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations. Andronaco Industries consists of various smaller companies operating therein. These are Pure Flex, (fiberglass) Ethylene, (steel lined pipe and fittings) and Nillcor (composite mixing, large valves and fiberglass) which are all owned by EagleTree Capital. Accompanying AQD staff on the inspection was Kevin DeGraves, Quality/Safety Manager. No odors or visible emissions were noted upon arriving at the facility.

FACILITY DESCRIPTION

Andronaco Industries manufactures valves, fittings, joints, sleeves, and other piping products for the pharmaceutical, chemical, steel, wastewater and energy markets utilizing polyfluorinated plastics and fiberglass (polystyrene resins). Following an inspection in 2013, the facility was issued Permit to Install No. 109-13, which includes 18 compression molding machines.

COMPLIANCE EVALUATION

PTI No. 109-13

Compression Molding:

There are currently six compression molding machines used to form fiberglass or graphite reinforced plastic composite products. A bulk material compound (premixed at Plant 3) consisting of reinforcement, resin, and additives is contained in lidded fifty-five gallon drums next to each molding press. The material is then applied to the press where the part is formed.

The permit limits emissions of Volatile Organic Compounds (VOCs) and acetone to 2.8 tons per 12-month rolling time period. There is also a material limit for styrene content of all resins used which shall not exceed 15% by weight as applied. Both the emission and material limit must be met though the use of recordkeeping to demonstrate compliance.

A spreadsheet named Plant 1 worksheet was provided to AQD staff for review. This worksheet appears to show styrene percent of resins, and all are above 15%. This is a violation of PTI No. 109-13, Special Condition No. II.1. Additionally, no VOC emissions records were provided. Due to the lack of records, this is a violation of PTI No. 109-13, Special Condition VI.3a-e.

Additional Equipment

Tank Farm:

In this process, stainless steel pipe/tube liners are made out of powdered polytetrafluoroethylene (PTFE, registered name Teflon®) resin. The liners are then sintered in a large oven, using various cycle times. The sintering process can take up to 14 hours, and reached temperatures of 700°F. There is also a low vacuum oven in this area. Research indicates that PTFE sintering has the potential to release tetrafluoroethylene and small amounts of polyfluorinated alkyl substances, known widely as PFAS compounds. Both of these are

known air toxics. A request to quantify these emissions and to clarify the permitting status of all sintering ovens at the facility will be made.

Extrusion Molding:

Three rotomolding/rotocasting (rotational molding) cells were observed during the course of the inspection. Here powder materials are dumped into a hot mold (500°F) while it is rotated and the material liquifies and flows and fills the space. There are three ovens of various sizes in this area.

Isostatic Compression Molding (intrusion molding):

In this process, container liners are produced by forming parts out of powder perfluoroalkoxy (PFA) plastic under heat and pressure then goes into a water bath to cool. Parts are sintered in one of two ovens to produce the final product. Research indicates that PTFE sintering has the potential to release tetrafluoroethylene and small amounts of polyfluorinated alkyl substances, known widely as PFAS compounds. Both of these are known air toxics. A request to quantify these emissions and to clarify the permitting status of all sintering ovens at the facility will be made.

Cold Cleaner:

During the previous inspection one cold cleaner in the maintenance area was identified that used a water-based cleaning solution called Simple Green. This unit was not observed during the inspection.

Welding:

There are metal welding stations that are vented into the plant environment that are controlled by a cartridge filter. These units are exempt from permitting under Rule 285(i).

Sandblasting:

There are three sandblasting units in the facility. Each unit has a baghouse control that is vented to the in plant environment. These units are exempt from permitting under Rule 285(vi).

Task line:

This area consists of compression molding and sintering of PTFE gaskets. The compression molding operations are exempt under Rule 286(b). It is noted that a small amount of isopropyl alcohol (IPA) has been used in the past to wipe down finished parts.

Paint Booth:

The paint booth was observed, I observed usage records, which indicate that ~18 ounces of paint are used per batch. This booth is exempt per Rule 287(2)(c).

Powder Coating Chambers:

There are two powder coating chambers that also bake with an internal baghouse that are exempt from permitting under Rule 287(d).

SUMMARY

Andronaco Industries was in non-compliance at the time of the inspection. A Violation Notice (VN) will be issued. The VN will also include a request information on the facility-wide Potential to Emit (PTE) demonstration for all pollutants at the source, as well as a request for a facility-wide inventory of equipment and identify the permitted or exempt status of each pursuant to Rule 278.

NAME April Lazzaro

DATE 05/09/2023

SUPERVISOR 