

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

N274845365

FACILITY: Gentex Corporation		SRN / ID: N2748
LOCATION: 11768 James St., HOLLAND		DISTRICT: Grand Rapids
CITY: HOLLAND		COUNTY: OTTAWA
CONTACT: Justin Olejniczak , EHS Specialist		ACTIVITY DATE: 07/16/2018
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2018		
RESOLVED COMPLAINTS:		

Background

Gentex Corporation (Gentex) SRN: N2748 is a mirror manufacturing facility that specializes in manufacturing automotive mirrors. The production facility located at 11768 James Street, Holland Michigan. Gentex is located in a primarily industrial area with the nearest residential structure approximately 700 feet north of the facility. The facility was inspected on 7/16/2018 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; as well as applicable exemptions from Rule 201.

Gentex is a minor source of volatile organic compounds (VOCs), particulate matter (PM), individual HAPs and aggregate HAPs.

Inspection

Site arrival was at 11:00 am on 7/16/2018. I met with Justin Olejniczak, Environmental Health and Safety Specialist, I presented my State of Michigan identification card, informed the facility representative of the intent of my inspection and was permitted onto the site. Mr. Olejniczak showed me the facility. Gentex is an automotive mirror and circuit board manufacturing facility. The facility consists two main production areas located in one building. During the inspection Mr. Olejniczak showed me the mirror final assembly area and the electrical assembly area. Justin also showed me the two smaller support sections of the facility, warehousing and utility.

Mirror final assembly

Primary function: Subassembly, final assembly and warehousing

Description

Gentex uses multiple bays at the James street facility for partial assembly of base components and final assembly of mirrors. The three main bays that generate air contaminants are Bay 3, Bay 5-1 and Bay 5-2. The facility tracks the emission from the three bays under the Rule 290 exemption from Rule 201. During the inspection I observe various aspects of the process at each bay. The bays are sectioned off into smaller production lines. Each line generally includes manual assembly of mirror components, laser etching, and glass cleaning with isopropyl alcohol (IPA). Justin informed me that they track both PM and VOC emission data from the appropriate processes.

Electronic assembly

Primary function: Circuit board assembly

Description

Gentex has a large clean room assembly area which it uses to assemble circuit boards for in house applications. The clean room has multiple production lines, each with a similar product flow. Gentex utilizes eight solder paste lines, two wave solder lines and four coating lines. The coating process is not the same as spray coating, but instead involves the sealing of circuit board components to the surface of the board. The process starts with a blank circuit board. Using a component like a screening plate (similar to ink based screen printing on fabric) a solder paste is applied. The board then has various components attached to the board and several different stations along the production line. Once all of the parts are set in place, a low temperature oven sets the parts. Some of the components are sealed in with a gel like adhesive.

Various processes associated with the electronic assembly are exempt from permitting pursuant to Rule 287(2)(c) and 287(2)(a). The soldering is exempt from permitting pursuant to Rule 290. Gentex is phasing out lead based solder and is moving toward a low VOC based paste.

Warehouse, utility and miscellaneous

Primary function: Material storage, cleaning, building utilities

Description

The smaller support areas of the facility include warehousing, cleaning and building utilities. The Warehousing area did not appear to be a source of any significant air emissions. The cleaning area was used for cleaning the screens/slide used to apply the solder. The process uses a chemical called Hydrex sp-50 cleaner. The facility has two washers, both appear to be exempted from Rule 201 pursuant to Rule 290.

The facility has 4 small boilers. The boilers appear to meet exemption Rule 282. While inspecting the boilers I was unable to locate a nameplate with a size designation. The boilers were not much larger than that of a residential water heater. I asked Justin to provide the size of the boilers later with the exemption demonstration. The provided records indicated that the boilers are each 3.0 MMBTU/hr.

While walking through a maintenance area, Justin showed me one of the facility's parts cleaners. Justin indicated that it was an aqueous based parts washer. I did not observe any solvent odors in the area, and the lid was closed.

Regulatory compliance

Rule 290

Processes: Board Washer, EA Adhesive, Element Cleaning, EUJAMESMANCLNG51, EUJAMESMANCLNG52, Lasers, Miscellaneous Solvent Use, Solder Paste, Wave Solder (lead), Wave Solder (lead free), Wave Solder

Limit and compliance: Each 290 exempt process is limited to 1000lbs of VOC per month. The highest reported emissions are from "miscellaneous solvent use". The emissions were fairly consistent, between 200 and 700 lbs per month for the past two years. This is below the 1000 lb emission limit and the processes appear to meet the Rule 290 exemption.

Rule 287(2)(c)

Processes: Conformal Coatings (five reporting groups)

Limit and compliance: The process is limited to 200 gallons minus water of coating per month. The

highest usage month for the past 2 years was March 2018 at approximately 158 gallons. This is below the 200 gallon minus water limit and appears to comply with the permit exemption.

Conclusion

It appears that Gentex is in compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and Rule 201.

NAME



DATE

7/31/18

SUPERVISOR

