

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

N188836298

FACILITY: Gentex Corporation		SRN / ID: N1888
LOCATION: 600 N. Centennial Street, ZEELAND		DISTRICT: Grand Rapids
CITY: ZEELAND		COUNTY: OTTAWA
CONTACT: Gary Engerson, Environmental Health and Safety Manager		ACTIVITY DATE: 06/15/2016
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

AQD Staff April Lazzaro (AL) and Chris Robinson (CR) arrived at the facility to conduct an unannounced, scheduled inspection. AL contacted Justin Olejniczak that morning at approximately 8:00 am and informed him that we would be onsite at approximately 8:45 am. AL and CR arrived at the facility at approximately 8:45 am and checked in with the front desk, who informed Mr. Olejniczak and Gary Engerson, Environmental Health and Safety Manager, of our presence.

During the pre-inspection meeting, AL informed both Mr. Olejniczak and Mr. Engerson of the scope of the inspection, which included the Title V Renewable Operating Permit (ROP) No. MI-ROP-N1888-2016 to include all Rule 290 emissions and recordkeeping review. In response to the draft rules package to rescind Rule 208a, Gentex had choices to make with regard to being a major source for particulate matter,(PM) hazardous air pollutants, (HAPs) and volatile organic compounds(VOC) and applying for opt-out limits; or obtaining a ROP. Gentex utilized a combination of options by obtaining a HAPs opt-out and obtaining a ROP for VOCs and PM. No odors or visible emissions were identified from any of the facility buildings inspected or observed.

FACILITY DESCRIPTION

The Gentex Corporation consists of seven facilities including 220 Riley, 58 E. Riley Street, the North Riley Campus, 220 Riley Street, 675 N. State Street, 600 N. Centennial (East and West) and the Central Chiller Plant. Gentex stated the North Riley Campus was reportedly empty, so we did not conduct a physical inspection there.

The Centennial Street facilities (east and west) contain the R & D labs, aerospace projects, microelectronics operations, inside mirror lines and solder equipment. Smart beam microelectronics is a feature on vehicles that automatically turns off the high beam headlights when it senses oncoming traffic. Centennial east contains eight electrical assembly paste lines. The other three buildings in this complex are being used as a distribution center, quality control and facilities storage.

220 Riley Street includes subassembly, and the new synthetic chemistry labs constructed in 2012. It also includes the new installations of Reactor Bay 1 & 2. These Emission Units (EU's) are not currently properly identified in the ROP or recordkeeping and must be corrected through a revision. The expected ROP modification submittal date September 23, 2016.

58 Riley has eleven lines that are basically the same and are used to manufacture interior mirrors. First the glass (element) is cut to size, trimmed and the excess glass is discarded. Following this, the element is washed with soap and water. Then the element is coated several times using a proprietary process called sputtering.

Basically, the system uses electricity and vacuum to apply a solid to the target material. There is no exhaust system serving this process. Two panes of coated glass are adhered to each other by a thin line of adhesive around the edge and cured. Then the fluid formula epoxy is put in between the two panes. The space left unglued which allowed the fluid to go between the glass parts is then "plugged. Gentex now makes the plugging material on-site in the new labs. The fluid formula epoxy is also manufactured in the new labs.

The State Street facility has 12 lines which are basically the same and are used to manufacture exterior mirrors. The process operates in a similar fashion as previously described. This facility also includes a glass bending process to meet necessary specifications. A sandblaster is used to remove coating off of the racks as necessary.

Gentex has been exploring recycling options for their waste glass. Although the glass is currently being sent to a landfill, it is being used for the construction of roads within the landfill, not waste.

COMPLIANCE EVALUATION

The ROP currently covers 71 emission units which are combined into various flexible groups as identified below. However, while preparing the AQD records request, Gentex staff found several emission units that are on-site, but are not included in the ROP. The expected ROP modification submittal date September 23, 2016.

FG-FACILITY

FG-FACILITY contains Opt-out limits for HAPs. This FG includes all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment. Records were provided as requested for the time period of June 2014 through April 2016 for HAPs Emissions. Each Individual HAP is limited to less than 9.0 tons per 12-month rolling time period. The highest individual HAP was xylene at 2.74 tons. Aggregate HAPs are limited to less than 22.5 tons per 12-month rolling time period. Total HAP emissions are reported at 3.78 tons. Monitoring and recordkeeping is sufficient to determine compliance with the HAP emission limits. See attached CD with recordkeeping.

FG- RULE287(c)

This flexible group is for exempt coating operations that utilize less than 200 gallons per month. The facility maintains monthly usage records in gallons as required and records indicate usage is below 200 gallons per month. See attached CD with recordkeeping.

FG- RULE290

This flexible group is for any exempt emission unit that emits air contaminants below the levels identified in Rule 290. Currently 53 Rule 290 emission units are listed in the ROP.

The IPA usage for all facilities is tracked based on the number of mirrors produced per line. Mr. Engerson and his staff receive information stating how many drums of IPA

have been “released” to the floor. After obtaining that information, they obtain production records and the IPA is pro-rated based on the number of mirrors produced on each line in that facility. This appears to be an appropriate methodology of tracking IPA usage. The records indicate compliance; however, Gentex staff had never conducted a cross reference of IPA purchased and IPA emissions reported. Staff requested facility IPA records for the time frame of 2015-present. These were provided, but contained an error and were resubmitted. The values appear to not directly correlate to the reported VOC emissions. It was clarified by Gentex that there are more than just IPA emissions that are VOC. This could not be confirmed through a review of Rule 290 records because there was a “VOC” column, but IPA was not listed individually as required.

Overall Rule 290 records were inadequate to demonstrate compliance with the requirements. The facility was not tracking emissions based upon material Chemical Abstract Service (CAS) number and when this information was obtained, it was discovered that there were chemicals being emitted that have not been previously tracked.

The number initially relayed to AQD was ~10-15 air contaminants without established ITSL/IRSL values. At that time, I contacted the AQD Air Toxics Unit and asked if they were willing to conduct an ITSL review on ~10-15 air contaminants or should the company utilize the methodology in Rule 229 to create their own. Air Toxics Unit staff indicated they would generate the ITSL values for the company. The list of air contaminants was received by the company on August 31, 2016 which was comprised of 92 chemicals. A closer look at this list revealed that there are materials on there that do not appear to be air contaminants. I requested an updated list to include only materials that are considered air contaminants. At the time of this report it had not yet been received.

The Air Toxics Unit will not review a list of 92 chemicals, without the submittal of a Permit to Install application. It is currently unclear if the facility is eligible to utilize the Rule 290 exemption.

Due to the failure of the company to keep proper records as required by Rule 290, a violation of MI-ROP-N1888-2016, FG-RULE290, Special Condition VI.1&2 will be cited.

For clarification going forward, each individual air contaminant that utilizes the Rule 290 exemption must be listed and identified by the CAS number and totaled as required in the rule.

FG-COLDCLEANERS

A solvent cold cleaner was present and inspected at the Riley Street complex. The requirements posting was attached and the lid was closed. This cleaner did not use heated solvent or agitation and contained a low VOC/HAPs free solvent.

FG- SIRICEMACT

The facility operates nine emission units that are subject to 40 CFR Part 63 Subpart ZZZZ. Maintenance records were requested, and Gentex provided 2015/2016 engine generator logs and 2016 maintenance records as requested. These records are difficult

to compare and determine what unit matches with the ROP emission unit name. This needs to be improved upon going forward. This should include, at a minimum, the emission unit id listed on the individual maintenance records.

Compliance Summary

Before leaving the complex, staff requested that Mr. Engerson send Title V and Rule 290 emission records.

AQD Staff received an e-mail with the records requested in a timely manner. Mr. Engerson noted that the records contained additional emission units that were not previously identified in their ROP, which it did. Subsequently, on June 21, 2016 staff requested a list of all emission units installed since 2011 for comparison.

This was received and it appeared as though there was concurrent and related installation of equipment that indicated a project needing permitting. A request was made for this information, pursuant to Rule 278a. Gentex submitted the demonstration timely, but it was not complete. It specifically did not include the exemption being used per EU as required in Rule 278a(b). Additionally, it completely left out the new building that was constructed in 2015. The demonstration also only evaluated installations on a calendar year basis, not on a concurrent and related basis. Additionally, the Rule 278a demonstration was to contain an update on the installation dates of equipment. As indicated above it was specifically noted that the new synthetic chemistry laboratory located at 220 Riley had been installed in 2012. This laboratory and emissions associated with that are not included in the current ROP or the Rule 287a demonstration. This information is still under review, however at this time is not considered a sufficient demonstration that Rule 278 has been met. As such, a violation of Rule 201 will be cited.

During the evaluation it was also noted that some emission unit ID's didn't match up to the ID's listed in their ROP. Staff spoke with Mr. Engerson and Gentex is reprogramming their air emissions database to accommodate required recordkeeping and to correct ID's. Gentex will prepare an ROP permit modification to incorporate all of the missing emission units by September 23, 2016.

Additionally, Gentex will submit the facility criteria pollutant Potential to Emit by this date. The facility had placed a deadline of August 31, 2016 on the submittal but on that date the consultant called and asked for an extension to September 23, 2016 which was granted.

Due to the complexity of the source and the variables and inadequacies involved with the Rule 290 recordkeeping, a Permit to Install is recommended. Correspondence and requested records are attached via data CD.

NAME 

DATE 9-30-16

SUPERVISOR 