

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

N653637826

FACILITY: GE Aviation Systems, LLC		SRN / ID: N6536
LOCATION: 3290 PATTERSON AVE., S. E., GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Cameron Main , Environmental Health & Safety Lead		ACTIVITY DATE: 12/06/2016
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

At 9:20 A.M. on December 6, 2016, Air Quality Division staff Dave Morgan conducted an unannounced scheduled inspection of GE Aviation located at 3290 Patterson Avenue in Kentwood. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations as well as Permit to Install (PTI) No. 270-98. Cameron Main, Environmental Health and Safety Lead and Matt Eling, EH&S Specialist accompanied AQD staff on the inspection.

#### FACILITY DESCRIPTION

GE Aviation manufactures aerospace equipment, such as, the "black box", gyroscopes, and circuit boards for commercial and military airplanes, tanks, etc. The facility consists of painting, solvent cleaning and various small electronics manufacturing processes. All equipment is exempt from new source review permitting, however, PTI No. 270-98 limits the facility's potential to emit for hazardous air pollutants (HAPs) and volatile organic compounds (VOC).

#### COMPLIANCE EVALUATION

The facility has many small bench operations involving hand application of solvents and soldering. Consistent with AQD Policy No. 006, many of the smaller operations have been organized into emission units based on the company's defined production areas because the equipment either has a common emission point or are functionally related in their operation.

#### EU-F114:

This emission unit consists of the machine shop in which the company has small cold cleaners exempt under Rule 281(h). The lids on these units were closed and operating procedures posted.

#### EU-F116:

This area consists of three caustic soda wire stripping pots where coatings are stripped off wire. The wire is then dipped into a small molten solder pot. The molten solder does contain lead. The company has records to show that lead emissions are essentially nil. The stripping and soldering processes are vented out and are exempt from permitting under Rule 285(r) and Rule 285(l), respectively.

There are also two fluidized bed units used to impregnate wire coils with epoxy. The fluidized bed consists of a powdered epoxy which becomes a coating on the wire once it is heated. The process is exempt under Rule 287. There is an associated curing oven (called the Blue M oven).

#### EU-A112:

The A112 area has a finishing room which consists of two Brinks spray booths exempt from permitting under Rule 287(c) which are used to apply acrylics, polyesters, enamels, amides, polyurethanes, and epoxys. Conventional spray guns are used to spray less than 200 gallons per month and Andrea paper filters are used as the particulate control. Filters looked to be well maintained. According to facility personnel, the filters are changed monthly and the booth pressure is also monitored with a manometer.

Most of the coatings that the facility uses are reduced with solvents like toluene and xylene and cleanup is done with epoxy and lacquer thinner.

Also in the finishing room, there are three cold cleaners exempt from permitting under Rule 281(h) used for cleaning gun nozzles and other spray components.

The A112 area also consists of a two component Epoxy potting operation (of Hysol). Essentially small quantities (one to eight ounces) of epoxy is mixed under a hood which is vented to the ambient air. The cups of mixed epoxy are then placed into a freezer to be used throughout the plant at a later time.

EU-F117:

This area consists of a batch vapor degreaser which uses a blend of fluorocarbon solvent for cleaning circuit boards. The company considers this unit exempt under Rule 290. The cleaning solvent does not contain halogenated hydrocarbons and is therefore not subject to the Halogenated Solvent Cleaning NESHAP.

Because the degreasing solvent contains VOCs, the unit is also subject to Rule 708 for new open top vapor degreasers. In the past, the company has documented that the unit solvent-to-air interface is less than 10 square feet, therefore only Rule 708(3) and (4) are applicable to the unit. The company is meeting these requirements.

Also in the EU-117 area is an Electrovert "AquaJet" circuit board cleaning unit. This unit has been disconnected and will be replaced with an aqueous unit. According to Mr. Main, the new unit will be exempt from permitting under Rule 290.

There are various individual workstations where small amounts of solvent is also used for cleaning. These units are used on a limited basis and are exempt from permitting under Rule 281(h). The company tracks total solvent usage from this process. All emissions from this area are fugitive.

Lastly the EU-117 area contains an Omniflow soldering machine and several other soldering machines exempt from permitting under Rule 285(i).

EU-F126 and EU-General:

These emission units are for small cold cleaning operations and small soldering operations that are exempt from permitting under Rule 281(h) and Rule 285(i).

Emergency Generators:

The company has a diesel-fired emergency generator rated at 1,207 horsepower and a natural gas-fired emergency generator rated at 174 horsepower. Based on the fuel and size of the units, each would be exempt from new source review permitting under Rule 285(g). It is noted that the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE) (40 CFR Part 63, Subpart ZZZZ) at Area Sources may apply to these units.

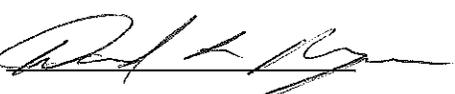
Recordkeeping:

All material usage and emission records are maintained in accordance with the permit by Fishbeck Thompson Carr and Huber. Calculations are based on material purchase records and tracked using a spreadsheet.

The volume of all VOC containing materials at the facility is very low. Total VOC emissions from November 2015 to October 2016 were 3.09 tons which is well below the 38.9 ton per 12-month rolling limit. Similarly, total HAP emissions were 0.79 tons which is also well below the 22.5 ton per year limit for the same time period. VOC emissions are primarily from the paint spray booths at the facility. All emissions are well below Rule 287(c) and Rule 290 requirements. Records are attached.

EVALUATION SUMMARY

GE Aviation appears to be in compliance with all applicable requirements. Records are attached.

NAME  DATE 12/8/16 SUPERVISOR 