

Georgia Department of Natural Resources

Environmental Protection Division • Air Protection Branch

4244 International Parkway • Suite 120 • Atlanta • Georgia 30354

404/363-7000 • Fax: 404/363-7100

Judson H. Turner, Director

NARRATIVE

TO: Manny Patel

FROM: Steve Neadow

DATE: December 4, 2015

Facility Name: **Hitachi Automotive Systems Americas, Inc.**

AIRS No.: 297 00038

Location: Monroe, GA (Walton County)

Application #: 23555

Date of Application: October 6, 2015

Background Information

Hitachi Automotive Systems Americas, Inc. operates an automobile parts manufacturing facility at 1000 Unisia Drive, Monroe, Georgia (Walton County). The facility will be classified as a true minor with regard to Title V regulations. Hitachi Automotive Systems Americas, Inc. was previously permitted as Unisia of Georgia Corporation on July 16, 1997. This facility manufactures parts including propeller shafts, timing control gears, cam timers, and steering mechanisms for the automotive industry. Other activities include numerous automated and robotic manufacturing processes; the facility operates a spray paint booth with a water curtain and a small emergency generator. The fuel burning equipment burns natural gas.

The facility is comprised of 3 Buildings

Building 1: Office space, break room, assembly area for VTC Lines. No process emissions.

Building 2: Office space, break room, assembly area for propeller shaft lines, and an **automated paint booth**. The automatic paint booth has a 0.8 MMBTU/hr cure oven and is controlled by a water curtain system.

Building 3: Office space, break room, assembly area for VDP-4, BEPS, PEPS, and P/S Gear lines. No process emissions.

Purpose of Application

Hitachi Automotive Systems Americas, Inc. submitted an application dated October 6, 2015 to the Division which was assigned No. 23555 for a name change and permit update. A Public Advisory was not issued since no additional equipment will be added.

Updated Equipment List

Emission Units			Associated Control Devices	
Source Code	Description	Energy Rating MMBTU/hr	Source Code	Description
PB1	Paint Booth Oven	0.80	---	Water Curtain
CU	Paint Booth and Touch Ups	---	N/A	---
GEN1	Backup Generator	0.38	N/A	---

Emissions Summary**Facility-Wide Emissions**

(in tons per year)

Criteria Pollutant	Potential	Actual
CO	0.29	0.29
NO _x	0.34	0.34
PM	23.76	23.76
PM10	23.76	23.76
PM2.5	23.76	23.76
SO ₂	0.02	0.02
VOC	45.6	45.6
Total GHG (if applicable)	420	420
Total HAP	1.14	1.14
Max. Individual HAP		
Methyl Isobutyl Ketone	0.863	0.863
Ethyl Benzene	0.259	0.259

Facility wide potential VOC emissions are estimated to be 45.6 tons per year thus avoiding Title V. Annual facility wide Total HAP emissions were estimated at 1.14 tons per year well below the Title V major source threshold for HAPs.

Regulatory Applicability

Visible emission opacity from the adhesive spraying and the injection molding process is limited to 40% per Georgia Rule (b). PM emission from the spray booths is limited by Georgia Rule (e). Spray booth exhaust is controlled by a water curtain for particulate matter. PM emission from painting was estimated to be 23.76 tons/year which will very easily comply with the Rule (e) limits.

40 CFR 60 New Source Performance Standard (NSPS) Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

The following sources are subject to NSPS in 40 CFR 60 Subpart JJJJ:

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

Hitachi currently operates a combustion engine manufactured after June 12, 2006 with a maximum engine power greater than 19KW (25 HP) actually, [113 KW, (149 HP)] solely for use as an emergency generator. All spark ignition internal combustion engines within the university are subject to this regulation.

40 CFR 63 National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines

Stationary Reciprocating Internal Combustion Engines (RICE) located at an area source of HAPs that are new, existing, or reconstructed are subject to MACT Subpart ZZZZ. Stationary RICE at area sources of HAPs are considered “new” under this Subpart if construction is commenced on or after June 12, 2006. The emergency generator engine was manufactured and installed after 2006, has a maximum engine rating of 149 HP, and is

therefore subject to Subpart ZZZZ. However, a new RICE located at an area source of HAPs must comply with this Subpart by meeting the requirements of 40CFR 60 Subpart JJJJ, and no further requirements apply for such engines under this Subpart (40 CFR 60.659(c)).

Notable exemptions

Georgia Rule 391-3-1-.02(2)(mmm)-Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity

Subsection 4(i) in Rule (mmm) defines “emergency standby stationary gas turbines and stationary engines” as any stationary gas turbine or stationary engine that operates only when electric power from the local utility is not available and which operates less than 200 hours per year. The definition of “emergency standby stationary gas turbines and stationary engines” is applicable to all of the generators located within the facility. Therefore, these generators are exempt from Rule (mmm) requirements because they are classified as emergency standby stationary engines.

40 CFR 63 Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

None of the coatings contain used at the facility contains the targeted HAPs of Methylene Chloride, chromium, cadmium, nickel, manganese or lead. Therefore, the area source coating MACT 40 CFR 63 Subpart HHHHHH does not apply to the adhesive spraying operations at the facility.

40 CFR 63 Subpart XXXXXX - National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

This subpart defines applicability as a source with the potential to emit metal fabrication or finishing metal HAP (MFHAP) defined to be the compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead. This facility is exempt from this regulation since they don't not emit any of the MFHAPs listed above.

Permit Conditions

Conditions 1.1-1.5 are standard permit conditions.

Condition 2.1 limits opacity from the facility sources to 40% per Georgia Rule (b).

Condition 2.2 limits Particulate Matter emissions from the manufacturing process according to Georgia Rule (e).

Condition 2.3 requires Hitachi comply with NSPS Subpart A and Subpart JJJJ for the operation of the spark ignition emergency generators.

Condition 2.4 outlines the limits for spark injection engine emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) in accordance with 40 CFR 60 Subpart JJJJ.

Condition 2.5 limits the accumulated non-emergency service time for the emergency generators to less than 100 hours per year and prohibits any operation other than emergency operation, maintenance checks and readiness testing.

Condition 2.6 requires Hitachi comply with all applicable provisions of NESHAP Subpart A and Subpart ZZZZ for the operation of the emergency generators.

Condition 3.1 requires maintenance records on air pollution control equipment be kept for 5 years.

Condition 3.2 requires all paint booths must operate with a PM filter.

Condition 4.1 requires Hitachi operate the emergency generators according to the manufacturer's written specifications, instructions or procedures developed by the Permittee that are approved by the engine manufacturer over the entire life of the engine.

Condition 5.1 requires monitoring of the pressure drop across the fiberglass filter in the adhesive spray booths and record the filter pressure drops on a daily basis.

Condition 5.2 requires Hitachi install a non-resettable continuous monitoring system for emergency generator GEN1 to track and record the cumulative hours of operation during emergency service as well as non-emergency service and to record the reason the generator was in operation.

Condition 6.1 requires Hitachi conducted a performance test at any specified emission point when so directed by the Division.

Condition 7.1 requires Hitachi must report any incident that the water discharge pressure from any of the pumps supplying water curtains as measured drifts outside its established working range, and is not corrected within twelve (12) hours of the occurrence.

Condition 7.2 requires the maintenance and retention of hours of operation for emergency generator GEN1 at the facility for both emergency and non-emergency service as recorded on the non-resettable hour meter.

Condition 7.3 requires the use of the monthly emergency and non-emergency service operating data to calculate monthly, the twelve month rolling total of the emergency and non-emergency service operating time for each generator during each twelve consecutive month period and notify the Division in writing within 15 days if any of the twelve month rolling total service operating time equals or exceeds 100 hours.

Condition 8.1 is a standard condition in all permits.

Condition 8.2 revokes previous permit No. 3714-147-12500.

Toxic Impact Assessment (TIA)

Not necessary. No physical changes to existing facility.

Summary & Recommendations

No Public Advisory was issued as this application was sent to clean up, update, and name change to their existing permit. The facility was originally classified as a synthetic minor (SM) but, now will be classified as a B source, true minor. The facility is located within the Northeast District Office however; ISCP will be responsible for compliance and the submittal of reports. I recommend approval of this permit and issuance of No. 3714-297-0038-B-01-0 proposed activity.