

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: April 5, 2016

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

AIRS No.: 297 00038

Location: Monroe, GA (Walton County)

Application #: 23732

Date of Application: March 9, 2016

Background Information

Hitachi Automotive Systems Americas, Inc. operates an automobile parts manufacturing facility at 1000 Unisia Drive, Monroe, Georgia (Walton County). The facility will continue to be classified as a true minor with regard to Title V regulations. 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.

Purpose of Application

Hitachi Automotive Systems Americas, Inc. submitted an application dated March 9, 2016 to the Division which was assigned No. 23732 to add a Paint Booth (PB2) to their facility. The spray booth is standard. It has two side openings where the conveyor goes in and out. The heat needed for drying is provided by gas or electric and the exhaust are vented to the atmosphere.

This application is submitted with the intentions of being an expedited permit. Check #27061 for \$3,000.00 from Hitachi cleared on March 25, 2016. A Public Advisory was issued and expires on April 15, 2016.

Updated Equipment List

Emission Units			Associated Control Devices	
Source Code	Description	Energy Rating MMBTU/hr	Source Code	Description
PB1	Paint Booth	0.80	---	Water Curtain
PB2	Paint Booth	0.80	---	Water Curtain
CU	Paint Booth and Touch Ups	---	N/A	---
GEN1	Backup Generator	0.38	N/A	---

Bold type indicates new equipment.

Emissions Summary**Facility-Wide Emissions**
(in tons per year)

Criteria Pollutant	Current Facility		After Modification	
	Potential	Actual	Potential	Actual
CO	0.29	0.29	0.29	0.29
NO _x	0.34	0.34	0.34	0.34
PM	23.76	2.38	47.49	4.75
PM10	23.76	2.38	47.49	4.75
PM2.5	23.76	2.38	47.49	4.75
SO ₂	0.02	0.02	0.02	0.02
VOC	15.2	15.2	30.4	30.4
Total GHG (if applicable)	420	420	420	420
Total HAP	1.14	1.14	2.26	2.26
Max. Individual HAP				
Methyl Isobutyl Ketone	0.863	0.863	7.73	7.73
Ethyl Benzene	0.259	0.259	0.518	0.518

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 with 99% efficiency. PM emission from painting was estimated to be 4.75 tons/year which will very easily comply with the Rule (e) limits. Since PB2 is similar to PB1, Facility wide PTE_{VOC} is doubled using the estimated use of 10,847.75 gallons of paint per year for PB1 in 2014. The weight of the paint is 11 lbs. per gallons. The VOC content of the paint is 2.8 lb./gal limit, facility wide PTE_{VOC} is estimated to be 30.4 tons/year.

$$\text{Gal/yr} = (10,847.75 \text{ gal/yr}) * (11 \text{ lb./gal}) = 119,325.25 \text{ gal/yr}$$

$$\text{PTE}_{\text{VOC}} = (119,325.25 \text{ gal/yr}) * (\text{VOC } 2.8 \text{ lb./gal}) * (1/11 \text{ lb./gal}) * (1 \text{ ton } /2,000 \text{ lb.})$$

$$\text{PTE}_{\text{VOC}} = 15.2 \text{ tons/yr for PB1 paint booth}$$

$$\text{Total PTE}_{\text{VOC}} = 30.4 \text{ tons/yr for PB1 + PB2 paint booth}$$

Notable exemptions**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 emit any of the MFHAPs listed above.

Permit Conditions

Condition 7.4 requires Hitachi use the equations listed when calculating the monthly VOC emissions from the entire facility. These records shall be kept available for inspection by or submittal to the Division for five years from the date of record.

Toxic Impact Assessment

A toxic impact assessment was done for Methyl Isobutyl Ketone and Ethyl Benzene. Total combined emissions increases are estimated to be 2.24 tons per year and will remain a minor source.

Summary & Recommendations

The Public Advisory expired on April 15, 2016 and no comments have been received. The facility will remain a B source, true minor. The facility is located within the Northeast District Office and will be responsible for compliance and the submittal of reports. I recommend approval of this permit amendment and issuance of No. 3714-297-0038-B-01-1 for the proposed activity.