

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

N770725448

FACILITY: Shelby Foam Systems, a Division of Magna Seating		SRN / ID: N7707
LOCATION: 6200 26 MILE RD, SHELBY TWP		DISTRICT: Southeast Michigan
CITY: SHELBY TWP		COUNTY: MACOMB
CONTACT: Linda Moore, EH&S Specialist		ACTIVITY DATE: 06/06/2014
STAFF: Rem Pinga	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Level 2 Target Inspection		
RESOLVED COMPLAINTS:		

On June 6, 2014, I conducted an unannounced level 2 target inspection at Shelby Foam Systems, a Division of Magna Seating of America, Inc. The facility is located at 6200 26 Mile Road, Shelby Township, Michigan 48316. 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 administrative rules, the facility's Renewable Operating Permit (ROP) No. MI-ROP-N7707-2013a. During the inspection, I was accompanied by Ms. Rebecca McClymont, Environmental Health and Safety (EH&S) Specialist and facility contact person. Prior to conducting the walk through inspection, I initially showed my credentials, stated the purpose of my inspection, and gave a copy of the pamphlet "Environmental Inspections: Rights and Responsibilities" to Ms. McClymont.

Magna Seating of America, Inc. acquired the facility from Faurecia Automotive Seating, Inc. on December 21, 2009. AQD District received Notices of Change of Ownership and Request to Transfer Permit to Install No. 303-06A (effective permit at that time) and Consent Order AQD No. 31-2008 both from Faurecia Automotive Seating, Inc. and Magna Seating of America, Inc. Magna Seating agreed to assume the responsibility for complying with the conditions of the permit to install and the stipulations in the consent order. The facility obtained modified PTI No. 303-08B in June 2011 to remove facility-wide VOC emission restriction of less than 100 tons per year (tpy) thus making the facility a major source for VOC and subject to the Title V of Clean Air Act of 1990, Renewable Operating Permit program. The facility obtained the initial Title V permit, ROP No. MI-ROP-N7707-2013, on August 23, 2013. The permit contained federally enforceable restrictions on the single and aggregate Hazardous Air Pollutants (HAPs) emissions to make the permit a synthetic minor for HAPs. The facility's Consent Order, AQD No. 31-2008, was recently terminated on May 2, 2014, per company's request and upon verification that the company has achieved compliance with the terms and requirements of the Consent Order. The facility is subject to the area source MACT, 40 CFR Part 63 Subpart OOOOOO. The facility submitted the initial/compliance notification requirements per Subpart OOOOOO dated 8/11/2008. The company showed compliance with the applicable

requirements of the standard by certifying that, even prior to July 16, 2007, methylene chloride was not used at the facility.

The facility manufactures seat cushions for the production of automotive seats. It operates 3 shifts per day (0700 to 1530 hours, 1500 to 2330 hours, and 2300 to 0730 hours) and 6 to 7 days per week. The seat cushion is produced by injecting/mixing polyol, polymeric diphenylmethane diisocyanate (MDI), and some additives into a lid and bowl type molding press and allow for chemical reaction to occur for about 3 to 4 minutes to form the product. The facility obtained a modified (minor) renewable operating permit, MI-ROP-N7707-2013a, on April 14, 2014 to remove the applicable requirements for the 749 BHP Caterpillar compression ignition emergency generator that was uninstalled from the facility.

During the inspection, I observed the facility operated 3 lines (emission units), EU-RTLine, EU-CFLine, and EU-Anti-Squeak which utilize mold release solvent and/or wax that contain volatile organic compounds (VOCs) and Hazardous Air Pollutants (HAPs). The RO permit contained a fourth emission unit, EU-Coldcleaner, for any parts washer installed after July 1, 1979 that is exempt from permit to install requirements per AQD Rule R 336.1285(r)(iv).

The EU-RTLine comprised of 32 individual molds lined up in an oval shaped conveyor system similar to a race track (hence RT line). The line was divided into 2 work stations in succession wherein designated manual HVLP applicators sprayed mold release solvent and/or paste wax to the mold prior to injection of polyol/MDI mixture. The lid was sprayed in the first station while the bowl got sprayed in the second work station. The plastic components were mixed at the spray gun and poured into the bowl through robotic applicators at the foam application stage. After the lid was closed, the process underwent a chemical reaction under high pressure to form the polyurethane foam product for bench seat and back seat production. The entire production cycle occurred for about 6 to 6.5 minutes. The line had an exhaust ductwork system at the back to capture any potential air emission releases and exhausted through 4-24" Diameter stacks per MI-ROP-N7707-2013a special condition EU-RTLine (VIII). The line also had an additional exhaust stack, SV-RTLine-01, for heat release currently only.

Per MI-ROP-N7707-2013a special condition EU-RTLine I(1), the facility's monthly 12 month rolling time period VOC emission from January 2013 through May 2014 was highest in January 2013 at 75.1 tons per year (tpy) and consistently went down to its lowest figure in May 2014 at 66.7 tpy. This was in compliance with the permit limit of 102 tons/year. Per MI-ROP-N7707-2013a special condition EU-RTLine I(2), the facility's monthly 12

month

rolling time period Hydrocarbon Naphtha emission rates from January 2013 through May 2014 was highest in February 2014 at 5.81 tpy and less than the 18.7 permit limit. Per MI-ROP-N7707-2013a special condition EU-RTLine II(1), the facility's spray mold release VOC content was reported at 6.1 lb/gallon and less than the 6.2 lb/gallon permit limit. Per MI-ROP-N7707-2013a special condition EU-RTLine II(2), the paste wax VOC content was reported at 4.4 lb/gallon and less than the 5.1 lb/gallon permit limit. Per MI-ROP-N7707-2013a special condition EU-RTLine (III)(1 & 2), the facility appeared to be capturing and disposing waste materials in an acceptable manner and containers were covered at all times during inspection. Per MI-ROP-N7707-2013a special condition EU-RTLine (IV), I observed airless manual applicators were used to spray the mold release wax. Per MI-ROP-N7707-2013a special condition EU-RTLine (V), the facility obtained data sheet from the wax manufacturer for every shipment of wax and utilized formulation data to calculate for emissions. Per MI-ROP-N7707-2013a special condition EU-RTLine (VI), the facility kept records of mold release waxes' VOC contents, raw materials used and calculations of monthly and 12 month rolling VOC emissions for EURT-Line. Per MI-ROP-N7707-2013a special condition EU-RTLine (VII), the facility submits the annual and semi-annual compliance/deviation ROP Report Certification timely.

The EU-CFLine comprised of 24 individual lid and bowl type molds arranged in a circular carousel (hence the carousel line). This line produced foam for bucket seat production. The process was similar to the EU-RTLine except for the use of airless spray guns for mold release applications and negative pressure. Each mold press had a filtered exhaust duct at the back connected to the 36 inches diameter exhaust stack per PTI MI-ROP-N7707-2013a special condition EU-CFLine (VIII) (1). This was a common stack also utilized by the anti-squeak line. The facility replaced the HVLP guns with the airless spray guns in December 2011 and submitted documentation that the airless spray guns have better transfer efficiency than HVLP guns per MI-ROP-N7707-2013a special condition EU-CFLine(IV)(1). Per MI-ROP-N7707-2013a special condition EU-CFLine(I)(1), the facility submitted records showing the monthly 12 month rolling time period VOC emission rates from January 2013 through May 2014 had highest figures in April 2013 and March 2014 at 29.8 tpy and in compliance with the permit limit of 47 tons/year. Per MI-ROP-N7707-2013a special condition EU-CFLine(I)(2), the facility monthly 12 month rolling time period Hydrocarbon Naphtha emission rates from January 2013 through May 2014 had highest figures in April 2014 at 1.716 tpy and in compliance with the permit limit of 8.7 tpy. Per MI-ROP-N7707-2013a special condition EU-CFLine II(1), the facility's spray mold release VOC content was reported at 6.1 lb/gallon and less than the 6.2 lb/gallon permit limit. Per MI-ROP-N7707-2013a special condition EU-CFLine II(2), the paste wax VOC content was reported at 4.4 lb/gallon and less than the 5.1 lb/gallon permit limit. Per MI-ROP-N7707-2013a special condition EU-CFLine (III)(1 & 2), the facility appeared to be capturing and disposing waste materials in an acceptable

manner and I observed containers covered at all times during inspection. Per MI-ROP-N7707-2013a special condition EU-CFLine (V), the facility utilized formulation data to calculate for emissions. Per MI-ROP-N7707-2013a special condition EU-RTLine (VI), the facility kept records of mold release waxes' VOC contents, raw materials used and calculations of monthly and 12 month rolling VOC emissions for EUCF-Line. Per MI-ROP-N7707-2013a special condition EU-CFLine (VII), the facility submits the annual and semi-annual compliance/deviation ROP Report Certification timely.

The seat foams from EU-RTLine and EU-CFLine are inspected, trimmed, sanded, repaired and packaged for shipment to customers. Per Ms. McClymont, an anti-squeak water based emulsion is applied to the foam. EU-Anti-Squeak consists of a three-sided spraybooth. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (I)(1), the facility submitted records showing the monthly 12 month rolling time period VOC emission rates from January 2013 through May 2014 had highest figures in August 2013 at 0.0257 tpy and in compliance with the permit limit of 1.0 tpy. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (II)(1), the Anti-Squeak material VOC content used from January 2013 through May 2014 was reported at 0.017 lb/gallon and in compliance with the permit limit of 0.04 lb/gallon. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (III)(1, 2, & 3), the facility appeared to be capturing and disposing waste materials in an acceptable manner, filters were disposed properly, and I observed containers covered at all times during inspection. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (IV)(1 & 2), I observed filters in place for the spraybooth and HVLP spray guns were used. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (V), the facility utilized formulation data to calculate for emissions. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (VI), the facility kept records coating VOC content, gallons of coating used and calculations of monthly and 12 month rolling VOC emissions for EU-Anti-Squeak. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (VII), the facility submits the annual and semi-annual compliance/deviation ROP Report Certification timely. Per MI-ROP-N7707-2013a special condition EU-Anti-Squeak (VIII), this emission unit shares a stack (SV-CFLine) with EU-CFLine.

The facility also uses a water based adhesive, SIMALFA 4558, for repair of cracks and imperfections in some products. The MSDS showed no VOC content for this product.

Per MI-ROP-N7707-2013a special condition FG-Coldcleaners, the facility has one parts washer that uses non halogenated solvent. In compliance with MDEQ-AQD Part 7 regulations, and FG-Coldcleaners' applicable requirements, the facility kept records of equipment dimensions, vapor pressure, quantity used, type of solvent used, etc.. It has an air/vapor interface of less than 10 square feet (36"x16"). It appears to be exempt from permit to install requirements per AQD Rule R 336.1281(h). During the inspection, I

observed the cover was in place and closed. I observed safety/operating instructions posted by the cover. The solvent used is Super Agitene 141 and contains >97% aliphatic petroleum distillate. For FY2013, the facility reported about 5 gallons of solvent usage.

Per MI-ROP-N7707-2013a special condition SOURCE-WIDE CONDITIONS(VI), the facility

kept records of individual and aggregate monthly HAP(s) emissions and monthly 12 month rolling time period emissions through May 2014. Per MI-ROP-N7707-2013a

special condition SOURCE-WIDE CONDITIONS (I)(1 & 2), the highest monthly 12 month rolling time period combined HAPs emissions occurred in July 2014 at 1.250 tons and below the individual HAP permit limit of 9.5 tpy as well as the aggregate HAPs permit limit of 24.5 tpy. Xylene showed the highest monthly 12 month rolling individual HAP emission at 1.027 tons/year for July 2013.

The facility removed the standby 749 brake horsepower diesel fired Caterpillar emergency generator thus requested to revise the facility's Clean Air Act of 1990, Title V, Renewable Operating Permit (ROP), ROP No. MI-ROP-N7707-2013 and subsequently obtained MI-ROP-N7707-2013a. Subsequently, the facility bought a new emergency generator, 1474

Horsepower (Hp), diesel fired Caterpillar, reciprocating internal combustion engine (RICE). The engine's rated heat input calculates to about 3.75 MMBtu/hr., thus exempt from permit to install requirements per AQD Administrative Rule R 336.1285(g) (the rated heat input is less than 10 MMBTU/hr). However, the generator appeared to be subject to 40 CFR 63 Subpart ZZZZ as an area source reciprocating internal combustion engine (RICE) MACT.

Subpart ZZZZ referenced the facility to 40 CFR 60 Subpart IIII, New Source Performance Standard (NSPS) for compression ignition internal combustion engine. As an emergency generator, the facility is not required to submit initial notification.

I did not observe any noncompliance issues during the inspection. Ms. Linda Moore recently replaced Ms. Rebecca McClymont as the facility contact person.

NAME ALA / J DATE 9/22/2014 SUPERVISOR CTE