NE00474400

#### DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION ACTIVITY REPORT: On-site Inspection

N586471160		
FACILITY: Adient US, LLC		SRN / ID: N5864
LOCATION: 49200 HALYARD DR, PLYMOUTH		DISTRICT: Detroit
CITY: PLYMOUTH		COUNTY: WAYNE
CONTACT: Cindy Priestly, HSEE Coordinator		ACTIVITY DATE: 03/14/2024
STAFF: Katherine Koster	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Targeted FY24 Inspect	ion	
RESOLVED COMPLAINTS:		

Source:	SRN N5864 – Adient US, LLC (formerly Johnson Controls)	
Location:	49200 HALYARD DR, PLYMOUTH, MI 48170	
Inspection Date	March 15, 2024	
Inspector:	Katie Koster, AQD	
Contact Person:	Cynthia Priestly	
Facility Phone Number:	734-254-6876	
Email:	cynthia.priestly@adient.com	
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#### FACILITY BACKGROUND

Adient US, LLC (formerly Johnson Controls) was consolidated in 1991 in over 500,000 square feet of office space accommodating about 2,000 employees within three buildings in Metro West Technology Park in Plymouth, Michigan. The Plymouth technical campus consists of design, engineering, sales and development functions for automotive seating components and systems as well as a sales team for the OE battery business. Its main purpose is for Research and Development. There is a foam lab, two boilers, one hot water heater, various small natural gas-fired heating units (direct and hot water) throughout the buildings, two emergency generators, a small welding area, a small woodworking shop and 3D printing, two small coating booths and a small laser etching unit.

## **COMPLIANCE HISTORY**

There are not any records of complaints and/or violation notices for this source within the last five years.

## **INSPECTION NARRATIVE**

On March 14, 2024, I arrived at the facility at about 10 AM to conduct an inspection at Adient US, LLC (herein Adient). After the introductions, I stated the purpose of the inspection, which was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, the applicable Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) regulations and the requirements/conditions cited in PTI 171-18. I briefly discussed the permit conditions and the records that I would be requesting. Cindy Priestly stated that this was a research and development facility. The second floor of the building is office space and the quality lab.

We started the inspection at the foam lab and continued the tour until we checked all operations that could potentially contribute to air pollution. The manager of the foam lab conducted that portion of the inspection. The molded-foam production starts by mixing long chain alcohol resins (polyols), surfactants, catalysts, and water into 55-gallon drums in the

mixing room. There are three different "systems" in the lab for making various foam shapes: a 6-component system for making seat cushions and backs, and two 4-component systems; one for making small parts such as arm and head rests, and the other for making larger parts. Mold release is used in small quantities; it is decanted into 5-gallon pots and applied manually by staff. The resin blend is metered in the appropriate ratio and proceeds to a pouring station where toluene di-isocyanate (TDI) is added via high pressure impingement mixing. The resin blend/TDI mixture is then poured into molds. This is all automated and causes an exothermic reaction. However, heating is still required, and it is generated electrically.

Other areas of operations related to the foam lab include: the bulk chemical storage and receiving area, the drum storage area, the chemical mixing area, and the tooling area (where mold maintenance repairs occur). Again, all foam components are for testing and not for production.

Next, I viewed both paint booths. Both appear to have very small usage of coating upon review of the clip board at each booth where usage is recorded. At this time, only aerosol cans are used and mostly use a white color for white light scanning. Sometimes black paint is used if facility has to touch up a part. Facility estimated that they do not use more than 10 cans per month. Filters were in place. On the larger booth, a manometer is in use to show when the filters need to be changed. At the time of the inspection, filters appeared relatively clean.

There is a grinding shop for grinding seat frames. A Torit collector collects steel fines; the drum has not needed to be emptied yet. The shaker function is automatic initiated at scheduled intervals and equipment exhausts back into the building.

Viewed welding stations and facility is in the process of installing an additional station. We also went into the woodworking shop and 3D lab which contains a small Arrestall dust collector outside that vents back inside the facility and is used on a non production basis. There are also two crash test labs. To finalize the tour we viewed the two boilers, one water heater, the permitted emergency generator which was at the back the building and the exempt generator that is right next to the permitted one. I recorded the non resettable hours of 260 for the permitted generator and 399 for the exempt generator. The smaller generator is 250 kW and a heat input 2.4 MMBTU/hr. The two boilers are each 1 MM BTU/hr heat input as confirmed by the nameplate. The facility alternates use. The hot water heater is 600,000 BTU/hr heat input. There are also miscellaneous heating units all throughout the building; including the roof. I did not observe all of this equipment. Facility submitted an inventory in response to the prior AQD inspection; I inquired whether the inventory needed to be updated and was told no changes had occurred. The inspection concluded with a closing meeting where I indicated that additional information was needed to complete the compliance evaluation and I would follow up with Cindy Priestly to complete the collection of records. A report with the inspection findings would be prepared. I left the facility at approximately 12:00 PM. I sent a request for records on 3/18/24 and follow up information request on 4/15/24. Facility asked for an extension to provide records which AQD granted.

## **APPLICABLE CONDITIONS - PTI 171-18**

#### SC I.1 to SC I.3 – In Compliance

Hourly Emission Limits for NMC+NOx, CO, and PM, are: 6.4, 3.5 and 0.2 g/kw-hr; respectively.

#### Evaluation:

The permit emission limits are based on the federal requirements for certified engines established under 40 CFR 60.4205(b) and 40.CFR 60.4202(b)(2) Table 1 of 40 CFR 89.112. According to the records previously provided, the facility purchased an EPA certified engine. For additional details refer to the evaluation of SC VI.2 and VI.3 in the next sections of this report.

# SC I.1 to SC I.3 – In Compliance

Hourly Emission Limits for NMC+NOx, CO, and PM, are: 6.4, 3.5 and 0.2 g/kw-hr; respectively.

The facility is required to provide fuel supplier certification records or fuel sample test data for each delivery of diesel fuel oil used in EUEMGEN1, demonstrating that the fuel meets the requirements cited above. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil.

# Evaluation:

The fuel is No. 2 Ultra Low Sulfur Diesel distributed by Marathon Petroleum. The SDS was provided. The sulfur content is listed as less than 15 ppm from the supplier and the SDS includes the aromatic content of the fuel. Shipments were received in June and August 2023.

# SC III.1 to III.3, SC IV.1 SC. VI.4 – In Compliance

Operational restriction and recordkeeping

EUEMGEN1 shall not operate for more than 500 hours per year based on a 12-month rolling-time-period as determined at the end of each calendar month.

EUEMGEN1 shall not operate for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing. (Record the hours per calendar year for the purpose of necessary maintenance checks and readiness testing). EUEMGEN1 may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing.

Provide the number of hours spent for emergency operation and non-emergency operation. Provide records of total hours of operation for EUEMGEN1 on a monthly and 12-month rolling time-period basis and the hours of operation during non-emergency operation for EUEMGEN1, on a calendar year time-period basis.

# Evaluation:

Log-sheets were provided showing the monthly generator's maintenance/testing and emergency hours of operation. The log has a column for the recording of the rolling 12-month total for 2022 through February 2024. According to the log, none of the hours of operation limits listed above have been exceeded.

SC I.1 to SC I.3, SC IV.2, SC IV.3, SC III.4, SC VI.2a and VI. 3a – In Compliance Certified Engine Emission-Related Written instructions and Maximum Rated Power.

SC IV.2a - requires the permittee to install, maintain and operate the engine of EUEMGEN1 certified to the emission standards cited on SC I.1, SC I.2 and SC I.3, for the same model year for EUEMGEN1.

SC III.4 - requires the facility to operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions.

SC IV.3 – requires the maximum rated power output of EUEMGEN1 shall not exceed 3,621 HP (2,700 kW), as certified by the equipment manufacturer.

SC VI.2a. - for a certified engine, the permittee shall keep records of the manufacturer certification documentation indicating that the engine meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII.

SC. VI.3a. - for a certified engine, the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.4.

#### Evaluation:

According to the previously submitted records, the facility purchased an EPA certified engine.

A copy of the USEPA certify of conformity with the CAA for the stationary engine 2017 model year, is in AQD permit application files. The EPA Certificate of Conformity No. HLHAL103.ESP-008 was issued to Liebherr Machines Bulle SA for the Diesel engine that powers the Kohler generator. The engine model LIEBHER KD62V12-6CES for the Kohler generator model KD2500 is certified to meet Tier II air emissions standards and it has a bkW of 2,700. Adient recognizes that the unit must be operated and maintained to the manufacturer's written instructions to ensure that the unit continues to meet the certification. The hard copy O&M manual provided by Kohler is maintained on-site. Adient has entered a contract with Cummins, Inc. to conduct semi-annual service in accordance with written manufacturer's emissions related maintenance recommendations. Attached are the semiannual service records from Cummins and internal more frequent/ weekly PM records.

#### SC V.I – Performance Testing – N/A

This condition is not applicable because the engine has been installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions; otherwise, performance testing will be required.

## SC VII.1 and SC VII.2 – In Compliance

Notification of installation of a certified engine.

Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by the Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity.

## Evaluation:

AQD received a notification from Adient, dated July 24, 2019, for the installation and operation of Kohler Model KD62V12-6CES emergency genset with a maximum rated electrical output of 2,500 kW (3621 bhp-hr). The notification indicated that the genset meets USEPA Tier II emission standards.

## APPLICABLE FEDERAL REGULATIONS

#### <u>40 CFR Part 60 Subpart IIII – NSPS for Stationary Compression Ignition Internal</u> Combustion Engines – **In Compliance**

NSPS IIII is for Stationary Compression Ignition Internal Combustion Engines. This NSPS was promulgated in 2006. The new emergency engine is subject to Subpart IIII. Compliance with the conditions cited on PTI 171-18 indicate compliance with the NSPS which was already evaluated in this report.

The NSPS compliance method is engine certification which has been provided and is in the facility file, ultra-low sulfur diesel which the certification has been provided, and a non-resettable hour meters which I observed during the inspection. This is to demonstrate that 500 hours per 12 month rolling time period has not been exceeded.

#### <u>40 CFR Part 63 Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion</u> Engines – In Compliance

NESHAP Subpart ZZZZ applies to major and area sources of HAP emissions, this facility is an area source of HAP emissions. NESHAP Subpart ZZZZ requires that new engines at area sources comply with the NESHAP by complying with their applicable NSPS, which for this engine is NSPS Subpart IIII.

# Non-Applicable Rules and Regulations

# 40 CFR Part 63 Subpart JJJJJJ- NESHAP for Industrial, Commercial, and Institutional Boilers at Area Sources

Subpart JJJJJJ applies to certain boilers at area sources of HAP emissions. The facility is an area source of HAP emissions. The proposed boilers are considered gas-fired boilers for Subpart JJJJJJ. Per 40 CFR 63.11195I, gas-fired boilers are not subject to Subpart JJJJJ.

## <u>40 CFR Part 63 Subpart OOOOOO – NESHAP for Flexible Polyurethane Foam Production</u> and Fabrication

The final National Emission Standards for Hazardous Air Pollutants (NESHAP) prohibits the use of methylene chloride at foam fabrication operations. If you own or operate a new or existing molded foam affected source, you must comply with the requirements in <u>paragraphs (c)(1)</u> and (2) of this section. (1) You must not use a material containing methylene chloride as an equipment cleaner to flush the mixhead or use a material containing methylene chloride elsewhere as an equipment cleaner in a molded flexible polyurethane foam process. (2) You must not use a mold release agent containing methylene chloride in a molded flexible polyurethane foam process. (2) You must not use a mold release agent containing methylene chloride in a molded flexible polyurethane foam process.) You must have a compliance certification on file by the compliance date. This certification must contain the statements in <u>paragraph (c)(1), (2), or (3)</u> of this section, as applicable, and must be signed by a responsible official.

(1) For a molded foam affected source:

(i) "This facility does not use any equipment cleaner to flush the mixhead which contains methylene chloride, or any other equipment cleaner containing methylene chloride in a molded flexible polyurethane foam process in accordance with  $\S$  <u>63.11416(c)(1)</u>."

(ii) "This facility does not use any mold release agent containing methylene chloride in a molded flexible polyurethane foam process in accordance with  $\S 63.11416(c)(2)$ ."

# See attached statement. No methylene chloride is used.

# EXEMPT EQUIPMENT

According to Rule 278a, to be eligible for a specific exemption listed in Rule 280 to Rule 291, any owner or operator of an exempt process or exempt process equipment must be able to provide information demonstrating the applicability of the exemption. The demonstration may include the following information: (a) A description of the exempt process or process equipment, including the date of installation. (b) The specific exemption being used by the process or process equipment. (c) An analysis demonstrating that Rule 278 does not apply to the process or process equipment.

In response to the prior inspection, PTE calculations were provided. See facility file. Facility demonstrated the applicability of the exemptions for the fuel burning equipment and it appears to be following the conditions and recordkeeping requirements. No additional fuel burning equipment has been installed since the permit was obtained according to the facility.

The non permitted generator is exempt per Rule 285(2)(g). However, facility needs to keep a log of hours of operation to demonstrate that it is emergency and does not operate more than 500 hours per year. Log was submitted and is attached.

Additional nonfuel burning emission units that appear to be exempt:

Foam Lab – Records are attached. Appears that the facility is using Rule 290(2); the only emissions are from the mold release.

Spray booths – Records are attached. Cans are 12-17 ounces in size. (274\*17.4). Rule 287 (2)(c). Booths were installed prior to 2016 so exemption did not have a can size at that point. All aersol cans were exempt.

Welding – Rule 285(2)(i); brazing, soldering, and welding equipment

Wood cutting – Rule 285(2)(I)(vi)(A); equipment for cutting wood and its exhaust system that is used on a nonproduction basis (paraphrased).

Grinding shop – Rule 285(2)(l)(vi)(B); equipment for grinding metal and its exhaust system that has emissions that are released only into the general in plant environment (paraphrased).

#### MAERS (Michigan Air Emissions Reporting System)

Facility is technically an opt out due to generator limited to 500 hours per year. They are reporting MAERS. AQD did not request any changes to the 2023 MAERS.

#### FINAL COMPLIANCE DETERMINATION:

At the time of this inspection, this source appears to be in compliance with conditions evaluated in this report.

DATE 5/31/24 SUPERVISOR pill Mendling