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

N756971312	
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14/303/1312		
FACILITY: ISUZU TECHNICAL CENT	SRN / ID: N7569	
LOCATION: 46401 COMMERCE CEN	DISTRICT: Detroit	
CITY: PLYMOUTH		COUNTY: WAYNE
CONTACT: Brandon Glass , Manager - Test Facilities		ACTIVITY DATE: 04/02/2024
STAFF: Katherine Koster COMPLIANCE STATUS: Compliance		SOURCE CLASS: SM OPT OUT
SUBJECT: FY24 Targeted Inspection		
RESOLVED COMPLAINTS:		

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Source:	SRN N7569 – Isuzu Technical Center of America, Inc.
Location:	46401 Commerce Center Drive, Plymouth, MI 48170
Date of Inspection:	April 2, 2024
Reason for Inspection:	Targeted Inspection
Main Contact:	Brandon Glass, Senior Manager, Lab Operations
Facility Phone Number:	(734) 582-9418

FACILITY BACKGROUND

(From prior inspection report) Isuzu Technical Center of America, Inc. was originally established in California in 1985 to conduct local vehicle engineering, emission testing, planning, design and local sourcing. In 1991, a technical center was built in Plymouth, Michigan to consolidate and expand Isuzu research and development activities in the Americas. In 1994, the company became Isuzu Motors America, Inc. after the merge with Isuzu Motors. That year, the capability of the Plymouth Technical Center was expanded to encompass development and performance testing in addition to ongoing durability and quality validation. Thereafter, the company changed its name again, this time from Isuzu Manufacturing Services of America, Inc. to Isuzu Technical Center of America, Inc. (hereafter Isuzu). Isuzu, at the Plymouth location, serves as the headquarters of Isuzu's Research & Development arm in North America providing expertise in planning, engineering, testing, validation, and compliance of commercial vehicles and diesel engines. Over the years the engine testing facilities at Plymouth have been modified and expanded, with variations in the type of fuel used, fuel throughput, as well as the number and type of testing operations conducted at the center.

PERMIT HISTORY (from prior inspection report)

Permit records show that the first two internal combustion engine test cells and the associated dynamometers installed in Plymouth were permitted by the Air Quality Division (AQD) in June of 1995 and in December of 1996 by the Wayne County Department of Environment, Air Quality Management Office (herein Wayne County).

The permits records reflect the facility's name changes cited above for the same SRN. On February 23, 2006, both the Wayne County permit and the AQD permit were voided because it was determined that the facility gualified for a PTI exemption. It appears that between 2006 and 2008 Isuzu was considered a true minor source operating two test cells under exemption Rule 285(g).

Records show that an inspection conducted on February 4, 2011, identified two new dynos installed in cells 5 and 6. Consequently, the potential NOx emissions estimated for the overall facility, with four units in operation, could be above the Title V major source threshold limit of 100 tons per year. Therefore, to resolve this situation, Isuzu submitted a permit application to obtain an opt-out permit to install (PTI). Permit No. 4-12 was issued on 4/3/2012 to cover the two dynamometers that had been installed in cells 5 and 6, the two old dynamometers in cells 1 and 2, and two proposed dynos to be installed in cells 3 and 4. Each cell would be equipped with one dynamometer for diesel engine testing. PTI 4-12 regulated the operations of six emission units EU-TEST CELL1 to 6. The permit also contained two chassis dynamometers EU-CHASSISCELL1 and EU-CHASSISCELL2.

PTI 4-12 was voided on June 14, 2016, and it was replaced with PTI 4-12A, which was issued to increase the annual fuel restriction and to allow the installation of the two dynamometers that had been permitted in 2012 but never installed in cells 3 and 4. New daily fuel restrictions were also added to the permit for toxic air contaminants (TAC) screening purposes. The permitting action increased the potential NOx emissions and to a lesser degree the emissions of all the other pollutants. The fuel restrictions continue to prevent the facility-wide emissions from exceeding the significant emission rate for all pollutants. The emission units, EU-CHASSISCELL1 and EU-CHASSISCELL2 were removed from the permit when PTI 4-12A was issued. This decision was based on EPA's determination that the chassis are considered mobile sources.

As of the date of this inspection report the active permit is the opt-out permit PTI 4-12A issued on June 14, 2016.

COMPLAINTS, VIOLATION NOTICE, AND CONSENT ORDERS

No outstanding complaints, violation notices, or consent order.

EQUIPMENT/PROCESS DESCRIPTION (from prior inspection report and re-verified via inpsection)

The general site plan of the facility includes the following main areas:

- 1) Office Space and Meeting Rooms
- 2) Test Lab Area
- 3) Outside Test Track and Parking Area

The test lab floorplan shows three laboratories: the engine dynamometer (dyno) lab, the chassis dyno lab, and the vehicle lab. The AQD permit regulates the emission units located in the dynamometer lab building which are at the northwest corner of the building.

Isuzu is permitted to test diesel fired engines in six dynamometer test cells. Cells 1 and 2 are on the south end of the engine dyno lab. Cells 3 to 6 are on the north side.

The internal combustion diesel engines vary in sizes and can be tested on dynamometers with a range of rated powers, up to a maximum absorbance power of 450 kW. An engine dynamometer is a device designed to create a load to duplicate various speed (RPM) and torque (Nm or lb-ft) requirements. From this data, power (HP or kW) can be calculated. This in turn provides a snapshot of the engine performance for comparison to the manufacturer's

specifications. Typically, a dynamometer gives the operator the ability to vary the load applied to the unit under test to mimic specific requirements.

The dynos are supported by accessories and ancillary equipment such as: fuel measurement system, sampling probes, room exhaust system, cooling tower, remote instrumentation and control, to name a few.

There are three diesel underground storage tanks (USTs) located outside, northwest of the test cell building; two diesel USTs with capacities of 2,385 gallons and one tank with 2,500-gallons. The pumping system feeds fuel into each cell based on demand.

Diesel engines and trucks are tested at the facility to meet EPA emissions standards. The emission testing procedures are those cited in the Code of Federal Regulations 40 CFR – Part 86. Essentially, the first step of their testing procedures is the calibration development to meet vehicle performance criteria for various model years.

A simplified version follows: Exhaust air is diluted (8:1) to cool it down before entering the sampling unit, sampled, analyzed and vented to the atmosphere through a stack. Parameters that are tracked during testing are: temperature, humidity and pressure. In general, one sampling run takes approximately 40 minutes to 4 hours to complete. Pollutants measured are CO, CO2, NOx, hydrocarbons (HC) and PM.

The engines tested at the facility are not dedicated to a specific test cell and are changed out in a regular basis. The emissions are controlled and typically the emission control devices stay with the engine. The main component of emissions reduction on the outlet of diesel engines is known as "after treatment". After treatment or emission control includes: high pressure common rail injection, exhaust gas recirculation (EGR), systems diesel oxidation catalyst (DOC), diesel particulate filter (DPF), selective catalytic reduction (SCR), and particle oxidation catalyst (POC) which are used together with a computer controlled engine management systems.

Each cell has its own control consoles located outside of the testing cell. All the automation/data acquisition and control system consoles are located along the hallway that leads to the entrance of each cell.

The operations that are subject to air regulations are those occurring at the test cells laboratory. The outside test area (Test Track) is for testing of mobile sources; but mobile source testing is rarely conducted.

In addition to the test cells, the facility has the following exempt equipment: a) two parts washers maintained by "Safety-Kleen" (one located at the garage and the other one at the engine built area), b) a series of space heaters located in different areas of the building, and c) two emergency generators.

The rule exemptions and more specific information about rated capacities and sizes for the exempt equipment are evaluated later in this report.

Additional operations in the building do not appear to generate air pollutant that vent to the outside air, and therefore are not regulated by AQD.

Isuzu currently operates Monday through Friday in two eight-hour shifts. The day shift runs from 7:00 A.M. to 3:00 PM and the late shift from 3:00 PM to 11:00 PM. Most tests run during the day shift, but there are others conducted during the night shift. Facility currently employs about 175 people.

INSPECTION NARRATIVE

The purpose of the inspection 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 and the Department of Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD) rules.

Each cell (1 to 6) has individual exhaust stacks (SV-E1 to SV-E6). However, cells 1 & 2, and cells 5 & 6, share an additional stack. The reasoning for the stack-sharing is to save costs. The cited cells share an expensive equipment, the dilution tunnel, which is used to conduct a special particulate matter test. There is one dilution tunnel in cell 2 and another one in cell 6. At each cell the horizontal exit pipe from the dilution tunnel bends 90 degree to discharge vertically upwards to the ambient air through the shared stacks SV-E1-2 (in cell 2) and SV-E5-2 (in cell 6). For details of the stacks installation please refer to the attached pictures for cells 5 and 6 provided by Isuzu via email on 2/13/2020. Cells 1 and 2 have a similar pipe arrangement.

From the prior inspection report, the emission summary table depicted on PTI 4-12A lists the shared stacks in the wrong cell location. This should be addressed in the future by a permit modification. Table below has them in the correct location. Except for the installation date (which was copied from PTI 4-12A), the following table provides a description of the emission units in accordance with the data collected from prior inspection. No changes have occurred according to Mr. Glass during the 4/2024 inspection.

Emission Unit ID (Installation Date)	Emission Unit Description	Comments and Updates
EU-TESTCELL1 (September 2005)	Dynamometer test cell for testing diesel fuel engines. Power: 104 / 370 kW Stack ID: SV-E1	Meiden EC dyno; 700 to 8000 RPM
EU-TESTCELL2 (September 2005)	Dynamometer test cell for testing diesel fuel engines. Power: 318 kW Stack ID: SV-E2 and SV-E1-2	Schenck dyno; 1700 to 4000 RPM Dilution Tunnel located in this cell. Emission & sampling for PM test shared with cell 1
EU-TESTCELL3	Dynamometer test cell for testing diesel	Meiden Dyno
(June 10, 2016)	fuel engines.	Motoring Power 240 / 150 kW
	Absorbing Power 300 / 188 kW Stack ID: SV-E3	Started operation end of year 2016
EU-TESTCELL4	Dynamometer test cell for testing diesel	Meiden Dyno
(June 10, 2016)	fuel engines.	Motoring Power 440 /240 kW
	Absorbing Power 450 / 270 kW Stack ID: SV-E4	Started operation end of year 2016
EU-TESTCELL5 (July 2008)	Dynamometer test cell for testing diesel fuel engines. Power: 330 kW Stack ID: SV-E5	AVL Schneider Dyno - 0 to 4000 RPM Emission & sampling shared with cell 6
EU-TESTCELL6 (July 2008)	Dynamometer test cell for testing diesel fuel engines. Power: 440/315 kW Stack ID: SV-E6 and SV-E5-2	AVL Schneider Dyno - 0 to 6000 RPM Dilution Tunnel located in this cell Emission & sampling for PM test shared with cell 5

As discussed from prior inspection, the permit lists Cell 6 as having a max of 370 kW. The rated power in Cell 6 is 440 kW. However, AQD previously inquired about this and was provided additional information by Gerry Plocharczyk (previous contact for Isuzu) in an email dated 9/22/2016. The motor of the dyno in cell #6 could absorb 440 kW but it is

limited by software parameterization to 370 kW and that value is not listed on the motor capacity tag. For details about this issue, please refer to the information provided by the dyno supplier (AVL), which is archived in AQD's Isuzu files.

Mr. Glass stated there have been no changes to test cells since prior inspection There are 6 test cells, all are operational, run a couple of hours a day; starting and stopping in the tests; not durability testing

AVL is software monitoring temp, pressure, emissions, etc

Cell 5 rated at 330 kW, visual confirmation of nameplate

Chassis dynos – One remains, the other was removed

Two generators – Baldor 249 hP (for IT), Norpro 24 hp (for the lab)

3 diesel fuel storage tanks (one of the three holds "certified" fuel); one waste oil which is mostly water with slight oil contamination

2 parts washers – have changed to an aqueous solution

Have replaced some unit heaters with others of the same size

Receive fuel deliveries every couple of weeks; two tanks are pump fuel, one tank is certified grade fuel

Receive fuel from Corrigan; for every load Isuzu sends a sample to Paragon for analysis Fuel usage – sensor in each tank

Dynamometers have a 30-50 year life span

5.2 L, I4 engines is all the facility is testing right now

Cell 1 and 2 (AC Dynos)

Eddy current dynos can only do steady state points; AC dynos can bounce around a little Norpro generator – 20 minute weekly test cycle; yearly oil level check/fuel filter/air filter; coolant every 2 years and belt change every 2 years

Baldor- 511.5 run hours

Facility provided site aerial photo with all stacks labeled

Isuzu has two emergency generators operating with diesel fuel engines. The Baldor IDLC100 3JD generator with an output rated capacity of 100 kW is powered by a John Deere engine rated at 139 hp @ 2400 rpm. It is located at the rear end of the building and serves the test-cell laboratories operations. The generator that supports the IT server room is identified as a Norpro 18 PMI and has an output rated capacity of 18 kW. The Norpro generator is powered by an Isuzu engine rated at 34.5 hp @ 1800 rpm. Both generators are equipped with non-resettable hour meters. I checked the meters during the inspection and recorded the totals hours of operation. The hour meter for the Baldor generator installed in 2008 showed 511.5 and the Norpro (installed in 2004) generator's digital controller displayed a total of 324.4 hours. Isuzu indicated that they did not have emergencies events during last year. Isuzu did not log emergency events (if any) for prior years.

Isuzu has space heaters burning natural gas throughout the facility. List was provided in prior inspection. All space heaters installed and operating have capacities below 50 MMBtu per hour.

REGULATORY APPLICABILITY (from prior inspection report)

The facility is subject to the following rules and regulations:

The facility accepted fuel restriction to opt-out from Title V for CO and NOx emissions, which would be the main pollutants from diesel combustion. The facility operates under the opt-out Permit PTI 4-12A issued on June 14, 2016.

Rule 224 deals with the best available control technology for toxics (T-BACT). During the permit modification of 2016 it was determined that the total annual non-VOC TAC emissions are less than 1 tpy and it would not be economically feasible to add additional controls at this level of emissions.

During permit evaluation of Rule 225 which deals with health-based screening levels for TACs, Isuzu agreed to modify the horizontal stack in cell No. 1 and make it vertical to improve dispersion.

Rule 301 covers visual emissions with opacity limits. The permit specifies a general 20 percent opacity limit in GC 11.

Rule 702 covers BACT for VOC emissions. During permit review it was determined that it would not be economically feasible to add additional controls at this level of emissions.

Rule 201 exemptions

Some equipment and/or processes are exempt from the requirements of Rule 201 to obtain a permit to install. They operate under specific exemptions which will be evaluated later in this report as part of the "Compliance Evaluation" section.

COMPLIANCE EVALUATION

For the purposes of determining compliance, this evaluation will refer to the permit limits and condition stated in permit PTI 4-12A issued on June 14, 2016, the requirements associated with Rule 201 exempt equipment, and the applicable federal regulations.

PTI 4-12A

For simplicity, the permit conditions cited on PTI 4-12A are paraphrased below. There are no special conditions listed in Sections II, IV, V and IX of the permit (listed as NA in the permit).

Fuel usage and emission records for January 2023 through March 2024 were reviewed and evaluated. See attached.

FG-TESTCELLS

Description: 6 engine dynamometer test cells. Emission Units: EU-TESTCELL1 to EU-TESTCELL6 Pollution Control Equipment: NA

SC I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Testing / Monitoring Method	Compliance Determination
SC I.1 NO _x	16.0 tpy	12-month rolling time period as determined at the end of each calendar month	SC VI.2	In Compliance -The maximum value for the evaluated period was 7.14 tpy August 2023.
SC I.2 CO	4.5 tpy	12-month rolling time period as determined at the end of each calendar month	SC VI.2	In Compliance -The maximum value for the evaluated period was 2.01 tpy August 2023.

Pollutant	Limit	Time Period/ Operating Scenario	Testing / Monitoring Method	Compliance Determination
SC I.3 VOC	2.8 tpy	12-month rolling time period as determined at the end of each calendar month	SC VI.2	In Compliance -The maximum value for the evaluated period was 1.25 tpy August 2023.
SC I.4 1,3 Butadiene	0.0625 tpy	12-month rolling time period as determined at the end of each calendar month	SC VI.2	In Compliance -The maximum value for the evaluated period was 0.0279 tpy August 2023.
SC I.5 1,3- Butadiene	1.00 lb/day	Calendar Day	SC VI.3	In Compliance - The maximum value for the period evaluated was 0.96 lb/day on March 26, 2024 although this number is falsely inflated. See below. 0.63 lb/day is second highest value reported on May 3, 2023.
SC I.6 Formaldehyde	0.165 tpy	12-month rolling time period as determined at the end of each calendar month.	SC VI.2	In Compliance – The maximum value for the evaluated period was 0.075 tpy August 2023.

SC II. MATERIAL LIMITS

1. The permittee shall only burn diesel fuel in FG-TESTCELLS. **In Compliance -** Records show that Isuzu only burns diesel fuel at their testing facilities. According to the records provided the facility is currently combusting ultra-low sulfur diesel. The most recent fuel delivery was in February 2024 centane content was 46.4 and sulfur content was 12.5 ppm

2. The fuel usage for FG-TESTCELLS shall not exceed 400 gallons per calendar day. In Compliance - The maximum daily fuel usage for the evaluated period was 384 on March 26, 2024. Second highest was 253 gallons on May 3, 2023. However, the March 26 value is reportedly inflated. According to an email from Brandon Glass, "I want to explain two instances of high fuel usage in our 2024 fuel log. On March 25th Isuzu filled four 55 gallon drums of certification fuel and again on March 26th Isuzu filled another six 55 gallon drums of certification fuel. These 10 drums of fuel are shipping to Isuzu Japan for testing at our R&D facility. The fuel was not burned at ITCA but it shows up on our fuel usage sheet because the fuel left our underground storage tanks. You will see in our 2024 fuel log that on March 26th we get close to the Butadiene daily limit, but we do not exceed it." I requested additional documentation and it was sent to me and is attached.
3. The fuel usage for FG-TESTCELLS shall not exceed 50,000 gallons per 12-month rolling time period as determined at the end of each calendar month. In Compliance - The maximum 12-month rolling fuel usage for the evaluated period was

22,301 gallons in August 2023.

SC VI. MONITORING/RECORDKEEPING

2. Keep the following information in a monthly basis for FG-TESTCELLS:

a) A record of the days of operation.

b) Gallons of diesel fuel used per month and 12-month rolling time period.

c) Diesel fuel usage calculations determining the annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month.

d) NOx, CO, VOC, 1,3-Butadiene and formaldehyde emission calculations determining the monthly emission rate in tons per calendar month.

e) NOx, CO, VOC, 1,3-Butadiene and formaldehyde emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

In Compliance - Isuzu maintains records of the days of operation, monthly diesel throughput, and the 12-month rolling records. The records were available for review and the requested records were provided. Isuzu keeps in a satisfactory manner, monthly and 12-month rolling emission calculations for NOx, CO, VOC, 1,3-Butadiene and Formaldehyde for FG-TESTCELLS.

3. Keep the following information in a daily basis for FG-TESTCELLS:

a) Diesel fuel usage on a daily basis.

b) 1,3-Butadiene emission calculations determining the daily emission rate in pounds per calendar day.

In Compliance - Isuzu maintains daily records in Ibs/day for diesel usage and 1,3-Butadiene emissions. See attached example.

SC VII.1 REPORTING - In Compliance

Isuzu notified AQD of the changes authorized by PTI 4-12A, which included the modification of the exhaust stack SV-E1-2 to discharge vertically, from the previous horizontal orientation and the installation of the dynamometers in Cells 3 and 4. The installation of the dynamometers for engine test cells 3 and 4 started right after the permit was issued in June 2016. Electrical and communication connections with the facility and test automation system took place subsequent to the install. Isuzu completed the modification of the stack SV-E1-2 on August 31, 2016.

SC VIII STACK RESTRICTIONS - In Compliance

The exhaust gases from the stacks SV-E1 to SV-E6 installed at each testing cell and the shared stacks in cells 2 and 6 (i.e. SV-E1-2, SV-E5-2) discharge unobstructed vertically upwards to the ambient air. Please refer to the pictures provided by Mr. Glass for details. I did not verify the dimensions of the stacks from the roof, but I observed them from the parking lot. They seemed to be the same size permitted by PTI 4-12A. Isuzu indicated that except for SV-E1-2, which was modified to discharge vertically, all the other stacks have not been modified since its initial installation.

EXEMPT EQUIPMENT

The following equipment and/or processes are exempt from the requirements of Rule 201 to obtain a permit to install pursuant to the rule exemptions identified herein:

Safety-Kleen parts washers

The facility has two parts washers which are exempt per 281(2)(k) because they are using aqueous based cleaner.

Space heaters

The space heaters burning natural gas which are each below 50 BBTU/hr heat input are exempt from permitting via Rule 282 (2)(b)(i). Information previously provided lists each space heater and none exceeds 50 MMBTU. See attached list.

Emergency Generators

There are two emergency generators that are powered by "Reciprocating Internal Combustion Engines" using diesel fuel. The engines are exempt from permitting pursuant to Rule 285(2)(g). This rule exempt combustion engines with less than 10 MMBtu/hour maximum heat input. The maximum heat input for the engines was calculated using the maximum diesel consumption in gal/hour (provided by Isuzu) and assuming a heating value of 139,000 Btu per gal for diesel combustion. The calculated heat input capacity resulted in values below the 10 MMBtu per hour for both engines. See attached from prior inspection.

APPLICABLE FEDERAL REGULATIONS – In Compliance

NSPS Subpart IIII

This subpart establishes minimum requirements for new or modified compressed ignition (diesel-fired) engines with requirements based on size, type, and date of manufacture. Diesel-fired emergency generators are subject to the NSPS Subpart IIII (40 CFR 60.4200) if:

• Commence construction (date the engine is ordered by the owner or operator) after July

11, 2005 and the engine are manufactured after April 1, 2006 and is not a fire pump; or • Modify (a change to any engine that causes an increase in the ability to emit any pollutant regulated under this subpart) or reconstruct (an existing source such that the cost of the new components is greater than 50% of the cost of a comparable new unit) after July 11, 2005.

The key pollutants EPA regulates from these sources includes nitrogen oxide (NOx), particulate matter (PM), sulfur dioxide (SO2), carbon monoxide (CO), and hydrocarbons (HC); NOx being the main pollutant when diesel is used as combustible.

According to the information provided by Isuzu, the Norpro generator which uses a diesel compression ignition engine, was installed in 2004 and has not been modified. Therefore, this equipment is not subject to NSPS Subpart IIII because the engine was ordered and manufactured before the applicability dates cited above.

The other generator (Baldor) was installed in 2008 and it is subject to NSPS Subpart IIII. To comply with the standards, Isuzu must meet the following requirements for the Baldor emergency generator:

• If the generator is less than 30 liters per cylinder, the owner/operator must purchase certified units from the manufacturer to meet the applicable engine design emission limits (40 CFR 60.4211(c)).

• Operate the generator and control device in accordance with the manufacturers' instructions (40 CFR 60.4211(a)).

• Install a non-resettable hour meter (40 CFR 60.4209(a)).

• Keep records of generator use in emergency and non-emergency service that is recorded through the non-resettable hour meter. Record the time of operation and the reason the engine was in operation during that time (40 CFR 60.4214(b)).

• Limit maintenance checks and readiness testing to 100 hours per year [40 CFR 60.4211(f) (2)].

• Sulfur Dioxide (SO2) emissions from the generator shall not exceed 15 parts per million sulfur content (40 CFR 60.4207).

Evaluation: The generator is less than 30 liters per cylinder and has a certified John Deere engine. Isuzu operates the engine in accordance with the manufacturers' instructions. A non-resettable hour meter records the generator usage in emergency and non-emergency service. The facility keeps operational records through the hour-meters but doesn't keep separate annual records. The recorded time represents the hours of operation for readiness testing and maintenance checks.

According to the attached log, it appears the generator operated for less than 100 hours in 2023 and there were no emergency situations reported during that calendar year. The recorded time represents the hours of operation for readiness testing and maintenance checks. The diesel used at the facility has a sulfur content under 15 PPM. February 2024 centane content was 46.4 and 12.5 ppm. July 2023 shipment was 45.8 centane and 12.4 ppm sulfur. For details refer to the attached records.

NESHAP Subpart ZZZZ (i.e. RICE MACT)

Both generators are subject to the requirements of Part 63, NESHAP for Source Categories, Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engine (RICE MACT), which are regulated under 63.6640(f). This regulation applies to new or existing emergency generators located at an area source with construction or reconstruction commencing before or after June 12, 2006.

Some of the applicable requirements of this subpart are similar to those evaluated in the previous section for the Baldor generator as part of the NSPS Subpart III.

1) Compliance with the RICE MACT requires Isuzu to operate both engines in accordance with the requirements cited in paragraphs (f)(1) through (4) of section 63.6640 of Subpart ZZZZ, as follows:

The permittee may operate the emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of section 63.6640 for a maximum of 100 hours per calendar year. Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. Any operation for non-emergency situations as allowed by this regulation counts as part of the 100 hours per calendar year.

Evaluation: According to the attached log and information from the facility, it appears the generators operated for less than 100 hours in 2023 and there were no emergency situations reported during that calendar year. The non resettable hour meter since 2008 for the Baldor was 511.5 hours. The non resettable hour meter since 2004 for the Norpro was 324.4 hours.

2) As stated in 63.6603 and 63.6640, Isuzu must comply with the following maintenance requirements for existing stationary RICE located at area sources of HAP emissions (Table 2d in the regulation).

a. Change oil and filter every 500 hours of operation or annually, whichever comes first. b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Evaluation: According to the preventive maintenance records provided for the Baldor generator and the maintenance schedule summary table for the Norpro generator, Isuzu seems to be in compliance with the maintenance requirements cited above. The annual maintenance service for the Norpro and Baldor was July 2023.

Note: Sources have the option to utilize an oil analysis program as described in order to extend the specified oil change requirement in Table 2d. Isuzu complies with the oil-change requirements

3) Continuous compliance with emission limitations and other requirements in accordance with 63.6640 (Work or Management practices and Table 6).

i. Operating and maintaining the stationary RICE according to the manufacturer's emissionrelated operation and maintenance instructions; or

ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Evaluation: Isuzu operates and maintain the stationary engines according to the manufacturer's emission-related operation and maintenance instructions. They keep maintenance records and maintains routine service according to the frequency dictated by manufacturers. For details refer to the attached records.

MAERS REPORTS

Isuzu submitted a timely and complete MAERS report.

FINAL COMPLIANCE DETERMINATION

Isuzu appears to be in compliance with the evaluated requirements and the applicable state and federal air emissions standards, rules and regulations.

NAME Auto DATE 11/20 SUPERVISOR April L. Wendling