

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

P121766431

FACILITY: Avancez Highland Park		SRN / ID: P1217
LOCATION: 1430 E 10 Mile Road, HAZEL PARK		DISTRICT: Warren
CITY: HAZEL PARK		COUNTY: OAKLAND
CONTACT: Tyler Bankey , EHS REP		ACTIVITY DATE: 02/16/2023
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: Synthetic Minor
SUBJECT: Conducted a scheduled inspection of Avancez Highland Park (SRN: P1217) to determine the company's compliance with the requirements of the Air Pollution Control Rules; and the conditions of the Permit to Install (PTI) No. 67-21.		
RESOLVED COMPLAINTS:		

On February 16, 2023, Michigan Department of Environment, Great Lakes and Energy (EGLE), Air Quality Division (AQD) staff, Noshin Khan, Owen Pierce, and I (Shamim Ahammod) conducted a scheduled inspection of Avancez Highland Park (SRN: P1217) located at 1430 East 10 Mile Road, Hazel Park, Michigan 48030. The purpose of the inspection was to determine the company'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 Air Pollution Control Rules; and the conditions of the Permit to Install (PTI) No. 67-21.

SOURCE DESCRIPTION

Avancez Highland Park sub-assembles the customer's parts and ships them to their assembly plant. Hazel Park is located in Oakland County, which is in NAAQS non-attainment for ozone. Avancez has installed a Kohler 2000REOZMD, 2923 hp (2180 kW) diesel-fueled emergency engine at the facility. They plan to operate the engine weekly for thirty minutes during necessary maintenance checks and readiness testing and during any utility outages as needed.

RULES AND REGULATIONS

Applicable State Rules

Rule 205 – Enforceable Emission Limits

Avancez is a synthetic minor source because, at 8,760 hours, NOx emissions would be above the major threshold of 100 tpy. The engine is restricted to 500 hours per year based on the EPA guidance memo for emergency engines.

Rule 702 – New sources of VOCs

VOC emissions shall not exceed the lowest maximum allowable emission rate specified by the following:

- (a) BACT, or a rate specified by the department
- (b) specified by an NSPS
- (c) specified as a condition in a permit
- (d) specified in part 6 rules

VOC emissions based on 500 hours of operation are 0.52 tpy. It would be economically infeasible to add control to the engine, so VOC BACT for the engine would be no control.

Rule 224 – T-BACT

EUENGINE1 is an emergency engine limited to 500 hours of operation per year, and the VOC TACs are meeting Rule 702(a) and are exempt from Rule 224. The non-VOC emissions are less than 1 tpy .

Applicable Federal Regulations

40 CFR 52.21 (c) & (d) – NAAQS and PSD Increment

Oakland County is in non-attainment for ozone, but the facility is not a major source under NNSR. 40 CFR 60 Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines

EUENGINE1 is a stationary compression ignition internal combustion engine (CI ICE) and was manufactured after April 1, 2006, so it is subject to NSPS Subpart IIII.

40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines

The emergency engine is subject to Subpart ZZZZ, but the engine is located at an area source of HAPs, and the State of Michigan has not accepted delegation for area sources.

Onsite Inspection

On February 16, 2023, at 11:00 AM, we arrived at the facility and were greeted by Tylor Bankey. We showed our photo credentials and explained the purpose of the inspection. Before walking through the facility, at the conference room, we met with Samuel Steerman-android, Installation Manager, Barry Earby-GM VAA Plant Manager, Jon Stevens, GM VAA Plant Manager, Tyler Bankey, Avancez Hazel Park, EHS Rep, Jamie Buford, Avancez Hazel Park Engineering Manager, and Ken Bouteiller, Avancez Hazel Park Maintenance Manager.

In a short meeting, I discussed the PTI requirements and what we want to observe during our field visit. I requested the records that I needed to review. After a short meeting, we walked through the facility.

Regulatory Analysis

EUENGINE1

EMISSION UNIT SPECIAL CONDITIONS

The facility operates a 2923 HP (2180 kW) diesel-fueled emergency engine to provide electrical power to the station and support equipment in the event power outage.

The emergency engine is subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and IIII. EUNEMGEN construction started on June 29, 2021, and operation started on October 18, 2021.

Emission Limit (EUENGINE1)

The engine is certified. The permittee provided an EPA certification that includes:

Certificate number: MMVXL65.4BBA-018

Effective date: 07/13/2020, expire Date: 12/31/2021

Model Year: 2021

Manufacturer Type: original Engine Manufacturer

Emission Power Category: 560<kW<=2237

Fuel Type: Diesel

Emission limit

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method
1. NMHC + NOx	6.4 g/kW-hr	Hourly ^A	EUENGINE1	SC V.1 SC VI.2
2. CO	3.5 g/kW-hr	Hourly ^A	EUENGINE1	SC V.1 SC VI.2
3. PM	0.20 g/kW-hr	Hourly ^A	EUENGINE1	SC V.1 SC VI.2

- Permittee provided EPA certification (MMVXL65.4BBA-018) that includes the exhaust emission data for HC, NOx, CO, and PM. Compliance is evaluated in SC VI.2.b.

- Testing/Sampling in SC V.1 isn't applicable because the engine is certified. Compliance is evaluated in SC VI.2.b.

Material Limits

Per SC II.1, the permittee shall burn only diesel fuel in EUENGINE1 with a maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent.

Per SC VI.5, The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUENGINE1, demonstrating that the fuel meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and the cetane index or aromatic content of the fuel oil.

- According to a fuel supplier record provided by Samuel Steerman, the permittee burns only diesel fuel in EUENGINE1 with a maximum sulfur content of 15 ppm. At this time the permittee was unable to provide the record for the minimum cetane index or maximum aromatic content of diesel fuel. A violation notice (VN) will be issued for the violation of SC II.1 and VI.5 of PTI No. 67-21.

Process/Operational restrictions

Per SC III.1, The permittee shall not operate EUENGINE1 for more than 500 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 500 hours include the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2.

Per SC VI.4, Tyler Bankey provided me with a record of the 12-month rolling hours of operation. The record indicates that the highest operation time of the emergency generator was 26.5 hours for the 12-month rolling period ending in September, October, and November 2022.

The monthly and 12-month rolling records of operations for the engine are as follows:

	Meter Reading hrs	Monthly hours total (calculated)	Monthly hours emergency	Monthly hours non-emergency	12-month rolling
Aug 2021	8	8	6	2	8
Sept 2021	9.3	1.3	0	1.3	9.3
Oct 2021	10.6	1.3	0	1.3	10.6
Nov 2021	11.9	1.3	0	1.3	11.9
Dec 2021	13.2	1.3	0	1.3	13.2
Jan 2022	14.5	1.3	0	1.3	14.5
Feb 2022	15.8	1.3	0	1.3	15.8
Mar 2022	17.1	1.3	0	1.3	17.1
April 2022	18.4	1.3	0	1.3	18.4
May 2022	23.7	5.3	4	1.3	23.7
Jun 2022	25	1.3	0	1.3	25

July 2022	26.3	1.3	0	1.3	26.3
Aug 2022	27.6	1.3	0	1.3	19.6
Sep 2022	34.1	6.5	5.2	1.3	26.5
Oct 2022	37.1	1.3	0	1.3	26.5
Nov 2022	35.4	1.3	0	1.3	26.5
Dec 2022	36.7	1.3	0	1.3	26.1
Jan 2023'	38	1.3	0	1.3	24.8
Feb 2023'	39.3	1.3	0	1.3	24.8

Process/Operational restrictions

Per SC III.2, The permittee may operate EUENGINE1 for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing.

Per SC III.3, The permittee may operate EUENGINE1 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 as provided in 40 CFR 60.4211(f)(2).

- Based on records, from January through December 2022, the operational hours for non-emergency use of emergency generators was 15.6 hours in 2022 which was below the limit of 100 hours per calendar year.

Per SC III.4, If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart IIII, for the same model year, the permittee shall meet the following requirements for EUENGINE1:

- Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
- Change only those emission-related settings that are permitted by the manufacturer, and
- Meet the requirements as specified in 40 CFR 89, 94 and/or 1068, as they apply to the engine.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine.

- AQD received a notification on February 16, 2023, that the permittee purchased a certified engine and operated it certified manner. The permittee provided EPA certification (Certificate Number: MMVXL65.4BBA) for the engine.

Per SC III.5, applies to non-certified engines or certified engines operating in a non-certified manner, the permittee shall keep a maintenance plan for EUENGINE1 and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

- This condition is not applicable. AQD received a notification on February 16, 2023, that the permittee purchased a certified engine and operated it certified manner. The permittee provided EPA certification(Certificate Number: MMVXL65.4BBA) for the engine.

Design/Equipment Parameters

Per EUNEMGEN, SC IV.1, the permittee shall equip and maintain EUNEMGEN1 with a non-resettable hours meter to track the operating hours.

- At the time of this inspection, I observed the non-resettable hour's meter reading was 39.3 hours.

As required in SC IV.2, the EUNEMGEN1 nameplate capacity shall not exceed 2180 kW for the engine, as certified by the equipment manufacturer.

- During my inspection, I observed the generator nameplate. I noted the following from the nameplate:

Model: 2000REOZMD, fuel type: Diesel, RPM:1800, MGF date: 05/18/2021) and Engine power: 2000 KW.

Monitoring/recordkeeping

Per SC VI.2, The permittee shall keep, in a satisfactory manner, the following records for EUENGINE1

- a. For a certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b. For an uncertified engine: The permittee shall keep records of testing required in SC V.1.
- AQD received a notification on February 16, 2023, that the permittee purchased a certified engine and operated it certified manner. The permittee provided EPA certification(Certificate Number: MMVXL65.4BBA) for the engine.

Per SC VI.3, The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUENGINE1

- a. 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.
- The permittee keeps 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.
- b. For an uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.5, and maintenance activities.

Per SC III.4, If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart III, for the same model year, the permittee shall meet the following requirements for EUENGINE1:

- a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
- b. Change only those emission-related settings that are permitted by the manufacturer, and
- c. Meet the requirements as specified in 40 CFR 89, 94 and/or 1068, as they apply to the engine.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a) & (c))**

- AQD received a notification on February 16, 2023, that the permittee purchased a certified engine and operated it certified manner.
- Per SC VI.2,b, the permittee has provided a Tier 2 EPA -Certification.

Reporting

Per SC VII.1, Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this 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. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than the commencement of the trial operation of EUENGINE1.

- The emergency engine (EUENGINE1) was installed on June 29, 2021, and started operation on October 18, 2021. The AQD district supervisor received the notification on February 16, 2023. This is a violation of SC VII.1(reporting) of PTI No. 67-21. AQD will issue a violation notice to the facility for this violation.

As specified in SC VII.2, “the permittee shall submit a notification specifying whether EUENGINE11 will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of EUENGINE1 and within 30 days of switching the manner of operation.

- The emergency engine (EUENGINE1) was installed on June 29, 2021, and started operation on October 18, 2021. AQD district office received the notification that EUENGINE1 will be operated as a certified emergency generator via email on February 16, 2023. This is a violation of SC VII.2(reporting) of PTI No. 67-21. AQD will issue a violation notice for this violation.

Stack/Vent Restrictions

Per VIII.1, at the time of inspection, the exhaust stacks (SVENGINE1) appeared vertical and obstructed (equipped with a rain cap). SVENGINE1stack appeared to be at least 17.5 feet above ground in height.

Other requirements

Per SC IX.1, the permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and IIII, as they apply to EUENGINE1. (40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590(c))

- EUENGINE1 is a stationary compression ignition internal combustion engine (CI ICE) and was manufactured after April 1, 2006, so it is subject to NSPS Subpart IIII.
- Explained in SC III.4 (Process and Operational restrictions) and SC VI.2 (Reporting).

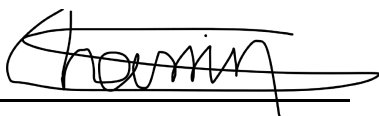
Per SC IX.2, The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZ, as they apply to EUENGINE1.

(40 CFR Part 63, Subparts A & ZZZZ, 40 CFR 63.6585)

- The emergency engine is subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines, but the engine is located at an area source of HAPs, and the State of Michigan does not have delegation over area sources.

Conclusion

Based on the on-site inspection and review of the records, it appears Avancez Highland Park does not comply with the requirements of SC II.1 (Material Limit), SC VI.5 (Monitoring/Recordkeeping), SC VII.1, and SC VII.2 (Reporting) of PTI No. 67-21. AQD will issue a violation notice to the facility for these violations.

NAME DATE 4/12/2023SUPERVISOR 