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

P102873202

FACILITY: Corteva Agriscience LLC		**SRN / ID:** P1028
LOCATION: 701 Washington Street, MIDLAND		**DISTRICT:** Bay City
CITY: MIDLAND		**COUNTY:** MIDLAND
CONTACT: Jacqueline Duby , Environmental Group Leader & Specialist		**ACTIVITY DATE:** 08/22/2024
STAFF: Nathanael Gentle	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MEGASITE
SUBJECT: FGEMERGSIRICE, FGEMERGCIRICE, and NSPS IIII Onsite Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 22, 2024, AQD staff conducted a scheduled onsite inspection of FGEMERGSIRICE, FGEMERGCIRICE, and an emergency engine subject to NSPS IIII at Corteva Agriscience, LLC, SRN P1028. AQD staff included Nathanael Gentle and Erin Sheridan with the Bay City District Office. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) Administrative Rules and Renewable Operating Permit, MI-ROP-P1028-2022d. At the time of inspection, the facility was found to be in compliance.

Facility Description and History

Corteva Agriscience, LLC is a megasite located at 701 Washington Street, Midland, Midland County, Michigan 48667. The stationary source consists of Corteva Agriscience LLC (Corteva) (SRN P1028), Clean Harbors Industrial Services (Clean Harbors) (P1028), DDP Specialty Electronic Materials US, Inc. (DDP) (SRN P1027), Nutrition & Biosciences USA 1, LLC (N&B) (P1027), The Dow Chemical Company (Dow Chemical) (SRN: A4033), Dow Silicones (SRN: A4043), and Trinseo, LLC (Trinseo) (SRN: P1025). During the August 22, 2024, inspection, compliance was evaluated for FGEMERGSIRICE, FGEMERGCIRICE, and emergency engines subject to NSPS IIII.

Compliance was evaluated for emergency engines. Two flexible groups for emergency engines are in section one of MI-ROP-P1028-2022d. They include FGEMERGSIRICE and FGEMERGCIRICE. FGEMERGSIRICE encompasses emergency spark ignition engines subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR, Part 63, Subpart ZZZZ. Engines in FGEMERGSIRICE are regulated as existing spark ignition (SI) emergency RICE with a maximum site rate of less than 500 brake horsepower (HP) located at a Major Source of HAP emissions. FGEMERGCIRICE encompasses emergency diesel fuel engines subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE). 40 CFR, Part 63, Subpart ZZZZ. Engines in FGEMERGCIRICE are regulated as existing compression ignition (CI) emergency RICE with a maximum site rate of less than 500 brake horsepower (HP) and greater than 500 brake horsepower (HP) located at a Major Source of HAP emissions.

Corteva Agriscience, LLC owns and operates one emergency engine, the 251 Generator located at the 251 building. The emergency engine is a Cummins model DQFAB diesel engine. The engine is used to power a service water pump during periods in which energy is unavailable from the grid. The water pump is used to supply water from the Tittabawassee River to various entities and processes within the iPark. The emergency engine is a new engine rated at >500 HP and subject to the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines.

Compliance Evaluation

FGEMERGSIRICE

FGEMERGSIRICE encompasses emergency spark ignition engines subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR, Part 63, Subpart ZZZZ. Corteva Agriscience does not own and operate any emergency spark ignition engines. Therefore, the requirements of FGEMERGSIRICE are not applicable to the facility. It is recommended this Flexible Group be removed from the ROP during the next ROP renewal.

FGEMERGCIRICE

FGEMERGCIRICE encompasses emergency diesel fuel engines subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) 40 CFR, Part 63, Subpart ZZZZ. Corteva owns and operates one diesel fueled emergency engine. The engine is rated at 1490 BHP and was installed in September of 2012. As a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that commenced construction of the stationary RICE on or after December 19, 2002, the engine is considered a new stationary RICE, 40 CFR 63.6590(a)(2)(i).

As a new stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, 40 CFR 63.6590(b) stipulates the engine does not have to meet the requirements of subpart ZZZZ except for the initial notification requirements of § 63.6645(f). Records of the initial notification were requested and reviewed. An initial notification was provided to the AQD on April 25, 2013, by Dow Chemical, SRN A4033. Two subsequent notifications were submitted following changes of ownership for the unit. These subsequent notifications include one submitted on November 14, 2019, for change in ownership from Dow Chemical to Dow AgroSciences. The other subsequent notification was submitted on January 11, 2021, for change in ownership from Dow AgroSciences to the current owner, Corteva Agriscience. Records provided and reviewed demonstrate the facility is in compliance with the requirements of 40 CFR 63.6590(b), and are therefore in compliance with 40 CFR, Part 63, Subpart ZZZZ. If it is determined changes should be made to the conditions of FGEMERGCIRICE to more accurately reflect the requirements of the engine subject to the subpart, these changes should be made during the next ROP renewal.

NSPS Subpart IIII

The compression ignition internal combustion engine was manufactured in 2011. The unit was purchased in 2011 and installed in September 2012. Staff report the unit has not been modified. As a stationary compression ignition internal combustion engine manufactured after April 1, 2006, in which construction was commenced after July 11, 2005, the unit is subject to the applicable requirements of 40 CFR Part 60 Subpart IIII, 40 CFR 60.4200(a)(2). Onsite staff report procedures are in place to ensure compliance is maintained. Each month onsite staff complete a reasonable inquiry to ensure the unit is meeting the requirements of NSPS Subpart IIII and ensure no changes were made to the unit that would trigger additional requirements.

The diesel fired emergency engine is rated at 1490 BHP in standby. The displacement of the engine is 2.54 liters per cylinder. Records demonstrating the engine specifications and displacement calculations were provided. Being the engine has a displacement of less than 30 liters per cylinder, the unit may be certified by the manufacturer to meet the applicable emission standards of NSPS Subpart IIII. If the unit is not certified by the manufacturer, a maintenance plan must be implemented and performance testing demonstrating compliance with the emission limits must be completed. The diesel engine was verified to be certified by the manufacturer to meet the EPA NSPS Stationary Emergency Tier 2 emission standards. Certification of emission standards was included in the Generator Set Data Sheet provided. Additionally, a

tag from the manufacturer was observed on the engine stating the engine complies with U.S EPA and California regulations for 2011 stationary emergency diesel engines.

The engine is equipped with a non-resettable hours meter, 40 CFR 60.4209(a). As an emergency stationary ICE, the unit must operate according to the requirements of 40 CFR 60.4211(f) in order for the engine to be considered an emergency stationary ICE under NSPS Subpart IIII. There is no limit on the use of the emergency stationary ICE in emergency situations. The unit may be operated for a maximum of 100 hours per calendar year for non-emergency purposes specified in paragraph (f)(2)(i) of the subpart. Non-emergency scenarios in which the unit may be operated include maintenance checks and readiness testing. Additionally, the unit may be operated for up to 50 hours per calendar year to supply power as part of a financial arrangement with another entity if the criteria specified in paragraph (f)(3)(i) are met. These 50 hours per calendar year count toward the 100 hours per calendar year of non-emergency operation.

Onsite staff report the engine is operated for emergencies, as well as maintenance and readiness testing. The unit is not operated to supply power as part of a financial arrangement with another entity. Records of engine hours and the reason for operation were provided for calendar year 2019 through July 2024, 40 CFR 60.4214(b). Records of engine hours and the reason for operation are tracked in a digital spreadsheet. The meter reading of engine hours, hours in which the engine is operated, as well as the purpose for operation, are recorded each month. Hours of maintenance and readiness testing are summated for each calendar year to ensure these hours do not exceed 100 hours per calendar year. During the period of records reviewed, the calendar year with the highest amount of maintenance and readiness testing hours was calendar year 2020 with 11.8 hours, well below 100 hours. Hours on the hour meter at the end of July 2024 was 115.8 hours. The facility was verified to be keeping appropriate records that demonstrate the engine is meeting the operating requirements of 40 CFR 60.4211(f) in order for the engine to be considered an emergency stationary ICE under NSPS Subpart IIII.

The emergency engine is not equipped with a diesel particulate filter, 40 CFR 60.4209(b). AQD staff observed the engine in place. At the time of inspection, the hours meter on the engine was observed to be at 116.9 hours.

Rule 201

The 251 Generator operates as exempt from the requirement of R 336.1201(1) to obtain a Permit to Install (PTI). Facility staff provided documentation showing the unit operates as exempt from needing a PTI pursuant to exemption Rule 285(g). Rule 285(g) states the requirement to obtain a Permit to Install does not apply to internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input. Documentation provided demonstrated the maximum fuel usage of the unit is 56.4 gph. Assuming a high heat value (HHV) of 137,380 Btu/gal, the maximum heat input was calculated as 7.75 MMBtu/hr. Based of the documentation provided, the 251 Generator appears to meet the exemption requirements of Rule 285 (g)

Summary

On August 22, 2024, AQD staff conducted a scheduled onsite inspection of FGEMERGSIRICE, FGEMERGCIRICE, and an emergency engine subject to NSPS IIII at Corteva Agriscience, LLC, SRN P1028. Corteva Agriscience, LLC is a megasite located at 701 Washington Street, Midland, Midland County, Michigan 48667. Two flexible groups for emergency engines are in section one of MI-ROP-P1028-2022d. They include FGEMERGSIRICE and FGEMERGCIRICE. These Flexible Groups encompass the requirements for emergency spark ignition engines and emergency compression ignition engines subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal

Combustion Engines (RICE), 40 CFR, Part 63, Subpart ZZZZ. Corteva Agriscience, LLC owns and operates one emergency engine, the 251 Generator located at the 251 building. The emergency engine is a new engine rated at >500 HP and subject to the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines. At the time of inspection, the facility was found to be in compliance.

NAME Nathanael Gerstle DATE 9/10/2024 SUPERVISOR