



REGION 4

ATLANTA, GA 30303

October 5, 2023

Mr. Dan Chisholm, Sr., CEO
Motor and Gear Institute
93 Delannoy Avenue, # 1002
Cocoa, Florida 32922

Dear Mr. Chisholm:

This letter is in response to your request dated July 24, 2023, regarding a potential change in the operating scenario for diesel fueled compression ignition (CI) internal combustion engines (ICEs) located at the Holmes Regional Medical Center (Center) in Melbourne, Florida, which are subject to Title 40 Code of Federal Regulations (C.F.R.) Part 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). In your letter, you also request clarification regarding rule limitations for demand-response operation of emergency CI ICEs.

Given the CI ICEs' model year and power rating, the U.S. Environmental Protection Agency confirms that the existing emergency CI ICEs are required to meet Tier 2 exhaust emission standards. However, non-emergency engines, for the same model year and power rating, are required to meet Tier 4 exhaust emissions standards. As a result, the Center's CI ICEs must remain in emergency service.

With the exception of an Administrator approval, or record, indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year, emergency CI ICEs are limited to 100 hours per calendar year. There is no time limit on the use of emergency stationary CI ICEs in emergency situations. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations must be counted as part of the 100 hours per calendar year for maintenance and testing. Except as provided in 40 C.F.R. § 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Details regarding the basis for our regulatory interpretation are provided in the remainder of this letter.

Description of Engines and Current Operation

The Center owns and operates two emergency operation 1.97 megawatt (MW) electrical power generators to support operations during periods of emergency circumstances (e.g., loss of electrical power from the local public electrical power supplier). Each generator is mechanically driven by one Caterpillar Model 3512C V-12 engine rated at 2,635 brake-horsepower (HP), with a displacement is 4.9 liters per cylinder (l/cyl). The engines were manufactured on August 12, 2020. Each engine is characterized and regulated as a Tier 2 exhaust emissions standard CI ICE under the provisions of Subpart ZZZZ.

Description of Proposed Operation

The Center, with assistance from your firm, is considering feasibility aspects related to implementing a change in the operating scenario for the generators from emergency service to non-emergency service operation. The non-emergency service operation of consideration involves routinely supplying electrical power to the Florida Power and Light's electrical power grid. Based on information you provided, the Center is currently classified as a minor (area) source for emissions of hazardous air pollutants (HAPs) (e.g., < 10 tons per year (TPY) of a single HAP and < 25 TPY of a combination of HAPs) and will remain so after the proposed change in operating scenario.

The EPA's Review of 40 C.F.R. 63, Subpart ZZZZ (emergency and non-emergency CI ICEs)

Under 40 C.F.R. § 63.6580, Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary RICEs located at major and area sources of HAP emissions and establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

Under 40 C.F.R. § 63.6585, you are subject to Subpart ZZZZ if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

Under 40 C.F.R. § 63.6590(a), an affected source includes any new stationary RICE located at a major or area source of HAP emissions. Under 40 C.F.R. § 63.6590(a)(2), a new affected source is any: (1) stationary RICE with a site rating of more than 500 HP located at a major source of HAP emissions where construction or reconstruction commenced on or after December 19, 2002, and (2) stationary RICE located at an area source of HAP emissions where construction or reconstruction on or after June 12, 2006.

Under 40 C.F.R. § 63.6590(c), a new stationary RICE located at an area source must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60 Subpart IIII, CI ICEs. No further requirements apply for such engines under Subpart ZZZZ.

The EPA's Review of 40 C.F.R. 60, Subpart IIII

1) 2007 Model Year and later stationary emergency engines with a displacement of < 30 l/cyl, constructed after July 11, 2005, and manufactured after April 1, 2006.

Under 40 C.F.R. § 60.4205(b), owners and operators of 2007 Model Year and later emergency stationary CI ICEs with a displacement of < 30 l/cyl that are not fire pump engines must comply with the emission standards for new non-road CI ICEs in 40 C.F.R. § 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 Model Year and later emergency stationary CI ICE.

Under 40 C.F.R. § 60.4202(a)(2), stationary CI ICE manufacturers must certify their 2007 Model Year and later emergency stationary CI ICEs with a maximum engine power of ≤ 3,000 HP, but > 50 HP, and a displacement of < 10 l/cyl that are not fire pump engines to the Tier 2 or Tier 3 emission standards for new non-road CI engines for the same rated power as described in 40 C.F.R. Part 1039, Appendix I, for all pollutants, and the smoke standards as specified in 40 C.F.R. § 1039.105 beginning in 2007 Model Year.

Under Table 2 of Appendix I to 40 C.F.R. Part 1039, 2020 Model Year stationary emergency operation CI ICEs rated at a maximum power of 1.97 MW are required to meet the Tier 2 exhaust emissions standards of non-road compression ignition engines.

Under 40 C.F.R. § 60.4211(f), if you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to (1-3) below:

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) You may operate your emergency stationary ICE for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICEs beyond 100 hours per calendar year.
- (3) Any operation for non-emergency situations as allowed by (i) below counts as part of the 100 hours per calendar year allowed in (2). In order for the engine to be considered an emergency stationary ICE under Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (1-3), is

prohibited. If you do not operate the engine according to the requirements in (1) through (3), the engine will not be considered an emergency engine under Subpart IIII and must meet all requirements for non-emergency engines. Except as provided in (i) below, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity:

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific (North American Electric Reliability Corporation) NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

2) 2007 and later model year stationary non-emergency engines with a displacement of less than 30 l/cyl constructed after July 11, 2005, and manufactured after April 1, 2006.

Under 40 C.F.R. § 60.4204(b), owners and operators of 2007 Model Year and later non-emergency stationary CI ICEs with a displacement of < 30 l/cyl must comply with the emission standards for new CI engines in 40 C.F.R. § 60.4201 for their 2007 Model Year and later non-emergency stationary CI ICEs, as applicable.

Under 40 C.F.R. § 60.4201(a), stationary CI ICE manufacturers must certify their 2007 Model Year and later non-emergency stationary CI ICEs with a maximum engine power less than or equal to 3,000 HP and a displacement of < 10 l/cyl to the certification emission standards for new nonroad CI engines in 40 C.F.R. 1039 §§ 101, 102, 104, 105, 107, 115, and Appendix I, as applicable, for all pollutants, for the same model year and maximum engine power.

Under 40 C.F.R. § 60.4211(c), if you are an owner or operator of a 2007 Model Year and later stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(b), you must comply by purchasing an engine certified to the emission standards in § 60.4204(b), as applicable, for the same model year and maximum engine power.

Under 40 C.F.R. § 1039.101(b), steady-state exhaust emissions from your engines may not exceed the applicable emission standards in Table 1 of 40 C.F.R. § 1039.101. Under Table 1, generator sets > 560 kilowatt (kW) are required to meet Tier 4 exhaust emission standards.

Forty (40) C.F.R. 1039 §§ 102, 104, 105, 107, and 115 do not apply to the subject engines since the engines are 2020 Model Year engines, operated at constant speed (1800 rpm), rated above 560 kilowatts, specify no evaporative emission standards for diesel-fueled engines, and are equipped with turbochargers.

The EPA's Determination

The 2020 Model Year emergency CI ICEs, as represented in your request, are required to meet Tier 2 exhaust emission standards, but 2020 Model Year non-emergency CI ICEs, rated at the same power, are required to meet Tier 4 exhaust emission standards. As a result, the Center's subject CI ICEs must remain in emergency service.

With the exception of an Administrator approval, or record, indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year, emergency CI ICEs are limited to 100 hours per calendar year. There is no time limit on the use of emergency stationary CI ICEs in emergency situations. Emergency stationary ICEs may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations must be counted as part of the 100 hours per calendar year for maintenance and testing. Except as provided in 40 C.F.R. 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

cc: Elizabeth Leturgey, EPA OECA
Melanie King, EPA OAQPS
David Read, FDEP

Anthony G. Toney
Acting Director

ANTHONY TONEY
Digitally signed by ANTHONY TONEY
Date: 2023.10.05 11:09:22 -04'00'

Sincerely,

The review of your regulatory interpretation request was coordinated with the EPA's Office of Enforcement and Compliance Assurance and Office of Air Quality Planning and Standards. If you have any questions about the response provided in this letter, please contact Mr. Tracy Watson of my staff at (404) 562-8998 or by email at watson.marion@epa.gov.