**Source Category Permit to Operate Existing Stationary Diesel-Fired Emergency Engines Exempt from NSPS Subpart IIII but Subject to NESHAP Subpart ZZZZ**

**Permit No. 7115-SC**

September 20, 2016

I. Applicability[[1]](#footnote-1):

a. This source category permit is applicable to a subset of owners and operators of diesel-fired emergency engines in the District of Columbia who submit an application to the Department of Energy and Environment (“the Department”), Air Quality Division (“AQD”) and are approved for coverage under this permit, either actively or by passive approval which will occur 45 days after submission of the application to AQD unless AQD objects to the approval in writing in that timeframe.

b. This source category permit covers operation of existing emergency diesel-fired compression ignition (CI) internal combustion engines that are exempt from compliance with 40 CFR 60, Subpart IIII but subject to 40 CFR 63, Subpart ZZZZ. To be covered under this permit, equipment must meet the following criteria:

1. The equipment consists of an existing diesel-fired emergency generator set or other diesel-fired emergency engine;

2. The equipment is stationary (i.e., it has remained or will remain in place for greater than 12 months);

3. The project that involved construction of the equipment to be covered did not trigger applicability of 20 DCMR 204, Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review) at the time of construction;

4. The engine has not been modified or reconstructed as defined in 40 CFR 60.14 or 60.15;

5. The facility at which the unit is located is not a major source of hazardous air pollutant (HAP) emissions [20 DCMR 399, definition of “Major source”, section (a)] (i.e. the facility does not emit more than 10 tons of any individual HAP nor does it emit more than 25 tons of all HAPs combined);

6. None of the following (A through C) describes the engine:

A. The model year of the engine is 2007 or later for engines that are not fire pump engines;

B. The engine is for a fire pump and its model year is equal to or newer than those specified in the following table, based on the size of the engine:

|  |  |  |
| --- | --- | --- |
| **Fire Pump Engine Applicability Table** | | |
| **Engine Power** | | **Starting Applicability Model Year\*** |
| **Mechanical Kilowatts (kWm)** | **Horsepower (hp)** |
| kWm <75 | hp<100 | 2011 |
| 75<kWm<130 | 100<hp<175 | 2010 |
| 130<kWm<560 | 175<hp<750 | 2009 |
| kWm>560 | hp>750 | 2008 |

\*Fire pump engines with a maximum engine power greater than or equal to 37 kWm (50 hp) and less than 450 kWm (600 hp) and a rated speed of greater than 2,650 revolutions per minute (rpm) are covered by this condition only three years after the model year listed in this table for the applicable power category.

or;

C. The engine was ordered by the owner or operator after July 11, 2005 and one of the following is true:

i. The engine was manufactured after April 1, 2006 and is not a fire pump engine; or

ii. The engine was manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006;

7. The engine will not be used for economic or emergency demand response purposes;

8. The Permittee will purchase only diesel fuel that contains a maximum sulfur content of 15 ppm (0.0015 percent by weight) for use in the engine; and

9. The equipment must be operated in compliance with all conditions of this permit.

c. Similar sources that do not meet the above criteria may be eligible for a different source category permit or a standard unit-specific permit issued pursuant to 20 DCMR Chapter 2, but cannot be covered by this source category permit.

II. General Requirements:

a. The emergency engine shall be maintained and operated in accordance with the air pollution control requirements of the applicable sections of 20 DCMR.

b. This permit expires on September 19, 2021 [20 DCMR 200.4]. If an applicant covered by this permit wishes to continue operation after this date, the owner or operator shall submit an application for renewal by June 19, 2021.

c. Operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.

d. The Permittee shall allow authorized officials of the District, upon presentation of identification, to:

1. Enter upon the Permittee’s premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.

e. A copy of this permit shall be kept on the premises and produced upon request.

1. Failure to comply with the provisions of this permit may be grounds for suspension or revocation of a Permittee’s approval to operate under this permit. [20 DCMR 202.2]
2. For any equipment covered by this permit that is located at a major stationary source (as defined in 40 CFR 199) facility or other facility subject to 20 DCMR Chapter 3, the Permittee shall submit a complete Chapter 3 (Title V) permit amendment request or, in the case of a facility with a current application under review, a revision to that pending application, within twelve (12) months of the date of approval of coverage under this permit, to include the requirements of this permit in the facility’s Title V permit for the covered equipment. [20 DCMR 301.2]

III. Emission Limitations:

a. Visible emissions shall not be emitted into the outdoor atmosphere from the engine, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, adjustment of combustion controls, or malfunction of the equipment [20 DCMR 606.1].

b. An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited. [20 DCMR 903.1]

IV. Operational Limitations:

* 1. a. The emergency engine shall be operated for fewer than 500 hours in any given 12 month period. If operation of 500 hours or more is intended, the engine is not eligible for coverage under this permit and must seek and obtain an equipment-specific Chapter 2 permit from the Department prior to initiating such operation. [20 DCMR 201]

b. Except as specified in Condition IV(c), the emergency engine shall be operated only during emergencies as follows: [20 DCMR 201]

1. For engines associated with emergency generators, electrical power outages due to: a failure of the electrical grid; on-site disaster; local equipment failure; or public service emergencies such as flood, fire, natural disaster, or severe weather conditions (e.g. hurricane, tornado, blizzard, etc.);

2. For engines associated with fire pumps, any fire emergency; or

3. For engines associated with emergency water pumps, any stormwater management emergency.

c. The emergency engine may be operated for the purpose of maintenance checks and readiness testing and in non-emergency situations for a period not to exceed one hundred (100) hours per calendar year as specified in Conditions IV(c)(1) and (2) below. Any such operations shall be considered as part of the 500 hours allowed under Condition IV(a) above. [20 DCMR 201]

1. The emergency engine may be operated for the purpose of 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. [40 CFR 63.6640(f)(2)(i) and DCMR 201]; and

2. The emergency engine may be operated for up to fifty (50) hours per calendar year in non-emergency situations, subject to the following conditions [40 CFR 63.6640(f)(4) and 20 DCMR 201]:

1. Any such operation shall be counted as part of the 100 hours per calendar year for maintenance and testing as provided in Condition III(c).
2. These 50 hours of non-emergency operations per calendar year cannot be used for peak shaving, or as part of any program to supply power to generate income for the facility as part of a financial arrangement with another entity;
3. All operations prohibited under Condition IV(e) are also prohibited under this condition; and
4. All operations of the emergency generator resulting from a deviation in voltage or frequency from the electric provider to the premises shall be considered non-emergency operation and counted as part of this 50 hour per calendar year allowance.

d. The Permittee shall purchase only diesel fuel that contains a maximum sulfur content of 15 ppm (0.0015 percent by weight) for use in the engine. [20 DCMR 201 and 20 DCMR 801]

e. The emergency engine shall not be operated in conjunction with a voluntary demand-reduction program or any other interruptible power supply arrangement with a utility, other market participant, or system operator. [20 DCMR 201]

f. The emergency engine shall be operated and maintained in accordance with the manufacturer’s emission-related written instructions or the Permittee shall develop and implement a written maintenance plan consistent with industry standards for similar models if manufacturer instructions are unavailable. Any Permittee-developed maintenance plan 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. [40 CFR 63.6625(e), 40 CFR 63.6640(a), 40 CFR 63, Subpart ZZZZ, Table 6, and 20 DCMR 201]

g. In addition to the requirements of Condition IV(f), the following maintenance activities shall be performed on the schedules specified [40 CFR 63.6603(a), 40 CFR 63.6640(a), and 40 CFR 60, Subpart ZZZZ, Table 2d]:

1. Change oil and filter every 500 hours of operation or annually, whichever comes first, except that sources have the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) in order to extend this specified oil change requirement. If such an oil analysis program is to be used, the plan shall be submitted to the Department for review at the time of its establishment;

2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

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

1. The Permittee shall minimize the engine’s time spent at idle during startup and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

i. At all times, including periods of startup, shutdown, and malfunction, the owner shall, maintain and operate the unit in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this permit and 40 CFR 63, Subpart ZZZZ have been achieved. Determination of whether acceptable operating procedures are being used will be based on information available to the Department and the EPA Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, review of operation and maintenance records, and inspection of the source. [20 DCMR 201 and 40 CFR 63.6605]

V. Monitoring and Testing Requirements:

a. The owner or operator shall monitor the date, time, duration, and reason for each emergency engine startup to ensure compliance with Conditions IV(a), (b), (c), and (e). [20 DCMR 500.2]

b. In order to ensure compliance with Condition IV(a), the Permittee shall monitor the total hours of operation each month with the use of a properly functioning, non-resettable hour metering device. Such a device must be installed if not already installed on the equipment. [40 CFR 63.6625(f) and 40 CFR 63.6655(f)]

c. The owner or operator shall test fuel oil as necessary to show compliance with Conditions IV(d) and VI(c) in accordance with ASTM method D-4294 or D-5453 or other method approved in advance by the Department. [20 DCMR 502.3 and 502.6]

d. The owner or operator shall conduct and allow the Department access to conduct tests of air pollution emissions from any source as requested. [20 DCMR 502.1]

VI. Record Keeping Requirements:

a. The following information shall be recorded, initialed, and maintained in a log at the facility for a period not less than three (3) years or, in the case of any major stationary source facility or other facility subject to 20 DCMR Chapter 3, five (5) years [20 DCMR 20 DCMR 302.1(c)(2)(B), 20 DCMR 500. 8, 40 CFR 63.6660, 40 CFR 66.6655, and 40 CFR 63.10(b)]:

1. The date, time, duration, and reason for each start-up of the emergency engine, including the following information:

i. If the unit is operated in non-emergency situations pursuant to Condition IV(c)(2),

the specific purpose for each operation period must be recorded; and

ii. If the unit is operated for emergency purposes, what classified the operation as emergency;

2. The total hours of operation for each month and the cumulative 12-month rolling period shall be calculated and recorded within 15 days of the end of each calendar month for the previous month and the 12-month period ending at the end of that month;

3. The total hours of operation for maintenance checks and readiness testing and non-emergency operation pursuant to Condition IV(c) each month, recorded within 15 days of the end of each calendar month, and totaled for each calendar year by January 15 of each year for the previous calendar year.

4. The total hours of operation each calendar year for non-emergency purposes pursuant to Condition IV(c)(2), totaled by January 15 of each calendar year for the previous calendar year;

5. Records of the maintenance performed on the unit *[Note that these records must be sufficient such that the Permittee is complying with the requirements of Condition IV(f)]*;;

6. Records of the results of any visible emissions monitoring performed;

7. Records of the occurrence and duration of each malfunction of operation;

8. Records of the actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunction process and air pollution control and monitoring equipment to its normal or usual manner of operation; and

9. For any equipment covered by this permit that is located at a major stationary source (as defined in 40 CFR 199) facility or other facility subject to 20 DCMR Chapter 3, the Permittee shall maintain fuel usage records for the unit on a monthly and annual total basis for use in reporting fuel use and emissions from the facility, including equipment covered by this permit, pursuant to the requirements of the Title V permit.

b. The Permittee shall maintain a copy of the emergency engine’s manufacturer’s maintenance and operating recommendations at the facility. If such documentation is unavailable, the Permittee shall maintain documentation of the written maintenance plan consistent with industry standards in accordance with which the unit is being maintained. [20 DCMR 500.2]

c. For each delivery of diesel fuel, the Permittee shall maintain one of the following:

1. A fuel delivery receipt containing the date, fuel type, and amount of the delivery and certification from the fuel supplier that the fuel delivered was tested in accordance with an appropriate ASTM method (specified in the certification) and met the requirements of Condition IV(d); or

2. A fuel delivery receipt and documentation of sampling and analysis containing the following information:

i. The fuel oil type and the ASTM method used to determine the type (see the definition of distillate oil in 40 CFR 60.41c for appropriate ASTM methods);

ii. The weight percent sulfur of the fuel oil as determined using ASTM test method D-4294 or D-5453 or other method approved in advance by the Department;

iii. The date and time the sample was taken,

iv. The name, address, and telephone number of the laboratory that analyzed the sample, and

v. The test method used to determine the sulfur content.

VII. Reporting Requirements:

If the facility at which the engine is located is subject to a permit issued pursuant to 20 DCMR Chapter 3 (Title V), the Permittee shall include the equipment covered by this source category permit in all reports required by the Title V permit, including, but not limited to, semi-annual and annual compliance certifications and reports.

Approved by:

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Stephen S. Ours, P.E. Date

Chief, Permitting Branch

SSO:JCN

1. For definitions of terms used in this permit, please see the relevant definition sections of 20 DCMR as well as 40 CFR 60.2, 40 CFR 60.4219, 40 CFR 63.2, 40 CFR 63.6590, and 40 CFR 63.6675. [↑](#footnote-ref-1)