APPLICATION FOR SOURCE CATEGORY PERMIT APPROVAL TO OPERATE AN EXISTING DIESEL-FIRED EMERGENCY ENGINE EXEMPT FROM NSPS SUBPART IIII BUT SUBJECT TO NESHAP SUBPART ZZZZ

Instructions: Please complete a separate copy of this form for each covered engine.

I. **Applicability** (Check all that are applicable)

☐ The equipment consists of a diesel-fired emergency generator engine or other diesel-fired emergency engine.

☐ The equipment is stationary (i.e., it will remain in place for greater than 12 months).

☐ The equipment is to be used exclusively for emergency purposes (except maintenance and testing and limited non-compensated non-emergency operations specified in Condition IV(c)(2) of the source category permit) and will not participate in a voluntary demand reduction program or any other interruptible power supply arrangement with a utility, other market participant, or system operator (demand response).

☐ The equipment will operate for fewer than 500 hours in any given 12 month period for all purposes, combined.

☐ The equipment's potential to emit (PTE) oxides of nitrogen (NO_x) is less than 25 tons per year (TPY). See the table in Section IV of this application to calculate PTE from this particular unit and sum NO_x emissions from all permit applications related to this project.

☐ Construction of this engine, in combination with any other equipment constructed as part of the same construction project, 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. You may check this box if you checked the previous box and there was no other air pollutant-emitting equipment constructed as part of the same construction project. If other air pollutant-emitting equipment was constructed as part of the same construction project, please perform and submit a full applicability evaluation pursuant to 20 DCMR 204 or contact the Air Quality Division (AQD) at (202) 535-2250 to request further guidance.

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

☐ 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).

☐ Check this box if none of the following (1 through 3) is true:

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

2. 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 (kW_m)	**Horsepower (hp)**	
$kW_m < 75$	hp<100	2011
$75 \leq kW_m < 130$	$100 \leq hp < 175$	2010
$130 \leq kW_m \leq 560$	$175 \leq hp \leq 750$	2009
$kW_m > 560$	hp>750	2008

*Fire pump engines with a maximum engine power greater than or equal to 37 kW_m (50 hp) and less than 450 kW_m (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;

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

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

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

☐ Only diesel fuel that contains a maximum sulfur content of 15 ppm (0.0015 percent by weight) will be purchased for use in the engine; and

☐ The equipment will be operated in compliance with the "Source Category Permit to Operate Existing Stationary Diesel-Fired Emergency Engines Exempt from NSPS Subpart IIII but Subject to NESHAP Subpart ZZZZ".

If you have checked all of the boxes above, you are eligible to apply for coverage under this source category permit. Please complete the remainder of this form. Note that your coverage under this source category permit is still subject to AQD approval. AQD may deny approval under this permit if it deems that further review is necessary due to special or unique circumstances related to a given application. Approval will occur either by active acknowledgement by AQD or by passive approval which will occur 45 days after submission of the complete application to AQD unless AQD objects to the approval in writing in that time.

If you are not eligible for coverage under this source category permit, you may still be eligible for a standard source-specific permit. Please contact AQD at (202) 535-2250 to discuss alternate permitting options or check the AQD website (http://doee.dc.gov/air) for the appropriate application forms.

If you have questions about your eligibility or how to complete this application, please contact AQD at (202) 535-2250.

II. Facility and Applicant Information

1. _____
   Full Legal Name of Applicant/Organization

2. _____
   Type of Organization

3. _____
   Name of Owner(s) or Principal Partner(s) of Above Organization

4. _____
   Mailing Address of Applicant (No., Street, City, State, Zip)

5. _____
   Street Address of Facility (if different from Mailing Address)

6. Owner/Responsible Official Name: _____

   Owner/Responsible Official Title: _____

   Phone No. _____ E-mail: _____

7. Contact Person: _____

   Contact Person Title: _____

   Phone No.:_____ E-mail: _____

8. Type of Project: ☐ New Construction ☐ Renewal/Transfer of Existing Permit
   ☐ Initial Permitting of Existing Source
   Note that replacement of an existing source is considered "New Construction".

9. For renewal or transfer of coverage from a standard permit, provide the existing permit number and expiration date:

   _____

10. Describe the facility at which this equipment will be located:

   _____

III. General Equipment Information

1. Equipment Name/Identification: _____

2. Engine type: ☐ Reciprocating ☐ Turbine ☐ Other

   If "Other", describe: _____

3. Fuel type: _____

4. Rated fuel consumption: _____ gal/hr

5. Engine is used for: ☐ Routine operational use ☐ Emergency or back-up use only
   Note: If the unit is to be used in a load response program or for peak shaving, please check "Routine operational use" and attach an explanation of the use(s) of the unit. Also note that only engines used in emergency or back-up capacities are eligible for coverage under this source category permit, except as specified in Condition IV(c) of the source category permit.

6. Rated generator electrical output: _____ kW/kWe
   Note: Enter n/a if your engine is not associated with a generator

7. Maximum engine power:_____ ☐ HP or ☐ kWm (choose units) @ _____ RPM

8. Stack height above ground: _____ ft Inner diameter at exit: _____ ft

   Exit gas volumetric rate: _____ cfm Gas temperature at exit: _____ °F

   Distance of stack from nearest property boundary: _____ ft

   Describe the location of the stack outlet: _____

9. Date construction/installation of engine began or is planned to begin: _____

10. Date construction/installation of engine completed (if applicable): _____

11. Manufacturing Information:

_____	_____	_____
Engine Order Date	Engine Manufacture Date	Engine Model Year
_____	_____	_____
Engine Serial Number (if available)	Engine per cylinder displacement	Engine Manufacturer
_____	_____	
Generator Manufacturer	Generator Manufacture Date	

IV. Emissions

Please complete the following "Potential to Emit" table and attach a sample calculation. (except as noted below):

Note: It is acceptable to provide calculations in an alternate format as an attachment to this application. Please ensure that any submittal provides sufficient information to allow the application reviewer to reproduce the calculations from the source material. Please also ensure that any alternative submittal provides substantially the same information requested in the following table.

If potential emissions are provided in an attachment, please check the following box: ☐

Table: Potential to Emit[1]					
Pollutant	**Emission Factor[2]**	**Units of Emission Factor[3]**	**Emission Rate (lb/hr)**	**Maximum Hours Per Year of Operation[4]**	**Maximum Potential Emissions (Tons/yr)**
NO_x					
SO_x					
VOC					
CO					
$PM_{(Total)}$					

[1] "Potential to Emit" is the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is enforceable as a practical matter. Secondary emissions do not count in determining the potential to emit of a stationary source. [20 DCMR § 199]
[2] The emission factor should reflect the maximum emissions expected from the unit when operating properly.
[3] Examples of commonly used units are lb/hp-hr and lb/million BTU of heat input.
[4] The default value for this column should be 500 hours per year for emergency engines. If a different value is used, you are not eligible for coverage under this source category permit so you should seek a standard unit-specific permit.

Cite the source(s) of the emission factors:

_____

V. Notes and Required Attachments

1. Please attach a copy of the manufacturer's specifications for the unit (whenever they can be obtained) and any other appropriate supporting documentation, including the basis for manufacturer-specified emission factors.

2. Deviations from submitted plans and specifications are not permissible without securing formal approval from AQD via an application update request and re-approval, if already approved. If an application update is submitted, the 45 day passive approval period will re-set as of the date of submission of the revised application.

3. The complete application and applicable supporting documentation must be submitted to the following address:

   Branch Chief, Air Quality Permitting Branch
   Department of Energy and Environment
   1200 First Street NE, 5th Floor
   Washington, DC 20002

VI. Applicant Certification:

I hereby certify, under penalty of D.C. Official Code § 8-101.05e, that I am authorized to submit this application on behalf of the applicant and that the statements contained herein are true and correct to the best of my knowledge. I further certify that all attached information and previously submitted information referenced in this application remains true, correct, and current, to the best of my knowledge.

Authorized Signature:

_____

Owner/Responsible Official Signature Print Name and Title Date

_____

Mailing Address of Owner/Responsible Official if Different From II(4) above

Report Fraud, Waste, Abuse, and Mismanagement to the District of Columbia Office of the Inspector General.
Confidential Toll Free Hotline: 1-800-521-1639 or 202-724-TIPS (8477). Email: hotline.oig@dc.gov

Attachment 1

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

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 28, 2016

I. Applicability[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:

[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.

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 (kW_m)	**Horsepower (hp)**	
kW_m <75	hp<100	2011
75≤kW_m<130	100≤hp<175	2010
130≤kW_m≤560	175≤hp≤750	2009
kW_m>560	hp>750	2008

*Fire pump engines with a maximum engine power greater than or equal to 37 kW_m (50 hp) and less than 450 kW_m (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 27, 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 27, 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.

f. 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]

g. 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:

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]:

    i. 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).

    ii. 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;

    iii. All operations prohibited under Condition IV(e) are also prohibited under this condition; and

    iv. 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.

h. 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. <u>Monitoring and Testing Requirements:</u>

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. <u>Reporting Requirements:</u>

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:

Stephen S. Ours

Stephen S. Ours, P.E.
Chief, Permitting Branch

9/28/2016
Date

SSO:JCN