GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

TO: File

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

FROM: John C. Nwoke
Environmental Engineer

SUBJECT: Source Category Permit No. 7115-SC to Operate Existing Stationary Diesel-Fired Emergency Engines Exempt from NSPS Subpart IIII but Subject to NESHAP Subpart ZZZZ

DATE: August 9, 2016

BACKGROUND INFORMATION

The Air Quality Division (AQD) of the Department of Energy and Environment (the Department) has developed a source category permit for owners or operators to operate a subset of existing stationary diesel-fired emergency compression ignition (CI) internal combustion engines in the District of Columbia. This particular source category permit is limited to engines exempt from compliance with the federal New Source Performance Standard (NSPS) "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" (40 CFR 60, Subpart IIII), but subject to the federal "National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)" (40 CFR 63, Subpart ZZZZ). This source category permit will expedite the permitting process by simplifying permitting paper work, not requiring a notice and comment period for each emergency engine applicant, and reducing Department permit review time. The source category permit includes the requirements of all relevant District of Columbia ("District") and federal air quality laws and regulations for this category of source.

All stationary emergency engines are potential sources of air pollution and are therefore subject to the requirements of 20 DCMR, Section 200 and must obtain a permit from the Department. This source category permit will provide an expedited method for obtaining such permits for a significant subset of those units while ensuring that all regulatory requirements are included in the governing permit for each covered unit.

TECHNICAL INFORMATION

This source category permit is applicable to owners and operators of stationary diesel-fired emergency engines in the District of Columbia who submit an application to AQD and are approved for coverage under this permit, either actively 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 timeframe.

This source category permit covers only the operation of existing, emergency internal combustion engines, operated exclusively on diesel fuel, that are exempt from the requirements of 40 CFR 60, Subpart IIII on the basis that they have not been modified or reconstructed as defined in 40 CFR 60.14 or 60.15 and that they do not fall into any of the three following categories:

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 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:

   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;

In addition, to be covered by this source category permit, an engine must be subject to the requirements of 40 CFR 63, Subpart ZZZZ, on the bases that [See 40 CFR 63.6585 and 40 CFR 63.6590]:

1. The engine is not located at a major source of hazardous air pollutants (HAPs) (i.e. it is

located at an area source of HAPs);

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

There are additional limitations placed on the equipment covered by this source category permit that are not required by the federal rule and may not be required in all cases by specific District regulations. This source category permit is not intended to disallow such operation in all cases. Instead, for some situations that may need further review by AQD, a case-by-case permit review process is still required to determine if such permits should be issued.

For equipment not covered by this source category permit (or other source category permits), if any entity owns, operates, or plans to install any equipment of this sort, they should consult with AQD to determine the applicability of any other permitting requirements pursuant to 20 DCMR 200. The main phone number for AQD is (202) 535-2250.

Note that this source category permit does not cover all engines. Examples of engines not covered are: 1) non-emergency engines, 2) non-road engines, 3) spark ignition engines, 4) engines subject to the requirements of the compression ignition NSPS (40 CFR 60, Subpart IIII), 6) engines whose owners/operators are requesting exemption from the Reciprocating Internal Combustion Engine (RICE) National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subpart ZZZZ, and 7) compression ignition engines burning fuel other than ultra-low sulfur diesel (15 ppm by weight or less). These categories may be covered by other source category permits or may be handled on a case-by-case basis by AQD.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements:
Stationary emergency engines that burn fuel are potential sources of oxides of nitrogen and other air pollutants. Thus a Chapter 2 permit is required for installation and operation of such engine. In this case this source category permit is being proposed to allow applicants to obtain such a permit for a subset of existing sources, under 20 DCMR 200.6.

20 DCMR Chapter 2, Section 204: Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review):
This source category permit is not intended to address NSR requirements and as such, the permit has been limited to applications that do not trigger 20 DCMR 204. It is extremely unlikely that New Source Review (NSR) would be triggered by any other pollutant without first triggering it for oxides of nitrogen (NOx). As such, the permit application specifically calls out the NSR threshold of 25 tons per year as a potential emission threshold above which the permit is not valid. However, in the rare instance that NSR could be triggered for other reasons, it is made clear in the application that AQD could deny coverage under the source category permit for

special or unique circumstances. AQD would consider triggering NSR for another pollutant to be one of these circumstances.

20 DCMR Chapter 2, Section 209: Permit Requirements for Non-Major Stationary Sources (Minor New Source Review):
The equipment covered by this permit must be considered "existing" pursuant to the definitions in 40 CFR 63, Subpart ZZZZ. In order to qualify for this permit, therefore, the equipment must have been installed before the applicability date of 20 DCMR 209 (January 1, 2014). As such, 20 DCMR 209 cannot be applicable to any units covered by this permit.

20 DCMR Chapter 3 – Operating Permits and Acid Rain Programs:
In some cases, these units are installed at major stationary sources subject to 20 DCMR Chapter 3, commonly known as Title V, referencing Title V of the federal Clean Air Act, which establishes this program on a national basis. In order to ensure that any equipment covered by this source category permit is amended into the facility's Title V permit, Condition II(g) was added to the source category permit to require permittees to submit the appropriate Title V permit application or application update to AQD within 12 months of the date of approval of coverage of the unit under the source category permit. Additionally, pursuant to Chapter 3 requirements, any permittee subject to Chapter 3 and covered by this source category permit is required to maintain records for five years rather than the standard three years for non-major sources. See Condition VI(a).

20 DCMR Chapter 6: Particulates:
The visible emission limitations of 20 DCMR 606 are applicable to all units covered by this permit. Therefore, Condition III(a) includes these requirements.

20 DCMR Chapter 8, Section 805: Reasonably Available Control Technology (RACT) for Major Stationary Sources of the Oxides of Nitrogen:
Some engines have the potential to be covered by 20 DCMR 805, Reasonably Available Control Technology (RACT) for Major Stationary Sources of the Oxides of Nitrogen. However, pursuant to 20 DCMR 805.1(c)(2), emergency standby engines operated less than 500 hours during any consecutive 12-month period are exempt from this regulation. In Condition IV(a) of the source category permit, operations are limited to fewer than 500 hours in any given 12-month period to ensure that none of the units covered by this permit trigger 20 DCMR 805.

20 DCMR Chapter 9, Section 903: Odorous or Other Nuisance Air Pollutants
"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]" is applicable to all sources. It is contained in Condition III(b) of

the permit.

40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:
As discussed previously, this source category permit has been written specifically to cover only engines not covered by this particular federal regulation.

40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:
As discussed previously, this source category permit has been written specifically to cover only engines subject to this particular federal regulation. The requirements of this regulation have been incorporated into the permit.

RECOMMENDATIONS

The public notice announcement was submitted to the D.C. Register for publication in the August 19, 2016 edition. The draft permit is available for public comment through September 19, 2016. Pursuant to 20 DCMR 210, the public notice will also be sent to EPA Region III and affected states (VA, MD, and WV).

The attached proposed permit complies with all applicable federal and District air pollution control laws and regulations. I recommend that the attached source category permit No. 7115-SC be issued upon completion of the public review period, assuming no adverse comments are received.

If adverse comments are received, such comments will be addressed prior to issuance of any final permit for this source category.

JCN