May 23, 2017

Mr. Keith Hull, Director

Naval Research Laboratory

Research and Development Services Division

4555 Overlook Ave., SW

Washington, DC 20375-5320

**RE: Permit (#6188-R1) to Operate One 300 kWe Diesel-Fired Emergency Generator Set at NRL Building 12, 4555 Overlook Avenue SW, Washington, DC**

Dear Mr. Hall:

Pursuant to sections 200.1 and 200.2 of Title 20 of the District of Columbia Municipal Regulations (20 DCMR), a permit from the Department of Energy and Environment (“the Department”) shall be obtained before any person can construct and operate a stationary source in the District of Columbia. The application of the Naval Research Laboratory (“the Permittee”) to operate a 300 kWe Kohler 300REOZDD emergency generator set with a 490 bhp (366 kWm) Detroit Diesel diesel-fired engine, located at Building 12, 4555 Overlook Avenue SW, Washington DC, per the submitted plans and specifications, received on April 4, 2016 is hereby approved, subject to the following conditions:

I. General Requirements:

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

b. This permit will expire on May 22, 2022. [20 DCMR 200.4] If continued operation after this date is desired, the Permittee shall submit an application for renewal by February 22, 2022.

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. 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. [20 DCMR 202.2]

II. Emission Limitations:

a. Emissions from this unit shall not exceed those in the following table as measured according to the procedures set forth in 40 CFR 89, Subpart E for NMHC, NOx, and CO and 40 CFR 89.112(c) for PM. [40 CFR 60.4205(b), 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a)-(c)]:

|  |  |  |
| --- | --- | --- |
| **Pollutant Emission Limits (g/kW-hr)** | | |
| NMHC+NOx | CO | PM |
| 4.0 | 3.5 | 0.20 |

b. Visible emissions shall not be emitted into the outdoor atmosphere from this generator, 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].

c. In addition to Condition II(b), exhaust opacity, measured and calculated as set forth in 40 CFR 86, Subpart 1, shall not exceed [40 CFR 60.4205(b), 40 CFR 60.4202(a), and 40 CFR 89.113]:

1. 20 percent during the acceleration mode;

2. 15 percent during the lugging mode;

3. 40 percent during the peaks in either the acceleration or lugging modes. *Note that this condition is streamlined with the requirements of 20 DCMR 606.1.*

d. 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]

III. Operational Limitations:

* 1. a. The emergency generator shall be operated for fewer than 500 hours in any given 12 month period. If operation of 500 hours or more is desired, the Permittee shall submit an application to amend this permit to comply with the conditions of 20 DCMR 805 and shall obtain the Department’s approval of such application prior to initiating such operation. [20 DCMR 201]

b. Except as specified in Condition III(c), the emergency generator shall be operated only during emergencies resulting from 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.). [20 DCMR 201]

c. The emergency engine may be operated for the purpose of maintenance checks and readiness testing and for non-emergency purposes for a period not to exceed one hundred (100) hours per calendar year as specified in Conditions III(c)(1) and (2) below. Any such operations shall be considered as part of the 500 hours allowed under Condition III(a) above. [40 CFR 60.4211(f)]

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 60.4211(f)(2)(i) and 20 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 60.4211(f)(3) 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 III(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) and either a cetane index of 40 or a maximum aromatic content of 35 volume percent for use in the engine. [40 CFR 60.4207(b)]

e. The emergency generator shall be operated and maintained in accordance with the recommendations of the equipment manufacturer. [40 CFR 60.4211(a)(1) and 20 DCMR 201]

f. The emergency generator 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]

g. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the units in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [20 DCMR 201]

IV. Monitoring and Testing Requirements:

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

b. In order to ensure compliance with Condition III(a), the Permittee shall monitor the total hours of operation each month with the use of a properly functioning, non-resettable hour metering device. [40 CFR 60.4209(a) and 40 CFR 60.4214(b)]

c. The Permittee shall monitor and/or test for the sulfur content in diesel fuel/No. 2 fuel oil obtained for use in the generator engine, to ensure compliance with Condition III(d) of this permit. [20 DCMR 500.2, 502.3, and 502.6]

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

V. 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 five (5) years from the date the information is obtained [20 DCMR 302.1(c)(2)(B) and 20 DCMR 500.8]:

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

i. If the unit is operated in non-emergency situations pursuant to Condition III(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 III(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 III(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 to document that the Permittee is complying with the requirements of Conditions III(e) and (g)]*;

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

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

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.

b. The Permittee shall maintain a copy of the emergency generator’s manufacturer’s maintenance and operating recommendations at the facility. [20 DCMR 500.1]

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 III(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.

d. The Permittee shall maintain a copy of the EPA Certificate of Conformity at the facility at all times. [20 DCMR 500.1]

If you have any questions, please call me at (202) 535-1747 or John Nwoke at (202) 724-7778.

Sincerely,

Stephen S. Ours, P.E.

Chief, Permitting Branch

SSO:JCN