October 25, 2022

Mr. Michael P. McCarn, Director

Naval Research Laboratory

Research and Development Services Division

4555 Overlook Ave., SW

Washington, DC 20375-5320

**RE: Permit No. 6106-R2 to Operate One GTA28 Natural Gas-Fired Emergency Generator Set at NRL Building 149, 4555 Overlook Avenue SW, Washington, DC**

Dear Mr. McCarn:

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 Naval Research Laboratory (“the Permittee”) to operate a Newage/Cummins GTA28 emergency generator set with serial number S213762-01 and a 770 bhp (574 kWm) Cummins natural gas-fired engine, S/N 25321892, located at Building 149, 4555 Overlook Avenue SW, Washington DC, per the submitted plans and specifications, received on April 25, 2022, 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 October 24, 2027. [20 DCMR 200.4] If continued operation after this date is desired, the Permittee shall submit an application for renewal by July 24, 2027.

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]

g. If not already completed at the time of issuance of this permit, the Permittee shall submit a complete application to modify the facility’s Title V operating permit (or a modification to another pending Title V application) to include the requirements of this permit within 12 months of the date of issuance of this permit. [20 DCMR 301.1(a)(3)]

II. Emission Limitations:

1. 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].

*Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a “SIP call”) requiring the District to revise 20 DCMR 606. See “State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA’s SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction”, 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition II(a) as stated above.*

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]

III. Operational Limitations:

* 1. a. The emergency generator set shall be operated for fewer than 500 hours in any 12-consecutive-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 set 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]

1. The emergency generator set 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. [20 DCMR 201]
2. The emergency generator set 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. [DCMR 201]; and
3. The emergency generator set may be operated for up to fifty (50) hours per calendar year in non-emergency situations, subject to the following conditions [20 DCMR 201]:
4. 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).
5. 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;
6. All operations prohibited under Condition III(e) are also prohibited under this condition; and
7. All operations of the emergency generator set 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 emergency generator set shall fire only natural gas. [20 DCMR 201]

e. The emergency generator set 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 generator set 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. [20 DCMR 201]

g. In addition to the requirements of Condition III(f), the following maintenance activities shall be performed on the schedules specified [20 DCMR 201]:

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 spark plugs 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. [20 DCMR 201]
2. At all times, including periods of startup, shutdown, and malfunction, the Permittee 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 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]

IV. Monitoring and Testing Requirements:

a. The Permittee shall monitor the date, time, duration, and reason for the emergency generator 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 properly functioning, non-resettable hour metering device. Such a device must be installed if not already installed on the equipment. [20 DCMR 201]

c. 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:

1. The following information shall be recorded, initialed (except records generated automatically by an electronic system), and maintained in a log at the facility (or readily accessible electronically from 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 II(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;

1. The total hours of operation for maintenance checks and readiness and non-emergency operation testing 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.
2. 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;
3. Records of the quantity of fuel used in the unit, recorded on a monthly basis and summed for each calendar year;

6. 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 Conditions III(f) and (g)]*;

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

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

9. 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

b. The Permittee shall maintain a copy of the emergency generator’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]

VI. Reporting Requirements:

The Permittee shall include the equipment covered by this permit in all reports required by the Title V permit for the facility, including, but not limited to, semi-annual and annual compliance certifications and reports.

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