

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

TECHNICAL SUPPORT MEMORANDUM

TO: File

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

FROM: John Nwoke *JN* For JCN
Engineer

**SUBJECT: LHREV Washington M Street, LLC
Permit No. 6970-R1 to Operate One NSPS Pre-2007 Uncertified Diesel-fired
Emergency Generator Set**

DATE: July 21, 2020

BACKGROUND INFORMATION

On February 25, 2020 the Air Quality Division (AQD), received a permit application from LHREV Washington M Street, LLC to renew Permit No. 6970 for the operation of a diesel emergency generator at 100 M Street SE. The emergency diesel generator is a 350 kWe Generac unit driven by a 525 HP Mitsubishi V-8 engine, serial number DC9-455992. The emergency generator is documented as having been manufactured in 2007, but the engine model year is 2006.

On January 6, 2019 AQD received a source category renewal application (which in fact was an initial attempt to renew its original expiring standard permit). That application had two problems; one of which was that the signatory absolved himself from personal liability, although he signed on behalf of the business entity. The AQD did not accept that position. The other thing that was problematic was that the application being submitted was the short-form renewal application for renewal of source category permit coverage approvals, while the unit was not previously permitted under a source category permit (it was permitted under a standard Chapter 2 permit), and was therefore not eligible for renewal of a source category approval. As a result of these deficiencies, the facility was required to address the issues and reapply for a source category permit as an initial applicant and also to appropriately execute Section V, "Applicant Certification", of the application form. The related correspondence between the Permitting Branch Chief and the LHREV Washington M Street, LLC is in the email of January 10, 2020 (available in the file for permit No. 6970).

The February 25, 2020 application noted above was signed and dated on February 20, 2020. The application is a standard application to renew an existing standard Chapter 2 permit. This application is the subject of this technical memorandum and the remainder of this memo will discuss the technical issues associated with the emission unit needing continued operation at this facility. The memo will also document the relevant regulatory review of the drafted renewal Permit No. 6970-R1.

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Publication of the permit action is planned for August 7, 2020 in the D.C. Register. Public comment for the permit action will be solicited through August 31, 2020.

LHREV Washington M Street, LLC has not requested that any of the materials submitted with this application be held confidential.

ISSUES

The renewal application indicated that the engine is a 2006 Model Year engine. However, the applicant was not able to document that the engine was certified by EPA to meet the emission requirements of 40 CFR 60, Subpart IIII, which is applicable to the unit. As such, the engine must be permitted as an uncertified engine and is therefore subject to emissions testing requirements. The applicant was made aware of this requirement in a virtual meeting on April 27, 2020.

REGULATORY REVIEW

The following review is not a full review of all air quality regulations applicable to this generator set, but is rather a discussion of regulations whose applicability or requirements were not immediately obvious and therefore warrant documentation of AQD's applicability evaluations.

40 CFR 60, Subpart IIII – Standards of Performance for Compression Ignition Internal Combustion Engines:

On January 6, 2019 AQD received a source category renewal application (which in fact was an initial attempt to renew its original expiring standard standalone permit). The application was resubmitted on February 25, 2020, following the correction of the errors identified in the earlier submittal.

In the course of reviewing the second application filing, it was determined that the engine was not certified. The reason for this was that the applicant could not produce an EPA Certificate of conformity for the engine. Most permits are issued for engines with documented EPA Certificates of Conformity. AQD normally depends upon the Certificate of Conformity to verify that the engine's emissions meet the emissions standards under 40 CFR 60, Subpart IIII.

Under 40 CFR 60, Subpart IIII, §60.4200(a)(1), manufacturers of stationary CI internal combustion engines that burn diesel and having a displacement of less than 30 liters per cylinder and whose model year is 2007 or later that are not fire pump engines are subject Subpart IIII. However, this engine is not a model year 2007 or later engine, but rather a model year 2006 engine. Under 40 CFR 4200(a)(2), this 2006 model year engine is covered by Subpart IIII. Certification requirements are found in 40 CFR 60.4202, however this section only requires that model year 2007 and later engines be certified. It does not, however, exempt the covered 2006 model year engines from meeting the standards under the regulation.

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Although the manufacturer, Generac, was not required to certify the engine being permitted, 40 CFR 60.4200 subjects owners and operators to Subpart IIII. More specifically 40 CFR 60.4205(a) requires that owners and operators meet the emissions standards for an emergency generator found in Table 1 of the regulation. Because the unit is subject to emission standards, but is not certified, it is not able to document compliance in accordance with 40 CFR 60.4211(a)(1). The applicant also does not have documentation of other records or data to show compliance in accordance with other compliance options found in 40 CFR 60.4211(b)(2) through (4). This leaves only the option to show compliance via a performance test in accordance with 40 CFR 60.4212 found in 40 CFR 60.4211(b)(5). 40 CFR 60.4205(e) indicates that “Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in § 60.4212.”

Based on a review of the testing requirements, the Permittee must test for compliance with the “not to exceed” (NTE) emission standards calculated pursuant to 40 CFR 60.4121(d). These standards have been included in Condition II(b) of the permit. Further, testing procedures specified in 40 CFR 1065, Subpart J, for field testing, are the appropriate test methods for this type of testing. See also 40 CFR 60.4212(a) and 40 CFR 1039.501(a). This has been specified in Condition IV(f).

It should be noted that a performance test should have been performed well before this time pursuant to the timeline in 40 CFR 60.8(a). This permit does not absolve the applicant from any consequences of not complying with that requirement, but provides 180 days from permit issuance to perform testing to come into compliance.

Beyond this, the LHREV emergency engine meets all other requirements for a diesel-fired emergency engine subject to NSPS Subpart IIII with respect to: (1) being subject to this subpart (§60.4200); (2) emissions standards for owners and operators (except that it must demonstrate compliance to the emissions standards through a performance test because it is not a certified engine) (§60.4205(e)); (3) notification, reports, and record keeping (§60.4214) etc. Relevant conditions and citations have been included in the permit.

20 DCMR Chapter 2, Section 200: General Permit Requirements:

The stationary emergency generator engine is subject to Chapter 2 permitting requirements, regardless of size. As such, the generator engine is subject to Chapter 2 permitting requirements.

20 DCMR Chapter 5, Section 500: Source Monitoring and Testing:

The engine is subject to performance test in-use engines pursuant to 40 CFR 60.4205(e) (discussed later under other regulations). The requirement for testing and monitoring is in Condition IV(a) of the permit.

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20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606 are applicable to this unit. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of the these units; provided, that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two 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, or malfunction of equipment. This requirement is contained in Condition II(c) of the permit.

Note that language has been included in the permit condition notifying the facility that there is an outstanding call for a State Implementation Plan (SIP) revision from EPA that may result in revisions to the applicable regulation. As such, if the regulation is changed, the new regulatory requirements will superseded those expressed in the permit specifically.

20 DCMR Chapter 8, Section 805: Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen

The engine is required to not operate any more than 500 hours in any given 12 month period in order to satisfy the requirement of 20 DCMR 805.1(c) to ensure that the unit does not trigger applicability of this regulation. This requirement was included in Condition III(a) of the permit.

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. This requirement is contained in Condition II(d) of the permit.

CONCLUSIONS

This permit action will be published in the D.C. Register on August 7, 2020. Public comments on the proposed permit action will be solicited through September 8, 2020. AQD will address any comments received before taking final action on the application. If no comments are received, I recommend that permit No. 6970-R1 be issued promptly following the end of the public comment period.

JCN