

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM

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

FROM: John Nwoke 
Environmental Engineer

SUBJECT: **U.S. Immigration and Customs Enforcement
Department of Homeland Security
Permit No. 7239 to Construct and Operate One 2,000 kWe Cummins Natural
Gas-Fired Emergency Generator Set at 500 12th Street SW, Washington DC**

DATE: April 4, 2019

BACKGROUND

On April 17, 2018, the Air Quality Division (“AQD”) of the Department of Energy and Environment (“the Department”) received an application to construct and operate one 2,000 kWe cummins natural gas-fired emergency generator from the U.S. Immigration and Customs Enforcement, Department of Homeland Security (“the Permittee” or “DHS”).

The application, which was initially submitted as a source category permit application, was assigned approval number 7043-SC-0049, however approval was not granted. Following a review of that application, it was determined that the emergency generator did not meet the requirements for eligibility of coverage under the applicable source category permit program. The reason for that is that the 2,826 hp Cummins engine does not meet the applicability requirement of Condition 1(b)(6) of the Source Category Permit No. 7043-SC since the engine is not certified and cannot maintain a copy of a non-existent EPA Certificate of Conformity pursuant to Condition V(c) of the source category permit.

Consequently, and in accordance with Condition 1(c) of Source Category Permit No. 7043-SC, the Permittee was required to submit a standard application for consideration on a unit-specific basis. On December 14, 2018, AQD received a standard Chapter 2 permit application from the Permittee via an email to replace the source category application for the same emergency generator. Permit No. 7239 was assigned to the application and this effectively replaced the source category coverage application which had been assigned approval number 7043-SC-0049.

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.

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40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines:

On April 17, 2018, AQD received the original source category permit coverage application from the applicant and, in the course of reviewing the permit application, it was determined that the engine was not certified. The reason for this was that the Permittee could not produce an EPA Certificate of conformity for the engine as required by the application. The issuance of a permit is contingent on the engine having an EPA issued Certificate of Conformity. AQD could not verify that the engine's emissions meet the emissions standards under 40 CFR 60, Subpart JJJJ without such a certificate.

Under 40 CFR 60, Subpart JJJJ, §60.4241(a), manufacturers of stationary SI internal combustion engines that burn natural gas and having a maximum engine power greater than 19 kW can choose to certify their engines to the emission standards in §60.4231(d), under the voluntary certification program described in Subpart JJJJ. In that regard, and in accordance with 40 CFR 60.4241(d), manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) (i.e., to emission standards in Table 1 to Subpart JJJJ), must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards. Apparently, the manufacturer did not participate in this voluntary certification program.

A manufacturer who is unable to produce a certificate of conformity has not demonstrated that their stationary SI ICE will meet the requirements of §60.4231(d) or (e), as applicable, and consequently, such an engine will be deemed uncertified.

Beyond this, the DHS emergency engine meets all other requirements for a natural gas-fired emergency engine subject to NSPS Subpart JJJJ with respect to: (1) being subject to this subpart (§60.4230); (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) (§60.4233); (3) notification, reports, and record keeping (§60.4245) and etc. Relevant requirements and citations have been incorporated into the permit.

20 DCMR 200 – General Permit Requirements

20 DCMR 200 requires a permit for the construction or operation of a stationary source of air pollution in the District of Columbia. This is being addressed by this permitting action. However, it should be noted that the equipment was previously installed and has not, to date, complied with this requirement.

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20 DCMR 606 – Visible Emissions

Visible emissions from the emergency generator to the outdoor atmosphere are limited by the requirement of 20 DCMR 606.1 and this restriction is included in Condition II(b) of the permit. A note was added to the permit to indicate that, if 20 DCMR 606 is revised as a result of the pending “start-up, shutdown, and malfunction SIP Call”, the new regulatory requirements will supersede the requirements specified in the permit.

20 DCMR 903 – Odorous or Other Nuisance Air Pollutants

Odorous emission resulting from the activity of DHS in connection with the construction or operation of the emergency generator is limited by 20 DCRM 903.1. This limitation has been included in the draft permit.

20 DCMR 1406 – Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This regulation adopts, by reference, most aspects of 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The only relevant requirement in this regulation is a requirement to comply with 40 CFR 60, Subpart JJJJ, discussed above. As such, 20 DCMR 1406 is applicable, but is not cited in the permit.

DISCUSSION

Regulatory Basis for Asserting that the DHS Emergency Generator is not a Standard Certified Generator

As previously noted, the DHS emergency generator application did not meet the eligibility criteria for coverage under source category Permit No. 7043-SC (Permit to Construct and Operate Stationary Natural Gas-Fired Emergency Engines Subject to NSPS Subpart JJJJ) because the engine has no EPA certificate of conformity. Under the source category permit program, the application to operate this emergency generator may still be processed under other permitting program pursuant to 20 DCMR 200. In this case, the DHS permit application was considered a standalone application to construct and operate an internal combustion engine.

The engine is uncertified as noted earlier. Owners or operators of uncertified engines must demonstrate, through a performance test conducted in accordance with 40 CFR 60.4243 and 60.4244, that the emissions from the engine meet the requirements of Table 1, Subpart JJJJ of 40 CFR Part 60.

This requirement was included in Conditions IV(e) and (f) of Permit No. 7239.

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Publication of the permit action is scheduled for the April 12, 2019 edition of the D.C. Register. Public comment for the permit action will be solicited through May 13, 2019.

CONCLUSIONS

Consistent with the above discussion, AQD is publishing a draft permit in the D.C. Register and the Department's website on April 12, 2019. Public comment on the proposed permit action will be solicited through May 13, 2019. If there are no adverse public comments, I recommend issuance of the permit to DHS following completion of the public review period. If comments are received during the public review period, they will be addressed before any final action is taken on the permit application.

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