

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. Department of the Navy, Naval Research Laboratory
Permit No. 6106-R2 to Operate One GTA28 Natural Gas-Fired Emergency
Generator Set at Building 149**

DATE: September 15, 2022

BACKGROUND INFORMATION

On April 25, 2022, the U.S. Department of the Navy, Naval Research Laboratory (NRL) which operates under the NAICS code of 928110, submitted an air permit application to the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) to operate one GTA28 natural gas-fired emergency generator. The unit is located at NRL Building 149. NRL is located at 4555 Overlook Avenue SW, Washington DC.

The GTA28 natural gas-fired emergency generator was originally permitted to operate in 2008 under Permit No. 6106, and again in 2017 under Permit No. 6106-R1. A draft renewal Permit No. 6106-R2 has been prepared in response to the April 25, 2022 permit renewal application. The emergency generator set is powered by a 770 hp Cummins natural gas-fired engine manufactured in August 2007 and reportedly installed in 2008.

NRL has not requested that any portions of the application be held confidential.

REGULATORY REVIEW

The regulatory review covering this emergency generator was previously conducted and documented in a “Chapter 2 Technical Support Memorandum” dated April 25, 2017. This older memorandum has been attached to this current document as an appendix. Since the unit was neither modified nor its method of operation altered and no change in the applicable regulations occurred, a regulatory review is unnecessary and therefore will not be discussed.

This draft permit will be published in the D.C. Register on September 23, 2022. Public comment for the permit will be solicited through October 24, 2022.

CHAPTER 2 TECHNICAL MEMORANDUM

U.S. Department of the Navy, Naval Research Laboratory

**Permit No. 6106-R2 to Operate One GTA28 Natural Gas-Fired Emergency Generator Set
at Building 149**

September 15, 2022

Page 2

CONCLUSION

If there are no adverse public comments, I recommend prompt issuance of the permit to NRL 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.

JCN

Appendix A

Chapter 2 Technical Support Memorandum
for Permit 6106-R1
April 25, 2017

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM

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

FROM: John Nwoke *JN*
Environmental Engineer

SUBJECT: **Naval Research Laboratory
Permit No. 6106-R1 to Operate One GTA 28 Natural Gas-Fired Emergency
Generator Set at Building 149**

DATE: April 25, 2017

BACKGROUND

On April 4, 2016, the Air Quality Division (AQD) of the Department of Energy and Environment (the Department) received applications to operate several emergency generators from the Naval Research Laboratory (NRL), one of which includes the GTA 28 natural gas-fired emergency generator.

The GTA 28 natural gas-fired emergency generator was initially permitted to operate in 2008 under Permit No. 6106 in Building 149 at NRL, located at 4555 Overlook Avenue SW, Washington, DC. The emergency generator is powered by a 770 hp Cummins natural gas-fired. The engine was manufactured in August 2007 and reportedly installed in 2008.

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 JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines:

On April 5, 2017 Stephen Ours and John Nwoke held a telephone conversation with Lionel Vega to clarify the AQD's position on the regulatory requirements imposed by Subpart JJJJ of 40 CFR 63. Indications were that the subject emergency generator was subject to Subpart JJJJ pursuant to 40 CFR 60.4230(a)(4)(i), consequently NRL needed to take action, after its review of the regulation, to ensure that the generator was in compliance with that regulation.

However, following that discussion, Mr. Ours contacted EPA Region III staff who forwarded the query to Melanie King in the EAP Office of Air Quality Planning and Standards (OAQPS) to clarify the requirements of 40 CFR 60.4230. Ms. King indicated that 40 CFR 60.4230(a)(4)(iv) is intended to cover all emergency engines with a maximum power that is greater than 25 hp while

CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM

Naval Research Laboratory

Permit No. 6106-R1 to Operate One GTA 28 Natural Gas-Fired Emergency Generator Set
at Building 149

April 25, 2017

Page 2

emergency engines less than or equal to 25 hp are covered under 40 CFR 60.4230(a)(4)(iii). Under this interpretation, 40 CFR 60.4230(a)(4)(i) would not be applicable to this engine at NRL.

Based on Ms. King's interpretation that 40 CFR 60.4230(a)(4)(iv) is the relevant section for this 770 hp engine, 40 CFR 60, Subpart JJJJ is not applicable because the unit was manufactured before January 1, 2009.

40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

This emergency engine meets the applicability criteria for this regulation. Based on the description in 40 CFR 63.6590(a)(2)(iii), because the unit is at an area source of hazardous air pollutants (HAPs) and it commenced construction after June 12, 2006, the unit is classified as a "New Stationary RICE". Furthermore, pursuant to 40 CFR 63.6590(c), because the unit is a new stationary RICE located at an area source, no requirements other than those imposed by 40 CFR 60, Subpart JJJJ are applicable to the unit.

As discussed above, 40 CFR 60, Subpart JJJJ is not applicable to the unit, therefore no requirements are imposed on the unit, despite being subject to 40 CFR 63, Subpart ZZZZ.

DISCUSSION

AQD does not allow any engines classified as "emergency engines" to operate in non-emergency situations unless they are subject to the emission standards in either 40 CFR 60, Subpart IIII or JJJJ or the maintenance requirements in 40 CFR 63, Subpart ZZZZ. Following the partial RICE rule vacatur in *Delaware v. EPA* (see the April 15, 2016 EPA memo from Peter Tsirigotis to EPA Regional Air Enforcement Managers and EPA Regional Air Directors at <https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf>), any operation during low voltage or frequency events is considered non-emergency operation. Additionally, it can be advantageous for a permittee to be authorized to operate in other non-emergency situations on an occasional basis, as authorized in the aforementioned standards.

This matter was discussed with Lionel Vega of NRL on April 10, 2017 and two options were presented to NRL. The first option would be to have a permit that did not contain any of the requirements of 40 CFR 63, Subpart ZZZZ, but which would allow for no non-emergency operation except for limited maintenance operation. The second option was that AQD would permit non-emergency operation similar to that allowed for unit subject to Subpart ZZZZ, but that AQD would include requirements similar to those found in Subpart ZZZZ in the permit, using AQD's authority to include appropriate requirements in permits under 20 DCMR 201.

On April 11, 2017 and again on April 25, 2017, Mr. Vega confirmed by email that NRL was choosing the second option. As such, AQD is including requirements similar to those found in 40

CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM

Naval Research Laboratory

**Permit No. 6106-R1 to Operate One GTA 28 Natural Gas-Fired Emergency Generator Set
at Building 149**

April 25, 2017

Page 2

CFR 63, Subpart ZZZZ in the permit, but is citing 20 DCMR 201 as the authority to include those requirements in the permit.

Publication of the permit action was planned for March 24, 2017 in the D.C. Register. Public comment for the permit action will be solicited through April 24, 2017.

CONCLUSIONS

Consistent with the above discussion, AQD is publishing a draft permit in the D.C. Register and the Department's website on May 5, 2017. Public comment on the proposed permit action will be solicited through June 5, 2017. If there are no adverse public comments, I recommend issuance of the permit to NRL 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.

SSOJCN