

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 OPERATION PERMIT MEMORANDUM

TO: File

FROM: Stephen S. Ours, P.E.
Chief, Permitting Branch
For
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Environmental Engineer

SUBJECT: **United States Marine Corps, Marine Corps Barracks
Permit Numbers 6321-R3, 6322-R3 and 6323-R3
Permits to Operate Three (3) 8.37 MMBtu/hr boilers**

DATE: July 22, 2024

BACKGROUND INFORMATION

A permit renewal request for permit numbers 6321-R2, 6322-R2 and 6323-R2 to operate three (3) natural gas-fired 8.37 MMBtu/hr boilers at the United States Marine Corps Barracks, located at 8th and I Streets SE, was received by the Air Quality Division (AQD) on February 21, 2024. AQD indicated to the applicant to provide a proper reference for the emission factors and complete the emission calculations. The applicant submitted complete calculations on March 27, 2024. In response to these applications, AQD has prepared draft renewal permit Nos. 6321-R3, 6322-R3, and 6323-R3.

The permit action will be published in the DC Register and on DOEE’s website on August 2, 2024. Public comments for the permit action will be solicited through September 3, 2024.

The U.S. Marine Corps has not requested that any of the materials submitted with this application be held confidential.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements

Each boiler is an 8.37 MMBTU/hr rated heat input natural gas-fired boiler. Because the rated heat input is greater than 5 MMBTU/hr., a Chapter 2 permit is required before construction and operation pursuant to 20 DCMR 200.

20 DCMR 204 – Permit Requirements for Major Stationary Sources Located in Non-attainment Areas (Non-attainment New Source Review (NNSR))

This equipment is existing, so this permit action will not trigger NNSR. At the time of construction of the equipment, the project also did not trigger applicability of this regulation as the potential to emit of all regulated air pollutants are below the relevant NNSR (and PSD) thresholds.

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20 DCMR 205 – Permit Requirements for New Source Performance Standards (NSPS)

The requirements of this section adopt the federal NSPS codified in 40 CFR 60. Specifically, Subpart Dc of 40 CFR Part 60 sets forth the standards of performance for small industrialCommercial-Institutional steam generating units (ICI boilers) with maximum design heat input capacity less than 100 MMBTU/hr. and greater than or equal to 10 MMBTU/hr. This Subpart includes steam generating units for which construction, modification, or reconstruction commenced after June 9, 1989. The natural gas-fired boilers that are the subject of this permitting action each have a maximum heat input of 8.37 MMBTU/hr. and are therefore not subject to this subpart.

20 DCMR 209 – Permit Requirements for Non-Major Stationary Sources (Minor New Source Review)

Minor New Source Review became effective January 1, 2014 for construction of new sources. These boilers were installed before that date, therefore this regulation does not apply to them.

20 DCMR Chapter 3: Operating Permits and Acid Rain Programs

The Marine Corps Barracks is not a major source of any air pollutants, nor do any of the less common trigger thresholds for applicability of this regulation apply. Therefore, this facility is not subject to Title V permitting under this rule.

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

Appropriate monitoring and testing requirements have been included in Condition IV of the permits with associated record keeping and reporting requirements in Condition V of the permits to ensure that compliance with the conditions of the permits can be evaluated.

20 DCMR Chapter 6, Section 600: Fuel Burning Particulate Emission

Total suspended particulate emission from each of the boilers shall not exceed 0.11 pounds per million BTU. This requirement is contained in Condition II(d) of the permits.

20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606 are applicable to all units, except those specified 606.6, categories which the boilers do not fall into. Since the boilers do not have Continuous Opacity Monitoring Systems (COMS) installed, they is not permitted to emit any visible emissions into the outdoor atmosphere as stated in 20 DCMR 606.1(a)(2) except as authorized in 20 DCMR 606.2. Under 20 DCMR 606.2, fuel-burning equipment that burns exclusively natural gas is permitted to exhibit visible emissions for two (2) minutes during any startup, cleaning, adjustment of combustion or operational controls, or regeneration of emission control equipment; provided, that discharged emissions during this period do not exceed twenty percent (20%) opacity (unaveraged). This limitation is outlined in Condition II(b) of the permit.

Additionally, the maintenance requirements of 20 DCMR 606.4 are included in Condition III(d). Appropriate record keeping to ensure compliance is included in Condition V of the permit.

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

Because the facility is not, and has never been, a major source of NO_x, this regulation does not apply.

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(c) of the permit. Additionally, the affirmative defense provisions of 20 DCMR 903.13(b) have been included in that condition. The odor control plan (OCP) conditions of this regulation do not apply to this facility at this time, but should an odorous condition occur, DOEE may, under certain circumstances, order the facility to develop one.

40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This regulation is not applicable because the unit is below the size applicability threshold of 10 MMBTU/hr heat input as stated in 40 CFR 60.40c(a). The requirements of this regulation are not included in the permit as a result.

40 CFR 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This regulation does not apply to these boilers as they are exclusively natural gas fired.

RECOMMENDATIONS

The proposed project and attached permit comply with all applicable federal and District air pollution control laws and regulations.

The proposed permit renewal action will be published in the DC Register and on DOEE’s website on August 2, 2024. Public comments for the permit action will be solicited from August 2, 2024 through September 3, 2024. If no adverse public comments are received, we recommend that permit Nos. 6321-R3, 6322-R3, and 6323-R3 be issued in accordance with 20 DCMR 200.2 promptly upon the expiration of the public notice period. If comments are received, they will be addressed before final action on the applications are taken.