

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
Department of Energy and Environment

**CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM**

TO: File

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

FROM: Olivia Achuko *SSO For OA*  
Environmental Engineer

SUBJECT: **Permit Nos. 6527-R2 through 6529-R2 to Operate Three Dual Fuel Boilers at the United States Botanic Garden Production Facility**

DATE: April 21, 2021

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**BACKGROUND INFORMATION**

On October 7, 2020, the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) received operating permit renewal applications for three (3) identical existing dual fuel-fired (natural gas as primary and No. 2 fuel oil as back-up fuel) boilers from the Architect of the Capitol. The boilers are each rated at 9.375 MMBtu/hour of heat input and are located at the United States Botanic Garden Production facility at 4700 Shepherd Parkway SW, Washington, DC 20590

The boilers were previously permitted under Permit Nos. 6527-R1, 6528-R1, and 6529-R1, issued on January 19, 2016. These permits expired on January 18, 2021. The renewal of the permits is now being considered under Permit Nos. 6527-R2, 6528-R2 and 6529-R2.

The Architect of the Capitol 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

The three boilers are rated at 9.375 MMBtu/hr heat input (natural gas-fired/ No. fuel oil-fired). Because the rated heat input is greater than 5 MMBTU/hr, and the units are stationary sources of air pollutants, Chapter 2 permits are required before operation pursuant to 20 DCMR 200.

20 DCMR Chapter 3: Operating Permits and Acid Rain Programs

The facility has the potential to emit of 12.02 tons per year of oxides of nitrogen (NOx), which is less than the 25 ton per year major source threshold for NOx. As such, AQD determined that 20 DCMR Chapter 3 is not applicable to this facility at this time.

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#### **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 permit to ensure that compliance with the conditions of the permit 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 0.10 pounds per million Btu per 20 DCMR 600.1. This requirement is contained in Condition II(c) of the permit.

#### **20 DCMR Chapter 6, Section 606: Visible Emissions**

The visible emissions limitations of 20 DCMR 606.1 are applicable to these three units. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of 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(b) of the permits. Specific testing requirements related to this regulation are also included in the boiler permits in Conditions IV(d) and (e).

Note that language has been included in the permit 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 supersede 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 (NOx RACT)**

NOx RACT is not applicable to this facility pursuant to 20 DCMR 805.1(a) because it is not a major source of NOx. See the discussion above related to 20 DCMR Chapter 3 applicability. As such, no requirements from 20 DCMR 805 were placed in the set of permits.

#### **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.

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

This regulation is not applicable because the units are below the size applicability threshold of 10 MMBTU/hr heat input though they were installed after June 9, 1989. See 40 CFR 60.40c(a).

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

These boilers would have the potential to be covered by this subpart, but the applicant has asserted that they intend to operate the boilers on oil only in accordance with the allowances specified in the definition of a “gas-fired boiler” found in 40 CFR 63.11237. The requirement to do so has been placed in Condition III(c) of the permits. As such, the equipment is not subject to Subpart JJJJJ, pursuant to 40 CFR 63.11195(e).

### **RECOMMENDATIONS**

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

The permit action for the boilers will be published in the DC Register and on DOEE’s website on April 30, 2021. Public comments for the permit action will be solicited from April 30, 2021 through May 31, 2021. AQD will resolve any comments received before taking final action on the applications. If no comments are received, I recommend that permit Nos. 6527-R2, 6528-R2 and 6529-R2 be issued in accordance with 20 DCMR 200.2 promptly following the end of the public comment period.

OA