

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: **Howard University Law School
Permits Nos. 6492-R1 and 6493-R1 to Operate Two 10.206 MMBTU
per Hour Natural Gas-Fired Boilers**

DATE: November 2, 2018

BACKGROUND INFORMATION

A pair of permit applications to renew the operating permit for two identical 10.206 MMBtu per hour natural gas-fired boilers at the Howard University Law School, located at 2900 Van Ness Street NW, Washington DC, was received by the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) on August 17, 2018.

The two identical boilers were originally permitted as dual fuel boilers in 2011. They became natural gas only units when their capability to combust No. 2 fuel oil was permanently removed in 2016. The potential to emit for these units have been recalculated to reflect the change of fuel.

The 2011 permits expired on August 1, 2014, but were not previously renewed. Additionally, the 2011 permit required emission testing to be performed on the units, but no record of this testing has been located, either by Howard University or AQD. It appears that this required testing was not performed.

Howard University 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 two boilers are 10.206 MMBTU/hr rated heat input natural gas-fired boilers. Because the rated heat input is greater than 5 MMBTU/hr, Chapter 2 permits are required before construction and operation pursuant to 20 DCMR 200.

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20 DCMR Chapter 3: Operating Permits and Acid Rain Programs

A source that has the potential to emit more than 25 tons per year of oxides of nitrogen (NO_x) is considered a Major Source and is required to obtain a Title V permit. The main campus of Howard University is a major source, therefore is subject to Chapter 3 and must obtain an operating permit in accordance with 20 DCMR 300.1. However, the West Campus, at which the Law School and these boilers are located, is not a major source. An evaluation to this effect was received by AQD on October 16, 2018 and a response agreeing with the findings was issued on October 26, 2018. As such, Chapter 3 is not applicable to this facility. It should be noted that, previously, Howard University had identified the West Campus as being part of an overall Howard University facility and AQD had accepted this determination. As such, the Law School equipment had been previously considered to be covered by the Title V permit requirements of the Main Campus. This is no longer the interpretation, as discussed above, and references to the Law School and the West Campus in totality will be removed from the Title V permit when re-issued.

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

20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 are applicable to all units. 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(b) of the permits. Specific testing requirements related to this regulation are also included in the boiler permits.

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 superseded those expressed in the permit specifically.

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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 are found in 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(c) of the permit.

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

This regulation is applicable because the units are above the size applicability threshold of 10 MMBTU/hr heat input and were installed after June 9, 1989. The sulfur dioxide requirements of 40 CFR 60.42c(d) are not applicable since the units are natural gas only boilers. The particulate matter requirements of this regulation are not applicable since the boilers burn only natural gas. 40 CFR 60.48c(g)(2), which requires monthly records of fuel usage to be maintained, is the only requirement applicable to the equipment. This requirement is found in Condition V(d) of the permit.

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

NESHAP subpart JJJJJ for area source ICI Boilers is not applicable because the boiler is permitted to burn only natural gas.

RECOMMENDATIONS

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

The permit actions for the boiler will be published in the DC Register and on DOEE's website on November 9, 2018. Public comments for the permit action will be solicited from November 9, 2018 through December 10, 2018. AQD will resolve any comments received before taking final action on the applications. If no comments are received, I recommend that permit Nos. 6492-R1 and 6493-R1 be issued in accordance with 20 DCMR 200.2 promptly following the end of the public comment period.

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