

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment

Air Quality Division



TO: File

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FROM: Olivia Achuko *SSO For OA*  
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SUBJECT: **United States Department of State  
Permit Nos. 6892 to 6900 to Construct and Operate Nine (9) Natural Gas  
Fired Boilers**

DATE: May 30, 2014

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***BACKGROUND INFORMATION***

The United States Department of State submitted applications for construction and operation permits for nine (9) natural gas fired boilers to be installed at 2201 C Street NW, Washington DC 20520. The boilers are nine (9) identical 6.0 MMBtu/hr Fulton boilers that will supplement eight small boilers that were installed in phase one of the renovation of the Harry Truman Building that houses the headquarter of United States Department of State (DOS). These units will offset the need for the facility to purchase steam from the General Services Administration. The applications were received on May 7, 2014.

The Permittee has not requested that any of the materials submitted with this application be held confidential.

***TECHNICAL INFORMATION***

The nine boilers are not on site yet so no serial numbers are available but the units have been identified as B1 to B9. The boilers are each 6 MMBtu/hr and are required to obtain Chapter 2 permits before installation and operation pursuant to 20 DCMR 200.1 and 200.2. The size threshold of units requiring permits is 5 MMBtu/hr. More detailed technical information is attached to the application form.



## **CHAPTER 2 TECHNICAL MEMORANDUM**

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### ***REGULATORY REVIEW***

#### **20 DCMR Chapter 2, Section 200: General Permit Requirements**

The boilers are each 6.0 MMBtu/hr natural gas-fired Fulton boilers. Since each of the boilers has a heat input greater than 5 MMBtu/hr and the potential to emit air pollutants, a Chapter 2 permit is required before construction and operation can begin.

#### **20 DCMR Chapter 2, Section 209: Permit Requirements for Non-Major Stationary Sources (Minor New Source Review)**

The NO<sub>x</sub> potential to emit (PTE) from each unit is less than 5 tons/yr (as are the PTEs for other covered pollutants), therefore Minor New Source Review is not applicable.

#### **20 DCMR Chapter 3: Operating Permit Requirements**

Upon review of the submitted documentation, the combined potential emissions from the boilers and other small units at the facility do not exceed the 25 tons per year threshold for a major source of oxides of nitrogen (NO<sub>x</sub>) and therefore no title V permit is required.

#### **20 DCMR Chapter 5, Source Monitoring and Testing**

Permittee must maintain written records of the amount of emissions of the pollutants specified in Conditions II(a) and (b) from the boilers in accordance with 30 DCMR500.2. These requirements have been established in Conditions V of the permit.

#### **20 DCMR Chapter 6: Particulates**

20 DCMR 600.1 is applicable to this equipment, resulting in a total suspended particulate limit of 0.13 lb/MMBTU, found in Condition II(d) of the permit. Compliance with this condition will be determined by stack testing required by Condition IV(a).

Additionally, the visible emission limitations of 20 DCMR 606 are applicable to this facility. Visible emissions shall not be emitted into the outdoor atmosphere from the boiler, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) 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 the equipment. This requirement is contained in Condition II(b) of this permit.

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**20 DCMR 805 – Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen**

This regulation is not applicable because the source is not a major source of NOx.

**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**

The nine identical boilers have heat input ratings equal to 6.0 MMBTU/hr which is less than the 10 MMBTU/hr threshold for this regulation, therefore this regulation is **not** applicable.

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

The boilers at this facility are only permitted to burn natural gas, therefore this subpart is not applicable.

***RECOMMENDATIONS***

The public notice announcement was submitted to the D.C. Register for publication in the June 6, 2014 edition. The draft permits are available for public comment through July 7, 2014. If no comments are received, I recommend that these permits be issued shortly after the expiration of the comment period. If comments are received, they will be addressed before issuance of any permits for the units.

SSO:NOA

