

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

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

FROM: Olivia Achuko *SSO For OA*
Environmental Engineer

SUBJECT: **WGL Energy Systems**
Permit to Construct and Operate Three Identical 6.0 MMBTU per
Hour Natural Gas Fired Boilers

DATE: September 20, 2018

BACKGROUND INFORMATION

A set of permit applications to construct and operate three (3) identical 6.0 MMBTU per hour natural gas fired boilers at The Parks at Walter Reed property located at 6825 16th Street NW, was received from WGL Energy Systems (WGLE) by the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) on July 23, 2018. WGLE is planning to construct a central heating and cooling plant (Energy Center 1) at The Parks at Walter Reed (TPWR) in Washington, DC. Due to their size, the boilers will require Chapter 2 construction and operation permits, thus the applications were submitted.

The permit actions will be published in the DC Register and on DOEE's website on September 28, 2018. Public comments for the permit actions will be solicited through October 29, 2018.

The WGL Energy Systems 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 boilers are each 6.0 MMBTU/hr rated heat input natural gas fired boilers. Because their rated heat inputs are 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 204 – Permit Requirements for Major Stationary Sources Located in Non-attainment Areas (Non-attainment New Source Review (NNSR))

This project consists of the construction of three 6.0 MMBTU/hr natural gas fired boilers. The potential to emit of all regulated air pollutants are below the relevant NNSR (and PSD) thresholds. In particular, the potential to emit NO_x from the three units, combined, was estimated to be 0.60 tons per year which is less than 25 tons per year NNSR threshold. This regulation is not applicable.

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 industrial-Commercial-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.

Each of the proposed natural gas-fired boilers has a maximum heat input of 6 MMBTU/hr and is therefore not subject to this subpart.

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

Minor New Source Review, which became effective January 1, 2014, is applicable to any source subject to 20 DCMR 200, if such source uses a stationary unit or air pollution control device that, individually, would have the potential to emit equal to or greater than 5 tons per year (tpy) per unit of any criteria pollutant (excluding CO, ozone, and lead) or aggregate of hazardous air pollutants (HAPs). The boilers do not individually have a potential to emit 5 tons per year of NO_x or any other pollutant listed in Section 209.1(b). Therefore the boilers do not trigger a minor source review evaluation pursuant to this regulation.

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 Parks at Walter Reed is not a major source, therefore it is not subject to Chapter 3 and will not need an operating permit in accordance with 20 DCMR 300.1.

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.

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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 606.1 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.

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) since it not a major source of NOx. This section is not applicable.

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 not applicable because the units are below the size applicability threshold of 10 MMBTU/hr heat input. See the discussion of 20 DCMR 205, above for more details.

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 boilers are 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.

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Public comments for the permit action will be solicited from September 28, 2018 through October 29, 2018. AQD will resolve any comments received before taking final action on the applications. If no comments are received, I recommend that permit Nos. 7219 through 7221 be issued in accordance with 20 DCMR 200.1 and 200.2 promptly following the end of the public comment period.

OA

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