August 3, 2021

George Korvah, Manager, Environmental and Water Chemistry Branch

Heating Operation and Transmission District, WPMAE

Central Heating and Refrigeration Plant (CHRP)

U.S. General Services Administration

325 13th Street SW

Washington, DC 20407

**Re: Permit Nos. 6407-R2 through 6410-R2 to Construct and Operate Four (4) Natural Gas and No. 2 Fuel Oil Fired Rental Boilers at the United States General Services Administration (GSA) Central Heating and Refrigeration Plant (CHRP)**

Dear Mr. Korvah:

Pursuant to sections 200.1 and 200.2 of Title 20 of the District of Columbia Municipal Regulations (20 DCMR), a permit shall be obtained from the Department of Energy and Environment (“the Department”) before any person may cause or allow the construction or operation of a stationary source in the District of Columbia. The permit applications of the United States General Services Administration (“GSA” or “the Permittee”) to install and operate up to four (4) natural gas and No. 2 fuel oil fired rental boilers, located at the 13th Street SW sidewalk north of GSA Central Heating and Refrigeration Plant in Washington, DC has been reviewed.

Based on the submitted plans and specifications as detailed in your application dated September 10, 2020, your application is hereby approved subject to the following conditions:

1. General Requirements:
	1. The four (4) boilers shall be installed and operated in compliance with the applicable air pollution control requirements of 20 DCMR.

b. This set of permits expires on August 2, 2026 (20 DCMR 200.4). If continued operation after this date is desired, the owner or operator shall submit applications for renewal by May 2, 2026.

c. Construction or operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.

d. The Permittee shall allow authorized officials of the District, upon presentation of identification, to:

* + 1. Enter upon the Permittee’s premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.

e. This set of permits shall be kept on the premises and produced upon request.

f. Failure to comply with the provisions of these permits may be grounds for suspension or revocation. [20 DCMR 202.2]

g. The Permittee shall maintain their previously submitted request to include the requirements of these permits in the facility’s Chapter 3 (Title V) operating permit until such time as they has been incorporated or the Department has taken other final action on the request. [20 DCMR 301.1(a)(2)]

h. The Permittee shall obtain approval from the District Department of the Transportation to place the four (4) rental boilers at the north sidewalk of GSA.

1. Emissions Limitation:
	1. Emissions from each unit shall not exceed the following:

|  |  |  |
| --- | --- | --- |
| **Pollutant** | **Emissions While** **Burning Natural Gas****(lb/hr)** | **Emissions While** **Burning No. 2 Fuel Oil****(lb/hr)** |
| Oxides of Nitrogen (NOx) | 9.8 | 20 |
| Carbon Monoxides (CO) | 8.24 | 3.57 |
| Oxides of Sulfur (SOx) | 0.06 | 5.14 |
| Volatile Organic Compounds (VOC) | 0.85 | 0.14 |
| Total particulate Matter  Total Filterable Total Condensable | 0.750.190.56 | 2.361.430.93 |

* 1. Visible emissions shall not be emitted from these units except that discharges not exceeding 40% opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minutes period and for an aggregate of twelve (12) minutes in any twenty-four (24) hours period during start-up, cleaning, adjustment of combustion controls, or malfunction of the equipment. (20 DCMR 606.1)
	2. Total suspended particulate matter (TSP) emissions from each boiler shall not be greater than the rate determined by the following formula, rounded to the nearest hundredth of a pound per MMBTU *[Unless other credible evidence of a violation of this limit is identified, the Permittee is deemed to have complied with this requirement by complying with Conditions III(a) through (c) of this permit]* [20 DCMR 600.1]:

E = 0.17455 H-0.23522

Where:

E = Allowable emissions in pounds per MMBTU of heat input, and

H = Heat input to the fuel-burning equipment in MMBTUs per hour;

Provided, that:

1. The resulting standard shall not exceed of 0.13 lb per MMBTU of heat input; and

2. The resulting standard shall not be lower than 0.02 lb per MMBTU of heat input.

* 1. 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 likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life and property is prohibited. [20 DCMR 903.1]
	2. The total plant-wide annual emissions of criteria pollutants, including the four (4) rental boilers, shall not be greater than 27 tons/year of carbon monoxide (CO), 268 tons/year of nitrogen dioxide (NOx), 2 tons/year of volatile organic compounds (VOC), 53 tons/year of particulate matter (PM) and 17 tons/year of sulfur dioxide (SOx).

#### f. NOx and CO emissions shall not exceed those achieved with the performance of annual combustion adjustments on each boiler. To show compliance with this condition, the Permittee shall, each calendar year, perform adjustments of the combustion processes of the boilers with the following characteristics [20 DCMR 805.8(a) and (b)]:

##### 1. Inspection, adjustment, cleaning or replacement of fuel burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer;

##### 2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx and, to the extent practicable, minimize emissions of CO;

##### 3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer; and

##### 4. Adjustments shall be made such that the maximum emission rate for any contaminant does not exceed the maximum allowable emission rate as set forth in this permit.

III. Operational Limitations:

a. Any boiler installed or operated under the authority of this permit shall have a heat input rating less than 100 MMBTU/hr.

b. Natural gas shall be used as a primary fuel for the boilers.

1. The sole alternative fuel for the boilers shall be No. 2 fuel oil as follows:
	* 1. The No. 2 fuel oil shall have a with a maximum sulfur content by weight of 0.0015% (15 ppm);
		2. No. 2 fuel oil use for the entire CHRP facility shall not exceed 4,435,035 gallons per 12 month rolling period; and
		3. The boilers shall operate on No. 2 fuel oil only for the following reasons: [20 DCMR 201, 40 CFR 63.11195(e) and 40 CFR 63.11237]

i. During periods of gas curtailment;

ii. During periods of gas supply interruption; or

iii. For periodic testing, maintenance, or operator training on liquid fuel not to exceed a combined total of 48 hours (per boiler) during any calendar year.

d. This approval is valid for the specific activity cited in the application submitted to this office. Any deviation from the specific activity is a violation of the permit.

e. The boilers shall be operated at all times in a manner consistent with the applicable manufacturer’s specifications for the unit.

f. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the units in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

g. Emissions shall be vented from a stack that vents at least 130 feet above grade.

h. Any boiler permitted under the authority of this set of permits (this document) shall only be installed and operated under the following conditions:

1. At least one of Boilers 1, 2, 3, 4, or 6 shall be shut down simultaneously with the operation,

2. The boiler or boilers shut down under Condition III(h)(1) shall have a total rated capacity greater than or equal to the total rated capacity of the boiler or boilers operating under the authority of this set of permits; and

3. The boiler or boilers shall meet the definition of a “temporary boiler” [40 CFR 63.7575 and 40 CFR 63.11237] as follows:

*Temporary boiler* means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

i. The equipment is attached to a foundation.

ii. The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

iii. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

iv. The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

1. Monitoring and Testing Requirements

a. The Permittee shall monitor the operation of the boilers in a manner consistent with a good preventive maintenance program.

b. The Permittee shall monitor the type and amount of fuel burned in each of the boilers.

c. The Permittee shall monitor the stack outlets and identify any visible emissions to ensure that if they occur, the problem is identified and repaired.

d. The Permittee shall conduct and allow the Department access to conduct tests of air pollution emissions from any sources as requested. [20 DCMR 502.1]

* 1. Emissions from any boilers operated under the authority of these permits shall be monitored for emissions of NOx and CO with the use of continuous emission monitoring systems (CEMS) that comply with the applicable performance specifications and quality assurance procedures found in 40 CFR 60, Appendices B and F.
	2. At least once per week, during operation of the any of the boilers, the Permittee shall conduct visual observations of the emissions from the boiler. If no operations are occurring for a given boiler during a given week, this shall be so noted. If emissions are visible, the Permittee shall make arrangements for prompt visible emissions testing by a person certified in accordance with EPA Reference Method 9 (40 CFR 60, Appendix A). Such a test shall consist of a minimum of 30 minutes of opacity observations for the boiler in question and shall be performed while firing the same fuel as was in use when the visible emissions were observed.
	3. Regardless of whether or not emissions are observed pursuant to Condition IV(g) of this permit, the Permittee shall conduct a minimum of one visible emissions test of the boiler each year or each rental period, whichever is shorter, for each fuel burned that year or rental period, as applicable. Such a test program shall consist of a minimum of 30 minutes of opacity observations of each boiler firing each fuel and shall be performed by a person certified in accordance with EPA Reference Method 9 (40 CFR 60, Appendix A).
	4. The Permittee shall test fuel oil as necessary to show compliance with the sulfur content requirements of Condition III(c) and V(g) in accordance with appropriate ASTM methods. [20 DCMR 502.6]
	5. The Permittee shall monitor the reason for each firing of No. 2 fuel oil as well as the number of hours each boiler is operated while firing No. 2 fuel oil to ensure compliance with Condition III(c)(3).
	6. The Permittee shall monitor the duration that each boiler installed under this set of permits remains onsite as well as its use during that time to ensure that compliance with Condition III(h)(3) is maintained.
1. Recordkeeping

The following information shall be recorded and maintained in a log at the facility for a period not less than five (5) years. [20 DCMR 302.1(c)(2)(B) and 20 DCMR 500.2]

* 1. The Permittee shall keep records of each time one or more boilers are installed and operated under the authority of these permits. The information maintained shall include:

1. The date of installation;

2. The size, make, model number, and serial number of each boiler installed; and

3. The dates and duration of operation of each boiler each day.

b. The Permittee shall keep records of fuel use for each boiler as follows:

* + 1. Records of natural gas shall be maintained showing therms or standard cubic feet of natural gas combusted each month. These records shall be kept as a 12-month rolling sum; and
		2. Records of No. 2 fuel oil use shall be maintained as follows:

i. The date(s) and times of each firing of No. 2 fuel oil;

ii. The reason for each firing of No. 2 fuel oil;

iii. The amount of No. 2 fuel oil fired by each boiler each month; and

iv. The total amount of No. 2 fuel oil fired by the boilers authorized by this set of permits, kept on a 12-month rolling sum basis.

c. The Permittee shall keep records of all maintenance performed on the emission units so as to document compliance with Conditions III(e) and (f). These records shall be initialed to attest to their accuracy.

d. The Permittee shall keep records of the results of all visible emissions monitoring performed.

e. The Permittee shall keep records of the results of any testing the Permittee performed pursuant to Condition IV(d).

f. The Permittee shall keep records of the emissions of each pollutant from each unit, on a monthly total basis, based on the results of the CEMS monitoring required pursuant to Condition IV(a).

g. The Permittee shall keep records of any exceedance of any hourly emission limit specified in Condition II(a).

h. For each delivery of No. 2 fuel oil, the Permittee shall maintain one of the following:

1. A fuel delivery receipt containing the date, fuel type, and amount of the delivery and certification from the fuel supplier that the fuel delivery was tested in accordance with an appropriate ASTM method (specified in the certification) and met the requirements of Condition III(b); or

2. A fuel delivery receipt and documentation of sampling and analysis containing the following information:

i. The fuel oil type and the ASTM method used to determine the type (see the definition of distillate oil in 40 CFR 60.41c for appropriate ASTM methods);

ii. The weight percent sulfur of the fuel oil as determined using ASTM test method D-4294, D-5453, D7039, or other method approved in advance by the Department;

iii. The date and time the sample was taken;

iv. The name, address, and telephone number of the laboratory that analyzed the sample; and

v. The test method used to determine the sulfur content.

i. The Permittee shall maintain, in a permanently bound log book, or another format approved in writing by the Department, the following information regarding combustion process adjustments required under Condition II(f): [20 DCMR 805.8(c)]

* + 1. The date on which the combustion process was last adjusted;
		2. The name, title, and affiliation of the person who made the adjustments;
		3. The NOx emission rate, in ppmvd, after the adjustments were made;
		4. The CO emission rate, in ppmvd, after the adjustments were made;
		5. The CO2 concentration, in percent (%) by volume dry basis, after the adjustments were made;
		6. The O2 concentration, in percent (%) by volume dry basis, after the adjustments were made; and
		7. Any other information that the Department may require.

j. The Permittee shall maintain records of each boiler installed and operated at the site under the authority of this set of permits sufficient to document compliance with Condition III(h)(3). These records shall include:

1. The date each boiler is brought to the site;

2. The specifications of each boiler brought to the site;

3. The purpose for which each boiler was used while at the site;

4. The date each boiler was removed from the site; and

5. Any approvals for extension issued by the U.S. Environmental Protection Agency and the Department pursuant to Condition III(h)(3)(ii).

1. Reporting
	1. The Permittee shall immediately contact the Air Quality Division’s Compliance and Enforcement Branch upon becoming aware of a sudden equipment failure or emergency or emissions in excess of any emission limit. The Department may be contacted at (202) 535-2600.
	2. The Permittee shall report the fuel usage, the criteria pollutant emissions and compliance status with each condition of this set of permits with the Title V semi-annual and annual report and in the formats required for the Title V reports.
	3. In addition to complying with Condition VI(a) and any other reporting requirements mandated by the District of Columbia, the owner or operator shall, within thirty (30) calendar days of becoming aware of any occurrence of excess emissions, supply the Department in writing with the following information:
		1. The name and location of the facility;
		2. The subject source(s) that failed, experienced the emergency, or caused the excess emissions;
		3. The time and date of the first observation of the equipment failure, emergency, or excess emissions;
		4. The cause and estimate/expected duration of the excess emissions (if applicable); and
		5. The proposed corrective actions and schedule to correct the conditions causing the emergency or excess emissions.

If you have any questions, please call me at (202) 535-1747 or Abraham T. Hagos at (202) 535-1354.

Sincerely,

Stephen S. Ours, P.E.

Chief, Permitting Branch

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