April 6, 2021

Christopher Potter

Director, Utilities and Power Plant Operations

Architect of the Capitol, U.S. Capitol Power Plant

25 E Street SE

Washington DC 20003

**RE: Permit No. 7298 to Install and Operate One Temporary Boiler at the U.S. Capitol Power Plant (CPP) Facility**

Dear Mr. Potter:

Pursuant to sections 200.1 and 200.2 of Title 20 of the District of Columbia Municipal Regulations (20 DCMR), a permit from the Department of Energy and Environment (“the Department”) shall be obtained before any person can construct, modify, or operate a stationary source in the District of Columbia. The application of the Architect of the Capitol, U.S. Capitol Power Plant (“the Permittee”) to install operate one natural gas and No. 2 fuel oil-fired boiler with a maximum heat input less than or equal to 99 million British thermal units per hour (MMBTU/hr) has been reviewed. This permit will allow the Permittee to install and operate no more than one temporary boiler at the site at any given time over the life of this permit.

Based on the plans and specifications as detailed in the air permit applications dated December 23, 2020, the application is hereby approved, and the operation of the boiler is permitted, subject to the following conditions:

I. General Requirements:

* 1. This approval is issued pursuant to the air pollution control requirements of the applicable sections of 20 DCMR for the installation and operation of the boiler.

b. This permit will expire on April 5, 2026. If continued operation after this date is desired, the Permittee shall submit an application for renewal by December 5, 2025. [20 DCMR 200.4]

1. Construction, installation, modification, or operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.
2. 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.

1. This permit shall be kept on the premises and produced upon request.
2. Failure to comply with the provisions of this permit may be grounds for suspension or revocation. [20 DCMR 202.2]
3. If not already completed by the date of issuance of this permit, within twelve (12) months of issuance of this permit, the Permittee shall submit a complete application (or an update to an already pending application) to modify the facility’s Title V operating permit to include the requirements of this permit [20 DCMR 301.1(a)(3)]. This application is due by April 5, 2022.

II. Emission Limitations:

* 1. The boiler shall not emit pollutants in excess of the following [20 DCMR 201 and 40 CFR 60.41c]:

| **Pollutant** | **Emissions Burning Natural Gas (lb/MMBTU)** | **Emissions Burning No. 2 Fuel Oil(lb/MMBTU)** |
| --- | --- | --- |
| Oxides of Nitrogen (NOx) | 0.1 | 0.14 |
| Carbon Monoxide (CO) | 0.037 | 0.039 |
| Sulfur Dioxide (SO2) | 0.06 | 0.06 |
| Total Particulate Matter [PM(total)]† | 0.005 | 0.01 |

† PM Total includes both filterable and condensable fractions.

* 1. b. 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, cleaning, adjustment of combustion controls, or malfunction of the equipment [20 DCMR 606.1]

*Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a “SIP call”) requiring the District to revise 20 DCMR 606. See “State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA’s SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction”, 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition II(b) as stated above.*

1. Total suspended particulate matter (TSP) emissions from the boiler shall not be greater than the rate determined by the following formula, rounded to the nearest hundredth of a pound per MMBTU [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.

d. NOx and CO emissions shall not exceed those achieved with the performance of combustion adjustments on the boiler. To show compliance with this condition, the Permittee shall, during each time the temporary boiler is brought onsite and installed for use, perform adjustments of the combustion processes of the boiler with the following characteristics [20 DCMR 805.8(a) and (b)]:

1. Inspection, adjustment, cleaning or replacement of fuel burning equipment, including the burner 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;

1. 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 Condition II(a) of this permit.

e. 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]

f. In addition to complying with the requirements of this permit document, the Permittee shall comply with all Plantwide Applicability Limits (PALs) established for the facility.

1. Operational Limitations:
	1. The Permittee shall only burn natural gas and No. 2 fuel oil in the boiler. [20 DCMR 201]

 b. The Permittee shall not purchase No. 2 fuel oil containing more than 0.0015 percent sulfur (15 ppm) by weight for use in the boiler. [20 DCMR 801.3]

c. The temporary boiler shall not remain at the facility for more than 180 consecutive days and be designed to, and be capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. The boiler shall not be attached to a foundation. The boiler shall not be moved from one location to another in an attempt to circumvent the residence time requirements of this requirement. [20 DCMR 201, 40 CFR 60.41c and 40 CFR 63.11237]

*Note that this is a streamlined permit condition. This limit is established to avoid applicability of 40 CFR 60 Subpart Dc and 40 CFR 63 Subpart JJJJJJ by ensuring that the unit meets the definition of a temporary boiler as defined in 40 CFR 60.41c and the less stringent 40 CFR 63.11237 which allows 12 consecutive months.*

d. The boiler shall be maintained and operated at all times in a manner consistent with the manufacturer’s specifications for the equipment. [20 DCMR 201]

e. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate each boiler in a manner consistent with good air pollution control practice for minimizing emissions and according to the manufacturer’s recommended procedures. 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. [20 DCMR 201]

IV. Monitoring and Testing Requirements:

a. At least once per month when operating on natural gas and once per week when operating on No. 2 fuel oil, during operation of the equipment, the Permittee shall observe each stack for a period of at least three minutes. Such visible emissions observations need not be performed in accordance with Reference Method 9, but may instead be only observations for the presence or absence of visible emissions (similar to the procedures set forth in EPA Reference Method 22). If the unit is on site and is not used during a given month, this shall be so noted and such records shall be maintained in accordance with Condition V(c).

If visible emissions are observed by this monitoring, or at any other time, the Permittee shall either shut the process down and make the necessary repairs/adjustments to correct the cause of the visible emissions or shall make arrangements for prompt observation by an individual certified in accordance with EPA Reference Method 9 to determine

b. Regardless of whether or not emissions are observed pursuant to Condition IV(a) of this permit, the Permittee shall conduct a minimum of one visible emissions test of the boiler each time a temporary boiler is brought onsite for each fuel burned during the duration of the boiler’s time at the facility. Such a test program shall consist of a minimum of 30 minutes of opacity observations of the boiler firing each fuel and shall be performed by a person certified in accordance with EPA Reference Method 9 (40 CFR 60, Appendix A).

c. In order to show compliance with Condition III(b) and the SO2 requirements of Condition II(a), the Permittee shall sample and test the fuel oil burned in the boiler at least once each calendar quarter or at the time of each fuel delivery, whichever is less frequent. For each sample, the Permittee must provide: [20 DCMR 502]

1. The fuel oil grade;

2. The weight percent sulfur of the fuel oil as determined using ASTM test method D-4294, D-5453, D-7039, or other method approved in advance by the Department;

3. The date and time the sample was taken;

4. The name, address, and telephone number of the laboratory that analyzed the

 sample; and

5. The type of test or test method performed.

In lieu of sampling and testing fuel oil each quarter for each of these data, the Permittee may obtain any or all of the data from the fuel oil supplier at the time of delivery and submit fuel receipts and fuel supplier certifications for all fuel deliveries that provide all of the above quality of fuel data (or those for which sampling and testing was not performed at the time of delivery) as well as the name of the fuel oil supplier, the date of delivery, statement from the oil supplier that the oil complies with the definition of “distillate oil” in 40 CFR 60.41c[[1]](#footnote-1), and the sulfur content of the oil.

Note that the sulfur content data obtained from the fuel supplier must be the results of specific tests of the fuel at hand or the most recent representative fuel analysis from the fuel terminal prior to the fuel supplier obtaining the fuel for delivery to the Permittee, if such terminal analyses are performed on at least a monthly basis. General fuel specifications are not acceptable for this datum.

Terminal specifications (with references to appropriate ASTM methods as defined above) may be used to document the fuel oil type if the fuel supplier provides written certification that this was the material purchased from the terminal and delivered to the facility. If this method of determining the fuel oil type is used, the Department may opt to require occasional supplemental sampling and testing of the fuel oil to confirm these certifications.

If any of the data cannot be obtained from the fuel supplier, it is the responsibility of the Permittee to sample the fuel and have it analyzed to obtain the required data.

d. The Permittee shall monitor the consumption of natural gas and No. 2 fuel oil in the boiler.

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

f. If the Department requires the Permittee to conduct testing pursuant to Condition IV(f), the Permittee shall follow the following procedures and furnish the Department with a written report of the results of such performance tests in accordance with the following requirements [20 DCMR 502]:

1. One (1) original test protocol shall be submitted to the following addresses a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.

Chief, Compliance and Enforcement Branch

Air Quality Division

Department of Energy and Environment

1200 First Street, NE, 5th Floor

Washington DC 20002

and

air.quality@dc.gov

2. The test protocol and test date(s) shall be approved by the Department prior to initiating any testing. The Department must have the opportunity to observe the test for the results to be considered for acceptance.

3. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the addresses in Condition IV(f)(1) above.

4. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

A. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

B. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

C. Summary of results with respect to each permit condition.

D. Statement of compliance or non-compliance with each permit condition.

5. The results must demonstrate to the Department’s satisfaction that the emission unit is operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the Permittee shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.

V. Record Keeping Requirements:

The Permittee shall maintain the following records for a period of not less than five (5) years from the date of each test, monitoring, sample measurement, report, application, or other activity. Such records must be kept in a form suitable and readily available for expeditious review and must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least two years after the date of each recorded action. Records may be kept offsite for the remaining three years, but must be made available to authorized officials of the District upon request, pursuant to Condition I(d): [20 DCMR 302.1(c)(2)(B), and 20 DCMR 500.8]

a. The Permittee shall keep records of each boiler deployed to the facility under the authority of this permit, to include:

1. Manufacturer;

2. Model;

3. Serial Number;

4. Heat input rating of the unit in lb/MMBTU;

5. The date the boiler was brought to the facility;

6. The date the boiler was removed from the facility;

7. The total duration in days that the boiler was deployed at the facility consecutively to document compliance with Condition III(c); and

8. Records of manufacturer emissions guarantees showing that the temporary boiler meets the emission limitations in Conditions II(a) and II(c) of this permit (except that emission calculations based on fuel sulfur content may be substituted for manufacturer emission guarantees for SO2);

b. The Permittee shall keep records of the results of all fuel sulfur testing and fuel supplier certifications obtained pursuant to Condition IV(c);

c. The Permittee shall maintain records of all visible emissions monitoring performed pursuant to Condition IV(a), including notes indicating when no observations were performed as a result of no operations of the boiler that month, when the boiler is onsite. These records shall be maintained in an organized fashion, shall include the identity of the person performing the monitoring, and shall be readily available for inspection by the District;

d. The Permittee shall maintain records of all Method 9 visible emissions testing performed pursuant to Conditions IV(a) and (b). These records shall also include the identity of the person performing the visible emissions testing and documentation of his/her Method 9 certification. These records shall include documentation indicating whether the results show compliance with Condition II(b);

1. The Permittee shall keep records of the type and amount of each fuel used in the boiler, showing the therms or standard cubic feet of natural gas combusted each month as well as gallons of #2 fuel oil combusted each month. These records shall be summed on a calendar year basis. These records shall be submitted to the Department semi-annually as part of the reporting required by Title V permit 033. [20 DCMR 500.2];
2. The Permittee shall keep records of the following information regarding the combustion adjustments required pursuant to Condition II(d) for the boiler: [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.

g. The Permittee shall keep records of all maintenance performed on each boiler while deployed to the facility so as to document compliance with Conditions III(d) and (e). These records shall be initialed to attest to their accuracy.

VI. Notification and Reporting Requirements

a. The Permittee shall include the equipment covered by this permit document in all reports required by the Title V permit for the facility, including, but not limited to, semi-annual and annual compliance certifications and reports, wherein the Permittee shall certify compliance or non-compliance with the conditions of this permit document for the covered equipment.

b. The Permittee shall notify the Department, in writing, within 10 days after bringing a temporary boiler onsite which includes the heat input rating of the boiler and manufacturer emissions guarantees showing compliance with Conditions II(a) and II(c).

c. The Permittee shall notify the Department, in writing, within 30 days of removing the temporary boiler from the facility.

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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1. Per 40 CFR 60.41c, “distillate oil” means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see 40 CFR 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see 40 CFR 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see 40 CFR 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see 40 CFR 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see 40 CFR 60.17). [↑](#footnote-ref-1)