June 1, 2021

Dr. Saharah Moon Chapotin

Executive Director

U.S. Botanic Garden

Architect of the Capitol

4700 Shepherd Parkway SW

Washington, DC 20032

**Re: Permit Nos. 6527-R2 through 6529-R2 to Operate Three Dual Fuel Boilers at the United States Botanic Garden Production Facility**

Dear Dr. Chapotin:

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 and operate a stationary source in the District of Columbia. The renewal applications of the Architect of the Capitol (“The Permittee”) to continue to operate the three (3) dual fuel fired boilers in the table below, at the United States Botanic Garden Production facility at 4700 Shepherd Parkway SW, Washington, DC 20590 have been reviewed:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Permit #** | **Equipment Type/Model** | **Equipment Size** | **Fuel Type** | **Equip ID**  |
| **6527-R2** | Bryan Water Tube: LMB750-W-FDGO | 9.375 MMBTU/hr | Natural gas & No. 2 fuel oil | Boiler 1Serial #69138 |
| **6528-R2** | Bryan Water Tube: LMB750-W-FDGO | 9.375 MMBTU/hr | Natural gas & No. 2 fuel oil | Boiler 2Serial #69141 |
| **6529-R2** | Bryan Water Tube: LMB750-W-FDGO | 9.375 MMBTU/hr | Natural gas & No. 2 fuel oil | Boiler 3Serial #69095 |

Based on the submitted plans and specifications on the permit applications, received on October 7, 2020 with cover letter, the applications are hereby approved, and the operation of the boilers is permitted subject to the following conditions:

I. General Requirements:

* 1. This approval is issued pursuant to the applicable air pollution control requirements of 20 DCMR for the construction and operation of the boilers.
	2. These permits expire on May 31, 2026. If continued operation after this date is desired, the owner or operator shall submit applications for renewal by February 28, 2026. [20 DCMR 200.4]

c. Operation of equipment under the authority of these permits shall be considered acceptance of their terms and conditions.

1. 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 units are located, an emissions related activity is conducted, or where records required by these permits are kept;

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

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

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

1. These permits shall be kept on the premises and produced upon request.
2. Failure to comply with the provisions of these permits may be grounds for suspension or revocation. [20 DCMR 202.2]

II. Emission Limitations:

* 1. Each of the three (3) identical 9.375 million BTU per hour dual fuel fired boilers shall not emit pollutants in excess of those rates specified in the following table [20 DCMR 201]:

|  |  |  |
| --- | --- | --- |
| **Pollutant** | **Short-Term Limit** **(Natural Gas) (lb/hr)** | **Short-Term Limit** **(No. 2 Fuel Oil) (lb/hr)** |
| Carbon Monoxide (CO) | 0.77 | 0.33 |
| Oxides of Nitrogen (NOx) | 0.92 | 1.34 |
| Total Particulate Matter (PM Total)\* | 0.07 | 0.22 |
| Sulfur Dioxide (SO2) | 0.01 | 0.01 |

\*PM Total includes both filterable and condensable fractions.

* 1. b. Visible emissions shall not be emitted into the outdoor atmosphere from the boilers, 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 each of the boilers shall not be greater than 0.10 pounds per million BTU. [20 DCMR 600.1]. *Note that, unless other credible evidence of a violation, such as test results required under Condition IV(b), are identified, compliance with Condition III(a) of this permit will be considered compliance with this condition.*

d. 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]

III. Operational Limitations:

* 1. a. The primary fuel for use in the boilers shall be natural gas. [20 DCMR 201]

 b. The alternative fuel for the boilers, used only in accordance with Condition III(c), shall be No. 2 fuel oil. The Permittee shall purchase only No. 2 fuel oil containing no greater than 15 ppm (0.0015%) sulfur by weight for use in the units. [20 DCMR 201 and 20 DCMR 801.3]

c. 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]

1. During periods of gas curtailment;

2. During periods of gas supply interruption; or

3. 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.

1. The boilers shall be operated at all times in a manner consistent with the applicable manufacturer’s specifications for the equipment. [20 DCMR 201]

e. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate each boiler 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. [20 DCMR 201]

IV. Monitoring and Testing Requirements:

a. In addition to any specific testing requirements specified in this permit, the Department reserves the right to require that the Permittee perform additional emission tests using methods approved in advance by the Department. [20 DCMR 502.1]

b. If the Department requests testing of this equipment in accordance with Condition IV(a), the Permittee shall conduct performance testing on the boilers using each of the fuels (natural gas and No. 2 fuel oil) (unless otherwise specified in the request), to determine compliance with Conditions II(a) (except SO2), (b), and (c), or a subset of these requirements as requested, and shall furnish the Department with a written report of the results of such performance test in accordance with the following requirements [20 DCMR 502]:

1. One (1) original test protocol shall be submitted to the following address 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

1200 First Street NE, 5th Floor

Washington, DC 20002

In addition, an electronic copy of the test protocol shall be submitted to the following address:

air.quality@dc.gov

2. The test protocol and date 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 mailing address in Condition IV(b)(1) above and an electronic copy shall be submitted to the email address in the same condition.

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 the 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.

c. The Permittee shall monitor the circumstances and the number of hours each boiler operates using No. 2 fuel oil each time it is burned to ensure compliance with the requirements of Condition III(c).

d. At least once per quarter when operating on natural gas and once per week when operating on No. 2 fuel oil, during operation of each boiler, the Permittee shall conduct visual observations of the emissions from each boiler. If no operations are occurring for a given boiler during a given quarter, 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.

1. Regardless of whether or not emissions are observed pursuant to Condition IV(d) of this permit, the Permittee shall conduct a minimum of one visible emissions test of each boiler each year for each fuel burned since the last visible emissions test required under this permit condition. If the only combustion of a given fuel since the last test was burned during periodic testing required by this permit, no visible emissions test for that fuel will be required under this condition. 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).

V. Record Keeping and Reporting Requirements:

The Permittee shall maintain the following records for a period of not less than three (3) years from the date of each test, monitoring, sample measurement, report, application, or other activity: [20 DCMR 500.2 and 500.8]

a. The Permittee shall keep records of the results of all emissions testing required for each boiler pursuant to Conditions IV(a) and (b) of this permit.

b. For each delivery of No. 2 fuel oil or diesel fuel, 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 delivered was tested in accordance with an appropriate ASTM method (specified in the certification) and met the requirements of Condition III (a); or

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

 A. The fuel oil type;

 B. The concentration or weight percent of sulfur in the fuel;

 C. The date and time the sample was taken;

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

 Sample; and

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

c. The Permittee shall maintain records of the dates and durations of each use of No. 2 fuel oil in each boiler each month. For each instance of No. 2 fuel oil use, a reason for such operation shall be listed in the records to document compliance with Condition III(c). [20 DCMR 500.2]

 d. The Permittee shall maintain records of the amount of each fuel type used each month in the boilers. These data shall be maintained in a rolling 12-month sum format. These data need not be maintained separately for each boiler. [20 DCMR 500.2]

e. The Permittee shall maintain records of all visible emissions monitoring performed pursuant to Condition IV(d), including notes indicating when no observations were performed as a result of no operations of a given boiler on a given fuel that quarter or week, as applicable. 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 Department.

1. The Permittee shall maintain records of all Method 9 visible emissions testing performed pursuant to Conditions IV(d) and (e). 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).

g. The Permittee shall immediately contact the Air Quality Division (AQD) of the Department upon becoming aware of a sudden equipment failure or emergency or emission in excess of any emission limit.

h. In addition to complying with V(a) and any other reporting requirements mandated by the District of Columbia, the Permittee shall, within 30 calendar days of becoming aware of any occurrence of excess emissions, supply AQD in writing with the following information:

1. The name and location of the facility;

2. The unit(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 emission;

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.

i. The Permittee shall submit the result of all testing required by Conditions IV(a) and (b) as specified, except that the Department may require different submittal protocols to be followed in cases of testing required pursuant to Condition IV(a) not envisioned by Condition IV(b).

If you have any questions, please call me at (202) 535-1747 or Olivia Achuko at (202) 535-2997.

Sincerely,

Stephen S. Ours, P.E.

Chief, Permitting Branch

SSO:OA