January 19, 2016

Ari Novy

Executive Director

U.S. Botanic Garden

Architect of the Capitol

4700 Shepherd Parkway SW

Washington, DC 20032

**Re: Permit Nos. 6527-R1 through 6529-R1 to Operate Three Dual Fuel Boilers at the United States Botanic Garden Production Facility**

Dear Ari Novy:

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 applications of the Architect of the Capitol (“The Permittee”) to operate three (3) dual fuel fired boilers at the United States Botanic Garden Production facility at 4700 Shepherd Parkway SW, Washington, DC 20590 has been reviewed:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Permit #** | **Equipment Type/Model** | **Equipment size** | **Fuel Type** | **Equip ID**  |
| **6527-R1** | Bryan Water Tube : LMB750-W-FDGO | 9.375 MMBTU/hr | Gas & #2 fuel | Boiler 1Serial #69138 |
| **6528-R1** | Bryan Water Tube : LMB750-W-FDGO | 9.375 MMBTU/hr | Gas & #2 fuel | Boiler 2Serial #69141 |
| **6529-R1** | Bryan Water Tube : LMB750-W-FDGO | 9.375 MMBTU/hr | Gas & #2 fuel | Boiler 3Serial #69095 |

Based on the submitted plans and specifications as detailed in the air permit applications, received on June 10, 2015 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.

b. These permits expire on January 18, 2021. If continued operation after this date is desired, the owner or operator shall submit applications for renewal by October 18, 2020. [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 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]

c. Total suspended particulate matter (TSP) emissions from each unit shall not exceed 0.10 pounds per million BTU. [20 DCMR 600.1]

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 the boilers shall be natural gas and the secondary fuel shall be No. 2 fuel oil. [20 DCMR 201]

b. 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 supply emergencies;

 2. During periods of gas curtailment; or

 3. For periodic testing on liquid fuel not to exceed a combined total of 48 hours

 during any calendar year.

 c. The No. 2 fuel oil shall be one containing no greater than 0.0015% sulfur by weight. [20 DCMR 201, and 20 DCMR 801]

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

b. The Permittee shall monitor the type of fuel burned in the boilers to ensure compliance with Conditions III(b) and (c).

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

d. At least once per week, during operation of the boiler, the Permittee shall conduct visual observations of the emissions from the boilers. 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.

 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 incidents or shall make arrangements for prompt observation by an individual certified in accordance with EPA Reference Method 9 to determine compliance with condition II(b).

e. To show compliance with Condition III(c), the Permittee shall sample and test the fuel oil burned in the boilers 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 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);

2. The weight percent sulfur of the fuel oil as determined using ASTM test method D-4294 or D-5453 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 these 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, 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 these 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.

f. 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]

g. If performance testing of one or more of these boilers is required in accordance with Condition IV(f), the Permittee shall conduct performance testing on the boilers using any of the fuels (natural gas and No. 2 fuel oil) designated by the Department, to determine compliance with Conditions II(a) (except SO2), (b), and (c) (or as otherwise directed by the Department) 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 and one (1) copy of the 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

2. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. 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 and one (1) copy of the test report shall be submitted to the address in Condition IV(g)(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 owner or operator 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 owner or operator shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.

V. Record Keeping Requirements:

1. The following information shall be recorded and maintained in a log at the facility for a period not less than three (3) years [20 DCMR 500.8]:
2. Records of all instances of boiler operation of each boiler using No. 2 fuel oil, including the reason for operation using that fuel and the number of hours the boiler is operated using that fuel. These data shall be maintained in a rolling twelve month sum format [20 DCMR 500.2 and 20 DCMR 500.8];
3. 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 the boiler that week. 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 [20 DCMR 500.8];
4. Records of all Method 9 visible emissions testing performed pursuant to Condition IV(d). 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) [20 DCMR 500.8];
5. Records of the results of all fuel sulfur testing and fuel supplier certifications obtained pursuant to Condition IV(e) [20 DCMR 500.8];
6. Records of the results of all emissions testing required for each boiler pursuant to Conditions IV(f) and (g) of this permit [20 DCMR 500.8];
7. The total quantity of each fuel used each month in the boilers and the cumulative 12-month rolling total of each shall be calculated and recorded with 15 days of the end of each month *(Note that these data may be kept on a boiler-specific basis or as totals for all boilers.)*; and

7. Record of all maintenance performed on the emission units listed in this permit so as to demonstrate compliance with Conditions III(d) and (e);

VI. Reporting Requirements:

a. 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.

b. In addition to complying with VI(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.

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

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