

**GOVERNMENT OF THE DISTRICT OF COLUMBIA**  
Department of Energy and Environment

**FACT SHEET AND STATEMENT OF BASIS  
FOR PROPOSED PERMITTING ACTION  
UNDER 20 DCMR 300 (TITLE V-OPERATING PERMIT PROGRAM)**

This "Fact Sheet and Statement of Basis" has been prepared pursuant to 20 DCMR 303.1(c) and 40 CFR 70.7(a)(5).

**PERMIT NO: 046**

**APPLICANT AND PERMITTEE:**

JBG/Federal Center, L.L.C.  
1200 New Jersey Avenue SE  
Washington DC 20590

**FACILITY LOCATION:**

U.S. Department of Transportation Headquarters  
1200 New Jersey Avenue SE  
Washington DC 20590

**RESPONSIBLE OFFICIAL**

Mr. Aaron Herman, Managing Member

**FACILITY DESCRIPTION:**

The United States Department of Transportation (USDOT) Headquarters is located at 1200 New Jersey Avenue SE Washington, DC 20590. JBG/Federal Center, L.L.C (JBG) owns and manages the headquarters building for DOT. The four natural gas-fired boilers at the site are used for building heating purpose and the four emergency generators are used for local power back-up. None of the units are used for demand response or peak shaving activities. JBG is responsible for operating and maintaining regulated air emissions sources at the DOT Building. These sources include the following:

- One (1) Caterpillar diesel-fired emergency generator set, rated at 1,500 kW (owned by JBG);
- One (1) Caterpillar diesel-fired emergency generator set, rated at 1,250 kW (owned by JBG);
- Two (2) Caterpillar diesel-fired emergency generator sets, rated at 1,250 kW (owned by USDOT, operated by JBG);
- Four (4) 10.5 MMBTU/hr dual fuel natural gas and No. 2 fuel oil-fired boilers (owned by JBG);
- One 10,000 gallon above ground storage tank for diesel fuel; and
- Four small water heaters, two make up air units, and various kitchen burners, all fired by natural gas and with heat input ratings less than 5 MMBTU/hr and considered insignificant activities for purposes of this permitting action.

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The units (except those considered insignificant) are permitted under Chapter 2 permits which are being incorporated into a Title V permit via this permitting action. The following table lists the equipment and associated permits.

<b>Emission Units</b>				
<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Equipment ID<sup>1</sup></b>	<b>Ch. 2 Permit No.</b>	<b>Description</b>
CU-1	S-1	BLR-1-East	7022	10.5 million BTU per hour (MMBTU/hr) dual fuel fired (natural gas and diesel) Ajax Boiler (installed 2007)
CU-2	S-2	BLR-2-East	7023	10.5 million BTU per hour (MMBTU/hr) dual fuel fired (natural gas and diesel) Ajax Boiler (installed 2007)
CU-3	S-3	BLR-1-West	7024	10.5 million BTU per hour (MMBTU/hr) dual fuel fired (natural gas and diesel) Ajax Boiler (installed 2007)
CU-4	S-4	BLR-2-West	7025	10.5 million BTU per hour (MMBTU/hr) dual fuel fired (natural gas and diesel) Ajax Boiler (installed 2007)
EG-4 <sup>2</sup>	S-8	JBG 1374	7018	1,500 kWe generator set powered by a 2,155 hp diesel engine (installed 2005)
EG-3 <sup>2</sup>	S-7	JBG 1800	7019	1,250 kWe generator set powered by a 1,807 hp diesel engine (installed 2005)
EG-2 <sup>2</sup>	S-6	DOT 1801	7020	1,250 kWe generator set powered by a 1,807 hp diesel engine (installed 2005)
EG-1 <sup>2</sup>	S-5	DOT 1802	7021	1,250 kWe generator set powered by a 1,807 hp diesel engine (installed 2005)

<sup>1</sup> "JBG" denotes ownership by JBG/Federal Center L.L.C., "DOT" denotes ownership by U.S. Department of Transportation. All four boilers are owned by JBG/Federal Center L.L.C.

<sup>2</sup> These emission unit IDs were incorrectly assigned when the Chapter 2 permits were issued, but have been corrected here, and so will not match the assigned values listed in the Chapter 2 permits.

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**EMISSIONS SUMMARY:**

The following is an estimate of overall potential emissions from the facility:

<b>FACILITY-WIDE EMISSIONS SUMMARY [TONS PER YEAR]</b>	
<b>Pollutants</b>	<b>Potential Emissions</b>
Sulfur Dioxide (SO <sub>2</sub> )	0.71
Oxides of Nitrogen (NO <sub>x</sub> )	22.53
Total Particulate Matter (PM Total)	0.90
Volatile Organic Compounds (VOCs)	1.14
Carbon Monoxide (CO)	9.25
Total Hazardous Air Pollutants (HAPs)	0.19

Permit Nos 7018 through 7021, for the boilers, and 7022 through 7025, for the generator sets, were issued with restrictions that limit the potential to emit (PTE) of oxides of nitrogen (NO<sub>x</sub>) to below the major source threshold of 25 tons per year. The issued permits included limits on hours of operations of each unit to avoid non-attainment new source review ("NNSR") permitting. The four emergency generators are limited to a total of 800 hours per year (in aggregate). The four boilers are limited to total of 17,520 hours of operation per year (in aggregate). Additionally, in both their Chapter 2 applications and their Title V application, JBG limited the NO<sub>x</sub> PTE by assuming that the boilers would not operate on diesel/No. 2 fuel oil for more than 800 hours per year, in aggregate. This was not included as a limit in the Chapter 2 permits, but because the PTE was limited based on that assumption, should have been. As a result, pursuant to 20 DCMR Chapter 2 permitting authority, with this permitting action, this additional limit is being placed in the permit explicitly. With these limits on operations, the potential NO<sub>x</sub> emissions for this facility is 22.53 tons per year.

**BASIS OF 20 DCMR CHAPTER 3 (TITLE V) APPLICABILITY:**

JBG/Federal Center, L.L.C has the PTE 22.53 tons per year (TPY) of NO<sub>x</sub>. This value does not exceed the major source threshold in the District of Columbia of 25 TPY of NO<sub>x</sub>. However, the facility is required to obtain a Title V Operating permit as conditions of the Chapter 2 operating permits previously issued.

Under normal maximum operating condition assumptions for PTE determinations (i.e., 500 hours per year per emergency generator and 8,760 hours per year of operation on the highest emitting fuel for the boilers), the combined emissions of the generators and the boilers would have exceeded the major source thresholds, and thus trigger an NNSR procedure during the Chapter 2 permit review process. In order to avert this possibility, the facility opted for operating hour restrictions (maximum 800 hours per year of operations for all four generators in aggregate and a total of 17,520 hours per year for all four boilers in aggregate, only 800 of which may be

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on the higher-emitting No. 2 fuel oil/diesel fuel) to keep their potential to emit NO<sub>x</sub> under the NNSR trigger source threshold. Since the District has no synthetic minor permitting program at this time, the Air Quality Division (“AQD”) of the Department of Energy and Environment (“DOEE” or “the Department”), as a matter of policy, uses the Title V Operating Permit program as a vehicle for establishing federally enforceable limits limiting the facility’s operations so as to not trigger NNSR and avoid the need to acquire emission offset and installation of lowest achievable emission rate (“LAER”) equipment.

**LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS:**

The conditions contained in the draft Title V operating permit are based on underlying requirements of 20 DCMR as well as various federal regulations promulgated pursuant to the federal Clean Air Act. The regulations that are the basis of each condition are cited in the permit, except those conditions added to make another condition, with a direct underlying regulation, enforceable as a practical matter may, in some cases, not have a specific citation. These latter, un-cited conditions generally consist of monitoring, recordkeeping, and reporting requirements authorized under 20 DCMR 500.1.

The draft Title V operating permit has been developed to incorporate the requirements of all applicable requirements as defined in 20 DCMR 399.1 along with additional conditions necessary to make all such requirements enforceable as a practical matter.

Any condition of the draft Title V operating permit that is enforceable by the District but is not federally-enforceable is identified in the draft Title V operating permit as such with an asterisk.

It should also be noted that this permit is being issued pursuant to the District’s authority under 20 DCMR Chapter 2 as well as Chapter 3. When the permit is issued for public review, the public notice will reflect this fact.

**REGULATORY REVIEW:**

This facility has been found to be subject to the requirements of the following regulations (except as specified in the discussion below):

**Federal and District Enforceable:**

- 20 DCMR Chapter 1 - General Rules
- 20 DCMR Chapter 2 - General and Non-Attainment Area Permits
- 20 DCMR Chapter 3 - Operating Permits and Acid Rain Programs
- 20 DCMR 500 - Records and Reports
- 20 DCMR 502 - Sampling, Tests, and Measurements
- 20 DCMR 600 - Fuel-Burning Particulate Emission
- 20 DCMR 603 - Particulate Process Emissions
- 20 DCMR 604 - Open Burning

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- 20 DCMR 605 - Control of Fugitive Dust
- 20 DCMR 606 - Visible Emissions
- 20 DCMR 700 - Miscellaneous Volatile Organic Compounds (VOCs)
- 20 DCMR 774 - Architectural and Industrial Maintenance Coatings
- 20 DCMR 800 - Control of Asbestos
- 20 DCMR 801 - Sulfur Contents of Fuel Oils
- 40 CFR 51.212, 52.12, 52.30, 60.11, and 61.12 - Credible Evidence
- 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI-ICE)
- 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE)
- 40 CFR 82, Subpart G - Protection of Stratospheric Ozone (Federally enforceable only except through Title V) (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 40 CFR 82, Subpart H - Halon Emissions Reduction (Federally enforceable only except through Title V) (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)

**District Enforceable Only:**

- 20 DCMR 402 - Chemical Accident Prevention (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 20 DCMR 900 - Engine idling
- 20 DCMR 901 - Vehicular exhaust emissions
- 20 DCMR 902 - Lead Content of Gasoline
- 20 DCMR 903 - Odorous or other nuisance air pollutants

**20 DCMR Chapter 2 – General and Non-Attainment Area Permits:**

The four boilers each have 10.5 MMBTU/hr heat input ratings. Because each of the boilers has a heat input rating greater than 5 MMBTU/hr, a Chapter 2 permit is required before construction and operation. Similarly, all stationary engines are subject to Chapter 2 permitting requirements, regardless of size. As such, all on the significant units at the facility are subject to Chapter 2 permitting requirements.

AQD is incorporating the previously issued Chapter 2 permits into the Title V permit with this action. Additionally, AQD is using Chapter 2 authority to update permit requirements where applicable. As such, the draft Title V permit will be issued for public notice pursuant to both Chapter 2 and Chapter 3 public notice requirements.

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Of particular note, AQD is adding a limit on hours of operation of the boilers on No. 2 fuel oil or diesel fuel of 800 hours in aggregate for all boilers. As discussed above, this should have been included in the previously issued Chapter 2 permits.

### **20 DCMR Chapter 3 – Operating Permits and Acid Rain Programs:**

Please see the discussion above in the section entitled “Basis of 20 DCMR Chapter 3 (Title V) Applicability” for a discussion of the applicability of Chapter 3 to the facility. The acid rain portions of this chapter are not applicable to the facility.

### **20 DCMR Chapter 5 – Source Monitoring and Testing:**

Throughout the permit, appropriate monitoring, testing, and record keeping requirements have been established to ensure that all emission and operational limits in the permit are enforceable as a practical matter. These requirements are established under the authority of Chapter 5.

### **20 DCMR 801: Sulfur Content of Fuel Oils:**

This regulation limits fuel oil sulfur content to 1% by weight in all circumstances. Additionally, the regulation regulates commercial fuel oil classified as No. 2 fuel oil. After July 1, 2016, for commercial fuel oil classified as No. 2 fuel oil, the limit is 0.05% by weight (500 ppm) and, after July 1, 2018, the limit is 0.0015% by weight (15 ppm). As a result, a limit on fuel oil sulfur content was placed in the permit for the boilers limiting purchases of fuel oil to the 15 ppm level (except when EPA temporarily suspends or increases the limit, as allowed in 20 DCMR 801). It should be noted also that there is an additional limit in the permit specifying a maximum sulfur in fuel limit of 0.081% by weight. This reflects the fact that, due to older fuel in the tank, existing tank sulfur content will exceed the levels allowed for purchasing.

The only portion of 20 DCMR 801 applicable to the emergency engines is the 1% sulfur content limit. This requirement is streamlined with the more stringent requirement found in 40 CFR 63.6604(b), discussed further below.

### **20 DCMR 805: Reasonably Available Control Technology for Major Stationary Sources of Oxides of Nitrogen:**

Because the limits on operations contained in the permit limit NO<sub>x</sub> emissions below the major source threshold for the facility, this regulation is not applicable.

### **40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:**

Pursuant to 40 CFR 60, NSPS Subpart IIII applies to stationary compression ignition internal combustion engines (CIICE): 1) with model years of 2007 or later, 2) that commenced construction after July 11, 2005 and were manufactured after April 1, 2006, or 3) that were modified or reconstructed after July 11, 2005. This subpart does not apply to any of the diesel emergency generators because the units are model year 2005 engines.

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### **40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units:**

Combustion units operating as dual fuel boilers are subject to NSPS Subpart Dc. Applicability for NSPS for boilers is based on unit size and age. The boilers must have heat input ratings greater than 10 MMBTU/hr and less than 100 MMBTU/hr, and must have been installed after June 9, 1989. Both criteria for age and size must be met for applicability of 40 CFR 60.40c – Subpart Dc to be triggered. The facility has four (4) dual fuel boilers in operation, each having a heat input capacity of 10.5 MMBTU/hr. These boilers were installed in 2007. The units meet both the size and age thresholds for applicability of this regulation, therefore Subpart Dc is applicable to these units. The requirements of Subpart Dc have been incorporated in the permit as applicable. Note that the “Standard for particulate matter (PM)” in 40 CFR 60.43c is not applicable to these units as they are below 30 MMBTU/hr in rated heat input.

The back-up fuel for the boilers is No. 2 fuel oil/diesel fuel containing no more than 0.081% sulfur by weight, according to the original Chapter 2 permit applications. According to 40 CFR 60.42c(d), the sulfur dioxide standard under this rule will be met if the fuel sulfur content does not exceed 0.5% by weight. This is less stringent than the 0.081% value established for existing fuel at the site pursuant to 20 DCMR Chapter 2 authority. As such, these requirements have been streamlined in the permit.

### **40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (NESHAP for RICE):**

Subpart ZZZZ of 40 CFR 63 regulates/monitors HAPs such as acetaldehyde, acrolein, benzene, toluene, xylene, cadmium, chromium, lead, etc., through surrogate compounds such as formaldehyde, CO and/or VOC.

A facility that emits or has the PTE 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs, is considered a major source of HAPs. Any source that is not a major source is an area source of HAPs. Because this facility does not have the PTE more than 10 tons/year of a single HAP or an aggregate of more than 25 tons of total HAPs, it is not a major source; it is an area source.

Subpart ZZZZ is applicable to new or reconstructed compression ignition (CI) engines at this facility, where “new” is defined as those engines that are manufactured or reconstructed after June 12, 2006. The four units were installed in 2005 and are therefore considered “existing” rather than “new” with respect to this regulation.

“Existing” CI engines are also covered by this regulation. In the early consideration of the Chapter 2 permits for the four emergency engines, AQD believed that these units would be exempt from this regulation as they were to be limited to not operating for purposes of commercial or emergency demand response and be kept to less than 15 hours per year of operation during low voltage or frequency situations. However, near the time of issuance of the Chapter 2 permits for the units, AQD became aware of the implications of the partial RICE

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vacatur (see <https://www.epa.gov/stationary-engines/technical-documents-neshap-reciprocating-internal-combustion-engines-0>). Any operation of the emergency generator sets to address low voltage or frequency situations would now be considered non-emergency operation, which the Department does not allow unless the unit is complying with either an NSPS (Subpart IIII or JJJJ) or NESHAP Subpart ZZZZ. As such, in order to be granted the non-emergency operation allowances in Subpart ZZZZ, this regulation was applied to the equipment. However, the sulfur content limit of the regulation was not applied at that time. This is being rectified in this Title V permit, where the 0.0015% by weight sulfur limit found in 40 CFR 63.6604(b) is being included in the permit. This requirement is the most stringent of several fuel sulfur requirements that are streamlined in the permit.

### **40 CFR 63, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources**

This regulation does not apply to the four 10.5 MMBTU/hr boilers as they are prohibited from operating using No. 2 fuel oil except during natural gas interruptions and for up to 48 hours per year for periodic testing. See Condition III(a)(2)(C) of the permit. The insignificant fuel burning equipment at the facility burns only natural gas, and is therefore also exempt from this regulation.

### **Compliance Assurance Monitoring (CAM) [40 CFR 64]:**

A CAM Plan does not apply to the emission units at the facility that are covered by the draft Title V permit. The emissions units covered in the permit include primarily boilers and emergency generators. These combustion units do not use control devices other than the inherent design of the units. Emissions from these units are products of the combustion of fuel burned and are controlled by proper operation, good combustion, and maintenance practices. Individually, emissions from each of these units will not exceed the major source threshold for air contaminant emissions identified within 40 CFR 64; therefore none of the units meet the criteria for CAM applicability.

### **Greenhouse Gas (GHG) Requirements:**

Because Chapter 3 (Title V) was triggered by other pollutants, no evaluation was made to determine if the facility would trigger Title V applicability under the GHG Tailoring Rule. No modifications have been made to the source that would trigger Prevention of Significant Deterioration (PSD) applicability. Other than this requirement, there are no other applicable requirements related to GHGs at this time, therefore none were included in the permit.

### **20 DCMR Chapter 2 Permits:**

The requirements of the following permits, issued under the authority of 20 DCMR Chapter 2 have been incorporated into the Title V permit. Note that, in some instances, requirements have been updated as they are transferred into the Title V permit. Such updates are being made pursuant to Chapter 2 permit authority.



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- Permit Nos. 7018 through 7021 – Permits to operate three 1,250 kWe emergency generator sets and one 1,500 kWe emergency generator set, all fired on diesel fuel, issued August 4, 2016; and
- Permit Nos. 7022 through 7025 - Permits to operate four identical 10.5 MMBTU/hr dual fuel-fired boilers, issued June 24, 2016.

**COMPLIANCE HISTORY:**

The applicant has been subject to no enforcement actions by AQD in the past three years. They were, however, listed in ICIS-AIR as a high priority violator for the first four calendar quarters of that three year period. This was a result of having been identified as a facility that had installed equipment with the potential to emit greater than 25 tons per year of NO<sub>x</sub> without obtaining a permit and without going through an NNSR procedure. AQD resolved this issue with the 2016 issuances of the Chapter 2 permits discussed above with limits to PTE to keep the facility emissions below NNSR and major source thresholds.

**COMMENT PERIOD:**

Beginning Date: December 14, 2018

Ending Date: January 14, 2018

All written comments should be addressed to the following individual and office:

Stephen S. Ours, P.E.  
Chief, Permitting Branch  
Department of Energy and Environment  
Air Quality Division  
1200 First Street, NE, 5<sup>th</sup> Floor  
Washington DC 20002

**PROCEDURE FOR REQUESTING PUBLIC HEARING:**

During the public comment period, any interested person may submit written comments on the draft Title V permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Department shall grant such a request if it is deemed appropriate. The venue, date, and time for any public hearing shall be announced in the D.C. Register and a daily newspaper.

**POINT OF CONTACT FOR INQUIRIES:**

N. Olivia Achuko  
Environmental Engineer  
Department of Energy and Environment  
Air Quality Division  
1200 First Street NE, 5<sup>th</sup> Floor  
Washington DC 20002

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(202) 535-2997

**REVIEWS:**

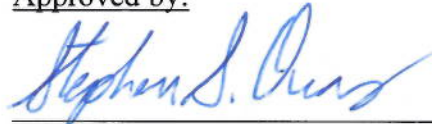
Prepared by:



N. Olivia Achuko  
Environmental Engineer

SSO:NOA

Approved by:



Stephen S. Ours, P.E.  
Chief, Permitting Branch