

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

THROUGH: Stephen S. Ours, P.E. *SSO*  
Chief, Permitting Branch

FROM: Abraham T. Hagos *SSO For ATH*  
Environmental Engineer

SUBJECT: **Permit No. 7258 to Construct and Operate a Non-Emergency Generator Set at 1 Washington Blvd. SE**

DATE: June 4, 2019

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**BACKGROUND INFORMATION**

A permit application from Kiewit Infrastructure Co. to construct and operate one non-emergency generator, at 1 Washington Blvd. SE, was received by the Air Quality Division (AQD) on April 9, 2019. Note that this address is in the District of Columbia, but located on the southwest side of the Potomac River, just south of Memorial Circle, near the base of the Arlington Memorial Bridge. This generator set is to be used to provide power to a construction trailer used in relation to bridge construction.

The permit action will be published in the DC Register and on DOEE's website on June 14, 2019. Public comments for the permit action will be solicited through July 15, 2019.

Kiewit Infrastructure Co. has not requested that any of the materials submitted with this application be held confidential.

**ESTIMATED EMISSIONS**

The following table shows estimated maximum potential emissions from the generator set. It should be noted that the unit is Tier IV certified, and therefore, despite emissions being estimated based on 8,760 hours per year of operation, emissions are lower than seen from most generators AQD permits.

Pollutant	Potential Emissions (tons per year)
Total Particulate Matter (PM Total)	0.04
Oxides of Sulfur (SO <sub>x</sub> )	0.02
Oxides of Nitrogen (NO <sub>x</sub> )	0.14
Volatile Organic Compounds (VOC)	0.04
Carbon Monoxide (CO)	0.02

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### **REGULATORY REVIEW**

#### 20 DCMR Chapter 2, Section 200: General Permit Requirements:

A non-emergency generator is a source of air pollutants that is not exempted in 20 DCMR 200. Thus a Chapter 2 permit is required.

#### 20 DCMR Chapter 2, Section 209: Permit Requirements For Minor New Source Review:

Effective January 1, 2014, the requirements of this section are applicable to any source required to obtain a chapter 2 permit to construct a new stationary source, modify an existing stationary source, or install or modify an air pollution control device on a stationary source that results in an increase of potential to emit (PTE) rate equal to or greater than five tons per year (5 TPY) from an individual unit of VOC, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, or an aggregate of all HAPs.

Potential emissions of all of these pollutant categories are below the 5 TPY limit from the unit. Therefore, 20 DCMR 209 is not applicable.

#### 20 DCMR Chapter 5: Source Monitoring and Testing Requirements:

Several monitoring and record keeping requirements have been added to the permit pursuant to this regulation. Monthly hours of operation must be maintained so that operations of the unit can be tracked and any related complaints can be traced to the unit. This requirement was added pursuant to 20 DCMR 500.1.

Additionally, emission testing and fuel oil testing requirements have been included in the permit pursuant to 20 DCMR 502 in Conditions IV(b) (c).

Kiewit Infrastructure Co. must sample and test the fuel oil at least once each calendar quarter or at the time of each fuel delivery (whichever is less frequent) or otherwise obtain necessary information from their fuel supplier. This requirement has been established in Condition V(c) of the permit.

#### 20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 are applicable to the generator. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of the generator; provided, that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two 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, or malfunction of equipment. This requirement is contained in Condition II(b). Monitoring for compliance is required pursuant to Condition IV(d).

It should be noted that 20 DCMR 606 is subject to a call for a State Implementation Plan (SIP) revision from EPA, commonly referred to as the "Startup, Shutdown, and Malfunction SIP call". The Department is evaluating potential revisions to the regulation that would potentially change

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and supersede the visible emissions requirements of this regulation. This is reflected in a note in Condition II(b).

#### 20 DCMR Chapter 9, Section 903: Odorous or Other Nuisance Air Pollutants

“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]” is applicable to this generator. This requirement is contained in Condition II(d) of the permit.

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

This federal regulation is applicable to this generator project. This unit is a generator set with a non-emergency engine. The emissions standards of this regulation are found in Conditions II(a), (c), and (d). The sulfur content of the diesel fuel requirement has been placed in Condition III(a). Maintenance and operation requirements are found in Condition III(c).

#### 40 CFR 63, Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Because this unit is a stationary reciprocating internal combustion engine (RICE) at an area source of hazardous air pollutants (HAPs), this regulation is applicable to the unit. However, pursuant to 40 CFR 63.6590(c)(1), the only requirement of this subpart is to comply with 40 CFR 60, Subpart III, discussed above. As such, Subpart ZZZZ is not referenced in the permit document.

## **RECOMMENDATIONS**

The application to construct and operate the diesel fired non-emergency generator equipment and the attached operating permit comply with all applicable federal and District air pollution control laws and regulations.

Public comments for the permit action will be solicited from June 14, 2019 through July 15, 2019. AQD will address any comments received before taking any final action on the permit application. If no adverse comments are received, I recommend that permit No. 7258 be issued in accordance with 20 DCMR 200.1 and 200.2 promptly upon the completion of the public review period.

SSO/ATH

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