

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

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

FROM: Wyatt Bohmann
Environmental Engineer

SUBJECT: Permit No. 7352 to Construct and Operate a Portable Crusher at the Robert F. Kennedy Memorial Stadium, Located at 2400 East Capitol St NE

DATE: May 13, 2024

BACKGROUND INFORMATION

A permit application package to construct and operate a Sandvik QJ341 jaw crusher powered by an onboard 2016 Caterpillar C9.3 diesel-fired engine to aid in the demolition of the Robert F. Kennedy Memorial Stadium, located at 2400 East Capitol St NE, was received by the Air Quality Division (AQD) on February 28, 2023 by District Logistics LLC. Upon review of the permit and discussions with the applicant, it became clear that the project would most likely extend beyond the 6-month operating period granted by the Source Category permit (6886-SC-R1) they originally requested to be covered under. As a result, District Logistics LLC was advised to resubmit the application as a Chapter 2 permit which was subsequently received on March 28, 2023 with further corrections to the application being received on August 28, 2023. The application was deemed complete when District Logistics sent an updated Certificate of Clean Hands on January 30, 2024.

District Logistics LLC has not requested that any of the materials submitted with this application be held confidential.

Estimated Emissions:

The equipment, per the request of the applicant, will be operated no more than ten hours per day, six days per week. This limitation will only allow the equipment to operate for a maximum of 3,120 hours within a 12-consecutive-month period.

The maximum emissions emitted from the operation of the unit covered by this permit have been estimated to be as follows:

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Pollutant	Potential Emissions Without Operational Limitations (tons per year)[†]	Potential Emissions With Operational Limitations (tons per year)
Coarse Particulate Matter (PM10)	6.74	2.40
Oxides of Sulfur (SO _x)	4.81	1.71
Oxides of Nitrogen (NO _x)	0.37	0.13
Volatile Organic Compounds (VOC)	0.06	0.02
Carbon Monoxide (CO)	0.29	0.10

[†] The applicant will not be permitted to operate at this level, but these data are used for evaluating whether 20 DCMR 204 would have been applicable without operational limits. See the regulatory review discussion below.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements

The crusher being proposed would be classified as a stationary source of air pollution, specifically for particulate matter. As a result, a Chapter 2 permit is required before construction and operation of the equipment can commence. Additionally, while engines of this type are normally considered non-road engines, because it will be active at the site for more than 12 consecutive months, it will also be considered a stationary engine and is subject to Chapter 2 permitting requirements.

Additionally, a limit on operating hours of the plant has been taken pursuant to 20 DCMR 200.7 in Condition III(a) of the permit. This limit has been taken to avoid applicability of 20 DCMR 209. This condition limits operations of the plant to 10 hours per day, 6 days per week, and 3,120 hours in any 12-consecutive-month period.

20 DCMR Chapter 2, Section 201: General Requirements for Permit Issuance

Pursuant to this section, several permit conditions have been included in the permits to ensure that operation of the equipment is protective of public health and welfare. These limits include the restriction on total operation time to no more than ten hours per day and no more than six days per week. The requirements to use only ultra-low sulfur diesel fuel for the crusher engine, and to maintain the equipment in accordance with manufacturers' recommendations are also required pursuant to this section.

20 DCMR Chapter 2, Section 204: Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review)

Non-Attainment New Source Review (NNSR) is not applicable to this unit. The operation of the equipment would not result in a "significant" (see the definition in 20 DCMR 299) increase in any air pollutant, even without the operational limitations placed in the permit. See the emission data in the table above. With the operational limits, the potential to emit (see the definition in 20 DCMR 199) is far below the applicability thresholds of this regulation.

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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_x, SO₂, PM₁₀, PM_{2.5}, or total hazardous air pollutants (HAPs).

With the operational limits established pursuant to 20 DCMR 200.7, emissions of each of these pollutants are well below the 5 TPY threshold from the crusher. Therefore, 20 DCMR 209 is not applicable.

Since the limitations taken are not avoiding applicability to 20 DCMR 300.1, the limit is not being taken pursuant to 20 DCMR 200.6, and therefore the permit also isn't considered a synthetic minor pursuant to 20 DCMR 300.3(c) and Title V fees do not apply.

20 DCMR Chapter 6, Section 605: Control of Fugitive Dust

The fugitive dust control requirements of 20 DCMR 605 are applicable to this portable crusher. The requirements of this regulation are found in Conditions II(b), (c), and III(c) of the permit. Additionally, it has been determined that use of wet suppression (water sprays) to minimize fugitive dust from the equipment is considered a "reasonable precaution" under this regulation, so this requirement has been included in Condition III(b) of the permit. The facility must monitor the site for compliance per Condition IV(c).

20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1(a)(2), 606.2(a)(3), and 606.2(f) are applicable to this portable crusher and the associated diesel-fired engine and are found in Condition II(e) of the permit. Visible emissions shall not be emitted into the outdoor atmosphere from operation of the portable crusher or the engine except for two (2) minutes during any startup, cleaning, adjustment of combustion or operational controls, or regeneration of emission control equipment; provided it doesn't exceed twenty-seven percent (27%) opacity (unaveraged). Testing to determine compliance with these requirements is included in Condition IV(d), the results of which must be reported pursuant to Condition VI(c).

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 equipment. This requirement is contained in Condition II(h) of the permit. Deviations must be reported pursuant to Condition VI(d) if identified.

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40 CFR 60, Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants

40 CFR 60, Subpart OOO is applicable to the equipment covered by this permit as the unit qualifies as a nonmetallic mineral processing plant under the applicable definitions. As a result of the applicability of this regulation, additional visible emissions requirements were placed in Condition II(f) with corresponding monitoring and testing requirements in Condition IV(c) and (d), and record keeping requirements in Condition V(h) and notification and reporting requirements in Conditions VI(a) through (c). Additionally, inspections of the water sprays have been required in Condition IV(e) with associated record keeping required in Condition V(i).

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

The engine powering the crusher is a non-emergency compression ignition engine. This federal regulation is applicable to the engine as it will be employed at the site for greater than 12 months in a non-emergency capacity, and the engine is thus categorized as a stationary engine. The emission standards of this regulation are found in Conditions II(a) and II(g) of the permit. The sulfur content requirement applicable to the diesel fuel for the unit is found in Condition III(f). Maintenance and operation requirements are found in Condition III(h). Record keeping for fuel sulfur is included in Condition V(g) while the requirement to maintain record of the EPA Certificate of Conformity for the engine is found in Condition V(j).

RECOMMENDATIONS

The application package to construct and operate a crusher and the draft 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 May 24, 2024 through June 24, 2024. If public comments are received, they will be reviewed and addressed before any final action is taken on the permit application package. If no adverse comments are received, I recommend that permit No. 7352 be issued in accordance with 20 DCMR 200.1 and 200.2 promptly upon the completion of the public review period.

SSO:WEB