

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 *ATH*
Environmental Engineer

SUBJECT: **Superior Concrete Materials, Inc.
Permit No. 7188 to Construct and Operate a Ready Mix Portable Concrete
Batch Plant at 1721 South Capitol Street SW**

DATE: November 8, 2017

BACKGROUND INFORMATION

A permit application to construct and operate a ready mix portable concrete batch plant at 1721 South Capitol Street SW was received by the Air Quality Division on September 21, 2017. Additional information was received on October 27, 2017 and November 2, 2017. The applicant is Superior Concrete Materials, Inc. They are intending to close an existing facility at 1601 South Capitol Street SW and this proposed facility is to take the place of the previously existing facility.

This permit will be published in the DC Register and on the Department of Energy and Environment ("DOEE" or "the Department") website on November 17, 2017. Public comments on the proposed permit action will be solicited through December 18, 2017. Additionally, a public hearing will be held on December 18, 2017.

The Company has not requested that any of the materials submitted with this application be held confidential.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements

The portable concrete ready mix equipment is a potential air pollution source, especially for particulate matter. Thus a Chapter 2 permit is required.

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

The potential to emit air pollutants from the proposed facility do not exceed any major source thresholds, even under unlimited operations (24 hours per day, 365 days per year, at maximum plant capacity). As such, this regulation is not applicable to this project.

20 DCMR Chapter 2, Section 209: Permit Requirements for Non-Major Stationary Sources (Minor New Source Review)

Under unlimited operations (24 hours per day, 365 days per year, at maximum plant capacity), the facility would have the potential to emit 9.8 tons per year of particulate matter less than 10 microns in aerodynamic diameter (PM10). This would trigger the applicability of 20 DCMR 209. However, the applicant has indicated that they have no intention to operate the plant in this manner. As a result, they have committed to operating the plant no more than 4,200 hours per year and to produce no more than 1,008,000 cubic yards of concrete per year. These limits have been placed in Condition III(a) of the permit. Operating at these levels, the facility has the potential to emit 4.7 tons per year of PM10. With these operational limitations in place, the project does not trigger applicability of Minor New Source Review whose applicability threshold for PM10 is 5 tons per year. It should be noted that 20 DCMR 209 is not in the District's State Implementation Plan (SIP); therefore the conditions to avoid applicability of this regulation have been made District-enforceable only conditions in the proposed permit.

20 DCMR Chapter 6, Section 603 and Appendix 6-1: Particulate Process Emissions

The discharge of particulate matter into the atmosphere from any process shall not exceed three hundredths (0.03) grains per dry standard cubic foot of the exhaust. Additionally, because the facility is rated to process more than 60,000 pounds (30 tons) per hour of materials, the facility must not emit more than 40.00 pounds per hour of particulate matter per this regulation. Actual emissions are expected to be well below this

To meet the particulate matter emissions standard from the main exhaust of the plant, the facility intends to use a C&W BP-790 pulse jet baghouse with 99.9% control efficiency for particulate matter. The manufacturer recommends that the differential pressure across the bags remain between 3 and 8 inches of water to ensure effectiveness of the unit.

Additionally, there are three silo vents, each proposed to be controlled with a cartridge-type dust collector. The manufacturer recommends that the differential pressure across the cartridges remain between 2 and 7 inches of water to ensure effectiveness of the silo dust collector units.

To monitor the efficiency of the dust collectors, magnehelic gauges must be installed across each unit. Monitoring is required in the proposed permit to ensure that the differential pressure remains within the manufacturers' recommended ranges. These requirements are found in Conditions III(d), IV(b), and V(a) of the proposed permit.

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Additionally, the proposed permit requires that the facility keep a set of replacement bags and cartridges at the facility to ensure that if one fails, it can be promptly replaced. This requirement and associated monitoring is contained in Conditions III(e) and IV(e) of the permit.

Additionally, to ensure the equipment is maintained, visible emissions monitoring and proper maintenance of the equipment are required in the permit.

20 DCMR Chapter 6, Section 605: Particulates

The visible emissions limitations of 20 DCMR 605 are applicable to this ready mix concrete equipment. The emission of fugitive dust from any material handling, screening, crushing, grinding, conveying, mixing, or other industrial-type operation or process is prohibited. This condition is found in Condition II(b) of the proposed permit. Additionally, reasonable precautions shall be taken to minimize the emissions of any fugitive dust into the outdoor atmosphere. These requirements are found in Condition III(f). The facility must monitor the site for compliance per Condition IV(e) and maintain records of deviations per Condition V(i).

20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 are applicable to this ready mix concrete plant. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of the ready mix concrete plant; 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(d). Monitoring for compliance is required pursuant to Condition IV(c). Records of any deviation must be kept pursuant to Condition V(g). A note is included in the permit following Condition II(d) advising that 20 DCMR 606 is subject to a call from EPA for the District to revise its regulation (a "SIP Call"). The note advises that any resulting revised regulation will supersede the language in the permit that reflects the District's current visible emissions regulation language.

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 all sources. This requirement is contained in Condition II(f) of the proposed permit. Monitoring for compliance is required pursuant to Condition IV(d). Records of deviations must be kept pursuant to Condition V(i).

RECOMMENDATIONS

The application to construct and operate a ready mix portable concrete batch plant and the attached operating permit comply with all applicable federal and District air pollution control laws and regulations.

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Public comments for the permit action will be solicited from November 17, 2017 through December 18, 2017. AQD will also hold a public hearing on December 18, 2017. AQD will resolve any comments received before taking any final action on the permit application. If no comments are received, I recommend that permit No. 7188 be issued in accordance with 20 DCMR 200.1 and 200.2.

SSO/ATH