

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

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

SUBJECT: Holcim-MAR, Inc., 5001 Fort Totten Drive NE, Permit No. 5585-R4 to Operate an Existing Ready Mix Concrete Batch Plant

DATE: July 5, 2024

BACKGROUND INFORMATION

Holcim-MAR, Inc. (a company formerly named Bardon, Inc.) operates a ready-mix concrete batch plant at 5001 Fort Totten Drive NE. This plant, formerly permitted to Super Concrete Corporation which did business as Aggregate Industries was most recently permitted under permit No. 5585-R3, dated May 13, 2016. On February 9, 2021, a permit renewal application was received by the Air Quality Division (AQD) of the Department of Energy and Environment (the Department) from Super Concrete Corporation c/o Bardon Inc. to renew approval to operate this concrete plant. On February 6, 2023, an application revision was received notifying AQD of the change in name of Bardon Inc. to Holcim-MAR, Inc. An updated Certificate of Clean Hands for Holcim-MAR, Inc. was received dated February 7, 2024.

The ready-mix concrete batch plant that is the subject of this permitting action is capable of producing both truck mix concrete and central mix concrete. The facility controls dust emissions with the use of one of two central dust collectors (both perform the same task and act as backups for each other; only one operates at a time). The central dust collector system collects dust from the elevated silos during loading, the weigh hoppers, and the truck loading operations. The older dust collector is a Griffin Jet Air Model JA 210-CE dust collector rated to control 99.9% of dust vented to that baghouse. The newer dust collector is a C&W Manufacturing and Sales Co. fabric filter baghouse unit rated to control 99.99% of dust vented to that baghouse. The plant is electrically powered.

This permitting action will be published in the D.C. Register and on the Department's website on July 19, 2024 and public comments on the permit action will be solicited through August 19, 2024.

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

TECHNICAL INFORMATION

Based on the emission calculations provided by the facility, the ready-mix concrete batch plant has the potential to emit the following when producing the maximum allowable concrete

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specified in the draft permit (300,000 cubic yards of central mix concrete and 200,000 cubic yards of truck mix concrete in any 12-consecutive-month period):

Pollutant	Maximum Annual Emissions (tons/yr)
Total Particulate Matter (PM Total)	3.15

REGULATORY REVIEW

Both federal and District of Columbia regulations and applicable requirements apply to this project. Applicability or non-applicability of key regulations is discussed below.

20 DCMR 104 – Entry and Inspection

This regulation provides the Department authority to access facilities and records for inspection, but also establishes authority to require that regulated entities perform monitoring, sampling, record keeping, and reporting as needed to track and document compliance with other air quality requirements. Emissions testing requirements have been included in the permit under the authority of this regulation. Various record keeping requirements have also been included in the draft permit pursuant to this section.

20 DCMR 200 – General Permit Requirements: The ready-mix concrete batch plant is stationary and has the potential to emit air pollutants. Therefore, it is subject to the requirement to obtain a Chapter 2 permit pursuant to this regulation.

20 DCMR 201 – General Requirements for Permit Issuance

This section gives the District authority to issue permits for operations if the operations and procedures are protective of public health and the environment. Under this regulation, the Department incorporates any specific requirements necessary to achieve those goals. Also, the Department does not consider whether emissions above the potential to emit identified in a given application would be protective, so therefore it typically incorporates emission limits into the permit that are based on the potential to emit reported in the application.

On this basis, the draft permit limits the Permittee to producing 300,000 cubic yards of central mix concrete and 200,000 cubic yards of truck mix concrete in any 12-consecutive-month period based on their application. These requirements are contained in Condition III(a) of the proposed permit.

Additionally, 20 DCMR 201 is the basis for including other operational limitations to ensure effective and proper operation of the equipment, such as incorporating the baghouse efficiency standards contained in Condition III(c) of the permit, the differential pressure ranges for baghouse operation in Condition III(d) of the permit, and the requirement to maintain replacement parts (including filters) for the baghouses onsite as specified in Condition III(e) of the permit. 20 DCMR 201 is also the primary basis for requiring that the equipment be operated

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in accordance with manufacturer's specifications as specified in Condition III(g) and that bilingual anti-idling signs be posted as specified in Condition III(j).

20 DCMR Chapter 3: Operating Permits and Acid Rain Programs

A source that has the potential to emit more than 25 tons per year of oxides of nitrogen (NO_x) or volatile organic compounds (VOCs), 10 tons per year of an individual hazardous air pollutant (HAP) or 25 tons per year of all HAPs combined, or 100 tons per year of other criteria pollutants is considered a major source and is required to obtain a Title V permit. As demonstrated by the "Maximum Annual Emissions" table above, Holcim-MAR, Inc. is not a major source, therefore it is not subject to Chapter 3 and will not need an operating permit in accordance with 20 DCMR 300.1. It should be noted that Holcim-MAR, Inc. is proposing to install additional equipment at the site (a crusher, a screener, and two conveyors). The applications to install these units are being addressed under separate cover, but the addition of the emissions from those units will still not cause the facility to be classified as a major source of any pollutant.

20 DCMR Chapter 5, Section 500: Source Monitoring and Testing Requirements

Appropriate monitoring and testing requirements have been included in Condition IV of the permit with associated record keeping and reporting requirements in Condition V of the permit to ensure that compliance with the conditions of the permit can be evaluated.

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

According to this regulation, the discharge of TSP¹ into the atmosphere from any process shall not exceed three hundredths (0.03) grains per dry standard cubic foot of the exhaust (permit Condition IIc)). Additionally, because the facility is rated to process more than 60,000 pounds (30 tons) per hour of materials, the facility shall not emit more than 40.00 pounds per hour of total suspended particulate matter per this regulation (permit Condition II(d)). Actual emissions are expected to be well below this level; using AP-42, a compilation of U.S. Environmental Protection Agency (EPA) emission factors, the applicant estimated maximum emissions, incorporating emission controls, of approximately 2.8 pounds per hour.

To meet the TSP standards, the applicant uses one of two central dust collectors (baghouses). The central dust collector system collects dust from the elevated silos during loading, the weigh hoppers, and the truck loading operations. The older dust collector is a Griffin Jet Air Model JA 210-CE dust collector rated to control 99.9% of dust vented to that baghouse. The newer dust collector is a C&W Manufacturing and Sales Co. fabric filter baghouse unit rated to control 99.99% of dust vented to that baghouse.

In order to ensure proper maintenance and operation of the dust collectors, differential pressure is to be monitored across the bag filters and must be maintained within specified ranges. See

¹ 20 DCMR Sections 600 and 603 use the term "particulate matter", however, these regulations were written at a time when that term generally referred to what we now refer to as "total suspended particulate matter" or "TSP". As a result, and for clarity, the permit uses these latter, more specific terms.

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Condition III(d) of the permit. If the differential pressure deviates from these ranges, the deviations must be investigated as the deviations may be signs of filter failure (low differential pressure) or pending failure/blinding (high differential pressure).

Replacement filters and other parts recommended by the dust collector manufacturers must be maintained at the site to repair the dust collectors promptly when needed. See permit Condition III(e).

In addition to differential pressure monitoring, to ensure the equipment is maintained, visible emissions monitoring and testing, maintenance in accordance with manufacturers' recommendations, and records of maintenance are required in the permit.

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

The fugitive dust requirements in 20 DCMR 605 are applicable to this ready-mix concrete batch plant. Reasonable precautions shall be taken to minimize the emission of any fugitive dust into the outdoor atmosphere. These requirements to are found in Conditions II(a) and (b) and Condition III(f) of this permit. This regulation is also the basis for requiring use of a wet sweeper vehicle per Condition III(f)(8).

The facility is required to monitor the site for compliance with these requirements, as set forth throughout Condition IV. Condition V establishes record keeping requirements to document compliance with the emission standards and their related monitoring requirements.

Chapter 6, Section 606: Visible Emissions

The recently updated (August 11, 2023) visible emissions limitations of 20 DCMR 606.1 and the limited exceptions in 20 DCMR 606.2 are applicable to this ready-mix concrete batch plant. Condition II(e) incorporates the requirement that visible emissions shall not be emitted from the equipment covered by this permit except that discharges shall be permitted for two (2) minutes during any startup, cleaning, adjustment of combustion or operational controls, or regeneration of emissions control equipment; provided, that such discharges shall not exceed 27% opacity from the equipment covered by this permit.

Monitoring for compliance is required pursuant to Condition IV(c). Records the required testing and results must be maintained per Condition V(b)(12).

Additionally, the requirements to maintain and operate the equipment properly and ensure that persons participating in the maintenance and operation of the equipment are properly trained and supervised, as specified in 20 DCMR 606.4, are found in Condition III(h) of the permit.

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

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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. In addition, the new (August 4, 2023) affirmative defense provisions of 20 DCMR 903.13(b) are also included in that condition.

Monitoring for compliance is required pursuant to Condition IV(d). Records of identified odors, and the actions taken to correct them, must be kept pursuant to Condition V(b)(13).

RECOMMENDATIONS

Based on AQD’s evaluation of the application package to operate the ready-mix concrete batch plant, the operation of the equipment as proposed, and the draft operating permit as written, are consistent with all applicable federal and District air pollution control laws and regulations.

Public comments on the permit action will be solicited from July 19, 2024 through August 19, 2024. Additionally, during that time, any person may request a public hearing on this subject. A public hearing will not be held unless requested. 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. 5585-R4 be issued in accordance with 20 DCMR 200.1 and 200.2 promptly upon the completion of the public review period.

SSO