

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment



CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

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

FROM: Abraham T. Hagos *ATH 11/15/13*
Environmental Engineer

SUBJECT: **Super Concrete Corporation**
Permit Number 5585-C2
Permit To Construct an Additional Emissions Control Unit to an Existing
Ready Mix Concrete Batch Plant

DATE: November 15, 2013

BACKGROUND INFORMATION

A permit application to construct an additional emissions control unit to an existing Ready Mix Concrete Batch plant at the Super Concrete Corporation (Aggregate Industries) site located at 5001 Fort Totten Drive NE was received by the Air Quality Division on January 7, 2013. A revised application was received on May 22, 2013. This unit, a C&W Manufacturing and Sales Company Model CP-3040 Pulse Jet Central Dust Collector, is to be constructed as a backup unit. The construction of an additional central dust collector gives the facility flexibility to perform routine maintenance on either unit during normal business hours and gives further assurance that the batching operation can operate uninterrupted should a failure occur with any one of the dust collectors. The permittee is Super Concrete Corporation, a company owned by Aggregate Industries. Therefore the facility is sometimes referred to as the Aggregate Industries site.

This permit will be published in the DC Register for notice of permit action on November 22, 2013. Public comments for the permit action will be solicited through December 23, 2013

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



CHAPTER 2 TECHNICAL MEMORANDUM

Super Concrete Corporation

Permit #5585-C2 to Construct an Additional Emissions Control Unit to an Existing Ready Mix Concrete Batch Plant

November 15, 2013

Page 2

REGULATORY REVIEW

Chapter 2, Section 200: General Permit Requirements:

The concrete mix equipment is a potential air pollution source for particulate matter and other pollutants. The applicant is requesting a permit to construct an additional emissions control unit. Thus a chapter 2 permit is required.

Chapter 6, Section 603: 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. To meet the particulate matter emissions standard, the facility is using a baghouse with 99.9% efficiency. For the existing control device, the manufacturer recommends that the differential pressure across the bags read between 3 and 6 inches of water; but the Department decided to allow the facility to operate between 2 and 6 differential pressure across the bags as long as the bags are maintained at 99.9% efficiency. For the new unit, the bags are to be rated as 99.99% efficient or greater for particulate matter and the differential pressure must be kept between 2 and 8 inches of water.

To monitor the efficiency of the baghouses, magnehelic gauges must be installed to show the differential pressure across the bags and must read between 2 and 6 inches of water when operating the bag house old baghouse and between 2 and 8 inches of water when operating the new baghouse. Per the manufacturers recommendation the facility shall keep the replacement parts (listed on the manufacturer's specification of the baghouse) for the bag house on site. It is contained in Conditions III(c) and (d).

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

Chapter 6, Section 605: Particulates

The visible emissions limitations of 20 DCMR 605 are applicable to this concrete mix equipment. Reasonable precautions shall be taken to minimize the emissions of any fugitive dust into the outdoor atmosphere. The reasonable precautions shall include, but not be limited to, in the case of demolition of buildings or structures, use, to the extent possible, of water; in the case of removal of demolition debris which is dusty or likely to become dusty, use of water to thoroughly wet the material before moving or removing the material and keeping it wet or otherwise in a dust-free condition until eventual disposal. These requirements are found in Conditions II(a) and (b) of this permit. The operational 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).

CHAPTER 2 TECHNICAL MEMORANDUM

Super Concrete Corporation

Permit #5585-C2 to Construct an Additional Emissions Control Unit to an Existing Ready Mix Concrete Batch Plant

November 15, 2013

Page 3

Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 are applicable to this concrete mix plant. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of the concrete mix 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 deviation must be kept pursuant to Condition V(g).

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(e) of the permit. Monitoring for compliance is required pursuant to Condition IV(d). Records of deviations must be kept pursuant to Condition V(h).

RECOMMENDATIONS

The application to construct an additional emissions control unit to an existing ready mix concrete batch plant and the attached permit comply with all applicable federal and District air pollution control laws and regulations.

Public comments for the permit action will be solicited from November 22, 2013 through December 23, 2013. AQD will resolve any comments received before issuing the permit, and if no comments are received, I recommend that permit (#5585-C2) be issued effective immediately. The construction permit will have a duration of three years. Once construction is completed, and once AQD has performed an onsite inspection of the equipment and approved it for operation, an operation permit can be issued for the concrete mix plant covering both control devices.

SSO:ATH