

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 and Enforcement

FROM: Abraham T. Hagos *ATH*
Environmental Engineer

SUBJECT: **Virginia Concrete Company, Inc.**
Permit #6451-R1
Permit To Construct and Operate a Concrete Batch Plant

DATE: April 1, 2015

BACKGROUND INFORMATION

A permit application to renew a permit to operate a concrete batch plant at 2 S Street SW was received by the Air Quality Division on September 10, 2014. Additional information was received on March 23, 2015. The Permittee is Virginia Concrete Company, Inc.

This permit will be published in the DC Register and on the District Department of the Environment (“DDOE” or “the Department”) website on April 10, 2015. Public comments on the proposed permit action will be solicited through May 11, 2015.

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

REGULATORY REVIEW

Chapter 2, Section 200: General Permit Requirements

The concrete mix equipment is a potential air pollution source, especially for particulate matter. Thus a Chapter 2 permit is required. The Permittee is requesting a permit to operate the equipment and produce up to 300,000 cubic yards of concrete per year.



CHAPTER 2 TECHNICAL MEMORANDUM

Virginia Concrete Company, Inc.

Permit #6451-R1 to Construct and Operate a Concrete Batch Plant

April 1, 2015

Page 2

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. 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 8 inches of water differential pressure across the bags as long as the bags are maintained at 99.9% efficiency.

To monitor the efficiency of the baghouses, magnehelic gauges must be installed to show the differential pressure across the bags and must read between 3 and 8 inches of water when operating the bag house. To ensure continuous proper operation, the permit requires the Permittee to keep the replacement bags for the bag house on site. These requirements are contained in Conditions III(d) and (e).

According to the requirements of Chapter 6 Appendix 6-1, the facility is capable of processing over 60,000 pounds per hour of material. The maximum allowable total particulate matter emissions for this process flow is 40 pounds. According to AP-42 emission factors for controlled emissions from concrete batching, this facility would emit approximately 4.6 pounds of particulate matter per hour if operating at its maximum process rate. Therefore it is expected to comply with Appendix 6-1 when the equipment is operating properly.

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 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

CHAPTER 2 TECHNICAL MEMORANDUM

Virginia Concrete Company, Inc.

Permit #6451-R1 to Construct and Operate a Concrete Batch Plant

April 1, 2015

Page 3

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(e). Monitoring for compliance is required pursuant to Condition IV(c). Records of any 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(f) 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 operate a concrete batch plant 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 April 10, 2015 through May 11, 2015. AQD will resolve any comments received before issuing the permit, and if no comments are received, I recommend that permit (#6451-R1) be issued in accordance with 20 DCMR 200.2.

SSO:ATH

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