

In the Matter of:

Administrative Compliance Order

*Virginia Concrete Co., LLC
Docket No: CAA-03-2019-0135DA*

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, PA 19103-2029**

In the Matter of	:	
	:	Docket No. CAA-03-2019-0135DA
Virginia Concrete Company, LLC	:	
Southwest DC Ready-Mix Plant	:	
2 S Street SW	:	
Washington, D.C. 23860	:	
	:	
Respondent	:	Administrative Compliance Order on Consent

U.S. EPA-REGION 3-RHC
FILED-30SEP2019pm4:04

ADMINISTRATIVE COMPLIANCE ORDER

A. PRELIMINARY STATEMENT

1. This Administrative Compliance Order (“Order”) is issued under the authority vested in the Administrator of the U.S. Environmental Protection Agency (EPA) by Section 113(a) of the Clean Air Act (“CAA” or the “Act”), 42 U.S.C. § 7413(a)(3) and (4).
2. On the EPA’s behalf, Karen Melvin, Director, Enforcement and Compliance Assurance Division, U.S. EPA Region III is delegated the authority to issue this Order under Section 113(a) of the Act.
3. Respondent is Virginia Concrete Company, LLC, a corporation doing business in the state of Virginia. Respondent is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e). Respondent owns and operates a concrete mixing plant known as the Southwest DC Ready-Mix Plant and located at 2 S Street SW, Washington, D.C. (the “Facility”).
4. Respondent enters into this Order on consent.
5. In satisfaction of the notice requirements of Section 113(a) of the Clean Air Act, 42 U.S.C. § 7413(a), on April 9, 2018, the EPA issued to Respondent a notice of violation (“NOV”) and provided a copy of the NOV to the District of Columbia (“DC”) Department of Energy & Environment (“DC DOEE”), providing notice to both that the EPA found that Respondent committed the alleged violations described in Section C of this Agreement and providing Respondent an opportunity to confer with the EPA. On

June 7, 2018, representatives of Respondent and the EPA discussed the April 9, 2018 NOV.

B. STATUTORY AND REGULATORY BACKGROUND

6. Section 113 of the Act, 42 U.S.C. § 7413, authorizes the EPA to take action to ensure that air pollution sources comply with all federally applicable requirements of a permit issued by a state as part of a federally approved State Implementation Plan (“SIP”).
7. The applicable implementation plan for the DC has been approved by EPA, see 40 C.F.R. § 52.472. The Facility is subject to the DC municipal regulations (“DCMR”) for particulate matter (“PM”), codified at DCMR 20-603. These requirements have been incorporated in the federally approved DC SIP.
8. Pursuant to 40 C.F.R. § 52.23, failure to comply with any approved regulatory provision of a SIP, or with any permit condition or permit denial issued pursuant to approved or promulgated regulations for the review of new or modified stationary or indirect sources, or with any permit limitation or condition contained within an operating permit issued under an EPA-approved program that is incorporated into the SIP, shall render the person so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under section 113 of the Act. Pursuant to DCMR 20-200.1, a permit from the DOEE must be obtained before any person shall cause, suffer, or allow the construction of a new stationary source, or the modification of an existing stationary source, or the installation or modification of any air pollution control device on a stationary source. These requirements have been incorporated in the federally approved DC SIP.
9. Pursuant to DCMR 20-200.2, an operating permit shall be obtained from DOEE before any person shall cause, suffer, or allow the operation of: (a) Any major stationary source, for which a construction or modification permit is required under DCMR 20-200.1; or (b) Any source, for which a construction or modification permit is required under DCMR 20-200.1, and which construction or modification permit was subject to conditions which affect, or would affect, the operation of the source. These requirements have been incorporated in the federally approved DC SIP.

C. FINDINGS

10. Respondent is headquartered at 1200 Urban Center Drive, Birmingham, AL 35242, with a principal place of business at 13880 Dulles Corner Ln # 450, Herndon, VA 20171.

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11. As a corporation organized under the laws of Delaware, Respondent is a “person” within the meaning of Section 113(a) of the Act, 42 U.S.C. § 7413(a), and as defined by Section 302(e) of the Act, 42 U.S.C. § 7602(e). The Facility is a concrete construction materials producer that, at all times relevant to this Order, manufactured ready-mix concrete by a batch process.
12. Respondent owns and operates the Facility located at 2 S Street SW in Washington, D.C.
13. DOEE issued Respondent State Operating Permit (“SOP”) 6451-R1, pursuant to DCMR 20-200.2, with an effective date of May 14, 2015, which governs the Facility as well as operation of control devices at the Facility for the period from May 14, 2015 up to and including the date of issuance of this Order.
14. SOP 6451-R1 requires, at Section III.b., that “[a]ll dust generated must be vented through the fabric filter dust collector (baghouse). [DCMR 20-201].”
15. SOP 6451-R1 requires, at Section III.c., that “[t]he baghouse shall maintain a particulate matter control efficiency of 99.9% at all times when the batch concrete plant is operating. [20 DCMR 201].”
16. SOP 6451-R1 requires, at Section II.c., that “[t]he 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. [20 DCMR 603.1].”
17. SOP 6451-R1 requires, at Section II.d., that “[t]he discharge of total suspended particulate matter into the atmosphere from the concrete batch plant shall not exceed 40 pounds per hour. [20 DCMR 603.1 and Appendix 6-1].”
18. SOP 6451-R1 requires, at Section II.e., that “Visible emissions shall not be emitted from these units except that discharges not exceeding 40% opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minutes period and for an aggregate of twelve (12) minutes in any twenty-four (24) hours period during start-up, cleaning, adjustment of combustion controls, or malfunction of the equipment. (20 DCMR 606.1).”
19. SOP 6451-R1 requires, at Section III.d., that “[t]he proper operation of the baghouse shall be demonstrated when the differential pressure across the bags maintained between 3 and 8 inches of water. A magnehelic pressure gauge shall be used to monitor the pressure drop. [DCMR 20-201].”

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20. On May 3, 2017, duly authorized representatives of the EPA conducted a CAA compliance evaluation at the Facility pursuant to the authority of Section 114 of the Act, 42 U.S.C. § 7414.
21. EPA has reviewed the Facility's magnehelic and dust control monitoring logs from January 2014 through December 2017 and found that, for the 1384 operating days during that period, 618 daily pressure readings were below the minimum 3-inch pressure differential range required in the SOP.
22. On the operating dates identified in Paragraph 21, above, Respondent operated the baghouse at the Facility at a pressure drop outside the permitted range of between 3 and 8 inches of water. This constitutes a violation of federally enforceable SOP 6452-R1, 40 C.F.R. § 52.23, and Section 113 of the CAA, 42 U.S.C. § 7413.
23. On April 9, 2018, EPA issued an NOV to Respondent regarding the violations identified in this Order, pursuant to Section 113 of the Act, 42 U.S.C. § 7413. On June 7, 2018, EPA met with Respondent to discuss the NOV.
24. EPA, having identified the violations stated herein, recognizes that the baghouse installed and operated by Respondent at the Facility is larger than required relative to the size of the manufacturing process and pollutant stream at the Facility. Therefore, operation may not have actually resulted in violations of the emissions limitations set forth in Section II. of the SOP as identified in paragraphs 16 and 17, above, even if such operation is technically inconsistent with the terms of the SOP (i.e., Section III.d. of the SOP as identified in paragraphs 19, above).

D. ORDER

25. Based upon the Findings of Fact and Conclusions of Law recited above, source testing is necessary to establish whether Respondent's operation of the baghouse at the Facility outside the pressure drop range designated in the SOP nevertheless does not produce violations of the emissions standards set forth in Section II. of the SOP as identified in paragraphs 16 and 17, above. Further, if source testing determines this to be the case, Respondent must seek an amendment to the SOP to revise the required pressure drop range to reflect a range that accurately represents the actual performance of the baghouse at expected maximum representative production rates and within the emissions limitations currently set forth in the SOP. Accordingly, Respondent is ordered to conduct the compliance program described in this section of this Order.

Source Testing Requirements

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26. Within one hundred fifty (150) days of issuance of this Order, Respondent shall conduct opacity tests and particulate emission tests of the baghouse in service at Facility in accordance with the test protocol attached to this Order as Attachment 1. At least 21 calendar days prior to the opacity and emission tests to be performed pursuant to this paragraph, Respondent shall submit notification to EPA and DC DOEE of the scheduled date and time of such testing. Virginia Concrete shall submit the notice via e-mail to James Adamiec at Adamiec.james@epa.gov and to DC DOEE through Kelly Crawford at Kelly.crawford@dc.gov.
27. Plant operations must be conducted in a manner representative of maximum routine operating conditions during all test runs.
28. Respondent shall submit to EPA and DOEE a test report on the results of the testing within thirty (30) days of completion of the testing. At a minimum, the test report must describe in detail:
 - The equipment utilized;
 - The testing procedures;
 - Any calibration information required by the test method;
 - The test results (emission rates);
 - Laboratory analysis;
 - Field data sheets; and
 - Any calculations that have been performed.

Permit Requirements

29. Within one hundred eighty (180) days of the Effective Date of this Order, Respondent shall submit to EPA a proposed revised baghouse pressure drop range for the Facility. At the time of submission of the proposed revised baghouse pressure drop range to EPA through James Adamiec at Adamiec.james@epa.gov pursuant to this paragraph, Respondent shall also provide a copy of such submission to DC DOEE through Kelly Crawford at Kelly.crawford@dc.gov.
30. EPA shall approve, or disapprove with comment and conditions, the proposed revised baghouse pressure drop range set forth in Respondent's submission under paragraph 29, above.
31. In the event EPA disapproves Respondent's submission under paragraph 29, above, Respondent shall re-submit a revised baghouse pressured drop range for the Facility reflecting EPA's comments and conditions within fourteen (14) days of receipt of such disapproval.

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32. At the time of re-submission of the proposed revised baghouse pressure drop range to EPA through James Adamiec at Adamiec.james@epa.gov pursuant to this paragraph, Respondent shall also provide a copy of such submission to DC DOEE through Kelly Crawford at Kelly.crawford@dc.gov.
33. EPA shall approve or disapprove any re-submitted proposed revised baghouse pressure drop range for the Facility as set forth in Respondent's submission under paragraph 31, above.
34. The parties shall continue the process of re-submittal and review set forth in paragraphs 30 and 31, above until such time as EPA approves the revised baghouse pressure drop range for the Facility.
35. Within thirty (30) days of Respondent's receipt of approval for the proposed revised baghouse pressure drop range for the Facility, Respondent shall submit an application to DDOE for incorporation of the proposed revised baghouse pressure drop range into SOP 6451. Nothing in this Order precludes Respondent from proposing, and DDOE from approving, SOP conditions that incorporate the proposed revised baghouse pressure drop range as an indicator of the proper operation of the baghouse and as a trigger for corrective action for the baghouse. At the time of such submission, Respondent shall provide a copy of the application to the EPA representatives identified in paragraph 42, below.

E. OTHER TERMS AND CONDITIONS

36. Respondent admits the jurisdictional allegations contained in this Order.
37. Respondent neither admits nor denies the findings in Section C (Findings) of this Order.

F. GENERAL PROVISIONS

38. Any violation of this Order may result in a civil administrative or judicial action for an injunction or civil penalties of up to \$97,229 per day per violation, or both, as provided in Sections 113(b)(2) and 113(d)(1) of the Act, 42 U.S.C. §§ 7413(b)(2) and 7413(d)(1), as well as criminal sanctions as provided in Section 113(c) of the Act, 42 U.S.C. § 7413(c). The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.
39. Nothing in this Order shall relieve Respondent of the duty to comply with all applicable provisions of the Act or other federal, state or local laws or statutes, nor shall it restrict

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the EPA's authority to seek compliance with any applicable laws or regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

40. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to the public health, welfare, or the environment.
41. The provisions of this Order shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns. From the Effective Date of this Order until the Termination Date as set out in paragraph 48 below, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion of or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of any such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.
42. Unless this Order states otherwise, whenever, under the terms of this Order, written notice or other document is required to be given, it shall be directed to the individuals specified at the addresses below unless those individuals or their successors give notice of a change of address to the other party in writing:

For the EPA:

James Adamiec

U.S. Environmental Protection Agency, Region III

Enforcement & Compliance Assurance Division (3ED21)

1650 Arch Street

Philadelphia, PA 19103-2029

Copies shall be sent to:

Daniel E. Boehmcke

Senior Assistant Regional Counsel

Office of Regional Counsel (3RC30)

U.S. Environmental Protection Agency

1650 Arch Street

Philadelphia, PA 19103-2029

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Virginia Concrete Co., LLC
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For the Respondent:

Tom Foley
Environmental Manager
Vulcan Materials – Mideast Division
13880 Dulles Corner Lane, Suite 450
Herndon, VA 20171

Copies shall be sent to:

Makram Jaber
Hunton Andrews Kurth LLP
2200 Pennsylvania Ave., NW
Washington, DC 20037

43. All notices and submissions shall be considered effective upon receipt.
44. To the extent this Order requires Respondent to submit any information to the EPA, Respondent may assert a business confidentiality claim covering part or all of that information, but only to the extent and only in the manner described in 40 C.F.R. Part 2, Subpart B. The EPA will disclose information submitted under a confidentiality claim only as provided in 40 C.F.R. Part 2, Subpart B. If Respondent does not assert a confidentiality claim, the EPA may make the submitted information available to the public without further notice to Respondent.
45. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Order to execute and bind legally the Parties to this document.

G. EFFECTIVE DATE AND OPPORTUNITY FOR A CONFERENCE

46. Pursuant to Section 113(a)(4) of the Act, an Order does not take effect until the person to whom it has been issued has had an opportunity to confer with the EPA concerning the alleged violations. By signing this Order, Respondent acknowledges and agrees that it has been provided an opportunity to confer with the EPA prior to issuance of this Order. Accordingly, this Order will take effect immediately upon signature by the latter of Respondent or the EPA.

H. JUDICIAL REVIEW

47. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue

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of fact or law set forth in this Order, including any right of judicial review under Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1).

I. TERMINATION

48. This Order shall terminate on the earlier of the following (the "Termination Date") at which point Respondent shall operate in compliance with the Act:
- a. One year after the Effective Date of this Order;
 - b. The effective date of any determination by the EPA that Respondent has achieved compliance with all terms of this Order; or
 - c. Immediately upon receipt by Respondent of notice from the EPA finding that an imminent and substantial endangerment to public health, welfare, or the environment has occurred.

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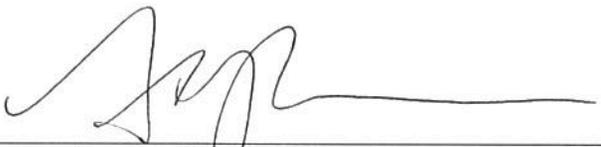
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

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Virginia Concrete Company, Inc.	:	
Southwest DC Ready-Mix Plant	:	
2 S Street SW	:	
Washington, D.C. 23860	:	
	:	
Respondent	:	Administrative Compliance Order on Consent

For United States Environmental Protection Agency, Region III:

<u>SEP 30 2019</u>	
Date	Karen Melvin, Director Enforcement & Compliance Assurance Division (3ED00) U.S. EPA, Region III 1650 Arch Street Philadelphia, PA 19103-2029

For Virginia Concrete Co., Inc.:

<u>9/12/2019</u>	
Date	Stephen Render, President Virginia Concrete Company, LLC 13880 Dulles Corner Lane, Suite 450 Herndon, VA 20171

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*Virginia Concrete Co., LLC
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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

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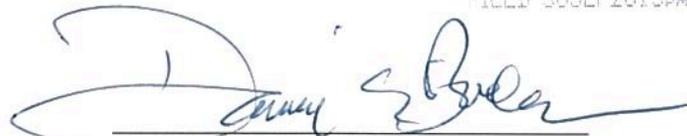
CERTIFICATE OF SERVICE

I certify that the foregoing "Administrative Compliance Order" in the Matter of Virginia Concrete Company, LLC, Docket # CAA-03-2019-0135DA, was filed with the Regional Hearing Clerk and that copies of the same were mailed to the parties as indicated below via Certified Mail, Return Receipt Requested:

Stephen Render, President
Virginia Concrete Company, LLC
13880 Dulles Corner Lane, Suite 450
Herndon, VA 20171

U.S. EPA-REGION 3-RHC
FILED-30SEP2019PM4:04

9/30/19
Date


Daniel E. Boehmcke
Assistant Regional Counsel

***Virginia Concrete
Company, LLC***

***Concrete Batch Plant Dust Collector
Stack Testing Protocol***

Prepared for:
Virginia Concrete Company, LLC

Prepared by:
Deyo and Associates, LLC



July 31, 2019

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Attachment A: Virginia DEQ Stack Testing Protocol Form

1.0 Introduction and Test Program Objectives

1.1 Facility Description and Permit Conditions:

Virginia Concrete Company (VCC) operates a concrete batch plant operation at 2 S Street SW, Washington, District of Columbia. Operations at the facility include raw material storage bins/silos, a central mix drum batch plant, and truck loading operations. Raw materials (fine and coarse aggregates, cement, supplemental cement, liquid admixtures, and water) are loaded into a central mix drum and the concrete mix is prepared in the rotating drum prior to being discharged to outgoing concrete trucks. The central mix drum is vented to a fabric filter dust collector during loading and mixing.

VCC currently operates its concrete batch plant under Air Permit No. 6451-R1 issued by the Government of the District of Columbia, District Department of the Environment (DOE). The current permit includes the following emissions/opacity limitations for the concrete batch plant process:

- Maximum PM emission concentration of 0.03 grains per dry standard cubic foot
- Maximum PM emission rate of 40 pounds per hour
- No visible emissions except that discharges not exceeding 40% opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minutes period and for an aggregate of twelve (12) minutes in any twenty-four (24) hours period during start-up, cleaning, adjustment of combustion controls, or malfunction of the equipment.

In addition, Condition III.d of the permit currently reads as follows:

“The proper operation of the baghouse shall be demonstrated when the differential pressure across the bags [is] maintained between 3 and 8 inches of water. A magnehelic pressure gauge shall be used to monitor the pressure drop. [20 DCMR 201]”

1.2 Test Program Objectives:

VCC has entered into an Administrative Compliance Order to resolve issues related to alleged violations of the VCC Permit. Specifically, EPA has alleged that the facility operated its dust collector outside of its “permitted” differential pressure range detailed in Permit Condition III.d. To resolve the alleged violation, VCC has agreed to perform stack testing of its drum dust collector to demonstrate that operation of the dust collector outside of the existing permit range – in particular, when the differential pressure drop is less than 3 inches of water - does not produce violations of the emission standards set forth in Section III of the permit (i.e.- 0.03 gr/dscf and 40 lb/hr).

As discussed in VCC’s June 7, 2018 meeting with EPA, VCC believes that a the differential pressure drop operating range for a dust collector is more appropriately considered an operational/maintenance tool that is used to trigger additional inspections and/or maintenance to ensure that the unit is operating correctly, and should not be considered a “permit limit.” Therefore, the purpose of the stack testing is to establish a lower pressure drop reading that will be used as a trigger for these additional inspections/maintenance procedures.

Specifically, after completion of the testing, VCC will establish a lower pressure drop reading to be approved by the EPA and inserted into the following proposed revised permit condition number III.d:

“The differential pressure across the bags shall be used as an indicator for the proper operation of the baghouse and the range set forth in this provision shall not be considered a permit limitation. A magnehelic pressure gauge shall be used to monitor the pressure drop. The proper operation of the baghouse shall be demonstrated when the differential pressure across the bags maintained between **<<insert lower range value here>>** and 8 inches of water. A differential pressure reading outside of the range of **<<insert lower range value here>>** to 8 inches of water shall require the permittee to perform a Method 22 observation of the dust

collector vent. The proper operation of the baghouse shall be demonstrated no visible emissions are observed using Method 22. In the event that visible emissions are observed using Method 22, the permittee shall implement the corrective actions set forth in Condition IV.c.1 and 2 of this permit to ensure the baghouse operation does not result in any visible emissions that do not meet the requirements of Section II.e. of this permit.”

Section 2.0 (and Attachment A) provides the testing protocol for this testing and Section 3.0 discusses the items to be included in the report to EPA.

2.0 Sampling Protocol:

EPA has provided minimum requirements for the testing protocol that are included in Sections 2.1 through 2.4 below.

2.1 Methods and Procedures for Testing:

EPA's testing protocol requirements include a "Complete description of the methods and procedures for testing at each unit, to include a minimum Methods 5 and 9, including all relevant parameters." To provide this information, and as discussed with representatives from the District of Columbia DOE, we have summarized this information using the Virginia DEQ Stack Test Protocol Form, included in Attachment A of this document. The Protocol in Attachment A also includes planned deviations from the EPA test methods to account for the variable, batch-like nature of the process.

2.2 Description of the Procedures to Minimize Unmeasured Emissions:

The Method 5 and 9 testing will measure all emissions venting from the drum dust collector. Therefore, there are no "unmeasured" emissions from the dust collector. It should be noted that the facility minimizes fugitive emissions from the facility in accordance with Permit Conditions II.a, II.b, III.b, and III.f.

2.3 Pressure Drop and Production Rate Monitoring:

As detailed in Section V.1 of the Protocol Form in Attachment A, VCC will monitor the concrete production rate once every 15 minutes. A minimum operating rate of 160 yd³/hr (80% of maximum capacity) is targeted for testing. Included with the report will be the average and maximum production rates associated with the concrete batching process achieved during testing.

Also as detailed in Section V.1 of the Protocol Form in Attachment A, VCC will monitor and document the dust collector differential pressure at a frequency of once every 5 minutes. As detailed above, the purpose of the testing is to establish a lower pressure drop value to be used as a trigger value to implement the inspection and maintenance/corrective action procedures set forth in Permit Condition IV.C. VCC will attempt to operate the drum dust collector at a level believed to be a "lower range of normal operation." Using the 5-minute data readings, VCC will calculate the average pressure drop during the test. To account for minor variability achieved during the testing, VCC will propose a lower pressure drop range for inclusion in the proposed revised Condition III.d at a value equal to 90% of the test average pressure drop.

It should be noted that only pressure readings taken during periods of time that the Method 5 and 9 testing is being performed will be included in the calculated average.

2.4 Other Information:

The information provided in Sections 2.1 through 2.3 above, Section 3.0 below, and the Stack Test Protocol Form in Attachment A provides all "information needed to fully address the requirements of Section D of (the) ACOC."

3.0 Stack Testing Report:

VCC will provide a detailed stack testing report to the EPA to include the following information associated with the Method 5 and 9 testing:

- Summary of Results
 - Results of the Method 5 and 9 Tests
 - Process and control equipment data recording to the test, including the pressure drop across the baghouse and the process rate of the concrete batch plant. VCC does not monitor the temperature of the process and this parameter is not required to demonstrate compliance with the testing objectives. Therefore, temperature will not be monitored during testing.
 - Discussion of any deviations from the reference test methods and any other problems encountered during the testing. Note that specific “planned” deviations from the test methods are included in Attachment A of this document.
 - Data on the production rate during testing for the concrete batch process. Specifically, VCC will document and report the average and maximum production rates achieved during testing.

- Facility Operations:
 - Description of the process and control equipment in operation during testing.
 - Operating parameters of all control and related equipment in operation during the test. Specifically, VCC will monitor the pressure drop of the dust collector during testing to establish the minimum pressure drop reading to be used as the lower range maintenance trigger value.
 - Facility operating parameters to include the average production rate during testing demonstrating that the unit operated at a production rate greater than 160 yd³/hr (80% of maximum operating capacity).

- Sampling and Analytical Procedures
 - Sampling port location(s) and dimensions of cross-section
 - Sampling point description, including labeling system
 - Brief description of sampling procedures, including equipment and diagram
 - Description of sampling procedures (planned and accidental) that deviated from any standard method
 - Brief description of analytical procedures, including calibrations (as appropriate for Methods 5 and 9)
 - Description of analytical procedures (planned or accidental) that deviated from standard method.
 - Quality control/quality assurance procedures, tests and results
- Appendices
 - Safety Data Sheets (“SDSs”) for the following materials:
 - Fine aggregates (sand)
 - Coarse aggregates (stone)
 - Cement
 - Supplemental cement (Newcem)
 - Any admixtures used in the batch process
 - Complete report with example calculations
 - Raw filed data (original, not computer printouts)
 - Laboratory report with signed chain-of-custody forms
 - Calibration procedures and results
 - Raw process and control equipment data, signed by plant representative
 - Test log
 - Project participants and titles, and
 - Related correspondence (if applicable)

ATTACHMENT A

Virginia Concrete Company

Drum Dust Collector Stack Testing Protocol Form

STACK TEST PROTOCOL - REQUEST FOR APPROVAL

 <p style="font-size: small; margin: 0;">This Section for DEQ Use Only</p>	<p><input type="checkbox"/> PROTOCOL (consisting of pages 1 through _____) IS APPROVED AS SUBMITTED.</p> <p><input type="checkbox"/> PROTOCOL (consisting of pages 1 through _____) IS APPROVED WITH REVISIONS NOTED IN APPENDIX B.</p> <p>Failure to conduct tests in accordance with the approved protocol may result in the test results being rejected by DEQ.</p> <p>Approved by: _____ Date: _____</p>
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I. Facility Name: Virginia Concrete Company	DEQ Registration No. N/A
Physical Location: 2 S Street, SW, Washington, DC	
Emission Unit(s) to be tested: Concrete Batch Plant Drum Dust Collector	
II. Stack Testing Firm: Air Monitoring Specialists, Inc.	
Contact Name: Bruce Gerber	Phone: (804) 231-3043
Environmental Lab: Enthalpy Analytical, Inc.	*Virginia Laboratory ID: 460155
Contact Name: Ashley Miller	Phone: (919) 850-4392

*As of 1/1/2012, analytical data submitted to DEQ to demonstrate compliance must have been performed by an environmental laboratory certified or accredited in accordance with 1VAC30, Chapter 45 and 46, available at <http://www.deq.virginia.gov/info/accreditation.html>. Failure to meet this requirement could result in rejection of the stack testing results.

For any laboratory utilized during this testing event, documentation demonstrating VELAP certification/accreditation for the analytes being tested must be submitted with this protocol, or at a time in advance of the testing event acceptable to the DEQ regional office responsible for reviewing the data.

DOCUMENT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE: _____ DATE: _____

Must be signed by a Responsible Official as defined in 9 VAC 5-20-230 of the Regulations for the Control and Abatement of Air Pollution, available at www.deq.virginia.gov

PRINTED NAME: Thomas Foley TITLE: Environmental Manager

III. Test Plan:

Test Required By: Agreement with USEPA Region III and DC Department of Energy and Environment

Deadline: Testing must be completed by ___ (date) to meet the deadline required by the above-referenced Agreement.

Test Date	Operating Rate	EPA Test Method To Be Used	Pollutant or Parameter Measured	No. Runs & Run Length for Pollutant Testing	Applicable Numeric Emission Limitation	Source of Emission Limitation (e.g., Permit condition #, NSPS, MACT, etc.)
TBD	160 yd ³ /hr (80% of operating capacity)	5	PM	3 Runs, See Section IV for Run Duration	0.03 gr/dscf	Permit condition II.c
		9	Opacity	3 Runs, See Section IV for Run Duration	0% Opacity Except that discharges shall not exceed 40% for two (2) minutes in any 60 minute period.	Permit Condition II.e

(Continue on additional sheet if necessary)

IV. Description of planned deviations from Test Methods:

- No deviations are planned, OR
- Deviations are planned as described in the following table:

PLANNED DEVIATIONS

EPA Test Method	Description of Requirement (Indicate Section No. from Method)	Description of Deviation (Identify reason if requesting DEQ approval)	Approvals (Attach copies of all EPA approvals)
Methods 5 and 9	Test Run Duration	<p>The Vulcan ready mix plant is a batch loading process consisting of two main steps:</p> <ol style="list-style-type: none">1) Drum loading of concrete ingredients and water, and2) Truck loading of the wet concrete mixture. <p>During the drum loading step, the drum is maintained in the horizontal position and the drum opening is vented to the dust collector. After mixing, the drum "tips" to load the wet concrete mixture into trucks. Since the concrete material is saturated during this step, no emissions are generated and the drum is not vented to the dust collector.</p> <p>Therefore, the Method 5 sampling and Method 9 observations must be "paused" during truck loading and other times where emissions are not being vented to the dust collector (e.g.- delays between trucks, etc.).</p> <p>The duration of the entire batch loading process for each truck is approximately 3 minutes, of which approximately 60 seconds represents the drum loading step. Other delays may be experienced between trucks and therefore, Vulcan is proposing that the Method 5 and 9 test runs consist of three test runs each of a duration representing a minimum of 20 concrete batches.</p>	<input type="checkbox"/> EPA approval attached <input type="checkbox"/> EPA approval requested on _____ (date) <input checked="" type="checkbox"/> DOEE approval requested

(Continue on additional sheet if necessary)

V. Source Operations: The purpose of a stack test is to demonstrate that a process and any associated emission control equipment are capable of meeting required emission limitations. Therefore, it is important to identify those parameters that affect actual emission rates and to ensure that such parameters remain at the tested or more conservative setting(s), except during start-up, shutdown, or malfunction. Records of those parameter settings must be maintained during and after the test to provide reasonable assurance that the equipment continues to operate in compliance with all operating and emission limitations. **The test results report must include the parameters identified below and their settings during testing.**

1. Adjustable Operating Parameters: Following a discussion with your air inspector, identify all adjustable process and control equipment parameters that have a measurable effect on emissions, and complete the table below. Example parameters are listed in Appendix A.

Parameter	Setting/value during stack test	Monitoring Frequency	Fixed ¹ or Varying ² after test	If varying ² , justify not testing at multiple values.
Operating rate:	160 yd ³ /hr	Every 15 minutes by operator	Varying	As agreed upon with EPA/DOEE.
Dust Collector Differential Pressure	<3" w.c. (target 1.5 to 3" w.c. if reasonable achievable)	Every 5 minutes by operator	Varying	As agreed upon with EPA/DOEE. Demonstrating compliance with the emissions and opacity limits in permit conditions II.c and II.e at a pressure drop less than 3" w.c. will allow the facility to establish a maintenance trigger value for inclusion into the permit.

(Continue on additional sheet if necessary)

¹ Fixed means that no changes will be made (except during start-up, shutdown, or malfunction) without validating with another stack test.

² Varying exclusive of start-up, shutdown, or malfunction.

2. Performance Indicator Parameters: Other parameters necessary to establish system performance, or useful in detecting deteriorating performance, need to be monitored as well. Some example parameters are listed in Appendix A. Any parameter that is required by permit to be monitored must be monitored during the stack test at a frequency that will provide a representative average. Following a discussion with your air inspector, complete the table below. **The test results report must include the run averages and also raw data if manually recorded.**

Parameters to be Monitored	Measurement Frequency
Dust Collector Differential Pressure	Every 5 minutes by operator

(Continue on additional sheet if necessary)

STACK TEST PROTOCOL - REQUEST FOR APPROVAL

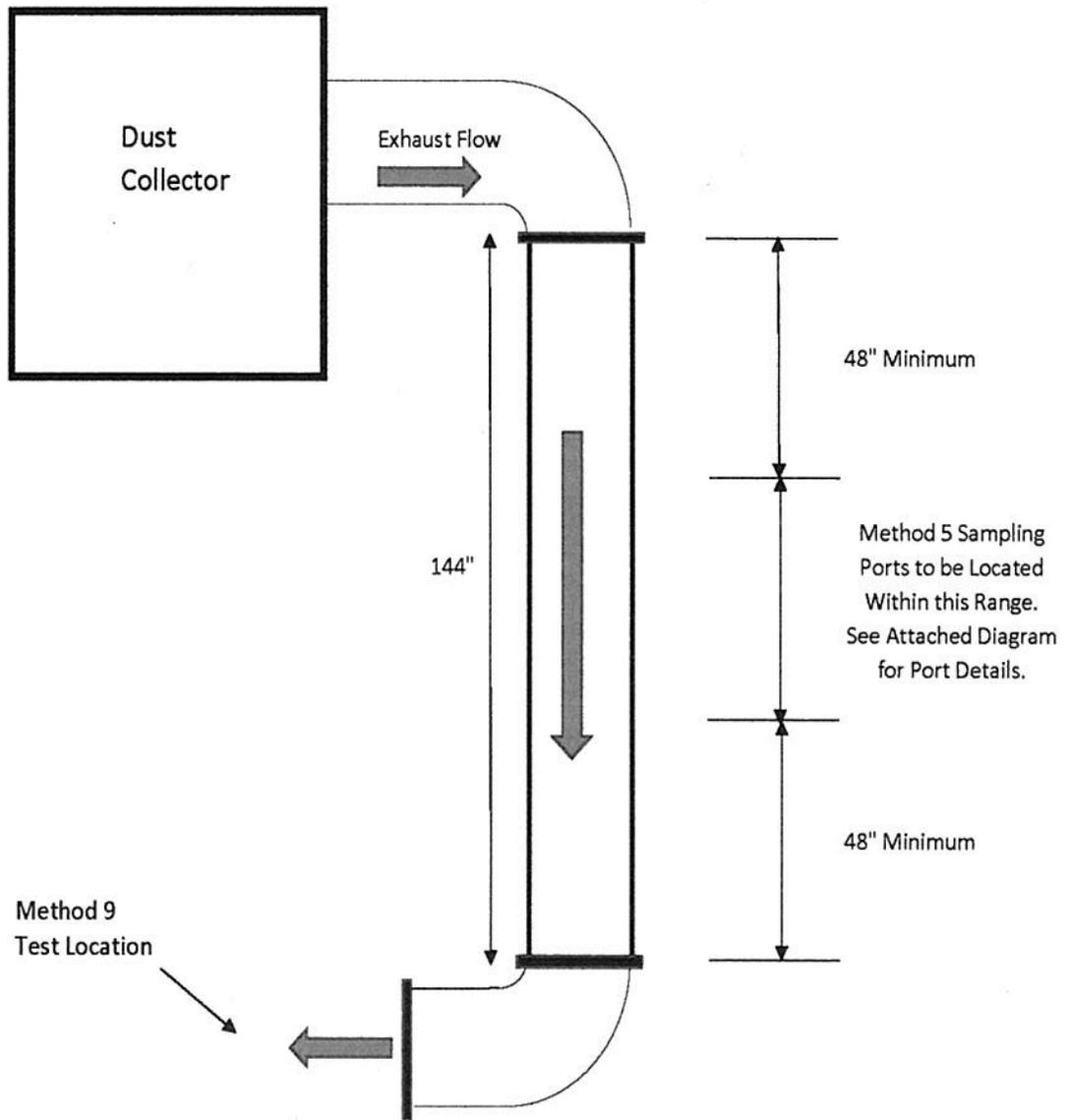
VI. Sampling Ports: In the space below or on a separate sheet, sketch the stack or duct as follows:

<p>TOP VIEW - show: 1) shape, 2) sample ports. See drawing on next page.</p>	<p>ELEVATION VIEW - show: 1) shape, 2) sampling ports, 3) all flow disturbances (upstream and downstream) affecting conditions at sampling ports, 4) distances from ports to disturbances, 5) gas flow direction.</p>
<p>2 – Sampling ports, 90 degrees apart 12 – Sampling points at five minutes per point 6 – On each traverse</p> <p>Method 5 Traverse Points</p> <ol style="list-style-type: none"> 1. 1.1 inches 2. 3.5 inches 3. 7.1 inches 4. 16.9 inches 5. 20.5 inches 6. 22.9 inches <p>Circular Stack: Diameter = <u> 24 </u></p> <p>Rectangular Stack: L = <u> </u> W = <u> </u> □ Equivalent Diameter = $(2LW)/(L + W) =$ <u> </u></p>	

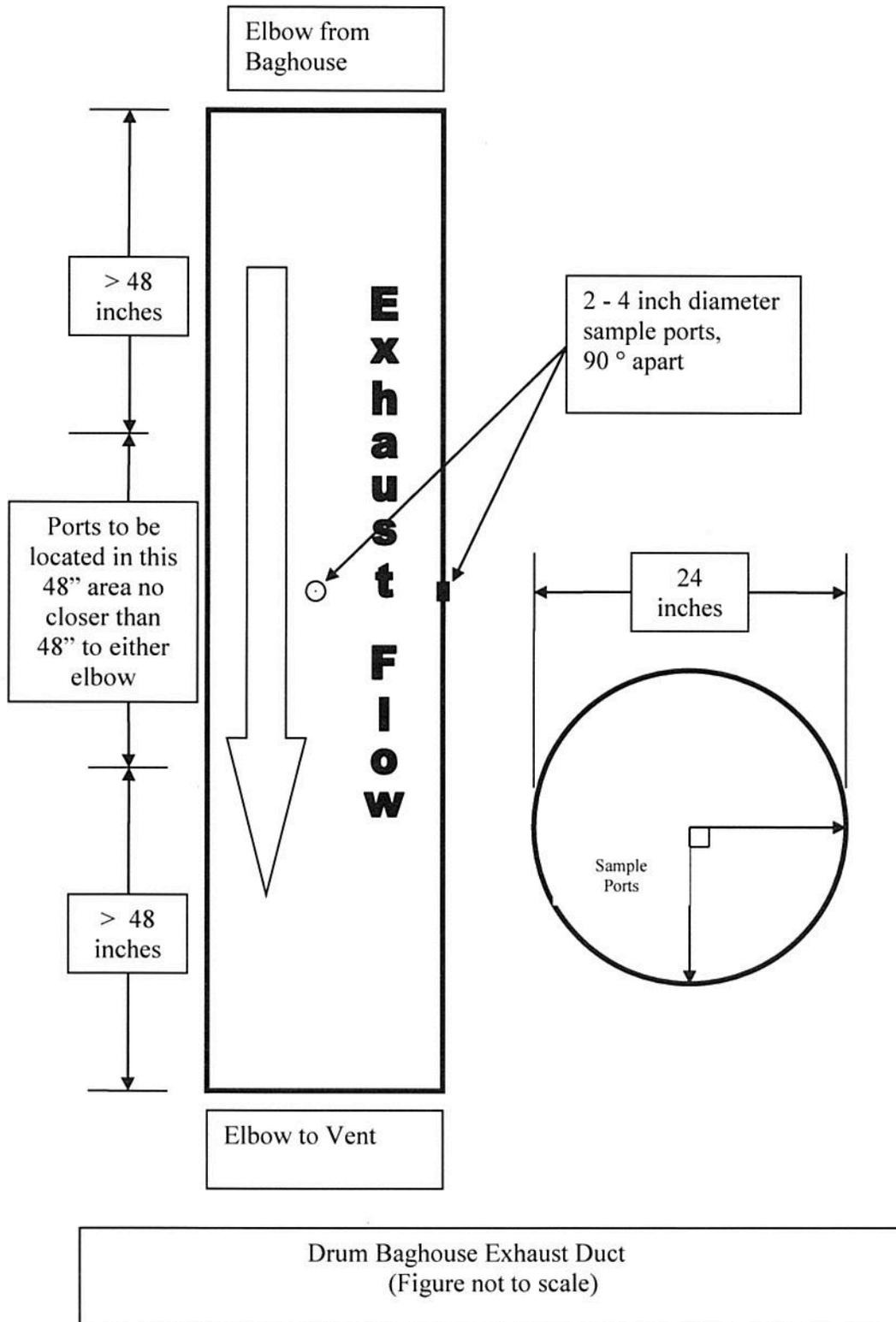
	UPSTREAM (exit side of ports)	DOWNSTREAM (process side of ports)
Type of Disturbance (E.g., exit, fan, bend, baffles, expansion, restriction, visible flame)	Elbow downstream of dust collector	Elbow prior to exhaust vent exit
Distance from Port to Disturbance = (dist.)	TBD, > 48 inches	TBD, > 48 inches
No. diameters from Port to Disturbance = (dist./dia.) or (dist./equivalent diameter)	TBD, > 2.0 Diameters	TBD, > 2.0 Diameters

STACK TEST PROTOCOL - REQUEST FOR APPROVAL

Vulcan Concrete Company
Dust Collector Exhaust Stack General Configuration Diagram
(Diagram not to Scale)



STACK TEST PROTOCOL - REQUEST FOR APPROVAL



STACK TEST PROTOCOL - REQUEST FOR APPROVAL

APPENDIX A

EXAMPLES OF PARAMETERS TO BE MONITORED DURING TESTING

Note: The facility is responsible for identifying and monitoring all process and control parameters that may reasonably be expected to affect the stack test results and to confirm operating conditions. These examples are not all-inclusive and may not always apply.

I. PROCESS	ADJUSTABLE OPERATING PARAMETERS	PERFORMANCE INDICATOR PARAMETERS
ALL	Operating rate; raw material composition and quality; automatic or manual control; equipment settings	Instrument readings as appropriate to establish operating conditions
Combustion	Fuel composition and quality; soot blowing frequency; damper settings, flue gas recirculation; water/steam injection rate; burner pressures; over/under fire air adjustments	Visible emissions/opacity; CO, HC concentration in flue gas; excess air; O ₂ concentration.
Coating (printing, painting)	VOC content of inks, coatings; equipment settings	

II. CONTROL EQUIPMENT	ADJUSTABLE OPERATING PARAMETERS	PERFORMANCE INDICATOR PARAMETERS
ALL	Automatic or manual control; equipment settings	Instrument readings as appropriate to establish operating conditions
Capture System	Damper positioning; doors or access panels open or shut; fan sheave or speed setting	Fan amps; pressure inside enclosure; integrity (door closed, no new openings); duct air velocity; direction of air flow at openings
Afterburner or Thermal Oxidizer	Temperature set points; frequency of flow reversal (for a regenerative system)	Temperature
Carbon Adsorber	Bed regeneration setting (initiated by time or outlet concentration); inlet gas temperature	Pressure drop
Catalytic Oxidizer	Temperature set points	Inlet & outlet temperature; catalyst activity; HC concentration in flue gas (measured with hand held PID or FID); pressure drop
Dry Scrubber	Type of reactive chemical; purity of reactive chemical; particle size of reactive chemical; injection rate; temperature	Feed rate indicator; temperature indicator
ESP	Number of fields in service; location of out-of-service fields(s); control software/microprocessor settings and/or methodology; gas temperature; rap rate; flue gas flow	Visible emissions/opacity; power levels (secondary current & secondary voltage)
Fabric filter	Setting for bag cleaning frequency (e.g. time or pressure drop settings); number of bags/compartments in service	Pressure drop; visible emissions/opacity; triboelectric sensor reading (bag leak detector)
Liquid Scrubber (packed bed, spray; venturi)	Liquid flow rate; venturi throat opening; particulate concentration in liquid (all fresh just before test or equilibrium levels); fresh liquid make-up rate; set point for neutralizing, oxidizing or reactive chemical addition; pH set point.	Pressure drop; neutralizing, oxidizing or reactive chemical concentration; pH

APPENDIX B

REVISIONS REQUIRED BY DEQ AS A CONDITION OF APPROVAL

This Section for DEQ Use Only	
Section Reference	Required Revision(s) to Protocol

(Continue on additional sheet if necessary)