

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

Source Category Permit to Construct and Operate Temporary Portable Concrete Plants

Permit No. 7123-SC

October 18, 2016

I. Applicability:

- a. This source category permit is applicable to a subset of owners and operators of temporary portable concrete plants in the District of Columbia who submit an application to the Department of Energy and Environment (“the Department”), Air Quality Division (“AQD”) and are approved for coverage under this permit, either actively or by passive approval which will occur 45 days after submission of a complete application to AQD unless AQD objects to the approval in writing in that timeframe.
- b. This source category permit covers new installation as well as operation of temporary portable concrete plants. To be covered under this permit, the portable concrete plant must meet the following criteria:
 1. The equipment consists a portable concrete plant with a maximum rated production capacity of 180 cubic yards of concrete product per hour;
 2. Only one portable concrete plant will be operated at the facility at a time;
 3. Approval of operation of the portable concrete plant at the site shall be for no more than one (1) year, renewable no more than once such that total operation of the plant at the site shall not exceed two (2) years¹. If continued operation after the first year is desired, the owner or operator shall submit a new application for renewal at least 45 days prior to expiration of the initial approval;
 4. The portable concrete plant will operate for no more than one 8-hour shift per day;
 5. The total production of the plant will not exceed 400,000 cubic yards in any consecutive 12 month period.
 6. Any hot water boiler associated with the plant has a heat input rating not exceeding 5 million BTUs (MMBTU) per hour; and
 7. The portable concrete plant must be constructed and operated in compliance with all conditions of this permit.

¹ Note that this two year maximum limitation is for this type of operation at the facility. An applicant may not avoid this limitation by swapping out one portable plant for a different one.

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- c. Similar sources that do not meet the above criteria may be eligible for a different source category permit or a standard unit-specific permit issued pursuant to 20 DCMR Chapter but cannot be covered by this source category permit.

II. General Requirements:

- a. The approved portable concrete plant equipment shall be constructed and operated in accordance with all applicable air pollution control requirements of 20 DCMR.
- b. This permit to construct and operate a portable concrete plant for a specific project at a specific address is valid for up to one (1) year only, renewable no more than once for a total duration of up to two (2) years. If continued operation is desired past the first year, the owner or operator shall submit a new application for renewal of the approval at least 45 days prior to expiration of the initial approval.
- c. This permit expires on October 17, 2021 (20 DCMR 200.4). If an applicant covered by this permit wishes to continue operation after this date (and has not yet reached the one year operating limit in Condition II(b)), the owner or operator shall submit an application for coverage by a renewed source category permit or a separate standard permit by July 17, 2021.
- d. Construction or operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.
- e. The Permittee shall allow authorized officials of the District, upon presentation of identification, to:
 - 1. Enter upon the Permittee's premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;
 - 2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
 - 3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - 4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.
- f. A copy of this permit shall be kept on the premises and produced upon request.

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- g. Failure to comply with the provisions of this permit may be grounds for suspension or revocation. [20 DCMR 202.2]
- h. For any equipment covered by this permit that is located at a major stationary source (as defined in 40 CFR 199) facility or other facility subject to 20 DCMR Chapter 3, the Permittee shall submit a complete Chapter 3 (Title V) permit amendment request or, in the case of a facility with a current application under review, a revision to that pending application, to include the requirements of this permit in the facility's Title V permit for the covered equipment no later than 45 days before the expiration of the initial one year approval duration. This only needs to be submitted if the equipment will be at the facility in excess on one year and the owner or operator is therefore requesting an extension beyond the original one year approval duration. [20 DCMR 301.2]

III. Emission Limitations:

- a. Emissions of dust shall be minimized in accordance with the requirements of 20 DCMR 605 and the "Operational Limitations" of this permit.
- b. The emission of fugitive dust from any material handling, screening, crushing, grinding, conveying, mixing, or other industrial-type operation or process is prohibited. [20 DCMR 605.2]
- c. The discharge of total suspended particulate matter (TSP) 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]
- d. The discharge of TSP from the portable concrete plant shall not exceed 40 pounds per hour. [20 DCMR 603.1 and Appendix 6-1]
- e. Emissions of PM₁₀ shall be less than 15 tons in any consecutive 12-month period. [20 DCMR 204]
- f. Visible emissions shall not be emitted into the outdoor atmosphere from stationary sources; provided, that the discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) 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, cleaning, soot blowing, adjustment of combustion controls, or malfunction of the equipment. [20 DCMR 606.1]
- g. 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]

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IV. Operational Limitations:

- a. The concrete production shall not exceed [20 DCMR 201]:
 1. 180 cubic yards per hour; and
 2. 400,000 cubic yards in any consecutive 12-month period.
- b. Dust shall be controlled as follows [20 DCMR 201]:
 1. All dust generated from mixer or truck loading shall be captured and vented through a fabric filter dust collector (baghouse); and
 2. Cement and cement supplement loaded to elevated storage silos via pneumatic conveying shall be controlled by a baghouse or other properly sized particulate filter.
- c. The baghouses and other particulate filters used to comply with Condition IV(b) shall maintain a particulate matter control efficiency of 99.9% at all times when the portable concrete plant is operating.[20 DCMR 201]
- d. The proper operation of the baghouse(s)/particulate filter(s) shall be demonstrated when the differential pressure across the bags or other filter media is maintained in within a range recommended by the equipment or filter manufacturer or within another range approved in writing by the Department. A properly calibrated differential pressure gauge shall be used to monitor the pressure drop. [20 DCMR 201]
- e. A set of replacement filters for each of the dust collectors shall be kept on site at all times. [20 DCMR 201]
- f. The Permittee shall take reasonable precautions to minimize the emission of any fugitive dust into the outdoor atmosphere. These reasonable precautions shall include, but not be limited to the following [20 DCMR 605.1]:
 1. In the case of unpaved roads, unpaved roadways, and unpaved parking lots:
 - i. Use of clean water in sufficient quantities and at sufficient frequencies to prevent the visible emission of dust due to the movement of vehicles or of the wind (use of binders or other chemicals may only be used with prior approval of the Department); and
 - ii. Prompt clean-up of any dirt, earth, or other material from the vicinity of the road, roadway, or lot which has been transported from the road, roadway, or lot due to anthropogenic activity or due to natural forces.

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2. In the case of paved roads, paved roadways, and paved parking lots: Maintenance of the road, roadway, lot, or paved shoulder in a reasonably clean condition through reasonably frequent use of water, sweepers, brooms, or other means through reasonably frequent removal of accumulated dirt from curbside gutters, through reasonably prompt repair of pavement, or through any other means;
3. In the case of vehicles transporting dusty material or material which is likely to become dusty:
 - i. Fully covering the material in question, with a tarpaulin or other material; and
 - ii. Operation, maintenance, and loading of the vehicle, distribution of the loaded material on or in the vehicle, and limiting the quantity of material loaded on or in the vehicle, so that there will be no spillage of the material onto the roads;
4. In the case of vehicles which accumulate dirt on the wheels, undercarriages, and other parts of the vehicle, due to the movement of the vehicle on dusty, dirty or muddy surfaces: Water washing of all of the dirty parts of the vehicle to thoroughly remove the dirt before or immediately after the vehicle leaves the dusty, dirty, or muddy surface.
- g. The portable concrete plant and all of its appurtenances shall be operated and maintained in accordance with the recommendations of the equipment manufacturers. [20 DCMR 201]
- h. Any hot water boiler associated with the operation shall burn only natural gas or distillate fuel oil (No. 2 fuel oil or diesel fuel) with a sulfur content not exceeding 15 ppm (0.0015% sulfur by weight). [20 DCMR 201]
- i. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the concrete mix in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [20 DCMR 606.3]

V. Monitoring and Testing Requirements:

- a. The Permittee shall monitor the concrete production the concrete batch plant each day to ensure compliance with Condition IV(a).

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- b. The Permittee shall monitor the differential pressure across the truck or mixer-loading baghouse filters and the silo-loading baghouse or other particulate filters to ensure compliance with Condition IV(d).
- c. At least once per week, during operation of the unit, the Permittee shall conduct visual observations of the emissions from the unit from the truck or mixer-loading baghouse outlet stack, from the cement and, where applicable cement supplement loading operation, and from elsewhere in the plant. If no operations are occurring during a given week, this shall be so noted. If visible emissions are observed, the following procedures shall be followed to address Conditions III(b) and (f), respectively:
 - 1. If visible emissions of fugitive dust are observed in excess of the limit specified in Condition III(b), prompt action shall be taken to correct the problem. Operations shall not continue (except as necessary for troubleshooting purposes) if such exceedances are observable, until such time as the problem has been addressed and the equipment has been returned to compliance.
 - 2. If visible emissions of fugitive dust or smoke are observed, the Permittee shall either discontinue operations until the problem is corrected or shall make arrangements for prompt visible emissions testing by a person certified in accordance with EPA Reference Method 9 (40 CFR 60, Appendix A). Such a test shall consist of a minimum of 30 minutes of opacity observations and shall be performed while operating in a similar manner as was occurring when the visible emissions were observed. If an exceedance of the requirements of Condition III(f) are observed, operations shall be discontinued until the problem is corrected.
- d. The Permittee shall monitor any odor emitted from the facility and take any actions necessary to ensure compliance with Condition III(g).
- e. The Permittee shall monitor the conditions at the site and take any actions necessary to ensure compliance with the fugitive dust requirements of Condition III(b).
- f. The Department reserves the right to require that the Permittee conduct performance tests and/or stack tests to determine compliance with Conditions III(c), (d), and (e). In the case that a performance test or stack test is required by the District, the Permittee shall furnish the District with a written report of the results of such performance tests in accordance with the following procedures. [20 DCMR 502.1]
 - 1. The stack tests shall be performed in accordance with 40 CFR 60, Appendix A, Methods 1 through 5 and Method 201/201a or other method(s) approved by the Department. The performance test shall consist of three separate one-hour runs using this test method.

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2. One (1) original and one (1) copy of the test protocol shall be submitted a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.
3. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.
4. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original and one (1) copy of the test report shall be submitted to the address in Condition V(f)(7).
5. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:
 - a. A statement that the owner or operator has reviewed the report from the emissions testing firm and agrees with the findings.
 - b. Permit number(s) and condition(s) which are the basis for the compliance evaluation.
 - c. Summary of results with respect to each permit condition.
 - d. Statement of compliance or non-compliance with each permit condition.
6. The results must demonstrate to the Department's satisfaction that the emission unit is operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the owner or operator shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.
7. The following address shall be used for correspondence with the Department for this performance testing:

Chief, Compliance and Enforcement Branch
Department of Energy and Environment
Air Quality Division
1200 First Street NE
5th Floor
Washington, DC 20002

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- g. In addition to the testing required above, the Permittee shall conduct and allow the Department access to conduct tests of air pollution emissions from any source as requested. [20 DCMR 502.1]
- h. The Permittee shall test fuel oil as necessary to show compliance with Condition IV(h) in accordance with appropriate ASTM methods. [20 DCMR 502.6 and 502.3]
- i. The Permittee shall monitor the operation of the equipment, the maintenance performed on it, and the stores of extra filters to ensure compliance with Conditions IV(b), (c), (e), (g), and (i).
- j. The Permittee shall monitor the activities at the site and the actions taken to minimize dust emissions to ensure compliance with Conditions III(a) and IV(f).

VI. Record Keeping Requirements:

The following information shall be recorded, and maintained in a log at the facility (and in a readily accessible location at an off-site location after operations cease at the facility) and made available when requested for a period of not less than three years from the date of each record: [20 DCMR 500.8]

- a. The Permittee shall keep a record of the following production records:
 - 1. The hours of operation each day to document compliance with Condition I(b)(4);
 - 2. The cubic yards of concrete produced each day;
 - 3. The sum of the cubic yards of concrete produced each month, updated no later than the fifth day of each calendar month for the previous calendar month;
 - 4. The sum of the previous 12 months of production, in cubic yards, updated by the fifth day of each calendar month for the 12-month period ending at the end of the previous calendar month to document compliance with Conditions I(b)(5) and IV(a)(2).
- b. The Permittee shall record the following differential pressure readings to document compliance with the operational requirements of Conditions IV(b), (c), and (d) of this permit as follows:
 - 1. The reading of the magnehelic pressure gauge measuring the differential pressure across the truck or mixer-loading baghouse shall be recorded at least once each day during truck or mixer loading; and

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2. The reading of the magnehelic pressure gauge measuring the differential pressure across each silo-loading baghouse or other particulate filter shall be recorded at least once per week during silo loading.
- c. The Permittee shall keep a record of all deviations from the pressure drop requirements of Condition IV(d) and the actions taken to correct each identified deviation.
- d. The Permittee shall maintain a record of all maintenance performed on the equipment, including, but not limited to filter changes, to document compliance with Conditions IV(g) and (i).
- e. The Permittee shall maintain a copy of the concrete mix plant and the fabric filter baghouse manufacturers' maintenance and operating recommendations and make such available to Department inspectors. These records shall include the recommended differential pressure ranges specified by the manufacturers or documentation of approval of alternate ranges by the Department established pursuant to Condition IV(d).
- f. The Permittee shall maintain copies of the specifications for the bags used in the baghouse(s) and any other particulate filters used at the site to document compliance with Condition IV(c).
- g. The Permittee shall keep a record of the results of all visible emissions monitoring performed pursuant to Condition V(c).
- h. Permittee shall keep records of all odors identified pursuant to Condition III(g) and V(d) and the actions taken to correct them.
- i. The Permittee shall keep records of any fugitive dust exceedances identified pursuant to Condition III(b) and V(e) and the actions taken to correct them.
- j. The Permittee shall keep records of the operating conditions, raw data, and results of any testing performed pursuant to Conditions V(f), (g), and (h) for the duration of the operations of the plant at the site.
- k. For each delivery of distillate fuel oil, the owner or operator shall maintain one of the following:
 1. A fuel delivery receipt containing the date, fuel type, and amount of the delivery and certification from the fuel supplier that the fuel delivered was tested in accordance with an appropriate ASTM method (specified in the certification) and met the requirements of Condition III(d); or
 2. A fuel delivery receipt and documentation of sampling and analysis containing the following information:

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- A. The fuel oil type and the ASTM method used to determine the type (see the definition of distillate oil in 40 CFR 60.41c for appropriate ASTM methods);
- B. The weight percent sulfur of the fuel oil as determined using ASTM test method D-4294 or D-5453 or other method approved in advance by the Department;
- C. The date and time the sample was taken;
- D. The name, address, and telephone number of the laboratory that analyzed the sample; and
- E. The test method used to determine the sulfur content.

VII. Reporting Requirements:

- a. Reporting related to any testing required pursuant to Conditions V(f) or (g) shall be performed in accordance with the reporting procedures specified in Condition V(f).
- b. The Permittee shall submit a letter to the following address upon completion of work at the site indicating that work has been completed and that the permit is no longer necessary.

Department of Energy and Environment
Air Quality Division
Attn: Chief, Permitting Branch
1200 First Street, NE
5th Floor
Washington, DC 20002

- c. As part of the letter submitted pursuant to Condition VII(b), the Permittee shall certify that the operations performed under the authority of this permit complied with the conditions of this permit. If substantial deviations occurred, these shall be listed in the letter as exceptions to the certification of compliance.

Approved by:

Stephen S. Ours, P.E.

Date

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Chief, Permitting Branch

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