

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

TO: File

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

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SUBJECT: **Source Category Permit No. 7123-SC-R1 to Construct and Operate
Temporary Portable Concrete Plants**

DATE: June 30, 2021

BACKGROUND INFORMATION

The Air Quality Division (AQD) of the Department of Energy and Environment (“the Department”) has developed a source category permit for owners or operators to construct and operate temporary portable concrete plants. This source category permit will expedite the permitting process by simplifying permitting paper work, not requiring a notice and comment period for each portable concrete plant application, and reducing Department permit review time. The source category permit includes the requirements of all relevant District of Columbia (“District”) and federal air quality laws and regulations for this category of source. The source category permit limits the size and duration of the operations approvable under the permit to those expected to be non-controversial.

All portable concrete plants constructed and operated in the District of Columbia are potential sources of air pollution and are required to obtain a source category permit from the Department pursuant to 20 DCMR 200.

The current source category permit is scheduled to expire on October 27, 2021. Prior to its expiration the Department needs to provide a new permit under which applicants may apply for coverage prior to the expiration of the existing permit. Issuing this permit renewal ahead of expiration of the old permit (No. 7123-SC), will allow the Department and the various previously permitted entities time to transition into the new permit. The old permit will not be cancelled or amended, but will rather expire on its scheduled expiration date. Once this renewed permit (No. 7123-SC-R1) is issued, it will be used exclusively for new applications.

TECHNICAL INFORMATION

This source category permit is applicable to owners and operators of portable concrete plants in the District of Columbia who submit an application to AQD and are approved for coverage under this permit, either actively or by passive approval which will occur 45 days

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after submission of a complete application to AQD unless AQD objects to the approval in writing in that timeframe.

This source category permit covers only the construction and operation of temporary portable concrete plants with a rated production capacity of up to 180 cubic yards of concrete product per hour. A number of limitations have been established to limit the applicability of this source category permit to ensure that potentially controversial or more complicated projects involving portable concrete plants are not covered by this source category permit, but are rather subject to standard case-by-case permitting. In addition to the production rate limitation, the following applicability limitations have been established:

1. Only one portable concrete plant may be operated at the facility at a time;
2. 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 must submit a new application for renewal at least 45 days prior to expiration of the initial approval;
3. The portable concrete plant will operate for no more than one 8-hour shift per day;
4. The total production of the plant will not exceed 400,000 cubic yards in any consecutive 12 month period.
5. The portable concrete plant's potential to emit (PTE) particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀) is less than 15 tons per year (TPY);
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 source category permit 7123-SC.

For equipment not covered by this source category permit (or other source category permits), if any entity owns, operates, or plans to install any equipment of this sort, they should consult with AQD to determine the applicability of any other permitting requirements pursuant to 20 DCMR 200. The main phone number for AQD is (202) 535-2250.

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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EMISSIONS ESTIMATES

AQD has placed several limitations on the size and production capacity of the equipment covered by this permit including:

1. A maximum production rate of 180 cubic yards per hour;
2. Only one portable concrete plant at a site at a time;
3. Operations are limited to one 8-hour shift per day; and
4. Total plant production is limited to 400,000 cubic yards in any consecutive 12-month period.

Based on calculations using AP-42 factors, these limits limit emissions below the New Source Review (NSR) threshold of 15 tons per year of particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀). They also limit emissions of total particulate matter below 40 pounds per hour to ensure compliance with 20 DCMR Chapter 6, Appendix 6-1.

Additionally, emissions of combustion products (NO_x, CO, PM and VOC) would be emitted from any fuel-burning hot water heater or boiler employed by the process. However, this permit has limited the size of any such hot water heater or boiler to less than 5 MMBTU/hr and has limited possible fuels to natural gas and No. 2 fuel oil (distillate). 20 DCMR 200.14 exempts such equipment from Chapter 2 permitting requirements due to its insignificant emissions potential. As such, AQD has not fully assessed the potential emissions from this aspect of the allowable equipment, but they can reasonably be assumed to be minimal. If one used AP-42 emission factors and assumed that the fuel used were ultra-low sulfur (0.0015% sulfur by weight maximum) No. 2 fuel oil (generally the higher emitting of the fuels allowed), the potential to emit given the operating hour restrictions on the site, would be 0.17 tons per year (TPY) of total particulate matter, 1.04 TPY of NO_x, 0.26 TPY of CO, 0.018 TPY of VOC, and 0.011 TPY of SO_x.

REGULATORY REVIEW

The regulatory review for the source category permit is not significantly impacted by this source category permit renewal.

The details of the regulatory review are available in the Technical Supporting Memorandum for the existing Source Category Permit No. 7123-SC dated September 7, 2016 and are available on the Department's website at: <https://doee.dc.gov/node/1188905> (see "Attachment(s)" near the bottom of the page).

There has been one substantive change from the previous permit language incorporated into the

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new permit. Language has been included in Condition III(f) (related to visible emissions limits) that there is an outstanding call for a State Implementation Plan (SIP) revision from EPA that may result in revision to 20 DCMR 606. As such, if the regulation is changed, the new regulatory requirements will supersede those expressed in the permit specifically.

RECOMMENDATIONS

The public notice announcement has been submitted to the D.C. Register for publication in the July 9, 2021 edition. The draft permit is available for public comment through August 9, 2021. Pursuant to 20 DCMR 210, the public notice will also be sent to EPA Region III and affected states (VA, MD, and WV).

The attached proposed permit complies with all applicable federal and District air pollution control laws and regulations. I recommend that the attached source category permit No. 7123-SC-R1 be issued upon completion of the public review period, assuming no adverse comments are received.

If adverse comments are received, such comments will be addressed prior to issuance of any final permit for this source category.

ATH