

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

TO: File

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**SUBJECT: Source Category Permit No. 7123-SC-R2 to Construct and Operate
Temporary Portable Concrete Plants**

DATE: May 4, 2026

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 paperwork, 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 August 15, 2026. 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-R1), 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-R2) 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 after submission of a complete application to AQD unless AQD objects to the approval in writing in that timeframe.

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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. Any diesel engine² used to power the plant shall be a 2007 model year or newer unit with a displacement of less than 10 liters per cylinder and shall not have a mechanical power output in excess of 300 bhp gross engine power output (prime rating); and
8. The portable concrete plant must be constructed and operated in compliance with all conditions of source category permit 7123-SC-R2.

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

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.

² This source category permit covers only plants powered by diesel engines that do not have a mechanical power output in excess of 300 bhp gross engine power output, if engine power is needed. Any natural gas engines or engines using other fuels must be permitted separately. Any diesel engines larger than the 300 bhp cutoff must likewise be permitted separately.

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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.

ESTIMATED EMISSIONS

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. Based on these calculations, excluding any boiler or generator,

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 of the concrete mixing equipment plus any boiler, given the operating hour restrictions on the site (8 hours per day, which equates to 2,920 hours per year), 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.

Similarly, worst case emissions from a diesel engine, operating the maximum allowable 8 hours per day, and using the emission standard for the oldest allowable engine of this size (model year 2007, Tier 2 emission standards), potential to emit is estimated to be 4.51 TPY NO_x, 2.51 TPY CO, 0.005 TPY SO_x, 0.14 TPY total particulate matter, and 0.24 TPY VOC.

Summing the potential to emit for all allowable equipment equates to the values in the following

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table:

Pollutant	Potential Emissions (tons per year)
Total Particulate Matter (PM Total)	0.31
Oxides of Sulfur (SO _x)	0.016
Oxides of Nitrogen (NO _x)	5.55
Volatile Organic Compounds (VOC)	0.26
Carbon Monoxide (CO)	2.77

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements:

Any portable concrete plant is a potential air pollution source, especially for particulate matter. Similarly, the non-emergency generator set being authorized under this iteration of this source category permit would produce products of combustion and not be exempt from Chapter 2 permitting. Thus a Chapter 2 permit is required for the installation and operation of such equipment. In this case, this source category permit is being proposed to allow applicants to obtain such a permit under 20 DCMR 200.8, which covers the establishment and use of source category permits.

20 DCMR Chapter 2, Section 204: Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review):

The trigger (significant) threshold for PM₁₀ for New Source Review (NSR) is 15 tons per year of emissions. Using AP-42 factors, AQD calculated (with a safety margin) that if the project were limited to production of 400,000 cubic yards of concrete per year as well as no more than 180 cubic yards per hour and no more than 8 hours of operation per day, there would be no danger of exceeding the 15 ton per year NSR trigger threshold.

Similarly, the “significant” threshold of 25 TPY of NO_x will not be exceeded, even with the addition in this iteration of this permit of an allowance to install a non-emergency generator set to support the project.

Sufficient limitations to ensure that these thresholds are not exceeded have been established in the permit.

20 DCMR Chapter 2, Section 209: Permit Requirements for Non-Major Stationary Sources (Minor New Source Review):

Based on AP-42 factors, many of the sources subject to this source category permit would have the potential to emit greater than 5 TPY of PM₁₀, thus triggering the applicability of this regulation. However, AQD has determined that properly maintaining baghouses or other particulate filters, all with particulate matter control efficiencies of 99.9% or greater on the mixer or truck loading systems as well as any silo loading operations would meet the requirements of this regulation for this type of equipment.

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Additionally, treating the non-emergency engine separately, since, outside of this source category permit, it would typically be permitted as a separate source, by limiting its size to 300 hp and its age to model year 2007 and newer, worst case NO_x emissions would be 4.51 TPY, which is below the 5 TPY threshold for applicability of this regulation.

20 DCMR 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 (gr/dscf) of the exhaust.

In addition to the aforementioned 0.03 gr/dscf limit, 20 DCMR 603.1 also references 20 DCMR Chapter 6, Appendix 6-1 as applicable to particulate processes. In AQD's experience, portable concrete mixing plants located in the District typically produce concrete at rates exceeding 60,000 pounds (30 tons) per hour. This means that the maximum particulate matter emission rate allowed under Appendix 6-1 is 40 lbs/hr. Using AP-42 factors (<https://www3.epa.gov/ttnchie1/ap42/>) for Concrete Batching (see section 11.12) AQD has estimated that a facility would need to produce 369.58 tons of concrete (approximately 183.69 cubic yards) to produce 40 pounds of total particulate matter emissions. As such, AQD has established the 180 cubic yards per hour maximum size limitation for units to be covered by this source category permit.

To ensure that covered units meet the aforementioned particulate matter emissions standards, any applicant must use a baghouse with filters rated at or above 99.9% efficiency for control of particulate matter to control emissions from mixer or truck loading. Similarly, emissions from cement and cement supplement loading to silos via pneumatic conveying must be controlled by 99.9% efficient baghouses or other properly sized particulate filters. Differential pressure ranges must be specified in the application based on manufacturer's specifications or otherwise justified and approved by the Department. Subsequently, the owner or operator must monitor the differential pressure across the filters to ensure that the filters are properly maintained and operating.

The owner or operator must keep a set of replacement filters for each of the dust collectors on site to ensure that identified filter failures can be corrected promptly. Additionally, to ensure the equipment is maintained, differential pressure monitoring, visible emissions monitoring, and records of maintenance are required in the permit.

20 DCMR Chapter 6, Section 605: Particulates

The visible emissions limitations of 20 DCMR 605 are applicable to temporary portable concrete mix equipment and related facility operations. Reasonable precautions shall be taken to minimize the emissions of any fugitive dust into the outdoor atmosphere. These requirements are found in Conditions III(a) and (b) of this permit. The operational requirements are found in Condition IV(f). The facility must monitor the site for compliance per Condition V(j) and maintain records of deviations per Condition VI(i).

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20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 and 606.2 are applicable to this portable concrete mix plant as well as any associated boiler or generator. Visible emissions shall not be emitted into the outdoor atmosphere from the operation except that discharges shall be permitted for two (2) during any start-up, cleaning, adjustment of combustion or operational controls, or regeneration of emissions control equipment; provided, that such discharges shall not exceed 20% opacity from any boiler and 27% opacity from all other equipment covered by the permit. This requirement is contained in Condition III(g). Monitoring for compliance is required pursuant to Condition V(c). Records of any deviation must be kept pursuant to Condition VI(g).

Additionally, the maintenance, operational, and training requirements of 20 DCMR 606.4 are incorporated into Conditions IV(j), (k), (l), and (m). Condition V(k) requires the investigation of malfunctions as required in 20 DCMR 606.5(b). The record keeping requirements of 20 DCMR 606.5 are found in Condition VI(l).

20 DCMR 801 – Sulfur Content of Fuel Oils:

This regulation limits fuel oil sulfur content to 1% by weight in all circumstances. However, there is a more stringent limit for commercial fuel oil in 20 DCMR 801.3, which would be the oil used by any hot water boiler used under this permit. This limit is 0.0015% by weight (15 ppm) sulfur. This requirement is contained in Condition IV(g).

The only portion of 20 DCMR 801 applicable to engines authorized under this permit is the 1% sulfur content limit found in 20 DCMR 801.1. This requirement is streamlined with the more stringent requirements found in 40 CFR 60.4207(b) and included in Condition IV(h) of the permit.

Compliance with the sulfur-in-fuel standards is determined by monitoring or testing required pursuant to Condition VI(k).

20 DCMR 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 III(h) of the permit. Condition III(h) incorporates the affirmative defense provision of 20 DCMR 903.13(b). This condition also notes that these requirements are District enforceable only. This type of facility is not subject to this regulation’s requirements to develop an odor control plan (OCP) at this time.

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

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40 CFR 60, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

This federal regulation is applicable to the generator engines authorized under this source category permit. These generators are powered by compression ignition non-emergency engines. The emissions standards of this regulation are found in Condition III(f). This condition is written to generally reference the relevant emission standards to allow for variation in generator engines used, while ensuring that relatively well-controlled engines are used (2007 model year and newer).

The sulfur content of the diesel fuel requirement has been placed in Condition IV(h), consistent with 40 CFR 60.4207(b). Compliance with the fuel standard is determined by monitoring or testing required pursuant to Condition VI(k).

40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Engines

This subpart does not apply to engines authorized under this permit because this permit authorizes only diesel-fueled units subject to Subpart IIII. From past experience, engines used for this purpose are seldom spark ignition engines, so this permit has not been written to countenance such engines. However, if a case were to occur where a spark ignition engine were preferred by the applicant, the could apply for a separate permit under Chapter 2 for the desired unit.

40 CFR 60, Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Ignition Internal Combustion Engines

All engines authorized under this permit are stationary reciprocating internal combustion engine (RICE) at area sources of hazardous air pollutants (HAPs), so this regulation is applicable to the units. However, because this permit has been written to allow only model year 2007 and newer diesel-fired engines to be used, pursuant to 40 CFR 63.6590(c)(1), the only requirement of this subpart is to comply with 40 CFR 60, Subpart IIII, discussed above. As such, Subpart ZZZZ is not referenced in the permit document.

RECOMMENDATIONS

The public notice announcement has been submitted to the D.C. Register for publication in the May 15, 2026 edition. The draft permit is available for public comment through June 15, 2026. 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-R2 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

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final permit for this source category.

SSO/PMJ