**Source Category Permit to Operate an Area Source Dry Cleaning Facility Using Perchloroethylene**

Permit No. 6866-SC-R1

May 21, 2019

I. Applicability:

a. This source category permit is applicable to all area source dry cleaning establishments using perchloroethylene (also known as tetrachloroethylene or perc or PCE) as a dry cleaning solvent in the District of Columbia who submit an application to the Department of Energy and Environment (“DOEE” or “the Department”), Air Quality Division (“AQD”) and are approved for coverage under this permit, either actively or by passive approval which will occur 30 days after submission of the application to AQD unless AQD objects to the approval in writing in that timeframe.

b. This source category permit covers only the equipment at the facility using perchloroethylene as a dry cleaning solvent. It does not cover other equipment regulated under Title 20 of the District of Columbia Municipal Regulations (20 DCMR) including boilers, generators and any other equipment at the facility capable of emitting air pollutants. 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.

c. This source category permit does not cover major source dry cleaning establishments emitting more than 10 tons per year of perchloroethylene. This equates to a facility using only dry-to-dry machines and purchasing greater than 2,100 gallons of perchloroethylene yearly. Any such sources should apply for a facility-specific permit from the Department, unless a separate source category permit is issued for that category of sources.

d. This source category permit does not permit installation of new dry cleaning machines designed to use perchloroethylene or n-propyl bromide as a cleaning agent for clothes or other fabrics. Such installations are prohibited after January 1, 2014 by D.C. Official Code § 8-108.03.

e. This source category permit is not applicable to any dry cleaning establishment proposing to use perchloroethylene or n-propyl bromide as a cleaning agent for clothes or other fabrics that is located within 200 feet of an existing child-occupied facility[[1]](#footnote-1), except where the dry cleaning establishment used such cleaning agents within 90 days before April 20, 2013. [D.C. Official Code § 8-108.03(d)(2)]

f. After December 21, 2020, any owner or operator of a dry cleaning establishment using perchloroethylene in a dry cleaning system that is located in a building with a residence shall no longer be eligible for coverage by this source category permit. [40 CFR 63.322(o)(5)(i)]

II. General Requirements:

a. The dry cleaner facility shall be operated in accordance with the air pollution control requirements of 20 DCMR and Title 40, Chapter 63, Subpart M of the Code of Federal Regulations (CFR).

b. This permit expires on May 20, 2024 [20 DCMR 200.4] unless superseded prior to that date. If an applicant covered by this permit wishes to continue operation after this date, the owner or operator shall submit an application for renewal by February 20, 2024.

c. If ownership of a facility changes a new permit application must be submitted by the new owner in order for the facility to remain covered by this permit.

d. 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; [20 DCMR 500.3]

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit; [20 DCMR 502.4]

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; [20 DCMR 500.3] 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. [20 DCMR 502.1]

f. Failure to comply with the provisions of this permit may be grounds for suspension or revocation with respect to a covered facility. [20 DCMR 202.2]

g. A copy of this permit shall be kept on the premises of each covered facility and produced upon request. [20 DCMR 101.1]

III. Emission Limits:

a. Visible emissions shall not be emitted into the outdoor atmosphere from this equipment. [20 DCMR 201 and 606.1]

b. 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]

c. Emissions of perchloroethylene shall not exceed 10 tons in any given 12 month rolling period from any facility covered by this permit. Note that 10 tons of emissions equates to 2,100 gallons of perchloroethylene usage in dry-to-dry machines.

d. After December 21, 2020, the owner or operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is located in a building with a residence. [40 C.F.R. § 63.322(o)(5)(i)]

IV. Operational Requirements:

a. Dry cleaning facilities must meet the operational requirements of this condition if they meet the following qualifications: 1) Less than 140 gallons of perc has been purchased in the past 12 consecutive months for the facility and you anticipate purchasing less than 140 gallons of perc during all future 12-month periods; and 2) the machine was constructed before December 9, 1991.

1. The owner/operator shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine, and shall keep the door closed at all other times. [40 C.F.R. § 63.322(c)]

2. The owner/operator shall operate and maintain each dry cleaning system according to the manufacturers’ specifications and recommendations. [40 C.F.R. § 63.322(d)]

3. The owner/operator shall drain all cartridge filters in their housing, or other sealed containers, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility. [40 C.F.R. § 63.322(i)]

4. The owner/operator shall store all perchloroethylene and wastes that contain perchloroethylene in solvent tanks or solvent containers with no perceptible leaks, with the exception being that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [40 C.F.R. § 63.322(j)]

5. The owner/operator shall inspect the system bi-weekly for perceptible leaks while the dry cleaning system is operating. Inspection with a halogenated hydrocarbon detector or perchloroethylene gas analyzer also fulfills the requirements for inspection for perceptible leaks. The following compartments shall be inspected [40 C.F.R. § 63.322(k)]:

1. Hose and pipe connections, fittings, couplings, and valves;
2. Door gaskets and seatings;
3. Filter gaskets and seatings;
4. Pumps;
5. Solvent tanks and containers;
6. Water separators;
7. Muck cookers;
8. Stills;
9. Exhaust dampers;
10. Diverter valves; and
11. All Filter housings

6. The owner/operator shall repair all leaks detected under Conditions IV(a)(5) or (7)(A), within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 C.F.R. § 63.322(m)]

7. Additional requirements:

1. The owner/operator of a dry cleaning system shall inspect the components listed in subparagraph (5) for vapor leaks monthly while the component is in operation. [40 C.F.R. § 63.322(o)(1)]
2. The inspection shall be conducted using a halogenated hydrocarbon detector or perchloroethylene gas analyzer that is operated according to the manufacturer’s instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery. [40 C.F.R. § 63.322(o)(1)(i)]
3. The inspection shall satisfy the requirement to conduct an inspection for perceptible leaks under subparagraph (5) or (6). [40 C.F.R. § 63.322(o)(1)(iii)]
4. The owner/operator shall not operate a transfer machine. [40 C.F.R. § 63.322(o)(3)]
5. The owner/operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is installed (including relocation of a used machine) after December 21, 2005, and that is located in a building with a residence. [40 C.F.R. § 63.322(o)(4)]
6. After December 21, 2020, the owner/operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is located in a building with a residence. [40 C.F.R. § 63.322(o)(5)(i)]

b. All other facilities and dry cleaning machines must comply with the following operating requirements:

1. The owner/operator shall comply with one of the following [40 C.F.R. § 63.322(a)]::

A. Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or an equivalent control device; or

B. Route the air-perchloroethylene gas vapor stream contained within each dry cleaning machine through a carbon adsorber installed on the dry cleaning machine prior to September 22, 1993. If this carbon adsorber can no longer work effectively, then you must install a refrigerated condenser to be used as a perc control device.

2. The owner/operator shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine, and shall keep the door closed at all other times. [40 C.F.R. § 63.322(c)]

3. The owner/operator shall operate and maintain each dry cleaning system according to the manufacturers’ specifications and recommendations. [40 C.F.R. § 63.322(d)]

4. Each refrigerated condenser used to comply with Condition IV(b)(1) and installed on a dry-to-dry machine, dryer, or reclaimer shall [40 C.F.R. § 63.322(e)]:

1. Be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating.
2. Be monitored according to Condition V(b)(1).
3. Prevent air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser.

5. Each carbon adsorber used for the purposes of complying with Condition IV(b)(1) shall [40 C.F.R. § 63.322(g)]:

1. Not be bypassed to vent or release any air-perchloroethylene gas-vapor stream to the atmosphere at any time.
2. Shall be monitored according to the applicable requirement according to Condition V(b)(2).

6. The owner/operator shall drain all cartridge filters in their housing, or other sealed containers, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility. [40 C.F.R. § 63.322(i)]

7. The owner/operator shall store all perchloroethylene and wastes that contain perchloroethylene in solvent tanks or solvent containers with no perceptible leaks, with the exception being that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [40 C.F.R. § 63.322(j)]

8. The owner/operator shall inspect the system weekly for perceptible leaks while the dry cleaning system is operating. Inspection with a halogenated hydrocarbon detector or perchloroethylene gas analyzer also fulfills the requirements for inspection for perceptible leaks. The following compartments shall be inspected [40 C.F.R. § 63.322(k)]:

A. Hose and pipe connections, fittings, couplings, and valves;

1. Door gaskets and seatings;
2. Filter gaskets and seatings;
3. Pumps;
4. Solvent tanks and containers;
5. Water separators;
6. Muck cookers;
7. Stills;
8. Exhaust dampers;
9. Diverter valves; and
10. All filter housings

9. The owner/operator shall repair all leaks detected under Conditions IV(b)(8) or (11)(A), within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 C.F.R. § 63.322(m)]

10. If parameter values monitored under Condition IV(b)(4) or (5) do not meet the values specified in Condition V(b)(1) or (2) adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within 2 working days of detecting such parameter value. Such repair parts shall be installed within 5 working days after receipt. [40 C.F.R. § 63.322(n)]

11. Additional requirements [40 C.F.R. § 63.322(o)]:

1. The owner/operator of a dry cleaning system shall inspect the components listed in Condition IV(b)(8) for vapor leaks monthly while the component is in operation.

i. The inspection shall be conducted using a halogenated hydrocarbon detector or perchloroethylene gas analyzer that is operated according to the manufacturer’s instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery.

1. The inspection shall satisfy the requirement to conduct an inspection for perceptible leaks under subparagraph (8).
2. The owner/operator of each dry cleaning system installed after December 21, 2005, shall route the air- perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air- perchloroethylene gas-vapor stream from inside the dry cleaning machine drum through a non-vented carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened. The carbon adsorber must be desorbed in accordance with manufacturer’s instructions.
3. The owner/operator shall not operate a transfer machine.
4. The owner/operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is installed (including relocation of a used machine) after December 21, 2005, and that is located in a building with a residence.
5. If the dry cleaning facility is located in a building with a residence, then the owner/operator shall eliminate any emission of perchloroethylene from any dry cleaning system after December 21, 2020.

V. Monitoring and Testing Requirements:

a. Dry cleaning facilities must meet the monitoring and testing requirements of this condition if they meet the following qualifications: 1) Less than 140 gallons of perc has been purchased in the past 12 consecutive months for the facility and you anticipate purchasing less than 140 gallons of perc during all future 12-month periods; and 2) the machine was constructed before December 9, 1991.

1. When calculating yearly perchloroethylene consumption, the owner/operator shall perform the following calculation on the first day of every month [40 C.F.R. § 63.323(d)]:

* + - * 1. Sum the volume of all perchloroethylene purchases made in each of the previous 12 months, as recorded in the log described in Condition VI(a)(1).
        2. If no perchloroethylene purchases were made in a given month, then the perchloroethylene consumption for that month is zero gallons.
        3. The total sum calculated in Condition V(a)(1) is the yearly perchloroethylene consumption at the facility.

b. All other facilities and dry cleaning machines must comply with the following monitoring and testing requirements:

1. When a refrigerated condenser is used to comply with Condition IV(b)(1) the owner/operator shall monitor on a weekly basis the parameters in either Condition V(b)(1)(A) or (B) below [40 C.F.R. § 63.323(a)]:

A. The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer’s operating instructions; or

B. The temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer with a temperature sensor to determine if it is equal to or less than 7.2 °C (45 °F) before the end of the cool-down or drying cycle while the gas-vapor stream is flowing through the condenser. The temperature sensor shall be used according to the manufacturer’s instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ±1.1 °C (±2 °F).

2. When a carbon adsorber is used to comply with Condition IV(b)(1), the owner/operator shall measure the concentration of perchloroethylene in the exhaust of the carbon adsorber weekly with a colorimetric detector tube or perchloroethylene gas analyzer. The measurement shall be taken while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber or removal of the activated carbon to determine that the perchloroethylene concentration in the exhaust is equal to or less than 100 parts per million by volume. The owner/operator shall [40 C.F.R. § 63.323(b)]:

* + - * 1. Use a colorimetric detector tube or perchloroethylene gas analyzer designed to measure a concentration of 100 parts per million by volume of perchloroethylene in the air to an accuracy of ±25 parts per million by volume.
        2. Use the colorimetric detector tube or perchloroethylene gas analyzer according to the manufacturer’s instructions.
        3. Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other intlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

3. When calculating yearly perchloroethylene consumption, the owner/operator shall perform the following calculation on the first day of every month [40 C.F.R. § 63.323(d)]:

* + - * 1. Sum the volume of all perchloroethylene purchases made in each of the previous 12 months, as recorded in the log described in VI(b)(1).

B. If no perchloroethylene purchases were made in a given month, then the perchloroethylene consumption for that month is zero gallons.

C. The total sum calculated in Condition V(b)(3) is the yearly perchloroethylene consumption at the facility.

VI. Record Keeping and Reporting Requirements:

a. Dry cleaning facilities must meet the record keeping and reporting requirements of this condition if they meet the following qualifications: 1) Less than 140 gallons of perc has been purchased in the past 12 consecutive months for the facility and you anticipate purchasing less than 140 gallons of perc during all future 12-month periods; and 2) the machine was constructed before December 9, 1991.

1. Each owner/operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information and maintain such information on site and show it upon request for a period of 5 years:

A. The volume of perchloroethylene purchased each month by the dry cleaning facility as recorded from perchloroethylene purchases; if no perchloroethylene is purchased during a given month then the owner/operator would enter zero gallons into the log. [40 C.F.R. § 63.324(d)(1)]

B. The calculation and result of the yearly perchloroethylene consumption determined on the first day of each month as described in Condition V(a)(1). [40 C.F.R. § 63.324(d)(2)]

C. The dates when the dry cleaning system components are inspected for leaks, as specified in Condition IV(a)(5) or (a)(7)(A), and the name or location of dry cleaning system components where leaks are detected. [40 C.F.R. § 63.324(d)(3)]

D. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with Condition IV(a)(6). [40 C.F.R. § 63.324(d)(4)]

E. Each owner or operator of a dry cleaning facility shall retain onsite a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility. [40 C.F.R. § 63.324(e)]

b. All other facilities and dry cleaning machines must comply with the following record keeping and reporting requirements:

1. Each owner/operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information and maintain such information on site and show it upon request for a period of 5 years:

A. The volume of perchloroethylene purchased each month by the dry cleaning facility as recorded from perchloroethylene purchases; if no perchloroethylene is purchased during a given month then the owner/operator would enter zero gallons into the log. [40 C.F.R. § 63.324(d)(1)]

B. The calculation and result of the yearly perchloroethylene consumption determined on the first day of each month as described in Condition V(b)(3). [40 C.F.R. § 63.324(d)(2)]

C. The dates when the dry cleaning system components are inspected for leaks, as specified in Condition IV(b)(8) or (b)(11)(A), and the name or location of dry cleaning system components where leaks are detected. [40 C.F.R. § 63.324(d)(3)]

D. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with Condition IV(b)(9) and (b)(10). [40 C.F.R. § 63.324(d)(4)]

E. The date and monitoring results (temperature sensor or pressure gauge) as specified ion Condition V(b)(1), if a refrigerated condenser is used to comply with Condition IV(b)(1) or (b)(11). [40 C.F.R. § 63.324(d)(5)]

F. The date and monitoring results as specified in Condition V(b)(2) when a carbon adsorber is used to comply with Condition IV(b)(1). [40 C.F.R. § 63.324(d)(6)]

G. Each owner or operator of a dry cleaning facility shall retain onsite a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility. [40 C.F.R. § 63.324(e)]

2. If, at any time, the facility identifies that its perchloroethylene usage has exceeded 2,100 gallons over a 12 month period, this will be considered an exceedance of the requirements of Condition III(c) and the facility must be reclassified as a major source and is no longer covered under this source category permit. Within 30 days of discovering this fact, the owner or operator shall apply for a major source dry cleaner permit from the Department. The Department may grant an extension to this deadline if requested by the owner or operator to provide additional time to prepare the permit application. During the period between exceeding the above perchloroethylene usage threshold and obtaining a major source dry cleaner permit, the owner or operator must comply with the applicable requirements of 40 C.F.R. Part 63, Subpart M.

Approved by:

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Stephen S. Ours, P.E. Date

Chief, Permitting Branch

Air Quality Division

SSO:OA

1. A “child-occupied facility” means a building, or portion of a building, which, as part of its function, receives children under 6 years of age on a regular basis and is required to obtain a certificate of occupancy as a precondition to performing that function. The term “child-occupied facility” includes a daycare center, nursery, preschool center,

   kindergarten classroom, child development center, child development home, child development facility, child-placing agency, infant care center, or similar entity. The location of a child-occupied facility as part of a larger structure does not make the entire structure a child-occupied facility. Only the portion of the facility occupied or regularly visited by children 6 years of age shall be considered the child-occupied facility. [D.C. Official Code § 8-108.03(c)] [↑](#footnote-ref-1)