

Office of Environmental Assistance and Protection

SUMMARY OF NESHAP CONDITIONS

[FOR DRY CLEANERS USING PERCHLOROETHYLENE (PERC)]

The following summary conditions pertain to all Dry-to-Dry machines currently operating in Forsyth County, installed, erected, or fabricated onsite after December 9, 1991, using refrigerated condensers, and that are not major sources (they do not use more than 8000 liters or 2,100 gallons of PERC in any consecutive 12 month period). The information in brackets shows the underlying Federal rule citation on which the conditions are based.

There are neither transfer machines nor machines without refrigerated condensers in Forsyth County. Rules pertaining to these two types of operations, as well as rules for major sources, will not be addressed on this document. Although great care was taken in trying to simplify the rules into the below list of conditions, owners\operators are not shielded from enforcement action should these conditions be incomplete. Go to the [Electronic Code of Federal Regulations](#) to read the Federal NESHAP rules in their entirety.

As of December 31, 2007 and unless stated otherwise by alternate dates within the conditions below, the owner or operator of each dry-to-dry cleaning machine system located at an area source (use less than 2100 gallons of PERC a year) and located in Forsyth County, North Carolina must comply with the following:

- 1) Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or an equivalent control device. Each refrigerated condenser used for this purpose shall: [63.322(a) (1)] [63.322(e)] [63.323(a)(1):
 - a) 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 is rotating.
 - b) Prevent air drawn into the dry cleaning machine when the door is open from passing through the refrigerated condenser.
 - c) Monitor the following parameters on a weekly basis: [63.323(a) (1)] (*See condition 12 for recording requirements that are used by the regulatory agency to verify that these monitoring requirements are being followed.*)
 - i) 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 (*note: The rule requires that these instructions be in the facility at all times. This is noted in condition 13.*).
 - ii) If the machine is not equipped with refrigeration system pressure gauges the following shall be monitored using the temperature sensor on the outlet side of the refrigerated condenser: the temperature of the air-perchloroethylene gas-vapor stream on a dry-to-dry machine, dryer, or reclaimer 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 + or - 1.1 °C

- 2) The owner or 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. [63.322(c)]
- 3) The owner or operator of each dry cleaning system shall operate and maintain the system according to the manufacturers' specifications and recommendations. [63.322(d)]
- 4) The owner or operator shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility. [63.322(i)]
- 5) The owner or operator shall store all Perchloroethylene and wastes that contain Perchloroethylene in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [63.322(j)]
- 6) The following components shall be inspected by the owners or operators of both *large*¹ and *small*² facilities for perceptible leaks while the dry cleaning machine is running. Large facilities must be inspected **weekly**. Small facilities are required to be inspected **biweekly** (the Department recommends that they be done weekly). [63.322(k)] [63.322(i)]
 - a) Hose and pipe connections, fittings, couplings, and valves;
 - b) Door gaskets and seatings;
 - c) Filter gaskets and seatings;
 - d) Pumps;
 - e) Solvent tanks and containers;
 - f) Water separators;
 - g) Muck cookers;
 - h) Stills;
 - i) Exhaust dampers;
 - j) Diverter valves; and
 - k) All Filter housings.
- 7) All small and large facilities shall conduct at least one inspection per month of all of the components listed in *condition 6) a through k* above using a halogenated hydrocarbon detector (or the more expensive PCE gas analyzer if the facility owner desires or already has one) that is operated according to manufacturer's instructions. This inspection with the halogenated hydrocarbon detector fulfills the requirement for one of the weekly checks required in *condition 6) a through k* [63.320(b)(1)] [63.322(o)]

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 (warning: be careful not to let the probe touch the machine or the tip may need to be replaced since residue on the tip may make it impossible to calibrate it to "0" even in outside air.).

- 8) The owner or operator of a dry cleaning system shall repair all leaks detected during the perceptible leak check or the halogenated hydrocarbon check 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. [63.322(m)] [see recording requirements in condition 12]

- 9) If parameter values monitored in accordance with *condition 1 c* above do not meet the required values, 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 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. [63.322(n)]
- 10) The owner or operator shall calculate perchloroethylene consumption on the first day of every month in order to determine and verify their source category and the applicable rules. The owner or operator shall perform the following calculation on the first day of every month: [63.323(d)] [see recording requirements in condition 12]
- a) Sum the volume of all perchloroethylene purchases made in the previous 12 months, as recorded in the log described in *condition 12* under the Reporting and Recordkeeping Requirements.
 - 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 as described in 10 (a) and 10(b) above shall be determined to be the yearly perchloroethylene consumption at the facility.
- 11) The owner or operator of each **dry cleaning system installed after December 21, 2005**, at an area source, shall route the air-PCE gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air-PCE 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. [63.322 (o)(2)]

Reporting and Recordkeeping Requirements to Demonstrate Compliance with One or More of the Previous Conditions

- 12) Each owner or operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information. The owner or operator must maintain this information on site for a period of 5 years and show it upon request: [63.324 (d)]
- 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 or operator would enter zero gallons into the log;
 - b) The calculation and result of the yearly perchloroethylene consumption determined on the first day of each month as specified in *condition 10* above;
 - c) The dates when the dry cleaning system components are inspected for leaks, as specified in *condition 6* above, and the name or location of dry cleaning system components where leaks are detected;
 - d) The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with *condition 8* or *condition 9*;

- e) The date and temperature sensor monitoring results, as specified in *condition 1 c* , if a refrigerated condenser is used per *condition 1*;

NOTE: The standards set forth in this condition appear to be intended for machines installed after December 9, 1991 but before December 21, 2005. Carbon Adsorbers are not required on these machines. However, many machines have carbon adsorbers installed in addition to the refrigerated condensers. This condition (12 e) somewhat contradicts the requirement of condition 1(c)(i) to read pressure gauges during the drying phase as the preferred monitoring preference. It is only on machines installed after December 21, 2005 that carbon adsorbers are required control devices on dry cleaning machines. From the Department's conversations with other agencies, it has come to the conclusion that reading pressure ranges is most advantageous for determining the proper functionality of the machines especially when a carbon adsorber is used as a control device. Therefore, recording pressure ranges is encouraged over temperature readings for all machines. However, based on this condition and until EPA writes the rule more clearly, the Department believes its agents must accept temperature sensor readings for machines installed before December 21, 2005 even if they have pressure gauges readily visible. However, the Department encourages owner\operators to switch to pressure range readings instead of temperature readings, especially if a carbon adsorber is being used, since it is a better tool for optimizing the operation of the machinery.

- f) The date and monitoring results, as specified in *condition 1 c*, if a carbon adsorber is used in lieu of a refrigerated condenser, if a carbon adsorber is used at a major source, or if the machine is installed after December 21, 2005 and requires the use of the carbon adsorber to filter the air in the drum before the door is opened. *NOTE: Although this is similar to condition 12 e above, notice it states monitoring results and does not mention the type of sensor to monitor. This indicates that the priorities shown in the rule (condition 1 c) should be followed. In other words, instead of temperatures, pressure readings should be compared to the ranges outlined in the manual unless the pressure gauges are inaccessible.*

- 13)** 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 control device located at the dry cleaning facility. [63.324 (e)]
- 14)** Each owner or operator of a dry cleaning facility shall submit to the Administrator or delegated authority by registered mail on or before July 28, 2008 a notification of compliance status providing the following information and signed by a responsible official certifying its accuracy: [63.324 (f)]
- a) The name and address of the owner or operator;
 - b) The address (that is, physical address) of the dry cleaning facility;
 - c) If they are located in a building with a residence(s), even if the residence is vacant at the time of this notification;
 - d) If they are located in a building with no other tenants, leased space, or owner occupants;
 - e) Whether they are a major or area source;
 - f) The yearly PCE solvent consumption based upon the yearly solvent consumption calculated according to condition 10 above;
 - g) Whether or not they are in compliance with each applicable requirement set forth in these conditions; and
 - h) All information contained in the statement is accurate and true.