

## **15A NCAC 02D .0945    PETROLEUM DRY CLEANING**

(a) For the purpose of this Rule, the following definitions apply:

- (1) "Cartridge filter" means perforated canisters containing filtration paper or filter paper and activated carbon that are used in a pressurized system to remove solid particles and fugitive dyes from soil-laden solvent, together with the piping and ductwork used in the installation of this device.
- (2) "Containers and conveyors of solvent" means piping, ductwork, pumps, storage tanks, and other ancillary equipment that are associated with the installation and operation of washers, dryers, filters, stills, and settling tanks.
- (3) "Dry cleaning" means a process for the cleaning of textiles and fabric products in which articles are washed in a non-aqueous solution (solvent) and then dried by exposure to a heated air stream.
- (4) "Dryer" means a machine used to remove petroleum solvent from articles of clothing or other textile or leather goods, after washing and removing of excess petroleum solvent, together with the piping and ductwork used in the installation of this device.
- (5) "Perceptible leaks" means any petroleum solvent vapor or liquid leaks that are conspicuous from visual observation or that bubble after application of a soap solution, such as pools or droplets of liquid, open containers of solvent, or solvent laden waste standing open to the atmosphere.
- (6) "Petroleum solvent" means organic material produced by petroleum distillation comprising a hydrocarbon range of eight to 12 carbon atoms per organic molecule that exists as a liquid under standard conditions.
- (7) "Petroleum solvent dry cleaning" means a dry cleaning facility that uses petroleum solvent in a combination of washers, dryers, filters, stills, and settling tanks.
- (8) "Settling tank" means a container which gravimetrically separates oils, grease, and dirt from petroleum solvent, together with the piping and ductwork used in the installation of the device.
- (9) "Solvent filter" means a discrete solvent filter unit containing a porous medium which traps and removes contaminants from petroleum solvent, together with the piping and ductwork used in the installation of this device.
- (10) "Solvent recovery dryer" means a class of dry cleaning dryers that employs a condenser to condense and recover solvent vapors evaporated in a closed-loop stream of heated air, together with the piping and ductwork used in the installation of this device.
- (11) "Still" means a device used to volatilize, separate, and recover petroleum solvent from contaminated solvent, together with the piping and ductwork used in the installation of this device.
- (12) "Washer" means a machine which agitates fabric articles in a petroleum solvent bath and spins the articles to remove the solvent, together with the piping and ductwork used in the installation of this device.

(b) This Rule applies to petroleum solvent washers, dryers, solvent filters, settling tanks, stills, and other containers and conveyors of petroleum solvent that are used in petroleum solvent dry cleaning facilities that consume 32,500 gallons or more of petroleum solvent annually.

(c) The owner or operator of a petroleum solvent dry cleaning dryer subject to this Rule shall:

- (1) limit emissions of volatile organic compounds to the atmosphere to an average of 3.5 pounds of volatile organic compounds per 100 pounds dry weight of articles dry cleaned, or
- (2) install and operate a solvent recovery dryer in a manner such that the dryer remains closed and the recovery phase continues until a final recovered solvent flow rate of 50 milliliters per minute is attained.

(d) The owner or operator of a petroleum solvent filter subject to this Rule shall:

- (1) reduce the volatile organic compound content in all filter wastes to 1.0 pound or less per 100 pounds dry weight of articles dry cleaned, before disposal and exposure to the atmosphere; or
- (2) install and operate a cartridge filter and drain the filter cartridges in their sealed housings for 8 hours or more before their removal.

(e) The owner or operator of a petroleum solvent dry cleaning facility subject to this Rule shall inspect the facility every 15 days and shall repair all perceptible leaks within 15 working days after identifying the sources of the leaks. If necessary repair parts are not on hand, the owner or operator shall order these parts within 15 working days and repair the leaks no later than 15 working days following the arrival of the necessary parts. The owner or operator shall maintain records, in accordance with Rule.0903 of this Section, of when inspections were made, what was inspected, leaks found, repairs made and when repairs were made.

(f) To determine compliance with Subparagraph (c)(1) of this Rule, the owner or operator shall use the test method in Section .2600 of this Subchapter and shall:

- (1) field calibrate the flame ionization analyzer with propane standards;
- (2) determine in a laboratory the ratio of the flame ionization analyzer response to a given parts per million by volume concentration of propane to the response to the same parts per million concentration of the volatile organic compounds to be measured;
- (3) determine the weight of volatile organic compounds vented to the atmosphere by:
  - (A) multiplying the ratio determined in Subparagraph (2) of this Paragraph by the measured concentration of volatile organic compound gas (as propane) as indicated by the flame ionization analyzer response output record,
  - (B) converting the parts per million by volume value calculated in Part (A) of this Subparagraph into a mass concentration value for the volatile organic compounds present, and
  - (C) multiplying the mass concentration value calculated in Part (B) of this Subparagraph by the exhaust flow rate, and
- (4) Calculate and record the dry weight of articles dry cleaned. The test shall be repeated for normal operating conditions that encompass at least 30 dryer loads that total not less than 4,000 pounds dry weight and that represent a normal range of variation in fabrics, solvents, load weights, temperatures, flow rates, and process deviations.

(g) To determine compliance with Subparagraph (c)(2) of this Rule, the owner or operator shall verify that the flow rate of recovered solvent from the solvent recovery dryer at the termination of the recovery phase is no greater than 50 milliliters per minute. This one-time procedure shall be conducted for a duration of not less than two weeks during which not less than 50 percent of the dryer loads shall be monitored for their final recovered solvent flow rate. Near the end of the recovery cycle, the flow of recovered solvent shall be diverted to a graduated cylinder. The cycle shall continue until the minimum flow of solvent is 50 milliliters per minute. The type of articles cleaned and the total length of the cycle shall be recorded.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);  
Eff. May 1, 1985;  
Amended Eff. June 1, 2008.*