

**AIR MANAGEMENT REGULATION XIV – CONTROL OF  
PERCHLOROETHYLENE EMISSIONS FROM DRY CLEANING FACILITIES  
(Approved by Air Pollution Control Board – 6-24-10 11-5-10 Draft After 8-12-10  
Hearing)**

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**I. DEFINITIONS:**

- (a) For the purpose of this regulation, the definitions of the Philadelphia Air Management Code and all regulations promulgated thereunder apply.
- (b) For the purpose of this regulation, the following definitions also apply:
  - (1) *Alternative Cleaning Technology.* A textile cleaning technology which may include, but is not limited to: water-based wet cleaning, carbon dioxide (CO<sub>2</sub>) cleaning, decamethylcyclopentasiloxane or volatile methyl siloxane, or petroleum hydrocarbon solvents.
  - (2) *Ancillary Equipment.* The equipment used with a dry cleaning machine in a dry cleaning system including, but not limited to, emission control devices, pumps, filters, muck cookers, stills, solvent tanks, solvent containers, water separators, exhaust dampers, diverter valves, interconnecting piping, hoses and ducts.
  - (3) *Articles.* Clothing, garments, textiles, fabrics, leather goods, and other items that are dry cleaned.
  - (4) *Carbon Adsorber.* An air cleaning device that consists of an inlet for exhaust gases from a dry cleaning machine; activated carbon in the form of a fixed bed, cartridge, or canister, as an adsorbent; an outlet for exhaust gases; and a system to regenerate or reclaim saturated adsorbent.
  - (5) *Cartridge Filter.* A replaceable cartridge filter that contains one of the following as the filter medium: paper, activated carbon, or paper and activated carbon. Cartridge filters include, but are not limited to: standard filters, split filters, "jumbo" filters, adsorptive filters, and all carbon polishing filters. Adsorptive Cartridge Filters contain diatomaceous earth or activated clay.
  - (6) *Closed-loop Machine.* Dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit (also known as a dry-to-dry unit) and which recirculates Perc-laden vapor through a primary

control system (e.g. refrigerated condenser) with no exhaust to the atmosphere during the drying cycle. A closed-loop machine may allow for venting to the ambient air through a local exhaust ventilation system, such as a door fan, after the drying cycle is complete and only while the machine door is open.

- (7) *Co-commercial*. A facility sharing a common wall, floor or ceiling with another commercial or industrial business/site.
- (8) *Co-located*. A facility sharing a common wall, floor or ceiling with a residence/residential site, sensitive facility, commercial business/site, or industrial business/site.
- (9) *Co-residential*. A facility sharing a common wall, floor, or ceiling with a residence/residential site.
- (10) *Co-sensitive*. A facility sharing a common wall, floor, or ceiling with a sensitive facility.
- (11) *Colorimetric Detector Tube*. A glass tube (sealed prior to use), containing material impregnated with a chemical that is sensitive to Perc and is designed to measure the concentration of Perc in air.
- (12) *Condenser*. An air cleaning device that removes condensable vapors by a reduction in the temperature of the exhaust gases or, in the case of a surface condenser, by contact of the exhaust gases with structures that are cooled by a circulating cooling fluid.
- (13) *Cool-down*. The portion of the drying cycle that begins when the heating mechanism deactivates and the refrigerated condenser continues to reduce the temperature of the air recirculating through the drum to reduce the concentration of Perc in the drum.
- (14) *Department*. The City of Philadelphia Department of Public Health.
- (15) *Desorption*. Regeneration or stripping of an activated carbon bed, or any other type of vapor adsorber by removal of the adsorbed solvent using hot air, steam, or other means.
- (16) *Diverter Valve*. A flow control device that prevents room air from passing through a refrigerated condenser when the door of a dry cleaning machine is open.
- (17) *Drum*. The rotating cylinder or wheel of the dry cleaning machine that holds the articles being cleaned.
- (18) *Dry Cleaning Control System*. Equipment or device (e.g., Carbon Adsorber, Refrigerated Condenser, azeotropic unit) used to reduce the amount of air pollutant(s) in an air stream prior to discharge to the atmosphere.
- (19) *Dry Cleaning Equipment*. Any machine, device, or apparatus used to dry clean articles.
- (20) *Dry Cleaning Facility*. An establishment with one or more dry cleaning systems.
- (21) *Dry Cleaning System*. All of the following equipment, devices, and apparatuses associated with the Perc dry cleaning operations: dry cleaning equipment; filter or

purification systems; waste holding, treatment, or disposal systems; Perc supply systems; dip tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges; and dry cleaning control systems.

- (22) *Drying Cycle*. The operation used to actively remove the Perc remaining in the materials after washing and extraction. For closed-loop machines, the heated portion of the cycle is followed by cool-down and may be extended beyond cool-down by the activation of a control system. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum.
- (23) *Drying Sensor*. A device that senses when articles being cleaned are relatively dry and automatically controls the drying cycle. Drying sensors include but are not limited to: infrared analyzers, float switches, and resistance probes. The device detects the concentration of synthetic solvents in the drying air or that the liquid solvent recovery rate is at a minimal rate. The drying sensor extends the drying cycle for a minimum time beyond the activation point to ensure dry articles.
- (24) *Dry-to-Dry Machine*. A one-machine dry cleaning operation in which drying and washing are performed in the same machine.
- (25) *Equivalent Closed-loop Vapor Recovery System*. A device or combination of devices that achieves, in practice, a Perc recovery performance equal to or exceeding that of refrigerated condensers.
- (26) *Facility*. All emission sources located at one or more adjacent or contiguous properties under common control, and owned or operated by the same person or persons.
- (27) *Fifth (5th) Generation Equipment*. A dry cleaning machine with all the features of Fourth Generation Equipment, plus a monitor inside the machine drum and an interlocking system to ensure that the concentration is below approximately 300 ppm before the loading door can be opened.
- (28) *Filter Muck*. The residue from a filter using loose diatomaceous earth, which must be replaced periodically.
- (29) *Fourth (4th) Generation Equipment*. A primary closed-loop refrigerated dry cleaning machine that has a "secondary control system" (e.g., closed-loop refrigerated condenser with a drying sensor and an integral carbon adsorber).
- (30) *Fugitive Emissions*. Emissions of air contaminants which could not reasonably pass through a stack, vent, chimney, or other functionally equivalent opening.
- (31) *General Exhaust Ventilation System*. A mechanical exhaust ventilation system consisting of fresh air makeup inlets and one or more exhaust fans in a Dry Cleaning Facility. This type of system would commonly be used to exhaust a dry cleaning workroom or a room enclosure.
- (32) *Halogenated-hydrocarbon Detector*. A portable device capable of detecting and reporting vapor concentrations of Perc.
- (33) *Hazard*. An event which may result in any Perc release, Perc spill, fire or explosion.

- (34) *Liquid Leak*. A Perc emission which is in a liquid state at the point(s) of discharge into the atmosphere.
- (35) *Major Source*. A Dry Cleaning Facility that emits or has the potential to emit more than 9.1 megagrams per year (10 tons per year) of Perc to the atmosphere. In lieu of measuring a facility's potential to emit Perc or determining a Facility's potential to emit Perc, a Dry Cleaning Facility is a major source if it includes only Dry-to-Dry Machine(s) and has a total yearly Perc consumption greater than 8,000 liters (2,100 gallons).
- (36) *Muck Cooker*. A device for heating filter muck to drive off Perc vapors for reclaiming.
- (37) *Openings*. Any window, door or air intake point.
- (38) *Leak*. Any Perc vapor or liquid leaks that are obvious from the odor of Perc, pools or droplets of Perc or by passing a finger over the surface of the equipment; or as detected by an appropriate portable monitoring instrument.
- (39) *Perc*. A colorless volatile chlorinated hydrocarbon. Perc is also known as perchloroethylene, tetrachloroethylene, tetrachloroethene, and PCE. The chemical formula for Perc is  $\text{Cl}_2\text{C}:\text{CCl}_2$ . The CAS registry number for Perc is 00127-18-4.
- (40) *ppb*. Parts per billion by volume in air or by weight in water.
- (41) *ppm*. Parts per million by volume in air or by weight in water.
- (42) *Portable Gas Analyzer*. A portable device capable of detecting Perc vapor concentrations of 25 ppm by volume.
- (43) *Primary Control System*. A Refrigerated Condenser or equivalent *closed-loop vapor recovery* system approved by the Department.
- (44) *Process Ventilation Emission*. The emission from any dry cleaning machine that occurs when the machine door is open.
- (45) *n-Propyl Bromide (n-PB)*. Also called 1-bromopropane,  $\text{C}_3\text{H}_7\text{Br}$ , it is a colorless nonflammable organic solvent used for the cleaning of metal surfaces, removal of soldering residues from electronic circuit boards, and as an adhesive solvent. Its Chemical Abstracts Service Registry Number (CASRN) is 106-94-5.
- (46) *Refrigerated Condenser*. A closed-loop vapor recovery system into which Perc vapors are condensed by cooling below the dew point of the Perc using a mechanical refrigerated system.
- (47) *Residence*. Any dwelling or housing which is occupied or intended to be occupied by the same person for a period of 180 days or more.
- (48) *Secondary Control System*. A device or apparatus that reduces the concentration of Perc in the recirculating air at the end of the drying cycle beyond the level achievable with a Refrigerated Condenser alone. For example, an integral Carbon Adsorber used in fourth generation equipment constitutes a secondary control system. An "integral" secondary control system is designed and offered as an

integral part of a production package with a single make and model of Dry Cleaning Machine and Primary Control System.

- (49) *Self-service Dry Cleaning Machine.* A Perc dry cleaning machine that is loaded, activated, or unloaded by the customer.
- (50) *Sensitive Facility.* Any educational facility for minors including, but not limited to, schools for kindergarten through twelfth (K-12) grade or preschools or other early childhood education facilities; and health and community care facilities including, but not limited to, hospitals, long-term or child care centers, and family day care homes.
- (51) *Stand-alone Facility.* A facility that is not co-located.
- (52) *Still.* Distillation equipment used to volatilize and recover Perc from contaminated solvent removed from the cleaned articles.
- (53) *Trained Operator.* A person who can effectively administer the requirements of the 'Work Practice Standards' and 'Leak Detection and Repair' sections of this regulation, and is conversant with the applicable devices and methods listed under Section IV (a)(1) of this regulation.
- (54) *Transfer Machine.* Perc Dry Cleaning Equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit. (First generation equipment)
- (55) *Vapor Adsorber.* A bed of activated carbon or other adsorbent into which vapors are introduced and trapped for subsequent desorption.
- (56) *Vapor Barrier.* A material surface or coating that is impermeable to Perc.
- (57) *Vapor Leak.* A fugitive emission of Perc vapor from unintended openings in the dry cleaning system. A vapor leak can be indicated by a rapid audible signal or visual signal from a halogenated-hydrocarbon detector or other approved instrument.
- (58) *Water Separator.* A vessel that uses gravity to physically separate liquid Perc from liquid water.

## II. PROHIBITIONS:

- (a) As of the effective date of this regulation, no person shall:
  - (1) Build, erect, install, alter or replace Perc Dry Cleaning Equipment or Perc Ancillary Equipment without first obtaining an Air Management permit for such installation and construction.
  - (2) Operate or use any Perc Dry Cleaning Equipment or Perc Ancillary Equipment without a current operating license as specified by the Air Management Code and regulations promulgated thereunder.
  - (3) Use any Perc Dry Cleaning Equipment as a Transfer Machine.
  - (4) Use Perc in any Co-residential or Co-sensitive Facility established, created,

or constructed after the effective date.

- (5) Use Perc in conjunction with any Dry Cleaning Equipment installed after the effective date at any Co-residential or Co-sensitive Facility.
  - (6) Install, use or offer for use any Self-Service Perc Dry Cleaning Machine(s).
  - (7) ~~Use immersion heaters to evaporate solvent from the untreated water effluent of solvent Water Separators.~~ Evaporate Perc from the untreated water effluent of solvent water separators into the atmosphere without use of air control devices approved by the Department.
  - (8) Vent Perc emissions from Dry Cleaning Equipment or Dry Cleaning Control Systems into the Dry Cleaning Facility, or any Co-residential, Co-sensitive or Co-commercial site.
  - (9) Use n-PB as a dry cleaning solvent in any Co-residential or Co-sensitive Facility. Subject to the conditions set forth in Section IX, n-PB may be used at Stand-alone or Co-commercial facilities.
- (b) After December 31, 2013:
- (1) No person shall operate, use, or allow the operation or use of, Perc or Perc Dry Cleaning Equipment at any Co-located Facility.
  - (2) On or before July 1, 2013, Co-commercial Dry Cleaning Facilities may petition the Department to continue using Perc beyond the December 31, 2013 phase out date. Pursuant to Section V.-(a), the petitioners must demonstrate that the airborne concentration of Perc in adjoining commercial or industrial sites is at or below 40 ppb.
- (c) Any installation of new, or relocation of used, Perc Dry Cleaning Equipment shall comply with the deadlines in 40 CFR 63 Subpart M.

### III. WORK PRACTICE STANDARDS:

- (a) Equipment Standards:
- (1) *Stand-alone Perc Facilities.* Within two years of the effective date of this regulation, all Stand-alone Perc Dry Cleaning Facilities shall use:
    - (i) Fourth (4<sup>th</sup>) Generation Equipment or better if the Perc Dry Cleaning Facility is a non-Major Source.
    - (ii) Fifth (5<sup>th</sup>) Generation Equipment or its equivalent approved by the Department if the Perc Dry Cleaning Facility is a Major Source.
    - (iii) All such Equipment required by Sections III (a)(1)(i)-(ii) shall be installed with, or if already in use shall be upgraded with, the following:
      - (A) A spill containment system capable of containing 125 percent of the capacity of the largest dry cleaning Perc tank or vessel

associated with the Dry Cleaning System; and

(B) A Drying Sensor.

(2) *Co-located Perc Facilities.* Within one year of the effective date of this regulation, *in addition* to the equipment listed in Section III (a)(1)(iii) hereof, all Co-located Perc Dry Cleaning Facilities shall ~~implement:~~

~~(2)-~~

~~(i) A minimum 25 foot buffer between Process Ventilation Emission points must be located a minimum of 25 feet from all and all Openings in nearby occupancies nearby residential, commercial, and sensitive facilities. The Department may require this distance to be more than 25 feet, based on computer modeling<sup>1</sup>; and~~

~~Modify Process Emissions Ventilation Points or install appropriate control devices, as approved by AMS, so that the airborne concentration of Perc at any air intake, window, doorway, or similar penetration of neighboring residential, commercial, or sensitive facilities be less than or equal to 40 ppb.~~

~~(i)~~

(ii) Either (A) ~~sealing off~~ the rooms containing Perc Dry Cleaning Equipment from the rest of the Facility with Vapor Barriers and installation of a separate General Exhaust Ventilation System for these rooms, or (B) ~~installation of~~ a professionally designed exhaust ventilation system that produces one air change every five minutes and maintains negative air pressure for the entire Facility.

(3) *All Perc Dry Cleaning Facilities.* Within 30 days of the effective date of this regulation, all Perc Dry Cleaning Facilities must be equipped with:

- (i) Adequate spill control equipment including sorbent materials, or an alternative method for absorbing spills; and
- (ii) Vapor-proof containers for storing spill-contaminated material and labeled 'FOR SPILL CONTAINMENT USE ONLY'.

(b) Operation and Maintenance Requirements:

(1) Each owner or operator of a Perc Dry Cleaning Facility shall comply with the following operation and maintenance requirements, as applicable:

~~(i) Operate Refrigerated Condensers so as to ensure that exhaust gases are recirculated until the air-vapor stream temperature is 45° F or less at the outlet. The difference between the temperature of the air Perc gas vapor stream entering and exiting the Refrigerated Condenser must be greater than or equal to 20° F (11.1° C). The temperature differential must be determined at least weekly with a thermometer with a temperature range of from 32° F (0° C) to 120° F (48.9° C) to~~

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<sup>1</sup> The computer modeling must be approved by the Department.

an accuracy of 2° F (1.1° C).

~~(i)(A)~~ If equipped with pressure gauges, the refrigeration system's high and low pressure during the drying phase must be kept within the range specified by the manufacturer. Refrigerated system pressure readings must be made on a weekly basis.

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~~(ii)~~ Operate Vapor Adsorbers used with a Primary Control System or Secondary Control System so as to ensure that exhaust gases are recirculated at the temperature specified for optimum adsorption.

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~~(iii)(iii)~~ Operate Carbon Adsorbers, lint filters, and exhaust fans in accordance with manufacturer's specifications.

~~(iii)(iv)~~ Drain Cartridge Filters in the filter housing, before disposal, for no less than 24 hours for Cartridge Filters and 48 hours for ~~adsorptive~~ Adsorptive Cartridge Filters. —The General Exhaust Ventilation System must be operated during this activity.

~~(iv)(v)~~ Keep all steam and condensing coils free of lint and hard lint build-up on interior surfaces.

~~(iv)(vi)~~ Replace door gaskets in accordance with manufacturer's specifications~~every two years.~~

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(2) *Preparedness and prevention.*

(i) Each owner or operator of a Perc Dry Cleaning Facility must:

(A) Maintain aisle space to allow proper inspection of the Dry Cleaning Equipment.

(B) Keep a reasonable supply of spare parts for repairing Dry Cleaning Equipment available at the Dry Cleaning Facility.

(C) Keep parts of the Dry Cleaning System including solvent containers where Perc may be emitted to the atmosphere closed at all times except when access is required for proper operation and maintenance.

(3) *Perc-contaminated wastewater discharges.*

(i) Each owner or operator of a Perc Dry Cleaning Facility must operate and maintain all Dry Cleaning Systems so as to ensure that Perc releases are contained and do not migrate to sewer systems or groundwater.

(ii) Each owner or operator of a Perc Dry Cleaning Facility must treat Perc-contaminated wastewater that is discharged to the public sewer system by physical separation (Water Separator) and double carbon filtration, or by an equivalent control technology which has been approved by the Department. ~~—and which has been properly designed to assure an effluent quality that is less than or equal to 20 ppb Perc~~

~~without Perc evaporation.~~ Any water discharged to the sewer must meet Philadelphia Water Department Regulations.

- (iii) Except as provided for by Section III (b)(3)(ii), no person may discharge into the public sewer system any Perc-contaminated wastewater or wastes resulting from Dry Cleaning Systems including, but not limited to, Still bottom or sludge residues, dirt, lint, soils, or any other deposits or residues extracted as a result of dry cleaning processes.
- (iv) No person shall discharge into the public sewer system filters or other filter media used in Dry Cleaning Systems.

(4) *Perc-contaminated wastes:*

- (i) Each owner or operator of a Perc Dry Cleaning Facility must store all Perc-contaminated wastes (including spent Cartridge Filters, spent carbon, Still bottoms, and lint) in tightly sealed containers, which are impermeable to the solvent, so that no Perc is emitted to the atmosphere.
  - (A) Containers must be appropriately labeled and stored in a designated area.
  - (B) Containers must be in good condition and must be kept closed except when necessary to add or remove waste.

**IV. LEAK DETECTION AND REPAIR:**

(a) *Leak check requirements.* As of the effective date of this regulation, a Trained Operator must inspect the Dry Cleaning System weekly for Liquid and Vapor Leaks and other Fugitive Emissions. ~~The Trained Operator, or a designee, must record the status of each component on a checklist supplied by the Department-approved inspection checklist as required in Section VI (c) of this regulation.~~

- (1) *Devices and methods permitted.* One of the following devices or methods must be used for detecting Vapor Leaks:
  - (i) a Halogenated-hydrocarbon Detector;
  - (ii) a Portable Gas Analyzer;
  - (iii) an air sampling pump and Colorimetric Detector Tube; or
  - (iv) an alternative method approved by the Department.
- (2) *Weekly inspections.* The following components of the Dry Cleaning System must be inspected weekly:
  - (i) While the Dry Cleaning System is operating, the following components shall be inspected for the presence of Liquid and Vapor Leaks and for proper operation:
    - (A) hose and pipe connections, fittings, couplings and

valves;

(B) door gaskets and seatings;

(C) filter gaskets and seatings;

(D) pumps;

(E) solvent (including spent solvent) tanks and containers;

(F) Water Separators;

(G) Muck Cookers;

(H) Stills;

(I) exhaust dampers;

(J) Diverter Valves; and

(K) Cartridge Filter housings.

(ii) Carbon Adsorber vents (for Vapor Leaks);

(iii) The temperature of the vapor stream on the ~~inlet and~~ outlet side of a Refrigerated Condenser; and

(iii)(A) If equipped with pressure gauges, refrigeration system high and low pressure readings; and

(iv) Preparedness and prevention equipment and conditions, as required in Section III (b)-(2) of this regulation, to ensure proper operation and maintenance. A notation must be made on the checklist at the time of inspection.

(b) *Repair of detected Leaks.* Except for loading and unloading of textiles following the completion of the Drying Cycle, and any short-term maintenance operations involving that requires opening any part of the Dry Cleaning System the opening of Dry Cleaning System components for inspection or repair, a Fugitive Emission concentration of 25 ppm or more of Perc emanating from any part of the Dry Cleaning System is a violation. -If a Leak or Hazard is detected, the Trained Operator must:

- (1) Note on the checklist, as required in Section VI (c) of this regulation, any Liquid Leak, Vapor Leak, or malfunction that has been detected.
- (2) Where a Hazard is imminent or has already occurred, shut down the Dry Cleaning System, and take immediate remedial action;
- (3) Report immediately all releases, spills, fires or explosions to the Department and appropriate emergency response agencies, as required in Section VII (b) of this regulation;
- (4) Repair the Leak within 24 hours unless repair parts are not available at the Perc Dry Cleaning Facility;
- (5) Mark or tag any leaking component that cannot be repaired at the time the Leak is

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- detected in a manner that is readily observable by an inspector;
- (6) Order all unavailable repair parts within two working days of detecting the Leak and install such repair parts within five working days after their receipt;
  - (7) Shut down leaking Perc Dry Cleaning Equipment that has not been repaired 15 working days after the Leak was detected; and
  - (8) Record the date the repair was completed on the checklist as required by Section VI (c).

## V. MONITORING

- (a) One year after the effective date of the regulation, a Co-commercial Perc Dry Cleaning Facility must collect a minimum of one air sample over 24-hours per quarter from an adjoining Co-commercial business/site. The sample must be submitted to an independent laboratory for analysis. The air sample must be taken:
  - (1) From and within the adjoining commercial or industrial business/site where the airborne concentration of Perc is highest.
  - (2) On days the Perc Dry Cleaning Equipment at the Co-commercial Perc Dry Cleaning Facility is operated.
- ~~(b)~~ The Department may collect ambient air samples at an occupied space Co-located to a Dry Cleaning Facility and analyze them for Perc. When the Department directs, the owner or operator of a Dry Cleaning Facility shall provide duplicate normal operating conditions during periods of sampling.
- (b)
- (c) If the Perc concentration of any collected air sample exceeds 200 ppb, the owner or operator of a Co-located Perc Dry Cleaning Facility shall cease all Perc operations immediately. —Said operations shall remain ceased until the owner or operator has taken any and all corrective action to reduce and maintain the airborne concentration of Perc in the co-located, occupied space at 40 ppb or below.
- (d) If the Perc concentration of any collected air sample exceeds 40 ppb but is below 200 ppb, the owner or operator of a Co-located Perc Dry Cleaning Facility shall immediately take any and all corrective action to reduce and maintain the airborne concentration of Perc in the co-located, occupied space at 40 ppb or below. —Said period for corrective action shall not exceed thirty (30) days from the date of the exceedance. In the event that the owner or operator can not demonstrate that the airborne concentration of Perc within the occupied space is at or below 40 ppb within the thirty (30) days, the owner or operator shall cease all Perc operations immediately. —Said operations shall remain ceased until compliance with the 40 ppb limit can be demonstrated.
- (e) The owner or operator of a Perc Dry Cleaning Facility shall reimburse the Department for the cost of collecting and analyzing ambient air samples whenever the Perc concentration result exceeds 40 ppb.

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## VI. RECORDKEEPING:

(a) Owners or Operators of all Perc Dry Cleaning Facilities or their designees shall record the following:

(1) A written description of any emergency response action, including, at a minimum:

(i) The date, duration and nature of any malfunction, spill or incident of the Dry Cleaning System;

(ii) The quantity of any spill;

(iii) The notification procedures followed; and

(iv) The corrective actions taken.

(2) The date of maintenance performed on any air cleaning component or exhaust system;

~~(3) The date the Carbon Adsorbers, lint filters, and exhaust fans are replaced per manufacturer's specifications. The number of loads processed between regenerations, cleaning and replacement of lint filters and Carbon Adsorber pre filters, and between repair or replacement of exhaust fans;~~

~~(4) The amount of activated carbon in the Carbon Adsorbers (dry weight in pounds);~~

~~(5)~~ (4) The date any maintenance is performed on the Drying Sensors;

~~(6)~~ (5) The date and volume of any Perc-contaminated hazardous waste shipments; ~~and;~~

(6) The date any Perc-contaminated wastewater treatment unit carbon cartridge is replaced; ~~and,-~~

(7) The date the door gaskets are replaced per manufacturer's specifications.

(b) Each owner or operator of a Perc Dry Cleaning Facility shall keep receipts of Perc purchases, including a log of the following:

(1) *Monthly consumption.* On the first day of the month, for the preceding month, the volume of Perc purchased that month by the Dry Cleaning Facility as recorded from Perc purchases; and

(2) *Yearly consumption.* The total sum of the volume of all Perc purchases made in each of the previous twelve months, as recorded in the log described above.

(c) Each owner or operator of a Perc Dry Cleaning Facility shall record the following information on a Department-approved inspection checklist ~~supplied by the Department:~~

(1) The dates when the Dry Cleaning System components are inspected for Leaks, as specified under Section IV (a)(2)(i) of this Regulation, and the name or location of Dry Cleaning System components where Leaks were detected;

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- (2) The date, time and monitoring results as specified in Section IV (a)(2) and Section V of this Regulation; and
- (3) The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with the requirements in Section IV (b)(4)-(5) and Section V of this Regulation.
- (d) Each owner or operator of a Perc Dry Cleaning Facility shall retain, on-site, a copy of the design specifications, manufacturer's specifications, and the operating manuals for each Dry Cleaning System and each Dry Cleaning Control System located at the Dry Cleaning Facility.
- (e) All records, including air monitoring record and inspection checklist, must be maintained on-site for five years, and shall be made available to the Department upon request.

**VII. REPORTING**

- (a) The owner or operator of a Perc Dry Cleaning Facility shall submit a permit application within six months of the effective date of this regulation. The permit application shall include all of the following information:
  - (1) Facility name, Facility address, owner/operator name, and telephone number;
  - (2) The distance from the center of the Facility to the property line of the nearest commercial/industrial building, and to the nearest Residence;
  - (3) A listing of all Sensitive Facilities located within 100 feet from the center of the Perc Dry Cleaning Facility;
  - (4) Annual operating information for the preceding year, including pounds of clothes cleaned, solvent type, gallons of solvent purchased, gallons of solvent at the Perc Dry Cleaning Facility at the beginning of the year, gallons of solvent remaining at the end of the year, gallons of Still ~~oil~~-residue waste produced, number and type of filter cartridges disposed, and copies of recent waste manifests;
  - (5) Equipment original date of purchase, or equipment manufacture date and equipment generation type; and
- (b) The owner or operator shall report immediately all releases, spills, fires or explosions to the Department and appropriate emergency response agencies.
- (c) The owner or operator shall report within three days any monitoring result that exceeds 40 ppb per Section V-(a).

**VIII. PROPERTY OWNER AND OPERATOR RESPONSIBILITIES**

- (a) The owner or operator of a property on which Perc, Perc Dry Cleaning Equipment or a Perc Dry Cleaning Facility is located shall:
  - (1) Ensure the operation and maintenance of said property in accordance with the Air

Management Code and regulations promulgated thereunder, including but not limited to the instant regulation; and

- (2) Where required by the Department, take all necessary action or cause the forbearance therefrom to effect compliance with the provisions of the Air Management Code and regulations promulgated thereunder, including but not limited to the instant regulation.
- (b) The failure of an owner or operator of a property on which Perc, Perc Dry Cleaning Equipment, or a Perc Dry Cleaning Facility is located to abide by the terms of this Regulation shall subject said owner or operator to any and all actions and remedies available under the Air Management Code and regulations promulgated thereunder, including but not limited to the assessment of penalties for non-compliance.

**IX. REQUIREMENTS AND SPECIFICATIONS FOR n-PB**

(a) All n-PB Dry Cleaning Facilities must comply with the prohibitions, work practice standards, leak detection and repair requirements, monitoring requirements, recordkeeping requirements, reporting requirements, and property owner and operator responsibilities outlined for Perc Dry Cleaning Facilities in Sections II-VIII, with the following modifications:

- (1) Per Section VII (a), Stand-alone and Co-commercial facilities must obtain an Air Management permit, prior to any installation or modification of existing Dry Cleaning Equipment using n-PB, and an operating license.
- (2) Co-commercial facilities, per Section II (b)(2) and pursuant to Section V (a), must demonstrate that the airborne concentration of n-PB in adjoining commercial or industrial sites is at or below 40 ppb. Venting of n-PB into adjoining commercial or industrial sites is prohibited.
- (3) Per Section IV (b), a Fugitive Emission concentration of 10 ppm or more of n-PB emanating from any part of the Dry Cleaning System is a violation.
- (4) Per Section V (c), the owner or operator of a Co-commercial n-PB Dry Cleaning Facility shall cease all n-PB operations immediately if the n-PB concentration of any air sample exceeds 225 ppb.
- (5) Per Section V (d), if the n-PB concentration of any collected air sample exceeds 40 ppb but is below 225 ppb, the owner or operator of a Co-commercial n-PB Dry Cleaning Facility shall immediately take any and all corrective action to reduce and maintain the airborne concentration of n-PB in the Co-commercial, occupied space at 40 ppb or below. Said period for corrective action shall not exceed thirty (30) days from the initial date of the exceedance.

**IX. EFFECTIVE DATE:**

This regulation shall be effective on xx.xx.xxxx.