

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

Division of Air Resources, Bureau of Stationary Sources

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# Part 232

## Dry-Cleaning Certificate Renewal Booklet

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## **Information for Individuals Renewing their §232-2.10 Perchloroethylene Dry-Cleaning Certificates**

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Every Owner, Manager and/or Operator of perc dry cleaning machines must take a New York State Department of Environmental Conservation (NYSDEC) approved sixteen-hour §232-2.10 environmental training program and successfully pass the respective Owner/Manager and/or Operator examination(s). As a NYS-Certified Perchloroethylene (Perc) dry-cleaning professional, it is your responsibility to know the many regulatory requirements and to make sure that your Perc dry cleaning operation is run according to the rules.

NYSDEC (the Department) has been enforcing the Part 232 requirements for more than twenty years. The regulation was revised on March 10, 2018 to update the requirements for perc dry cleaning facilities and add new requirements for alternative solvent dry cleaning equipment.

The United States Environmental Protection Agency (USEPA) lists Perc vapor as a Hazardous Air Pollutant (HAP). Perc is classified as a likely human carcinogen. Studies show that workers exposed to Perc have a slightly higher risk of developing cancer and are more likely to have reproductive problems. Long-term exposure to Perc has been shown to cause brain and nervous system damage: decreased hand-eye coordination, lower scores on vision tests, less ability to distinguish colors, decreased learning speed, and a decreased ability to memorize or pay attention. Long-term exposure can also cause liver and kidney damage.

Perchloroethylene exposure is harmful even at low concentrations. In a study of healthy people who lived in apartments near dry-cleaning shops, individuals were tested for their ability to see subtle differences in color, to pay attention and to react quickly. Their test scores were lower than healthy people who did not live near dry-cleaning shops.

The following pages outline the major regulatory requirements of newly revised 6 NYCRR Part 232, Dry Cleaning Facilities.

## Overview of Dry Cleaner Regulation

There are approximately 1,590 dry cleaning facilities operating in New York State. About 1,030 of these facilities use perchloroethylene (perc) as a dry cleaning solvent, 540 use an alternative solvent and 20 use both perc and alternative solvents. The majority of these facilities are located in the New York City metropolitan area and most only use perc. All of these facilities are regulated under the newly revised Dry Cleaning Facilities regulation, 6 NYCRR Part 232, which became effective on March 10, 2018. Facilities that only use water-based cleaning processes (wet cleaning) and/or liquid carbon dioxide dry cleaning machines are exempt from this regulation.

### Specific Key Requirements

**Facility Registrations and Permits:** Almost all dry cleaning facilities must obtain a NYS Air Facility Registration (232-1.6(a)(3)). The largest facilities must obtain a State, or Title V, Facility Permit (232-1.6(a); 232-2.8(b)(3)(iii); 232-3.6(b)(3)(iii)). Persons proposing to construct a new dry cleaning facility, make changes to an existing facility by installing new or modified perc or alternative solvent equipment or by switching dry cleaning solvents, must apply for an air permit (Air Permit Application Form) or registration (Form AFR-232 and instructions AFR-232I) and receive department approval in accordance with Part 201 before commencing construction, installation or modification. New or modified perc facilities must also submit a Notification of Compliance Status (Form 232-13) to the NYSDEC Bureau of Stationary Sources, NYSDEC Regional Office and the EPA.

**Notification of Dry Cleaning Equipment Shutdown:** Any person who owns an existing facility subject to this Part must submit a completed Notice of Dry Cleaning Equipment Shutdown (Form 232-14) to the department when the operation of any perc or alternative solvent dry cleaning machine is terminated and taken out of service. This completed form must be submitted to the department by means of certified mail, return receipt requested, no later than 30 days after the termination of operation. Where this form is submitted by an owner of a dry cleaning facility that has decommissioned all dry cleaning equipment and ceased operation of the facility, the air facility permit or registration will be expired and the facility will be removed from the annual fee billing list.

**Posting Notices:** Facility owners or operators must post notices that inform building tenants and/or customers where perc and/or alternative solvent dry cleaning chemicals are used in the facility (232-1.7(a)). Separate notices are required for both types of solvents. These posting notices state where additional information may be found about the potential health effects from exposure to dry cleaning chemicals (232-1.7(b)(4); 232-1.7(c)(2)). The notices, supplied upon request and prepared by the department with information provided by the facility owner or operator, must be posted in a conspicuous facility location that is accessible to the general public. Posting notices for the use of perc have been required since May 15, 1997 and are required under new Part 232. Posting notices for the use of an alternative solvent are required after September 6, 2018.

**Perc Dry-Cleaning Machines:** Subpart 232-2 regulates perc dry cleaning machines based on the installation date, machine type (3<sup>rd</sup> or 4<sup>th</sup> generation), department Model Certification or manufacturer's Statement of Compliance, facility type (co-located residential, co-located commercial or stand-alone) and by future phase-out dates (232-2.4). The use of perc dip tanks and perc transfer equipment is prohibited (232-2.3(a)(1); 232-2.3(e)(2)).

**New installations:** Only new compliant fourth generation perc dry cleaning machines that belong to equipment models previously certified by the department, or which have been issued a manufacturer's Statement of Compliance, may be installed and thereafter operated at stand-alone and co-located commercial facilities (232-2.4(b)(1)). No perc dry cleaning machines may be installed in any co-located residential facilities (232-2.3(d)(3)). Used equipment may only be installed if a variance is granted by the department (232-2.2(e)). Variances will be granted to relocate any used compliant fourth generation perc machines that are less than 10 years old, from an existing permitted or registered facility to a stand-alone facility under the same ownership, if the facility meets all other applicable requirements and a new or modified air permit or registration is first obtained.

**Existing installed machines:** Compliant perc dry cleaning machines and external door fans may be operated at their existing locations unless future operation is prohibited (232-2.4(b)(2)). The installation of external door fans on fourth generation dry cleaning machines, which were essentially banned after September 24, 2003, are now officially prohibited after March 10, 2018 (232-2.3(d)(5)). The operation of any perc dry cleaning machine at a co-located residential location is prohibited by the federal NESHAP (40 CFR Part 63, Subpart M) and Part 232 after December 21, 2020 (232-2.3(c)(5); 232-2.3(d)(7)). After December 31, 2021, all third generation perc dry cleaning machines must be removed from service (232-2.3(c)(6)). Owners, managers or trained operators of perc dry cleaning equipment must complete weekly leak inspection and preparedness and prevention checklists (Forms 232-2P and 232-3P), a weekly maintenance log for internal carbon adsorbers (Form 232-4P), a monthly owner drum testing checklist (Form 232-5P), an occasional maintenance log for critical equipment components (Form 232-6P), a six-month operation and maintenance checklist (Form 232-7P) and a corrective action log (Form 232-8P). Additionally, facility-wide and occasional emergency response and hazardous waste shipment logs (Forms 232-9P&A and 232-10P&A) and a monthly perc usage log (Form 232-11P) must be completed.

**Monthly Owner Drum Testing of Perc Machines:** In addition to the required yearly machine testing by compliance inspectors (inspector drum testing), essentially all operational fourth generation perc dry cleaning machines must be tested by the owner or owner's representative at least once each month (232-2.5(i)). Testing must be conducted using a colorimetric detector tube sampling pump, or photo ionization detector, in good working order. This equipment must be purchased by the owner or

owner's representative to conduct this test. Testing results must be recorded on department form 232-5P.

**Vapor Barrier Rooms and General Exhaust Ventilation Systems:** All co-located commercial and residential perc dry cleaning facilities must be equipped with a vapor barrier room that encloses all perc dry cleaning machines (232-2.4(a)(1)). Entry doors may only be open when a person is entering or exiting the room enclosure. Vapor barriers must be constructed of polyvinyl chloride (PVC) sheet, 22 mil thick (0.022 in.); sheet metal; metal foil faced composite board; and other equivalent materials that are impermeable to perc vapors including epoxy coatings, glass and structural plastic. All joints, seams and penetrations of the vapor barrier room must be sealed except for entry doors and outside air inlet and exhaust vents. The use of chemically compatible sealants (caulks) are important to maintain the integrity of the vapor barrier room enclosure. Vapor barrier rooms must be equipped with a general exhaust ventilation system that is completely separate from the ventilation system(s) serving other areas of the building (232-2.4(a)(2)). The general exhaust ventilation system must be operated at all times the facility is open for business and be capable of at least one air change every five minutes.

**Perc solvent deliveries:** Perc process tanks must be refilled using a closed-loop delivery system (232-2.6(d)(6)).

**Yearly Compliance Inspections:** Every perc dry cleaning facility must be inspected, and each dry cleaning machine must be tested (inspector drum testing), at least once each year by an independent department approved Part 232 Registered Compliance Inspector (232-2.11(a) & (b)). Facility inspection reports are reviewed by regional DEC engineering/technical staff for compliance and enforcement purposes. Part 232 requires that owner/managers must provide public access to a facilities most recent Compliance Inspection report (232-2.11(k)(1)).

**Alternative Solvent Dry-Cleaning Machines:** Subpart 232-3 regulates alternative solvent dry cleaning machines based on the installation date, machine type (washers, extractors, dryers and dry-to-dry machines), primary control system (water cooled condenser or refrigerated condenser), age and condition of the machine and by the manufacturer's Certification of Model Compliance (232-3.3(b)).

**New installations:** Only new compliant machines, relocated compliant machines, or used compliant machines that are less than five (5) years old and certified by the manufacturer or their representative as being in a like new condition, may be installed in any location (232-3.3(b)(1)). Newly installed machines must be dry-to-dry, closed-loop machines that are equipped with a refrigerated condenser and meet the requirements of Part 232-3.3(a)(1)(ii). Owners of permitted or registered dry cleaning facilities may relocate from their facility any compliant alternative solvent dry cleaning machines, that are less than 10 years old, to any other dry cleaning facility under their ownership if the facility meets all other applicable requirements and a new or modified air permit or registration is first obtained (232-3.3(b)(1)(i)). After September 6, 2018, no

person may sell, offer for sale, cause to be offered for sale, or lease any alternative solvent dry cleaning machine to be installed in New York State unless the manufacturer has submitted a Certification of Model Compliance to the department (232-3.7(a)(1)). A Certification of Model Compliance shall certify that the subject alternative solvent dry cleaning machine model meets the design and performance standards of Part 232-3.3. Upon submittal of a Certification of Model Compliance, the machine model certification will be posted on the department's website.

**Existing installed machines:** Compliant alternative solvent dry cleaning equipment installed prior to March 10, 2018 may be operated at their existing locations unless future operation is prohibited (232-3.3(b)(2)). All dryers without a primary control system, solvent dip tanks, drying cabinets and water proofing operations in any vented machine are prohibited after December 31, 2021 (232-3.2(c)). Solvent recovery dryers that have a water cooled condenser for the primary control system are prohibited after December 31, 2026 (232-3.2(d)). Finally, the operation of any alternative solvent transfer machine is prohibited after December 31, 2031 (232-3.2(e)). Owners, managers or operators of alternative solvent dry cleaning equipment must complete weekly leak inspection and preparedness and prevention checklists (Forms 232-2A and 232-3A), a six-month operation and maintenance checklist (Form 232-7A) and a corrective action log (Form 232-8A). Additionally, facility-wide and occasional emergency response and hazardous waste shipment logs (Forms 232-9P&A and 232-10P&A) and monthly alternative usage logs (Form 232-12A) must be completed if applicable.

**Approved Alternative Solvents:** After September 6, 2018, dry cleaners may only use approved solvents in alternative solvent dry cleaning equipment (232-3.8(a)). Manufacturers requesting approval of an alternative solvent must submit to the department the information specified under Part 232-3.8(c) of the Dry Cleaning Facilities regulation. All alternative solvents proposed for approval will be noticed in the Environmental Notice Bulletin (ENB). After a thirty (30) day comment period, all approved alternative solvents will be posted on the department's website: <http://www.dec.ny.gov/chemical/72273.html>.

**Equipment standards and specifications:** Part 232 has equipment standards and specifications for both perc and alternative solvent dry cleaning equipment. Perc equipment standards and specifications are specified under 232-2.4(a)(3), (4) and (5). Alternative solvent equipment standards and specifications are specified under 232-3.3.

**Leak Inspection, self-monitoring and operational and maintenance requirements:** Part 232 has separate leak Inspection, self-monitoring and operational and maintenance requirements for perc (232-2.5; 232-2.6) and alternative solvent (232-3.4; 232-3.5) dry cleaning equipment. New forms 232-2P, 232-3P, 232-4P, 232-5P, 232-6P, 232-7P and 232-8P are for perc dry cleaning equipment and new forms 232-2A, 232-3A, 232-7A and 232-8A are for alternative solvent dry cleaning equipment.

**Hazardous Waste Management:** Part 232 contains specific solid and hazardous waste disposal and record-keeping requirements (232-1.4). A record of hazardous waste shipments must be noted and maintained on Form 232-10P&A.

**Wastewater treatment:** Part 232 contains specific requirements for wastewater treatment and disposal (232-1.4(a)(1) & (2); 232-2.6(d)(2)(ii); 232-2.7; 232-3.5(c)(9)).

**Reporting and recordkeeping:** There are reporting and recordkeeping requirements for both perc (232-2.8) and alternative solvent (232-3.6) dry cleaning equipment in Part 232. All records must be kept on-site for at least five (5) years (232-1.4(a)(6); 232-2.5(a); 232-2.6(c); 232-2.8(f); 232-3.4(a); 232-3.6(e)). The department has created new Part 232 inspection and reporting forms for perc and alternative solvent dry cleaners. These new forms can be obtained from any NYSDEC office or can be downloaded from the department's website. In addition to the forms for perc and alternative solvent dry cleaning equipment, new forms 232-9P&A (Emergency Response), 232-10P&A (Hazardous Waste Shipment Log), 232-11P (Perc Usage Log) and 232-12A (Alternative Solvent Usage Log) are facility-wide record keeping forms.

**Owner/Manager and Operator Certification:** Perc dry cleaning facility owners and/or managers and all perc machine operators must attend a 16-hour training course, successfully pass a DEC Certification test and hold current, valid DEC Owner/Manager and/or Operator Certificates (232-2.10(a)). Every perc dry cleaning facility must have at least one person with an Owner/Manager and Operator Certification. New Part 232 has extended the expiration date for re-certifications issued after March 10, 2018 from three (3) to five (5) years (232-2.10(f)). Although the training course is only required for owners, managers and operators of perc dry cleaning facilities, the department recommends this course for all owners, managers and operators of alternative solvent dry cleaning machines.

**Manufacturer's training sessions:** After any new perc or alternative solvent dry cleaning machine is installed at a facility, the manufacturer or manufacturer's representative must conduct an on-site training session for the purchaser or lessee. A minimum two-day training session is required following the installation of a new perc machine (232-2.9(a)(6)). Training sessions must include instruction on how to maintain and operate the dry cleaning machine.

**Dry Cleaning Facility Inspection and Reporting Forms:** The following is a list of all dry cleaning facility inspection and reporting forms. Copies of these forms are attached to this document.

### **General Dry Cleaning Facility Forms:**

- AFR-232 AIR FACILITY REGISTRATION APPLICATION for Dry Cleaners using Perchloroethylene and/or Approved Alternative Solvents
- AFR-232I AIR FACILITY REGISTRATION APPLICATION INSTRUCTIONS for Perc and Alternative Solvent Dry Cleaning Facilities
- 232-13 Notification of Compliance Status
- 232-14 Notice of Dry Cleaning Equipment Shutdown
- 232-15 PART 232 DRY CLEANING COMPLIANCE INSPECTION REPORT
- 232-15I Part 232 Compliance Inspection Report Instructions

### **Perc Dry Cleaning Equipment Checklists (Parts I, II, II(a), III, IV, V, VI, VII, VIII):**

- 232-2P Parts I, II & II(a) - WEEKLY Leak Inspection and Self-monitoring Checklists for Perc Dry Cleaning Equipment
  - Part I – Weekly Leak Inspection Checklist
  - Part II – Weekly Self-monitoring Checklist for Refrigerated Condensers
  - Part II(a) - Weekly Self-monitoring Checklist for External Door Fans
- 232-3P Part III – WEEKLY Preparedness and Prevention Checklist for Perc Dry Cleaning Equipment
- 232-4P Part IV – WEEKLY Maintenance Log for Integral Carbon Adsorbers on Perc Dry Cleaning Machines
- 232-5P Part V – MONTHLY Owner Drum Testing Checklist for Perc Dry Cleaning Machines
- 232-6P Part VI – OCCASIONAL Maintenance Log for Perc Dry Cleaning Equipment
- 232-7P Part VII – SIX MONTH Operation and Maintenance Checklist for Perc Dry Cleaning Equipment
- 232-8P Part VIII - Corrective Action Log for Perc Dry Cleaning Equipment



**Alternative Solvent Dry Cleaning Equipment Checklists  
(Parts I, II, III, VII, VIII):**

- 232-2A      Parts I & II – WEEKLY Leak Inspection and Self-monitoring Checklists for Alternative Solvent Dry Cleaning Equipment
- Part I – Weekly Leak Inspection Checklist  
                    Part II – Weekly Self-monitoring Checklist for Refrigerated Condensers
- 232-3A      Part III – WEEKLY Preparedness and Prevention Checklist for Alternative Solvent Dry Cleaning Equipment
- 232-7A      Part VII – SIX MONTH Operation and Maintenance Checklist for Alternative Solvent Dry Cleaning Equipment
- 232-8A      Part VIII - Corrective Action Log for Alternative Solvent Dry Cleaning Equipment

**Facility-wide Logs for Perc and or Alternative Solvent Dry Cleaning Facilities  
(Parts IX, X, XI, XII):**

- 232-9P&A    Part IX – OCCASIONAL Emergency Response Log for Perc and or Alternative Solvent Dry Cleaning Facilities
- 232-10P&A   Part X – OCCASIONAL Hazardous Waste Shipment Log for Perc and or Alternative Solvent Dry Cleaning Facilities
- 232-11P      Part XI – MONTHLY Perc Usage Log for Perc Dry Cleaning Facilities
- 232-12A      Part XII – MONTHLY Alternative Solvent Usage Log for Alternative Solvent Dry Cleaning Facilities with Transfer Machines





**NYSDEC Regional Offices**

<p><b>NYSDEC - Region 1</b> Attn: RAPCE SUNY Stony Brook, Building 40 50 Circle Road Stony Brook, NY 11790-3409 (631) 444-0203</p> <p><b>Counties: Nassau &amp; Suffolk</b></p>	<p><b>NYSDEC - Region 2</b> Attn: RAPCE 1 Hunters Point Plaza 47-40 21st Street Long Island City, NY 11101-5407 (718) 482-4900</p> <p><b>Counties: Bronx, Kings (Brooklyn), Manhattan, Queens, Richmond (Staten Island)</b></p>	<p><b>NYSDEC - Region 3</b> Attn: RAPCE 21 South Putt Corners Road New Paltz, NY 12561-1696 (845) 256-3045</p> <p><b>Counties: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester</b></p>
<p><b>NYSDEC - Region 4</b> Attn: RAPCE 1130 North Westcott Road Schenectady, NY 12306-2014 (518) 357-2045</p> <p><b>Counties: Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schoharie, Schenectady</b></p>	<p><b>NYSDEC - Region 5 SUB-OFFICE</b> Attn: RAPCE 232 Golf Course Road Warrensburg, NY 12885-1145 (518) 623-1200</p> <p><b>Counties: Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington</b></p>	<p><b>NYSDEC - Region 6</b> Attn: RAPCE State Office Building 317 Washington Street Watertown, NY 13601-3787 (315) 785-2239</p> <p><b>Counties: Herkimer, Jefferson, Lewis, Oneida, St. Lawrence</b></p>
<p><b>NYSDEC - Region 7</b> Attn: RAPCE 615 Erie Blvd., West Syracuse, NY 13204-2400 (315) 426-7400</p> <p><b>Counties: Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins</b></p>	<p><b>NYSDEC - Region 8</b> Attn: RAPCE 6274 E. Avon-Lima Road Avon, NY 14414-9519 (585) 226-2466</p> <p><b>Counties: Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates</b></p>	<p><b>NYSDEC - Region 9</b> Attn: RAPCE 270 Michigan Avenue Buffalo, NY 14203-2999 (716) 851-7200</p> <p><b>Counties: Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming</b></p>

**New York State Department of Environmental Conservation  
AIR FACILITY REGISTRATION APPLICATION INSTRUCTIONS  
Perc and Alternative Solvent Dry Cleaning Facilities**



**Department of  
Environmental  
Conservation**

The following are instructions for completing an Air Facility Registration Application (Form AFR-232) for new or modified dry cleaning facilities that use perchloroethylene and/or alternative dry cleaning solvents. These requirements are set forth in 6 NYCRR Part 201-4. Applications should be submitted to the Regional Air Pollution Control Engineer serving the county in which the facility is located. Mailing addresses may be found on page two (2) of the application form. Dry cleaning facilities that use only water-based cleaning and/or liquid carbon dioxide are exempt from all air permitting requirements if there are no other applicable sources at the facility.

**RESTRICTIONS:** Any dry cleaning facility with an actual or estimated yearly perchloroethylene consumption (usage) level that equals or exceeds 1,050 gallons/year or a yearly alternative solvent consumption level that exceeds 3,000 gallons/year cannot use this Air Facility Registration Application form and must apply for an Air State Facility or Title V Permit.

**DEC ID:** For existing dry cleaners that are not relocating, enter the DEC ID from the current Air Facility Registration. All other facilities should leave this field blank.

**TAXPAYER ID:** Enter the business Taxpayer ID number (**do not enter your personal Social Security number**).

**Box Number(s)**

**1 - 6 OWNER INFORMATION:** Enter the name of the facility owner for which this application is being prepared in Box 1. For an individual, list the owner's full name. In Boxes 2, 3, 4, 5 and 6, enter the mailing address of the owner. Enter the COUNTRY if foreign owned in Box 5 and the appropriate ZIP/Postal Code (ZIP code + extension may also be entered) in Box 6. For multiple party ownership where no legal business partnership exists, provide the name and mailing address, if different, of each individual owner using a slash (/) to separate data for each owner. For corporations, include any division or subsidiary names.

**7- 9a-c FACILITY OWNER/MANAGER INFORMATION:** List the name, telephone and fax number, and email address of the person responsible for the operation and regulatory compliance of the dry cleaning facility (Owner/Manager) in Boxes 7 and 9a-c. If the dry cleaner uses perchloroethylene as a solvent, the owner/manager must possess an Owner/Manager Certificate and the Certificate number must be recorded in Box 8 of the application form.

**10 - 14 FACILITY INFORMATION:** Enter the facility name and physical location address (e.g., Acme Rd. or Building 3, XYZ Industrial Park) of the dry cleaning facility in Boxes 10 and 11. Enter the name of the City or Town, State and ZIP Code for the primary jurisdiction of the facility in Boxes 12, 13 and 14. For instances where a facility is located in multiple jurisdictions (i.e., across city, town, or county lines) list all jurisdictions using a slash (/) to separate data for each location, with the primary jurisdiction listed first.

**15a,b,c BUILDING INFORMATION:** For Control Systems (15a), check the appropriate boxes to indicate that a Vapor Barrier and/or General Exhaust Ventilation System has been installed at the facility. For Building Type (15b), check Stand-Alone or Co-located. A co-located facility shares a common wall, floor, or ceiling with a residence or another business (e.g., coin-operated Laundromat); a stand-alone does not. For co-located facilities (15c), check each appropriate box that describes the other types of tenants that occupy the building with the dry cleaning facility.

**DRY CLEANING MACHINES (Boxes 16 - 25):** Enter the Machine Manufacturer, Model Number, Serial Number, Capacity (lbs), Year Manufactured, Date Installed, Solvent Type, Solvent Gallons/Year (usage), Spill Pan (Y/N), and Machine Type for each perchlorethylene 3<sup>rd</sup> and 4<sup>th</sup> generation dry cleaning machine and each alternative solvent dryer, recovery dryer and dry-to-dry, closed-loop dry cleaning machine. Do not list any alternative solvent washers or extractors or any dry cleaning equipment using only water-based cleaning and/or liquid carbon dioxide as the primary solvent. If your facility has more than 3 dry cleaning machines, use additional form(s) to describe the equipment.

**New York State Department of Environmental Conservation  
AIR FACILITY REGISTRATION APPLICATION INSTRUCTIONS  
Perc and Alternative Solvent Dry Cleaning Facilities**



**Department of  
Environmental  
Conservation**

NOTE: The Box numbers listed in this section (Boxes 16 - 25) include a supplemental letter (e.g., 21a, 21b, etc.) on the application form. These supplemental letters keep information separate for each machine. To find instructions for Boxes numbered 21a, 21b and 21c on the application form, refer to the instructions listed for Box 21 below:

- 16 - 20 NAMEPLATE INFORMATION:** Enter the Machine Manufacturer (Box 16), Model Number (Box 17), Serial Number (Box 18), Capacity (lbs., Box 19) and Year Manufactured (Box 20) in the appropriate box on the Air Facility Registration Application form. This information is typically found on the nameplate on the back of the machine.
- 21 INSTALLATION DATE:** Enter the installation date for each piece of dry cleaning equipment in Box 21.
- 22 SOLVENT TYPE:** In Box 22, enter the primary solvent type from those listed below (letters A–J; Z) for the dry cleaning equipment identified. If the primary solvent is not listed, enter “Z” in Box 22 and write in the name of the solvent in Box 26.

A.	Perchloroethylene (Perc); CAS 127-18-4; chlorinated hydrocarbon	G.	RR Street Solvair™; CAS 29911-28-2; Dipropylene Glycol n-Butyl Ether <sup>2</sup>
B.	GreenEarth SB-32; CAS 541-02-6; decamethylcyclopentasiloxane, by Gen Elec	H.	SolvonK4™; CAS 2568-90-3; dibutoxymethane, Kreussler
C.	ExxonMobil DF-2000™ <sup>1</sup> ; CAS 64742-48-9; synthetic hydrocarbon	I.	Green Earth (GEC-5); CAS 541-02-6; decamethylcyclopentasiloxane, by Shin-Etsu
D.	Chevron Phillips EcoSolv® <sup>1</sup> ; CAS 68551-17-7; highly refined hydrocarbon	J.	DC-142 <sup>1</sup> ; CAS 64742-88-7; aliphatic hydrocarbon, by Essential Solvents
E.	Rynex 3™; CAS 132739-31-2; dipropylene glycol tert-butyl ether	.	
F.	Sasol LPA-142 <sup>1</sup> ; CAS 64742-47-8; highly refined hydrocarbon	Z.	Other unlisted primary solvent

<sup>1</sup> All dryers used to remove petroleum solvents (e.g., DF-2000, EcoSolv & Sasol LPA-142 & DC-142) from dry cleaned articles may be subject to the New Source Performance Standard (NSPS) for Petroleum Dry Cleaners (40 CFR Part 60, Subpart JJJ) if the manufacturer’s rated dryer capacity is equal to or greater than 84 pounds from all machines combined. Petroleum dryers installed between 12/14/82 and 9/21/84 at facilities with an annual solvent consumption level less than 4,700 gallons per year are exempt from the NSPS. Note, the EPA has determined that Subpart JJJ does not apply to dry-to-dry, closed-loop equipment.

<sup>2</sup> The Solvair™ dry-cleaning system uses both Dipropylene Glycol n-Butyl Ether (nPGnBE) and carbon dioxide (exempt) as dry cleaning solvents and has been approved for Air Facility Registration.

- 23 SOLVENT GAL/YR:** For existing dry-to-dry machines, report in Box 23 (Solvent Gal/Yr), the machine’s annual solvent consumption for the previous 12 months. For existing dryers and solvent recovery dryers, report in Box 23 the annual solvent consumption for the washing machine that dry cleans the articles which are transferred to the dryer. For new machines, estimate the annual solvent consumption for the machine.
- 24 SPILL PAN (Y/N):** Answer Yes or No (Y/N) in Box 24 to indicate if a spill pan was installed under the machine.
- 25 MACHINE TYPE:** Choose a machine type from those listed below (letters A–D; N-S; Z) and enter the letter in Box 25. If a machine is not listed, enter type “Z” and a description in Box 27. If you have more than 3 dry cleaning machines, use additional copies of this form to describe all the dry cleaning equipment.

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New York State Department of Environmental Conservation  
**AIR FACILITY REGISTRATION APPLICATION INSTRUCTIONS**  
**Perc and Alternative Solvent Dry Cleaning Facilities**



Department of  
**Environmental  
 Conservation**

Machine Type code	Machine description
<b>Perchloroethylene Dry Cleaning Machines:</b>	
A	3 <sup>rd</sup> Generation Perchloroethylene Dry Cleaning Machine with a Door Fan
B	3 <sup>rd</sup> Generation Perchloroethylene Dry Cleaning Machine that has been converted to a 4 <sup>th</sup> Generation machine with an added Integral Carbon Adsorber
C	4 <sup>th</sup> Generation Perchloroethylene Dry Cleaning Machine that is NOT DEC Certified and has NOT been issued a Statement of Compliance by the Manufacturer
D	4 <sup>th</sup> Generation Perchloroethylene Dry Cleaning Machine that is DEC Certified or which has been issued a Statement of Compliance by the manufacturer  Refer to NYSDEC website for list of 4th generation perchloroethylene dry cleaning machines that are DEC Certified, or which have been issued a Statement of Compliance, and are approved for new machine installations at co-located commercial and stand-alone facilities: <a href="http://www.dec.ny.gov/chemical/8943html">http://www.dec.ny.gov/chemical/8943html</a>
<b>Alternative Solvent Dry Cleaning Machines:</b>	
N	Dryer without a primary control system
O	Solvent recovery dryer that is equipped with a refrigerated condenser as the primary control system
P	Dry-to-dry, closed-loop dry cleaning machine that is equipped with a refrigerated condenser as the primary control system
R	Solvent recovery dryer that is equipped with a water cooled condenser as the primary control system
S	Dry-to-dry, closed-loop dry cleaning machine that is equipped with a water cooled condenser as the primary control system
<b>Other Dry Cleaning Machines:</b>	
Z	Other unlisted Dry Cleaning Machine

**26 OTHER SOLVENT(S):** Write in the names of all the unlisted primary dry cleaning solvents given a Solvent Type “Z” in Box 22a, 22b, or 22c. Do not report in Box 26 any solvents used for dry-side pre-cleaning or used as spotting agents.

**27 OTHER MACHINE(S):** Write in a description of all the unlisted dry cleaning machines that were given a Machine Type “Z” in Box 25a, 25b, or 25c. Do not describe any alternative solvent washing machines or extractors.

**CERTIFICATION:** Enter the name, official title, signature and date of signature of the responsible official accountable for the compliance of this facility with the applicable regulations. Certification is required by a representative of the firm or applicant responsible for demonstrating the truth, accuracy and completeness of the information contained in this application. The responsible official should be aware that significant penalties could result from submitting false information, including the possibility of fines and imprisonment for knowing violations.

# NOTIFICATION OF COMPLIANCE STATUS

40 CFR Part 63, Subpart M (NESHAP) - National Perchloroethylene Air Emissions Standards for Dry Cleaning Facilities



Department of Environmental Conservation

New and existing facilities installing new perc dry cleaning machines, must submit a completed Notification of Compliance Status form to the department by registered mail within 30 days of commencing operation. Additionally, facilities with a calculated yearly perc consumption that exceeds 2,100 gallons (section 232-2.8(b)(3)), must submit this completed form to the department by registered mail within 180 days from the date of determination.

DEC ID for Dry Cleaning Facility:  -     -

## Facility Information Section

1. Print or type the following for each separately located dry cleaning facility. The owner of more than one facility must fill out a separate form for each facility.

Owner/Operator: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

### **Facility Location Address (if different from mailing address)**

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: NY Zip: \_\_\_\_\_

2. This facility (check all that apply):

- no longer has dry cleaning equipment (if this box checked, skip to Certification Section).
- has dry cleaning equipment that uses perchloroethylene (perc) as a solvent.
- has dry cleaning equipment that uses one or more of the following alternative solvents:

<input type="checkbox"/> GreenEarth SB-32	<input type="checkbox"/> ExxonMobil DF2000™	<input type="checkbox"/> Rynex 3™	<input type="checkbox"/> Water-based cleaning
<input type="checkbox"/> SASOL LPA-142	<input type="checkbox"/> R.R. Streets Solvair™	<input type="checkbox"/> SolvonK4™	<input type="checkbox"/> GreenEarth GEC-5
<input type="checkbox"/> Carbon dioxide (CO2)	<input type="checkbox"/> Chevron Phillips EcoSolv®	<input type="checkbox"/> DC-142	<input type="checkbox"/> Other _____

3. The dry cleaning facility is located in a building (check only one):

- which includes residences (residential building).
- with other commercial occupancies only (non-residential building).
- with no other occupancies (stand-alone).

4. The annual perc consumption for the facility is \_\_\_\_\_ gallons.

*NOTE: The facility is a Major Source if perc usage exceeds 2,100 gallons/year. Contact NYSDEC Regional Office regarding requirements.*

5. PERC DRY CLEANING MACHINE INFORMATION (skip to Certification Section if facility has no perc dry cleaning equipment). List and describe all perc dry cleaning machines below (attach additional sheet if needed):

Make	Model	Serial Number	Machine Class (Generation)	Date Installed
			<input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/> 3 <sup>rd</sup> *	
			<input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/> 3 <sup>rd</sup> *	
			<input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/> 3 <sup>rd</sup> *	
			<input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/> 3 <sup>rd</sup> *	

\* 3rd generation machine operating with a door fan

# NOTIFICATION OF COMPLIANCE STATUS

40 CFR Part 63, Subpart M (NESHAP) - National Perchloroethylene Air Emissions Standards for Dry Cleaning Facilities



Department of Environmental Conservation

## Certification Section

Print or type the name and title of the Responsible Official\*\* for the dry cleaning plant:

Name: \_\_\_\_\_ Title: \_\_\_\_\_

\*\* A Responsible Official can be:

- The president, vice president, secretary, or treasurer of the company that owns the dry cleaning plant;
- An owner of the dry cleaning facility;
- The manager of the dry cleaning facility;
- A government official, if the dry cleaning facility is owned by the Federal, State, City, or County government; or
- A ranking military officer, if the dry cleaning facility is located at a military base.

I CERTIFY THAT THE FACILITY IS NOT A MAJOR SOURCE, THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE, AND THAT THIS FACILITY IS IN COMPLIANCE WITH ALL APPLICABLE CONTROL DEVICE AND MONITORING REQUIREMENTS LISTED IN THE FOLLOWING REGULATIONS:

- 40 CFR PART 63 – NATIONAL PERCHLOROETHYLENE AIR EMISSION STANDARDS FOR DRY CLEANING FACILITIES (JULY 27, 2006 FINAL RULE) and
- 6 NYCRR PART 232 – DRY CLEANING FACILITIES (MARCH 10, 2018).

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(Responsible Official)

**Keep a copy of this form for your records and mail a copy to each of the following offices:**

NYSDEC, Division of Air Resources Bureau of Stationary Sources 625 Broadway Albany, NY 12233-3254	U.S. EPA Region 2 290 Broadway, 21 <sup>st</sup> floor New York, NY 10007-1886	NYS DEC Regional Office  (See list below)
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### NYS DEC Regional offices:

Nassau & Suffolk Counties: NYSDEC Region 1, SUNY Building 40, 50 Circle Road, Stony Brook, NY 11790-3409

5 Boroughs of New York City: NYSDEC Region 2, 1 Hunters Point Plaza, 47-40 21st Street, Long Island City, NY 11101-5407

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester Counties:  
NYSDEC Region 3, 21 South Putt Corners Road, New Paltz, NY 12561-1696

Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schoharie, Schenectady Counties:  
NYSDEC Region 4, 1130 North Westcott Road, Schenectady, NY 12306-2014

Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington Counties:  
NYSDEC Region 5 Suboffice, 232 Golf Course Rd, Warrensburg, NY 12885-1145

Herkimer, Jefferson, Lewis, Oneida, St. Lawrence Counties:  
NYSDEC Region 6, State Office Building, 317 Washington Street, Watertown, NY 13601-3787

Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins Counties:  
NYSDEC Region 7, 615 Erie Blvd. West, Syracuse, NY 13204-2400

Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates Counties:  
NYSDEC Region 8, 6274 E. Avon-Lima Rd, Avon, NY 14414-9519

Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming Counties:  
NYSDEC Region 9, 270 Michigan Ave., Buffalo, NY 14203-2999



**NOTICE OF DRY CLEANING EQUIPMENT SHUTDOWN**  
**Perc and/or Alternative Solvent Dry Cleaning Machines**



**Department of Environmental Conservation**

Complete this form whenever any Perc or Alternative Solvent Dry Cleaning Machine is removed from service. The completed form must be typed or legibly printed and sent by CERTIFIED MAIL RETURN RECEIPT REQUESTED to the NYSDEC Regional office that serves your county. Mailing addresses are shown on page two (2) of this form. Keep a copy of this form for your records.

DEC ID for Dry Cleaning Facility:  -  -

(Please report facility information as on NYSDEC Registration or Permit form)	
Facility Name:	
Facility Address:	
Phone Number:	

List below each Perc and Alternative Solvent dry cleaning machine that was taken out of service at your dry cleaning facility.

Machine Manufacturer and Model Name:	Serial Number:	Shutdown Date:	Replacement Machine (if any):

In accordance with 6 NYCRR Part 232-1.6(c), I am notifying DEC that I have ceased operating the above dry cleaning machine(s) at the above facility.

Responsible Official:
Title:
Signature:
Date:

**NOTICE OF DRY CLEANING EQUIPMENT SHUTDOWN**  
**Perc and/or Alternative Solvent Dry Cleaning Machines**



**Department of  
 Environmental  
 Conservation**

**NYSDEC Regional Office Mailing Addresses for Submission of  
 Notice of Dry Cleaning Equipment Shutdown**

NYSDEC REGIONAL OFFICE MAILING ADDRESSES	COUNTIES IN REGION
NYSDEC Region 1 Attn: Regional Air Pollution Control Engineer SUNY Stony Brook, Building 40 50 Circle Road Stony Brook, NY 11790-3409	Nassau & Suffolk
NYSDEC Region 2 Attn: Regional Air Pollution Control Engineer 1 Hunters Point Plaza 47-40 21st Street Long Island City, NY 11101-5407	5 Boroughs of New York City
NYSDEC Region 3 Attn: Regional Air Pollution Control Engineer 21 South Putt Corners Road New Paltz, NY 12561-1696	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
NYSDEC Region 4 Attn: Regional Air Pollution Control Engineer 1130 North Westcott Road Schenectady, NY 12306-2014	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schoharie, Schenectady
NYSDEC Region 5 SUB-OFFICE Attn: Regional Air Pollution Control Engineer 232 Golf Course Road Warrensburg, NY 12885-1145	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington
NYSDEC Region 6 Attn: Regional Air Pollution Control Engineer State Office Building 317 Washington Street Watertown, NY 13601-3787	Herkimer, Jefferson, Lewis, Oneida, St. Lawrence
NYSDEC Region 7 Attn: Regional Air Pollution Control Engineer 615 Erie Blvd., West Syracuse, NY 13204-2400	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins
NYSDEC Region 8 Attn: Regional Air Pollution Control Engineer 6274 E. Avon-Lima Road Avon, NY 14414-9519	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates
NYSDEC Region 9 Attn: Regional Air Pollution Control Engineer 270 Michigan Avenue Buffalo, NY 14203-2999	Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming

**New York State Department of Environmental Conservation**  
**PART 232 DRY CLEANING COMPLIANCE INSPECTION REPORT**  
 Inspections Required Per 6 NYCRR, Part 232-2.11



**Department of Environmental Conservation**

DEC ID for Dry Cleaning Facility:

-  -

Date of this inspection \_\_\_/\_\_\_/\_\_\_

Date of last inspection \_\_\_/\_\_\_/\_\_\_

Date DEC was notified of this inspection \_\_\_/\_\_\_/\_\_\_

Is this a follow-up 45 day re-inspection: YES  NO

Dry cleaning facility name \_\_\_\_\_

Location address \_\_\_\_\_

City

County/Borough

Zip

Business telephone #: ( ) - Date facility began operation at this location \_\_\_/\_\_\_/\_\_\_

Facility type (check one):  Stand-alone  Co-located commercial  Co-located residential

Location and types of other occupancies adjacent to dry cleaner \_\_\_\_\_

Dry cleaning facility owner's name \_\_\_\_\_

Dry cleaning facility owner's telephone number: ( ) -

Certified Owner/Manager's name \_\_\_\_\_

O/M Certificate number \_\_\_\_\_ O/M Certificate expiration date \_\_\_/\_\_\_/\_\_\_

**List all operator's names, operator certificate numbers, and certificate expiration dates:**

<u>Name</u>	<u>Certified?</u>	<u>Operator Certificate #</u>	<u>Expiration date</u>
_____	YES <input type="checkbox"/> No <input type="checkbox"/>	_____	___/___/___
_____	YES <input type="checkbox"/> No <input type="checkbox"/>	_____	___/___/___
_____	YES <input type="checkbox"/> No <input type="checkbox"/>	_____	___/___/___

Compliance inspector's name \_\_\_\_\_

Compliance inspector's telephone number: ( ) -

O/M Certificate number \_\_\_\_\_ O/M Certificate expiration date \_\_\_/\_\_\_/\_\_\_

**For DEC OFFICIAL USE ONLY - Compliance Status Determination:**

Compliance, or  Non-compliance

Name \_\_\_\_\_ Title \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Attach additional sheet(s) if necessary)

**(A) FACILITY: BADGE SAMPLING**

Immediately upon entering all perc dry cleaning facilities, the inspector must place the sampling badge just outside the vapor barrier room door (if co-located), or approximately midway between the machine and the pressing station (if stand-alone), at a height of 3 to 6 feet above the floor and away from any open windows or outside doors. The sample must be collected during the inspection and for a minimum of two hours and two machine loads. Samples must be analyzed at a laboratory using NIOSH Method 1003:

Sample start time \_\_\_\_ : \_\_\_\_ am pm End time \_\_\_\_ : \_\_\_\_ am pm Number of loads run \_\_\_\_\_

Describe the location of the sampling badge below:

Distance to floor is \_\_\_\_ (feet); to VBR or dry cleaning machine if stand-alone \_\_\_\_ (feet); to the pressing station is \_\_\_\_ (feet); and to nearest open window, door or exhaust fan or duct \_\_\_\_ (feet).

Badge sample number \_\_\_\_\_

Badge sample concentration (if detected) \_\_\_\_\_ ppm Detection Limit (if undetected) \_\_\_\_\_ ppm

Name of laboratory used to analyze badge sample \_\_\_\_\_ (Attach lab report)

**(B) FACILITY: GENERAL INFORMATION**

Number of perc dry cleaning machines \_\_\_\_\_ Any coin operated perc machines ..... YES  NO

All perc dry cleaning machines 3<sup>rd</sup> or 4<sup>th</sup> generation ..... YES  NO

List all perc and alternative solvent dry cleaning machine(s) removed from service since the last inspection along with their removal date(s) \_\_\_\_\_

Number of alternative solvent dry cleaning machines \_\_\_\_\_ Alternative Solvent \_\_\_\_\_

Are all of these machines dry-to-dry, closed loop with a refrigerated condenser..... YES  NO

If "NO", describe alternative solvent machine(s) \_\_\_\_\_

Are all perc and alternative solvent dry cleaning machines listed on DEC registration or permit YES  NO

Number of "wet cleaning" machines (not standard washing machines) \_\_\_\_\_

Number of "liquid carbon dioxide" dry-to-dry, closed loop dry cleaning machines \_\_\_\_\_

**(C) FACILITY: SAMPLING EQUIPMENT**

**Inspector must provide the following information for instruments used:**

Halogen Leak Detector (Beeper) used to locate leak.

Manufacturer \_\_\_\_\_ Model Number \_\_\_\_\_

Portable Gas Analyzer used to quantify leaks. Specify Type: ( ) PID, ( ) FID, ( ) Other \_\_\_\_\_

Manufacturer \_\_\_\_\_ Model Number \_\_\_\_\_

Gas Analyzer's range of detection \_\_\_\_\_ Accuracy \_\_\_\_\_

Date Manufactured \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Date PID UV Lamp Window Last Cleaned \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Calibration procedure: \_\_\_\_\_

\_\_\_\_\_ Calibration Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Calibration Gas \_\_\_\_\_ Response Factor \_\_\_\_\_

Colorimetric Tubes / Sampling Pump.

Pump Manufacturer \_\_\_\_\_ Pump Model Number \_\_\_\_\_

Tube Number \_\_\_\_\_ Tube Expiration Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**(D) FACILITY: RECORD KEEPING**

The inspector must check the following items for compliance and mark the applicable boxes:

- Is the DEC Part 232 posting notice (sign) displayed in a conspicuous public location ..... YES  No
- Are equipment manuals (manufacturers or other) available ..... YES  No

Are the following records maintained, current, accurate and complete on DEC checklists and Logs:

- Weekly Leak Inspection Checklist (232-2P) ..... YES  No
- Weekly Self-monitoring Checklist for Refrigerated Condensers (232-2P) ..... YES  No
- Manufacturer's specified pressure ranges (bar): High \_\_\_\_ to \_\_\_\_ and Low \_\_\_\_ to \_\_\_\_
- Weekly Self-monitoring Checklist for External Door Fans (232-2P) ..... N/A  YES  No
- Weekly Preparedness and Prevention Checklist ... (232-3P) ..... YES  No
- Weekly Maintenance Log for the Integral Carbon Adsorber ... (232-4P) ..... YES  No
- Monthly Owner Drum Testing Checklist for Perc Dry Cleaning Machines (232-5P) ..... YES  No
- Occasional Maintenance Log for Perc Dry Cleaning Equipment (232-6P) ..... YES  No
- Most recent date refrigerated condenser coils were removed and cleaned: \_\_\_\_ / \_\_\_\_ / \_\_\_\_
- Six Month Operation & Maintenance Checklist ... (232-7P) ..... YES  No
- Corrective Action Log for Perc Dry Cleaning Equipment (232-8P) ..... YES  No
- Occasional Emergency Response Log ... (232-9P&A) ..... YES  No
- Occasional Hazardous Waste Shipment Log ... (232-10P&A) ..... YES  No
- Name of hazardous waste hauler \_\_\_\_\_ Licensed ..... YES  No
- Monthly Perc Usage Log ... (232-11P) ..... YES  No
- Date perc usage log was initiated \_\_\_\_ / \_\_\_\_ / \_\_\_\_
- Most recent monthly quantity purchased \_\_\_\_\_ gallons, Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_
- Largest 12 month perc usage within past 12 months \_\_\_\_\_ gallons, Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_
- Are records completed by certified operators ..... YES  No
- Are records maintained on-site for five years ..... YES  No
- Explain any "NO" answers above \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**(E) FACILITIES: CO-LOCATED LOCATIONS**

Complete this section (E) for co-located commercial and residential facilities. The Vapor Barrier Room (VBR) door must be closed whenever measurements are taken within the room enclosure. The volumetric flow rate of the VBR general exhaust must be measured at the fan(s) inlet or outlet, in close proximity to the fan.

Vapor Barrier Room (VBR) installed ..... YES  No

Describe Vapor barrier materials:

- Glass       22 mil. or greater PVC       Metal foil composite board       Sheet metal
- 2-part epoxy       Sheet vinyl flooring       Fiberglass-reinforced polyester resin       100% silicon caulk
- Other (specify): \_\_\_\_\_

Is the VBR general exhaust ventilation system operating ..... YES  No

Is the VBR concentration less than 25 ppm just inside the partially opened door ..... YES  No

Are all VBR visible joints and seams sealed ..... YES  No

List all compromises to the integrity of the VBR enclosure including ceiling, floor, and pipe chases:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is the VBR door kept closed at all times except when a person is entering or exiting..... YES  NO 
Does the VBR door function properly and fully seal when closed..... YES  NO 
Is the VBR exhaust system separate from other building ventilation systems ..... YES  NO 
Describe the location of the air outlet vent inside the VBR \_\_\_\_\_

Describe the location of the fresh air inlet vent inside the VBR \_\_\_\_\_

VBR dimensions: Height \_\_\_\_ (ft) Width \_\_\_\_ (ft) Length \_\_\_\_ (ft) & Calculated Volume \_\_\_\_\_ (ft³)

VBR fan exhaust flow rate \_\_\_\_\_ (ft³/min) Measurement instrument \_\_\_\_\_

VBR exhaust system provides a fresh air change every \_\_\_\_\_ minutes

Where does the VBR exhaust system vent outside the building in relation to the closest opening (window, door or air intake) in a nearby occupancy: \_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

(F) FACILITY: ADDITIONAL INFORMATION

Provide the following additional information:

Wastewater Management Procedures - Separator and Steam Condensate Water:

- ( ) Collected and shipped as listed hazardous waste, or
( ) Treated on-site and discharged per Part 232 by:
( ) Heat Evaporation, ( ) "Mister," ( ) Sewer, ( ) Other \_\_\_\_\_
Manufacturer and Model # of Treatment Unit \_\_\_\_\_

Answer the following questions (write "NA" if not applicable):

How often are machine lint filters cleaned and replaced \_\_\_\_\_
Manufacturer's recommendation for lint filter cleaning and replacement \_\_\_\_\_
Number of loads between cleaning and replacement of carbon absorber pre-filter \_\_\_\_\_
Manufacturer's recommendation for cleaning and replacement of carbon absorber pre-filter \_\_\_\_\_

Are all solvent and perc-contaminated waste containers kept covered and sealed ..... YES  NO 
Are all parts of dry cleaning system closed (e.g. doors, filters, stills, etc.)..... YES  NO

Answer the following questions for machines installed prior to May 15, 1997:

Have floor drains and flooring in the vicinity of the equipment been sealed..... YES  NO 
Have temporary dikes, berms and containment devices been placed in areas where
spills are likely to occur..... YES  NO

Mark the appropriate boxes to indicate if the Preparedness and Prevention Equipment is available:

Are vapor proof containers available for storing spill contaminated material..... YES  NO 
Volume of containers available (units) \_\_\_\_\_
List absorbent material available for spill containment \_\_\_\_\_
Is fire control equipment available and in working order..... YES  NO 
Is aisle space around dry cleaning equipment adequate and clear for inspection ..... YES  NO 
Are spare parts for equipment repair available on-site ..... YES  NO

**(G) DRY CLEANING EQUIPMENT**

Use additional “**DRY CLEANING EQUIPMENT**” and “**EQUIPMENT TESTING**” pages (Sections G & H) for each perc dry cleaning machine. Record available information from the machine name plates:

Machine Manufacturer \_\_\_\_\_  
 Model Number \_\_\_\_\_  
 Serial Number \_\_\_\_\_  
 Capacity (lbs.) \_\_\_\_\_ Year Mfg. \_\_\_\_\_ Date Installed \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Machine Type:     3<sup>rd</sup> gen. w/external door fan     3<sup>rd</sup> to 4<sup>th</sup> conversion  
                           4<sup>th</sup> gen. uncertified                       4<sup>th</sup> gen. DEC certified or issued Statement of Compliance  
 Date dry cleaning machine last serviced \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Service Technician \_\_\_\_\_ Name of Company \_\_\_\_\_

Does the machine have an external door fan (232-1.2(b)(34)) ..... YES  NO   
 Does the machine have an internal door fan (232-1.2(b)(42))..... YES  NO   
 Does the machine have a spill containment pan..... YES  NO   
 Volume of spill pan \_\_\_\_\_(ft<sup>3</sup>)    Volume of largest perc tank associated with machine \_\_\_\_\_ (ft<sup>3</sup>)

**The compliance inspector must verify or record the following items (if applicable):**

Carbon adsorber regeneration:  
 Carbon adsorber capacity \_\_\_\_\_ pounds                      Date of last regeneration: \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Indicate the method of carbon regeneration by marking the applicable box:  
 Steam                       Hot Air (Steam Coils)                       Other (Describe) \_\_\_\_\_  
 Number of loads \_\_\_\_\_ and pounds \_\_\_\_\_ (lbs) of clothes cleaned between regenerations  
 Manufacturer’s recommended regeneration frequency \_\_\_\_\_  
 Pounds of clothes cleaned per pound of carbon in adsorber \_\_\_\_\_  
 Date carbon was last replaced \_\_\_\_\_

**(H) DRY CLEANING EQUIPMENT TESTING**

**LIQUID AND VAPOR LEAKS:** The dry cleaning machine must be inspected for perceptible liquid and vapor leaks during that portion of the machine cycle that the component is utilized. Leak and fugitive measurements must be taken approximately 1 cm from each listed source (not clothing). Check “Leaks” box if a leak is detected using a “beeper”. These detected leaks must then be quantified using a PID to measure the emission concentration. When using only a PID to perform the leak check, record all measured source concentrations. Enter BDL (Below Detection Limit) as measurement if measured concentration is the below the “range of detection” reported on page 2 of this form:

<b>PERFORM LEAK CHECK:</b>	<u>Inspected</u>	<u>Leaks</u>	<u>Measurement</u>	<u>Tagged</u>	<u>Date</u>
Front loading door.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Perc solvent tanks and containers.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Lint trap.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Button trap.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Water separator.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Refrigerated Condenser housing.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Heating Coil.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Cartridge filter.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Spin disk filter.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Solvent pump pre-filter.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____
Solvent pump.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	____/____/____

**PERFORM LEAK CHECK:**

	<u>Inspected</u>	<u>Leaks</u>	<u>Measurement</u>	<u>Tagged</u>	<u>Date</u>
Still.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___
Carbon adsorber.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___
Hoses and pipes, fittings, couplings and valves...	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___
Perc contaminated waste storage drums.....	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___
Six inches above clothing recently dry cleaned...	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___
Any other area, list _____	<input type="checkbox"/>	<input type="checkbox"/>	_____ ppm	<input type="checkbox"/>	___/___/___

**MACHINE TESTING:** Testing must be conducted under normal operating conditions where machine is filled to at least 80% of rated capacity.

**3<sup>rd</sup> and 4<sup>th</sup> Generation Dry Cleaning Machines with External Door Fans:** Measure the end-of-cycle maximum perc concentration at least 8 duct diameters downstream from the carbon adsorber and 2 duct diameters upstream from any flow disturbance such as a bend or outlet immediately after opening the machine door. Record and submit all testing results.

Load #1: Test Load \_\_\_\_\_ lbs. Final cool down condenser outlet vapor temp. \_\_\_\_\_ °F  
 Load #1: Refrigerated Condenser High \_\_\_\_\_ and Low \_\_\_\_\_ Pressures (bar) during heated drying cycle  
 Load #1: Maximum Perc conc. \_\_\_\_\_ ppm Sampling device \_\_\_\_\_

Load #2: Test Load \_\_\_\_\_ lbs. Final cool down condenser outlet vapor temp. \_\_\_\_\_ °F  
 Load #2: Refrigerated Condenser High \_\_\_\_\_ and Low \_\_\_\_\_ Pressures (bar) during heated drying cycle  
 Load #2: Maximum Perc conc. \_\_\_\_\_ ppm Sampling device \_\_\_\_\_

Measure the inward velocity of the door fan at the center of the door opening \_\_\_\_\_ fpm  
 Identify the measuring instrument \_\_\_\_\_

**4<sup>th</sup> Generation Dry Cleaning Machines:** Drum testing must be conducted on all 4<sup>th</sup> generation dry cleaning machines, with or without an external door fan, at major facilities and all 4<sup>th</sup> generation dry cleaning, without an external door fan, at non-major facilities. Deactivate any fugitive emissions control system (internal and/or external door fan) prior to opening the loading door and sampling the end-of-cycle maximum perc drum concentration (Subparagraph 232-2.5(i)). Measure the concentration in the drum immediately after opening the loading door. The measurement must be taken near the rear of the drum above the articles being cleaned. Record and submit all testing results.

Load #1: Test Load \_\_\_\_\_ lbs. Duration of entire dry cleaning test cycle \_\_\_\_\_ min.  
 Load #1: Refrigerated condenser outlet vapor temperature at end of final cool down cycle \_\_\_\_\_ °F  
 Load #1: Refrigerated Condenser High \_\_\_\_\_ and Low \_\_\_\_\_ Pressures (bar) during heated drying cycle  
 Load #1: Maximum Perc conc. \_\_\_\_\_ ppm Sampling device \_\_\_\_\_

Load #2: Test Load \_\_\_\_\_ lbs. Duration of entire dry cleaning test cycle \_\_\_\_\_ min.  
 Load #2: Refrigerated condenser outlet vapor temperature at end of final cool down cycle \_\_\_\_\_ °F  
 Load #2: Refrigerated Condenser High \_\_\_\_\_ and Low \_\_\_\_\_ Pressures (bar) during heated drying cycle  
 Load #2: Maximum Perc conc. \_\_\_\_\_ ppm Sampling device \_\_\_\_\_

Was the fugitive emissions control system de-activated prior to sampling ..... n/a  YES  NO   
Entire dry cleaning test cycles controlled by fully automatic program ..... YES  NO



(I) INSPECTION SUMMARY

All perc dry cleaning facilities must be inspected yearly unless granted an extension by the department due to extenuating circumstances. Should such an extension be granted, the following yearly inspection must be conducted no later than one year after the date of the originally scheduled inspection. Registered inspectors must notify the department within three business days when measured perc emissions or concentrations exceed the maximum limit specified in section 232-2.4(a)(3)(iii) for external door fans or the measured end-of-cycle perc drum concentration exceeds the specified limit in section 232-2.4(a)(5) during the performance test of the dry cleaning machine (232-2.11(i)). All leaks found at the facility must be repaired immediately and re-tested. If a repair cannot be completed immediately, the leak must be repaired in accordance with the requirements in Part 232 and re-inspected within 30 days. Copies of this completed report must be submitted no later than 45 days after the completion of this inspection to the following parties:

- 1. Facility owner
2. NYSDEC Regional Air Pollution Control Engineer ( in Region where source is located )
3. Permitting & Compliance Section, Attn: Part 232 Implementation Group, NYSDEC Division of Air Resources, 625 Broadway, Albany, NY 12233-3254

Write a summary of the inspection or re-inspection. Describe all problems and potential Part 232 violations. For re-inspections, re-submit pages with modified information and include the completed first and last pages of this form. Complete written inspection summary on additional pages if necessary.

Inspection Summary: \_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

(J) REPORT CERTIFICATION

Compliance Inspector Certification: I certify that all inspection information gathered by me and included in this report is true, accurate, and complete. I am aware that false statements (6 NYCRR Part 200.3) made herein are punishable as a class A misdemeanor under Section 210.45 of the Penal Law.

Compliance inspector's name (print) \_\_\_\_\_
Signature \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Registered Compliance Inspectors Certification: I certify that I have reviewed all the gathered information presented in this report, that it was prepared by me or under my direct supervision, and believe all information is true, accurate, and complete. I am aware that false statements (6 NYCRR Part 200.3) made herein are punishable as a class A misdemeanor under Section 210.45 of the Penal Law.

Registered inspector's name (print) \_\_\_\_\_
Address (print) \_\_\_\_\_
Telephone number: ( ) -
Signature \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_
O/M Certificate number \_\_\_\_\_ Check applicable box: [ ] P.E., [ ] R.A., or [ ] C.I.H

May 31, 2018

## Part 232 Compliance Inspection Report Instructions [FORM 232-15I INSTRUCTIONS (5-31-2018)]

DEC routinely reviews all **232-15 Compliance Inspection Reports** for compliance and enforcement purposes. Please read the following instructions for completing the report.

### **Before You Begin:**

- **YOU MUST USE A COPY OF FORM 232-15, POSTED ON THE NYSDEC WEBSITE, TO RECORD AND REPORT THE FINDINGS OF THE COMPLIANCE INSPECTION.**
- **INCOMPLETE AND/OR ILLEGIBLE INSPECTION REPORTS WILL BE REJECTED BY DEC REVIEWING ENGINEERS AND RETURNED TO THE REGISTERED COMPLIANCE INSPECTOR FOR RE-SUBMITTAL.**
- **Advise the dry-cleaning facility Owner/Manager to have all the information you need, organized and ready, in advance of your scheduled inspection. Needed information includes DEC facility registration records, building information, the previous year's Part 232-15 Inspection Report, all required Part 232 checklists, operation and maintenance logs and files, equipment manuals and specification documents.**
- **COMPLETENESS.** Complete all sections of the 232-15 form. ALL fields must contain an entry: mark "n/a" (not applicable) if a question does not apply and "Unknown" if the information is unknown. Write "Unavailable" if the Owner/Manager cannot produce the required information at the time of the inspection. Compliance Inspectors should submit only complete, final inspection reports.
- **LEGIBILITY.** All entries **MUST** be legible. The completed inspection report is an official certified document as submitted to DEC. If the inspector cannot generate a legible report during the inspection, field notes should be taken on a draft 232-15 form and then transcribed using block printing or a typewriter to produce a legible document. Attach additional sheets if more space is needed to report findings and comments.
- **CERTIFICATION.** Both the Compliance Inspector and the Registered Compliance Inspectors (RCIs) must certify the inspection report. The Compliance Inspector must certify that all information he/she gathered is true, accurate and complete. The Registered Compliance Inspector must review all the gathered information that was prepared under his/her direct supervision and certify, to the best of his/her knowledge, that all information is true, accurate and complete. RCI certified reports must be signed by the RCI through their original professional seal affixed on the right side of the Report Certification Section (SECTION J). Three signed copies must be submitted; one to the facility owner for facility records and public review, one to the DEC RAPCE for the compliance status determination and one to the Permitting & Compliance Section for auditing purposes.

**Specific comments and instructions for filling out Form 232-15.** All data fields on the form must be completed although not all are discussed below.

**PART 232 DRY CLEANING COMPLIANCE INSPECTION REPORT ( Page 1):**

**DEC ID.** The DEC ID number can be found at the top of the dry cleaning facility's Air Facility Registration (AFR), Air State Facility (ASF) permit or Air Title V (ATV) permit. All dry cleaning facilities must have a current registration or permit and it must be kept on site.

If the facility owner doesn't have a registration or permit, describe the circumstances in the Inspection Summary in SECTION I. Write "PENDING" above the DEC ID number box if an application has been submitted to DEC. Write "MUST SUBMIT APPLICATION" above the DEC ID number box if the facility owner has not yet submitted a registration or permit application and have them contact the DEC Regional Air Pollution Control Engineer's office for assistance. Additionally, the Small Business Environmental Assistance Program (SBEAP) provides free and confidential assistance to small business at 1-800-780-7227.

**Follow-up 45 day re-inspections.** If a compliance inspection reveals a machine leak or malfunction, the machine must be repaired within the applicable timeframe established in section 232-2.5 and then re-inspected by a compliance inspector no later than 45 days after the machine leak or malfunction was detected. Check the appropriate box to indicate if this is a follow-up 45 day re-inspection.

**Dry Cleaning Facility name.** The legal business (tax) name of the facility. If the business goes by another name, write down both names.

**Location address.** The street address where the facility is located.

**Date facility began operation at this location.** Enter the date the original shop owner first began to operate any perchloroethylene dry cleaning machine at this location.

**Facility type and type of other occupants.** Check the box describing the type of dry cleaning facility: stand-alone, co-located commercial or co-located residential. Also describe the location and types of other building occupants adjacent to the dry cleaner.

**Dry Cleaning Facility owner's name.** Name of the person owning the dry-cleaning business and their telephone number. If owned by a corporation or other organization, enter that name and the name of the contact person.

**Certified Owner/Manager's name.** Record the name of the NYSDEC Certified Owner/Manager and the O/M Certificate number and expiration date.

**Operator Names.** Write down the names of all the employees who operate the dry cleaning machines and indicate if they are certified by the department. Include their names, certificate numbers and certificate expiration date exactly as they appear on their NYSDEC Operator Certificate. All perc dry cleaning machine operators must be certified by the department.

**Compliance inspector's name.** Enter the name of the individual actually performing the physical inspection: either the RCI or the CI. Write down the compliance inspector's name, telephone number, Owner/Managers Certificate number and expiration date exactly as it appears on the NYSDEC O/M Certificate.

## **FACILITY: BADGE SAMPLING (SECTION A).**

Immediately upon entering all perc dry-cleaning facilities, the Compliance Inspector shall begin passive (badge) sampling. The badge shall be placed just outside the vapor barrier room door (if co-located), or approximately midway between the dry-cleaning machine and the pressing station (if stand-alone), at a height of 3 to 6 feet above the floor level and away from any open windows or outside doors. NYSDOH requires that this measurement be made within the BREATHING ZONE of the facility occupants. Some 232-15 inspection reports have been filed with the reported badge location outside of the 3 to 6 foot height range. **Such reports will be rejected and the RCI will be required to re-inspect the facility.**

**The sample must be collected during the time that the inspection takes place and for a minimum of two hours and two machine loads. The compliance inspector must be present during the entire time the badge sample is collected.**

Samples **MUST** be analyzed at a NYSDOH ELAP certified laboratory using NIOSH Method 1003. There are over 390 Commercial Labs with NYS DOH ELAP certification. They are listed at:

<http://www.wadsworth.org/labcert/elap/comm.html>

**An original copy of the badge sample laboratory analysis MUST be attached to the Part 232 Dry Cleaning Compliance Inspection Report (Form 232-15) that is sent to the NYSDEC Regional Air Pollution Control Engineer. Copies of the laboratory analysis should be attached to the inspection reports that are sent to the facility owner and Permitting & Compliance Section.**

**Badge location:** Note the distance from the badge sampler to the floor; to the VBR or the dry cleaning machine if stand-alone; to the pressing station; and to the nearest open window, door or exhaust fan or duct. The inspector may find that drawing a line sketch on the back of the 232-15 form helpful in recording this required information.

## **FACILITY: GENERAL INFORMATION (SECTION B).**

Record the number of Perc dry cleaning machines and indicate if they all are 3<sup>rd</sup> or 4<sup>th</sup> generation dry cleaning machines. Also report the existence of any COIN-OPERATED Perc dry-cleaning machines at the facility regardless of whether they are claimed to be “in-service” or not.

**Dry cleaning machine removal:** Note on the inspection report any Perc or alternative solvent dry cleaning machines removed from service since the last inspection date along with their removal dates. Machines removed from service must be physically rendered inoperative by disconnecting the utilities (electric, steam, etc.). Upon the termination of operation of any dry-cleaning machine, the facility owner must send a Notice of Dry Cleaning Equipment Shutdown to the respective DEC regional office to the attention of the Regional Air Pollution Control Engineer. The Notice of Dry Cleaning Equipment Shutdown form (Form 232-14) can be found on the NYSDEC website. If a dry cleaning machine has not been removed from service but an Owner/Manager/Operator claims a machine is “unused” or “out-of-service” it still must be listed on the inspection report.

Record the number of alternative solvent dry cleaning machines and include the name of the alternative dry cleaning solvent used at the facility. Only include the total number of alternative solvent dryers, solvent recovery dryers and dry-to-dry, closed loop dry cleaning machines; do not include any washers, extractors, “wet cleaning” machines or liquid carbon dioxide dry cleaning machines. Determine if all dry-to-dry, closed loop dry cleaning machines are equipped with a refrigerated condenser; specifically identify any machines that are not.

Note the number of perc and alternative solvent dry cleaning machines listed on the NYSDEC registration/permit. If the number of machines at the facility does not equal the number on the registration/permit, the registration/permit needs to be updated. The facility Owner/Manager should then contact the appropriate DEC regional office for assistance.

Record the number of “wet cleaning” machines and liquid carbon dioxide dry-to-dry, closed loop dry-cleaning machines at the facility. Do not include standard washing machines used for shirt laundry.

#### **FACILITY: SAMPLING EQUIPMENT (SECTION C).**

The Compliance Inspector may choose how leaks will be **detected**, and once detected, how they will be **quantified**. For example, the inspector may choose to locate leaks with a “beeper” and then to quantify the emissions with a PID.

End-of-cycle Perc drum concentrations from dry cleaning machines must be measured using a portable gas analyzer or colorimetric tube sampling pump.

PIDs are sensitive instruments that require periodic service. The UV Lamp window should be cleaned on a regular basis and PIDs must be calibrated prior to the inspection. Colorimetric tube sampling pumps should be leak tested prior to sampling the end-of-cycle Perc concentrations.

#### **FACILITY: RECORD KEEPING (SECTION D).**

The Part 232 **Posting Notice** (sign) must be conspicuously displayed and **easily readable** to all who enter the facility.

Ask for and confirm the existence of **equipment manuals**: missing manuals should be replaced by the facility owner/manager. If original manuals are not available from the machine manufacturer, the federal EPA has a “generic” manual which should be ordered and kept on site.

**Checklists, Logs, etc.:** Must be filled out according to the Part 232 regulatory schedule (weekly, monthly, occasionally or every 6 months) and be legible and kept on-site. Records must be completed by certified operators and be maintained on-site for five years. The inspector must confirm that all required logs are currently being kept, and must record the **initiation date** specified in the perc usage log on the inspection report. Verify that **no gaps** appear in the record keeping. Record any discrepancies from these requirements in the Inspection Summary in SECTION I.

DEC has been asked by facility owners and inspectors if missing past records should be re-created in anticipation of a compliance inspection. The answer is clearly “NO,” since this would be a falsification of an official State document.

Dry-cleaning facility managers can obtain additional copies of any Part 232 Checklists and Log forms from the DEC website or at no cost by calling any DEC Air Resources program office.

#### **FACILITY: CO-LOCATED LOCATIONS (SECTION E).**

Complete this section for co-located facilities only. All Perc dry cleaning machines must be installed in a Vapor Barrier Room (VBR) at co-located facilities (co-located residential or commercial). Facility files should contain records of vapor barrier construction, including documentation of the use of approved construction materials. Approved alternate vapor barrier materials include epoxy coatings, glass and a structural plastic; the use of chemically compatible sealants (caulks) are important.

Prior to entering the Vapor Barrier Room, verify that the exhaust fan is running from outside the room and record its operational status in the report. When the exhaust fan is running, the room will be under negative pressure and perc exposure will be minimized. If the exhaust fan is not running, have the operator turn it on. Partially open the door to measure the Perc air concentration inside the VBR. If the door concentration exceeds 25 ppm, the department recommends that you do not enter the VBR without wearing a NIOSH certified elastomeric half-face or full-face respirator with organic vapor cartridges. If the door concentration exceeds 100 ppm, the department recommends that you do not enter the vapor barrier room until the owner repairs the major leak.

Look carefully for any gaps, cracks or openings in the vapor barrier surfaces. There should be NONE. **Record any observed compromises - cracks, gaps, etc. - in the vapor barrier.**

DEC is especially concerned that the floor be a continuous surface (membrane) and have no cracks, etc. All floor drains in the vapor barrier room **must** be completely sealed; DEC recommends that other drains within the vapor barrier room should be sealed. Record any deviations from the requirements on the form.

Part 232 does not require the installation of vapor barrier material under machines installed before May 15, 1997 at co-located facilities. Nonetheless, the vapor barrier membrane on the floor of these older facilities should be as comprehensive as possible. Any accessible area under these machines must be coated with one of the approved vapor barrier materials. If not accessible, the vapor barrier material should extend up to the base of the machine and be sealed to it. After May 15, 1997, anytime a machine is replaced with a new machine or lifted for maintenance or for any other reason, the vapor barrier surface under the machine must be checked to make sure the floor has a continuous Perc impermeable surface. If not, the floor vapor barrier surface under the machine must be repaired or modified to make the floor impermeable to Perc. Record any observed deviations from these requirements in SECTION I.

**Part 232 REQUIRES that vapor barrier room enclosure doors be CLOSED AT ALL TIMES except when a person is entering or exiting the room. Note confirmation of closed door on inspection form.**

The vapor barrier room exhaust system (General Exhaust Ventilation System) must be completely separate from other facility ventilation systems and be operated at all times when the facility is open for business. Record the locations of the fresh air inlet(s) and outlet vent(s) inside the vapor barrier room. The “fresh air” inlet(s) MUST introduce **outside air** into the vapor barrier; note any discrepancies.

Measure and note the VBR dimensions and calculate and report the volume of the room enclosure. If the facility has been inspected before, much of this information may be available on a previous inspection report. If so, check the information for accuracy and make sure that there are no changes. Record current information on inspection form. Use a velometer or equivalent device for measuring the Vapor Barrier Room exhaust flow rate. Although such measurements should ideally be done in accordance with generally accepted engineering practices, they may be taken at the interior face of the exhaust vents for the purposes of this inspection. Note the measurement instrument. Calculate and record the air exchange rate to confirm it exceeds one air exchange every 5 minutes.

Describe where the Vapor Barrier Room exhaust system vents outside the building in relation to any residential, other co-located facility or other building air intake vents, nearby windows or public access areas.

#### **FACILITY: ADDITIONAL INFORMATION (SECTION F).**

**WASTE WATER MANAGEMENT:** Part 232 currently allows the use of treatment systems utilizing physical separation (water separator) and double carbon filtration prior to either heat evaporation, misting (atomizing nozzle) or allowable direct sewer disposal of the carbon-filtered water. These treatment

systems require a separator and filtration units to reduce the Perc concentration to less than 20 ppb (parts per billion).

The alternative to on-site treatment is for a facility to collect all the separator water in a drum as a Hazardous Waste and then to ship it to an approved facility using a licensed Hazardous Waste hauler. If this option is used by the facility, check the appropriate box on the inspection report.

Record the manufacturer's name, model name and number of any Wastewater Treatment Units on the Compliance Inspection Report. Use additional sheets if necessary.

**Additional questions:** Perc contaminated lint and fuzz from filters must be disposed of as hazardous waste. Confirm this operational practice. Verify that all solvent containers and containers containing Perc contaminated items are kept covered and sealed. Verify that all parts of the dry cleaning system are closed. Many of the questions in this SECTION require information which should have been previously recorded on the various Part 232 O&M logs: confirm that facility staff answers are consistent with what is written on forms. Look at maintenance logs to ensure they are being kept up-to-date. Repair parts? The repair part inventory may be limited but it should contain replacement parts for the most common repairs (gaskets, filters, etc.). Check for existence of fire control equipment, (fire extinguisher) - is its inspection current? Note.

## **DRY CLEANING EQUIPMENT (SECTION G).**

Complete a separate SECTION G (page 5) for each Perc dry cleaning machine located at the facility. Obtain additional copies of SECTION G if the facility has multiple Perc dry-cleaning machines. Refer to the machine nameplate, manuals, checklists and equipment maintenance log for the information requested on the inspection report. If the machine has been modified or retrofitted, examine work orders, receipts and other available documents to gather information needed to fill out this section. **When the inspection is scheduled, the inspector should remind the facility owner/manager to have these and other necessary documents ready for review at the time of inspection.** If these documents are unavailable, note this on the 232-15 form.

Some dry cleaning machines may have fugitive emissions control systems (internal or external door fans) that are activated upon machine door opening after the drum has ceased rotation and dry cleaning cycle is complete. External door fans reduce perc drum concentrations by drawing drum vapors through an external carbon adsorber and then venting the emissions to the outside air. Internal door fans are non-vented control systems which reduce perc drum concentrations by recirculating drum vapors through the machines internal carbon adsorber and returning the controlled vapors back into the drum. When testing the machine drum of a 4<sup>th</sup> generation dry cleaning machine, determine if the machine has an activated internal door fan. Internal door fans must be deactivated prior to conducting this test. Where in doubt, have the operator switch off power to the machine after the machine door has been opened. Drum testing is not required for any perc dry cleaning machine that is equipped with an external door fan at a non-major facility: these machines require sampling the external door fan exhaust. NOTE: Although there are presently no major perc dry cleaning facilities in New York State, 4<sup>th</sup> generation machine drums at major facilities must be tested weekly with both internal and external door fans de-activated.

Refer to the Part 232 O&M logs and the Manufacturer's operational machine manual for information on carbon adsorbers.

## **DRY CLEANING EQUIPMENT TESTING (SECTION H).**

Complete a separate SECTION H (pages 5 & 6) for each Perc dry cleaning machine located at the facility. Record all testing results in the inspection report. Obtain additional copies of SECTION H for multiple Perc dry-cleaning machines or to record more than two test runs for a machine. Testing must be conducted under normal operating conditions and with the machine filled to a minimum of 80% of rated

capacity. Under normal operating conditions, the department assumes the machine will be run using a fully automatic program, as recommended by the manufacturer. If any test run is conducted using any manual control, a written explanation must be provided in the Inspection Summary.

**Each of the Leak Check items in this section must be inspected and checked for leaks during that portion of the machine cycle that the component is utilized (i.e., fill piping and pump during fill cycle; air ducts during drying cycle, etc.). If a leak is found, the leak concentration must be measured using EPA Method 21 (Type II: Section 8.3.2) and recorded on the form. Leak and fugitive measurements shall be taken approximately 1 cm from each listed source with the sampling probe moving about one inch per second.**

Section 232-2.5 requires that the **entire dry-cleaning system** be inspected for leaks and not just the specific areas and items listed in SECTION H. Check for leaks using a halogenated hydrocarbon detector (“beeper”) and/or Perc gas analyzer (flame ionization detector, photoionization detector, or infrared analyzer). A *vapor leak* is defined as a Perc vapor concentration exceeding 25 parts per million by volume (40 CFR Part 63.321 (subpart M)). Note any leaks from “any other areas” and record the measured concentration on the form. Be sure to check for leaks around the hazardous waste drums and the waste-water treatment unit (if so equipped).

Leaks discovered during a §232-2.11 Compliance Inspection should be repaired immediately if possible. If the leak(s) cannot be repaired during the time of the inspection, **the machine must be repaired and re-inspected no later than 45 days after the leak or malfunction was detected.** It is preferable that the re-inspection be conducted by the same inspector.

Several of the items listed under “PERFORM LEAK CHECK” are not part of the operator’s weekly leak check. Each of these additional items **must be physically inspected and an individual Perc measurement must be taken at each location and recorded on the inspection form.** If a particular item does not exist at the facility, indicate “n/a” on the form. Incomplete Compliance Inspection reports will be returned to the RCI and the facility Owner/Manager by DEC.

**3<sup>rd</sup> and 4<sup>th</sup> Generation Dry Cleaning Machines with External Door Fans.** Part 232 requires operators to test external door fans and record the results on the Weekly Self-monitoring Checklist for External Door Fans (Part II(a)). External door fans must be installed on all 3<sup>rd</sup> generation dry cleaning machines. Determine the location where the operator normally takes this measurement. The sampling location should be at least 8 duct diameters downstream from the external carbon adsorber and 2 duct diameters upstream from any flow disturbance such as a bend or outlet. For rectangular ducts use an equivalent diameter “D” equal to  $2LW/(L+W)$ . If the operator is sampling from an incorrect location, inform the operator of the proper location and make a note of it in the Inspection Summary (SECTION I).

Measure and record the end-of-cycle maximum Perc concentration from the external door fan exhaust at the proper location using a colorimetric tube sampling pump or a portable gas analyzer (e.g., PID). Sampling should be conducted immediately after opening the machine door and activating the external door fan. If a portable gas analyzer is used, sampling should continue for about a minute to ensure that the maximum concentration is measured. Only one test run is required if the maximum measured Perc concentration doesn’t exceed 20 ppm (Subparagraph 232-2.4(a)(3)(iii)).

Report the test load, the refrigerated condenser’s high and low pressure readings during the middle of the heated phase of the drying cycle and the condenser’s outlet vapor temperature at the end of the final cool down cycle. Where temperature gauges are installed to demonstrate compliance, the final cool down temperature must be less than 45°F. If the dry-cleaning machine uses a built-in temperature gauge, consult the machine manual for range and accuracy specifications.



Measure and record the inward velocity of the door fan at the center of the door opening and record the velocity and measuring instrument.

#### **4<sup>th</sup> Generation Dry Cleaning Machines.**

All internal door fans must be deactivated prior to testing 4<sup>th</sup> generation Perc dry cleaning machines not equipped with an external door fan. Conduct this test to determine compliance with the end-of-cycle drum concentration standard in subparagraph 232-2.4(a)(5). For major perc dry cleaning facilities, the test must be conducted on all 4<sup>th</sup> generation dry cleaning machines, with or without an external door fan, and with internal and external door fans de-activated. Although the DEC recommends the use of internal door fans for reducing worker exposure, *they must be deactivated prior to sampling the end-of-cycle drum concentration* for the purpose of determining Part 232 regulatory compliance. Use the following procedure to test a 4<sup>th</sup> generation dry cleaning machine:

1. Before the test load is run, determine if the dry cleaning machine has an active internal door fan system. If so, or in doubt, inform the operator that you want the power to the dry cleaning machine switched off immediately after the machine door partially opened in step 6. If not, steps 5 and 6 may be omitted.

*Internal door fan. A system, which is activated after completion of the drying cycle and upon machine door opening, that reduces the solvent vapor concentration in the drum by drawing fresh room air into the drum and then passing the air-solvent mixture through an integral carbon adsorber before recirculating the air-solvent mixture back into the drum.*

2. Run the dry cleaning test load.

*The test must be conducted under normal operating conditions with a machine load equal to, or greater than, 80% of capacity. Test runs should be conducted using a fully automatic program cycle and without the operator manually controlling any part of the dry cleaning cycle.*

3. Prepare to take the end-of-cycle drum measurement. PID(s) and sampling pumps must be properly configured and/or calibrated.

*PIDs should be configured to save the maximum measured instantaneous perc drum concentration.*

4. Ask the operator to press the door lock release button. May not be required for older machines.

*Pressing the button will release the door lock and turn on any activated internal door fan systems. Internal door fans are an option on many machines. Renzacci calls this option "Air Fresh;" Realstar, the "Air Clean System;" and Union, the "Recuper." Although internal door fans are recommended for reducing worker exposure, they must be deactivated prior to sampling the end-of-cycle drum concentration for the purpose of determining Part 232 regulatory compliance.*

5. Partially open the machine door.

6. Ask the operator to immediately switch off power to the machine.

*Switching off power to the machine will turn off any active internal door fan.*

7. Slowly open the machine door to the fullest extent.

*Opening the door too quickly may create a vacuum or wake effect that will draw perc vapors out of the drum and into your breathing space.*

8. Immediately extend the tip of the PID probe or sampling pump's colorimetric tube towards the rear of the drum and into the vapor space above the clothes. Be careful not to touch the tip of the probe or tube to the clothes as it may invalidate the test.
  - a. Sampling with a PID. Hold the tip of the probe inside the drum for about 15 seconds to display and save the maximum instantaneous perc concentration. The LCD readout will climb until a maximum concentration is reached and then begin to drop-off. Remove the PID after about 15 seconds and have the operator close the door of the machine.
  - b. Sampling with a colorimetric tube sampling pump. Hold the tip of the colorimetric tube inside the drum while gripping the base of the pump. For Gastec samplers, pull the handle out fully until it is locked, and then release it and wait until the white flow finish indicator is visible on the back of the handle (about 30 seconds). Use one-half pump stroke with a Gastec sampling pump and colorimetric tube 133HA for assessing compliance (60 to 900 ppm).
  - c. Sampling with both a PID and colorimetric tube sampling pump. If you have both a PID and sampling pump, try sampling with both devices to verify testing results. Tape both devices together, side-by-side, with painter's tape and align the tips of the probes. Expect the sampling results to be similar but not identical as a PID measures the maximum instantaneous concentration whereas a sampling pump measures a 15-30 second average concentration.

Time and record the duration of the entire dry cleaning cycle in minutes. Additionally, observe and report the refrigerated condenser's high and low pressure readings during the middle of the heated portion of the drying cycle and condenser's outlet vapor temperature at the end of the final cool down cycle. All testing results must be recorded and submitted to DEC. Only one test is required if the measured drum concentration doesn't exceed 300 ppm for machines installed on or after May 15, 1997 and 500 ppm for machines installed before May 15, 1997.

#### **INSPECTION SUMMARY (SECTION I).**

The Registered Compliance Inspector must summarize and record all observed exceptions to Part 232 requirements on this page. **Use additional pages if necessary. Inspectors should write down all pertinent comments regarding what they have observed. IF IN DOUBT -- WRITE IT DOWN.**

**The Compliance Inspectors task is to make impartial and factual observation of the conditions that exist at the facility at the time of the inspection. The RCI must then check and validate the information.** Remember, the RCI does not "flunk" or "violate" a facility. It is the DEC's responsibility to review the reported observations made in the Compliance Inspection report (232-15) and take appropriate enforcement action if necessary and warranted.

#### **REPORT CERTIFICATION (SECTION J).**

The DEC requires that both the Compliance Inspector and Registered Compliance Inspector certify the inspection report. The Compliance Inspector must certify that all reported information is true, accurate and complete. Registered Compliance Inspectors must then review all the gathered information and certify that it was prepared under his/her direct supervision and that he/she believes all information to be true, accurate and complete. The RCI must sign and certify the inspection report as both the Compliance Inspector and Registered Compliance Inspector if he/she conducted the actual inspection. Certified reports must be signed by the RCI through their original professional seal affixed on the right side of the Report Certification Section (SECTION J). Any false statements (6 NYCRR Part 200.3) made to the DEC are punishable as a class A misdemeanor under Section 210.45 of the New York State Penal Law.

Any comments, corrections or suggestions on the content of this document should be directed to the following address:

**New York State Department of Environmental Conservation  
Division of Air Resources  
Bureau of Stationary Sources  
Attn: Part 232 Implementation Group  
625 Broadway – Second Floor  
Albany, New York 12233-3254  
Phone: (518) 402-8403  
FAX: (518) 402-9035**

**Attachment: EPA Method 21**

*While we have taken steps to ensure the accuracy of this Internet version of the document, it is not the official version. To see a complete version including any recent edits, visit: <https://www.ecfr.gov/cgi-bin/ECFR?page=browse> and search under Title 40, Protection of Environment.*

## METHOD 21 - DETERMINATION OF VOLATILE ORGANIC COMPOUND LEAKS

### 1.0 Scope and Application

#### 1.1 Analytes.

Analyte	CAS No.
Volatile Organic Compounds (VOC)	No CAS number assigned.

1.2 Scope. This method is applicable for the determination of VOC leaks from process equipment. These sources include, but are not limited to, valves, flanges and other connections, pumps and compressors, pressure relief devices, process drains, open-ended valves, pump and compressor seal system degassing vents, accumulator vessel vents, agitator seals, and access door seals.

1.3 Data Quality Objectives. Adherence to the requirements of this method will enhance the quality of the data obtained from air pollutant sampling methods.

### 2.0 Summary of Method

2.1 A portable instrument is used to detect VOC leaks from individual sources. The instrument detector type is not specified, but it must meet the specifications and performance criteria contained in Section 6.0. A leak definition concentration based on a reference compound is specified in each applicable regulation. This method is intended to locate and classify leaks only, and is not to be used as a direct measure of mass emission rate from individual sources.

### 3.0 Definitions

3.1 *Calibration gas* means the VOC compound used to adjust the instrument meter reading to a known value. The calibration gas is usually the reference compound at a known concentration approximately equal to the leak definition concentration.

3.2 *Calibration precision* means the degree of agreement between measurements of the same known value, expressed as the relative percentage of the average difference between the meter readings and the known concentration to the known concentration.

3.3 *Leak definition concentration* means the local VOC concentration at the surface of a leak source that indicates that a VOC emission (leak) is present. The leak definition is an instrument meter reading based on a reference compound.

3.4 *No detectable emission* means a local VOC concentration at the surface of a leak source, adjusted for local VOC ambient concentration, that is less than 2.5 percent of the specified leak definition concentration. that indicates that a VOC emission (leak) is not present.

3.5 *Reference compound* means the VOC species selected as the instrument calibration basis for specification of the leak definition concentration. (For example, if a leak definition concentration is 10,000 ppm as methane, then any source emission that results in a local concentration that yields a meter reading of 10,000 on an instrument meter calibrated with methane would be classified as a leak. In this example, the leak definition concentration is 10,000 ppm and the reference compound is methane.)

3.6 *Response factor* means the ratio of the known concentration of a VOC compound to the observed meter reading when measured using an instrument calibrated with the reference compound specified in the applicable regulation.

3.7 *Response time* means the time interval from a step change in VOC concentration at the input of the sampling system to the time at which 90 percent of the corresponding final value is reached as displayed on the instrument readout meter.

#### 4.0 *Interferences[Reserved]*

#### 5.0 *Safety*

5.1 *Disclaimer.* This method may involve hazardous materials, operations, and equipment. This test method may not address all of the safety problems associated with its use. It is the responsibility of the user of this test method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to performing this test method.

5.2 *Hazardous Pollutants.* Several of the compounds, leaks of which may be determined by this method, may be irritating or corrosive to tissues (*e.g.*, heptane) or may be toxic (*e.g.*, benzene, methyl alcohol). Nearly all are fire hazards. Compounds in emissions should be determined through familiarity with the source. Appropriate precautions can be found in reference documents, such as reference No. 4 in Section 16.0.

#### 6.0 *Equipment and Supplies*

A VOC monitoring instrument meeting the following specifications is required:

6.1 The VOC instrument detector shall respond to the compounds being processed. Detector types that may meet this requirement include, but are not limited to, catalytic oxidation, flame ionization, infrared absorption, and photoionization.

6.2 The instrument shall be capable of measuring the leak definition concentration specified in the regulation.

6.3 The scale of the instrument meter shall be readable to  $\pm 2.5$  percent of the specified leak definition concentration.

6.4 The instrument shall be equipped with an electrically driven pump to ensure that a sample is provided to the detector at a constant flow rate. The nominal sample flow rate, as measured at the sample probe tip, shall be 0.10 to 3.0 l/min (0.004 to 0.1 ft<sup>3</sup>/min) when the probe is fitted with a glass wool plug or filter that may be used to prevent plugging of the instrument.

6.5 The instrument shall be equipped with a probe or probe extension or sampling not to exceed 6.4 mm (1/4in) in outside diameter, with a single end opening for admission of sample.

6.6 The instrument shall be intrinsically safe for operation in explosive atmospheres as defined by the National Electrical Code by the National Fire Prevention Association or other applicable regulatory code for operation in any explosive atmospheres that may be encountered in its use. The instrument shall, at a minimum, be intrinsically safe for Class 1, Division 1 conditions, and/or Class 2, Division 1 conditions, as appropriate, as defined by the example code. The instrument shall not be operated with any safety device, such as an exhaust flame arrester, removed.

### *7.0 Reagents and Standards*

7.1 Two gas mixtures are required for instrument calibration and performance evaluation:

7.1.1 Zero Gas. Air, less than 10 parts per million by volume (ppmv) VOC.

7.1.2 Calibration Gas. For each organic species that is to be measured during individual source surveys, obtain or prepare a known standard in air at a concentration approximately equal to the applicable leak definition specified in the regulation.

7.2 Cylinder Gases. If cylinder calibration gas mixtures are used, they must be analyzed and certified by the manufacturer to be within 2 percent accuracy, and a shelf life must be specified. Cylinder standards must be either reanalyzed or replaced at the end of the specified shelf life.

7.3 Prepared Gases. Calibration gases may be prepared by the user according to any accepted gaseous preparation procedure that will yield a mixture accurate to within 2 percent. Prepared standards must be replaced each day of use unless it is demonstrated that degradation does not occur during storage.

7.4 Mixtures with non-Reference Compound Gases. Calibrations may be performed using a compound other than the reference compound. In this case, a conversion factor must be determined for the alternative compound such that the resulting meter readings during source surveys can be converted to reference compound results.

### *8.0 Sample Collection, Preservation, Storage, and Transport*

8.1 Instrument Performance Evaluation. Assemble and start up the instrument according to the manufacturer's instructions for recommended warm-up period and preliminary adjustments.

8.1.1 Response Factor. A response factor must be determined for each compound that is to be measured, either by testing or from reference sources. The response factor tests are required before placing the analyzer into service, but do not have to be repeated at subsequent intervals.

8.1.1.1 Calibrate the instrument with the reference compound as specified in the applicable regulation. Introduce the calibration gas mixture to the analyzer and record the observed meter reading. Introduce zero gas until a stable reading is obtained. Make a total of three measurements by alternating between the calibration gas and zero gas. Calculate the response factor for each repetition and the average response factor.

8.1.1.2 The instrument response factors for each of the individual VOC to be measured shall be less than 10 unless otherwise specified in the applicable regulation. When no instrument is available that meets this specification when calibrated with the reference VOC specified in the applicable regulation, the available instrument may be calibrated with one of the VOC to be measured, or any other VOC, so long as the instrument then has a response factor of less than 10 for each of the individual VOC to be measured.

8.1.1.3 Alternatively, if response factors have been published for the compounds of interest for the instrument or detector type, the response factor determination is not required, and existing results may be referenced. Examples of published response factors for flame ionization and catalytic oxidation detectors are included in References 1–3 of Section 17.0.

8.1.2 Calibration Precision. The calibration precision test must be completed prior to placing the analyzer into service and at subsequent 3-month intervals or at the next use, whichever is later.

8.1.2.1 Make a total of three measurements by alternately using zero gas and the specified calibration gas. Record the meter readings. Calculate the average algebraic difference between the meter readings and the known value. Divide this average difference by the known calibration value and multiply by 100 to express the resulting calibration precision as a percentage.

8.1.2.2 The calibration precision shall be equal to or less than 10 percent of the calibration gas value.

8.1.3 Response Time. The response time test is required before placing the instrument into service. If a modification to the sample pumping system or flow configuration is made that would change the response time, a new test is required before further use.

8.1.3.1 Introduce zero gas into the instrument sample probe. When the meter reading has stabilized, switch quickly to the specified calibration gas. After switching, measure the time required to attain 90 percent of the final stable reading. Perform this test sequence three times and record the results. Calculate the average response time.

8.1.3.2 The instrument response time shall be equal to or less than 30 seconds. The instrument pump, dilution probe (if any), sample probe, and probe filter that will be used during testing shall all be in place during the response time determination.

8.2 Instrument Calibration. Calibrate the VOC monitoring instrument according to Section 10.0.

8.3 Individual Source Surveys.

8.3.1 Type I—Leak Definition Based on Concentration. Place the probe inlet at the surface of the component interface where leakage could occur. Move the probe along the interface periphery while observing the instrument readout. If an increased meter reading is observed, slowly sample the interface where leakage is indicated until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately two times the instrument response time. If the maximum observed meter reading is greater than the leak definition in the applicable regulation, record and report the results as specified in the regulation reporting requirements. Examples of the application of this general technique to specific equipment types are:

8.3.1.1 Valves. The most common source of leaks from valves is the seal between the stem and housing. Place the probe at the interface where the stem exits the packing gland and sample the stem circumference. Also, place the probe at the interface of the packing gland take-up flange seat and sample

the periphery. In addition, survey valve housings of multipart assembly at the surface of all interfaces where a leak could occur.

8.3.1.2 Flanges and Other Connections. For welded flanges, place the probe at the outer edge of the flange-gasket interface and sample the circumference of the flange. Sample other types of nonpermanent joints (such as threaded connections) with a similar traverse.

8.3.1.3 Pumps and Compressors. Conduct a circumferential traverse at the outer surface of the pump or compressor shaft and seal interface. If the source is a rotating shaft, position the probe inlet within 1 cm of the shaft-seal interface for the survey. If the housing configuration prevents a complete traverse of the shaft periphery, sample all accessible portions. Sample all other joints on the pump or compressor housing where leakage could occur.

8.3.1.4 Pressure Relief Devices. The configuration of most pressure relief devices prevents sampling at the sealing seat interface. For those devices equipped with an enclosed extension, or horn, place the probe inlet at approximately the center of the exhaust area to the atmosphere.

8.3.1.5 Process Drains. For open drains, place the probe inlet at approximately the center of the area open to the atmosphere. For covered drains, place the probe at the surface of the cover interface and conduct a peripheral traverse.

8.3.1.6 Open-ended Lines or Valves. Place the probe inlet at approximately the center of the opening to the atmosphere.

8.3.1.7 Seal System Degassing Vents and Accumulator Vents. Place the probe inlet at approximately the center of the opening to the atmosphere.

8.3.1.8 Access door seals. Place the probe inlet at the surface of the door seal interface and conduct a peripheral traverse.

8.3.2 Type II—"No Detectable Emission". Determine the local ambient VOC concentration around the source by moving the probe randomly upwind and downwind at a distance of one to two meters from the source. If an interference exists with this determination due to a nearby emission or leak, the local ambient concentration may be determined at distances closer to the source, but in no case shall the distance be less than 25 centimeters. Then move the probe inlet to the surface of the source and determine the concentration as outlined in Section 8.3.1. The difference between these concentrations determines whether there are no detectable emissions. Record and report the results as specified by the regulation. For those cases where the regulation requires a specific device installation, or that specified vents be ducted or piped to a control device, the existence of these conditions shall be visually confirmed. When the regulation also requires that no detectable emissions exist, visual observations and sampling surveys are required. Examples of this technique are:

8.3.2.1 Pump or Compressor Seals. If applicable, determine the type of shaft seal. Perform a survey of the local area ambient VOC concentration and determine if detectable emissions exist as described in Section 8.3.2.

8.3.2.2 Seal System Degassing Vents, Accumulator Vessel Vents, Pressure Relief Devices. If applicable, observe whether or not the applicable ducting or piping exists. Also, determine if any sources exist in the ducting or piping where emissions could occur upstream of the control device. If the required ducting or piping exists and there are no sources where the emissions could be vented to the atmosphere upstream of



the control device, then it is presumed that no detectable emissions are present. If there are sources in the ducting or piping where emissions could be vented or sources where leaks could occur, the sampling surveys described in Section 8.3.2 shall be used to determine if detectable emissions exist.

### 8.3.3 Alternative Screening Procedure.

8.3.3.1 A screening procedure based on the formation of bubbles in a soap solution that is sprayed on a potential leak source may be used for those sources that do not have continuously moving parts, that do not have surface temperatures greater than the boiling point or less than the freezing point of the soap solution, that do not have open areas to the atmosphere that the soap solution cannot bridge, or that do not exhibit evidence of liquid leakage. Sources that have these conditions present must be surveyed using the instrument technique of Section 8.3.1 or 8.3.2.

8.3.3.2 Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution. Observe the potential leak sites to determine if any bubbles are formed. If no bubbles are observed, the source is presumed to have no detectable emissions or leaks as applicable. If any bubbles are observed, the instrument techniques of Section 8.3.1 or 8.3.2 shall be used to determine if a leak exists, or if the source has detectable emissions, as applicable.

## 9.0 Quality Control

Section	Quality control measure	Effect
8.1.2	Instrument calibration precision check	Ensure precision and accuracy, respectively, of instrument response to standard.
10.0	Instrument calibration	

## 10.0 Calibration and Standardization

10.1 Calibrate the VOC monitoring instrument as follows. After the appropriate warm-up period and zero internal calibration procedure, introduce the calibration gas into the instrument sample probe. Adjust the instrument meter readout to correspond to the calibration gas value.

Note: If the meter readout cannot be adjusted to the proper value, a malfunction of the analyzer is indicated and corrective actions are necessary before use.

### 11.0 Analytical Procedures[Reserved]

### 12.0 Data Analyses and Calculations[Reserved]

### 13.0 Method Performance[Reserved]

### 14.0 Pollution Prevention[Reserved]

### 15.0 Waste Management[Reserved]

*16.0 References*

1. Dubose, D.A., and G.E. Harris. Response Factors of VOC Analyzers at a Meter Reading of 10,000 ppmv for Selected Organic Compounds. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2-81051. September 1981.
2. Brown, G.E., *et al.* Response Factors of VOC Analyzers Calibrated with Methane for Selected Organic Compounds. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2-81-022. May 1981.
3. DuBose, D.A. *et al.* Response of Portable VOC Analyzers to Chemical Mixtures. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2-81-110. September 1981.
4. Handbook of Hazardous Materials: Fire, Safety, Health. Alliance of American Insurers. Schaumburg, IL. 1983.

*17.0 Tables, Diagrams, Flowcharts, and Validation Data[Reserved]*

















# Part VII - SIX MONTH Operation & Maintenance Checklist for Perc Dry Cleaning Equipment



Complete the following checklist once every six months for each perc dry cleaning machine and associated ancillary equipment in the facility. Any answer of "No" below requires completion of the Corrective Action Log (Part VIII, Form 232-8P).

Machine Manufacturer and Model Number: \_\_\_\_\_

Machine Serial Number: \_\_\_\_\_

Trained Operator's Initials: \_\_\_\_\_ Date: \_\_\_\_\_

**Operation & Maintenance:**

**General;**

Are all hose and pipe connections, fittings, couplings and valves; door gaskets and seatings; filter gaskets and seatings; pumps; solvent (including spent solvent) tanks and containers; water separators; stills; and all filter housings of each dry cleaning system maintained according to the recommended manufacturer's specifications?	Yes	No
Are all parts of the dry cleaning system, including solvent containers, kept closed at all times except when access is required for proper operation and maintenance?	Yes	No
Are perc process tanks refilled using a closed-loop delivery system?	Yes	No

**Button and lint traps;**

Are button and lint traps cleaned on the manufacturer's suggested intervals <u>and at least once each working day</u> ?	Yes	No
Is lint placed in tightly sealed and properly labeled containers?	Yes	No
Are the button and lint traps cleaned when the local or general exhaust ventilation system is operating to minimize operator exposure to perc emissions?	Yes	No

**Integral Carbon adsorbers on 4<sup>th</sup> generation machines;**

Is the temperature of the exhaust gases that are recirculated through the carbon adsorber at the operating temperature specified by the manufacturer?	Yes	No	N/A
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**Cartridge and adsorptive filters (N/A if filter transferred to a separate device to reduce volume or perc);**

Are cartridge filters drained in the filter housing for at least 24 hours before disposal?	Yes	No	N/A
Are adsorptive cartridge filter drained in the filter housing for at least 48 hours before disposal?	Yes	No	N/A

**Stills;**

Does the still operate <u>without</u> venting any emissions into the facility?	Yes	No
Is the still operated at less than or equal to 75 percent of capacity or other alternative value recommended by the manufacturer?	Yes	No
Is the still cooled to 100°F (38°C) or less before being emptied or cleaned?	Yes	No
Date the still was last cleaned?	____/____/____	

**Wastewater Treatment Units (skip section if facility has no wastewater treatment unit);**

Is the wastewater treated by physical separation (water separator) and double-carbon filtration prior to evaporation and/or allowed disposal or discharge?	Yes	No	
Are the carbon cartridges from the wastewater treatment unit replaced in accordance with the manufacturer's specification?	Yes	No	
Is the evaporator operated to ensure that no liquid perc or visible emulsion is allowed to vaporize?	Yes	No	N/A

**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form must be kept on-site for at least five (5) years.**

# Part VIII - Corrective Action Log for Perc Dry Cleaning Equipment



Department of Environmental Conservation

Any deficiency reported in Parts I, II, II(a), III, V or VII of the Checklists for Perc Dry Cleaning Equipment requires completion of this log to describe the corrective action taken to address each noted deficiency. Each perc machine should have a separate Part VIII log for recording the Date corrective action was taken, applicable Checklist Part and a description of the Corrective Action Taken.

Machine Manufacturer and Model Number: \_\_\_\_\_

Machine Serial Number: \_\_\_\_\_

Date:	Checklist Part:	Corrective Action Taken:
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		
___/___/___		

**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form must be kept on-site for at least five (5) years.**







# Part VII – SIX MONTH Operation & Maintenance Checklist for Alternative Solvent Dry Cleaning Equipment



Complete the following checklist once every six months for each alternative solvent dry cleaning machine and associated ancillary equipment in the facility. Any answer of "No" below requires completion of the Corrective Action Log (Part VIII, Form 232-8A).

Machine Manufacturer and Model Number: \_\_\_\_\_

Machine Serial Number: \_\_\_\_\_

Operator's Initials: \_\_\_\_\_ Date: \_\_\_\_\_

**Operation & Maintenance:**

**General;**

Are all parts of the dry cleaning system, including solvent containers, kept closed at all times except when access is required for proper operation and maintenance?	Yes	No
Are all hose and pipe connections, fittings, couplings and valves; door gaskets and seatings; filter gaskets and seatings; pumps; solvent (including spent solvent) tanks and containers; water separators; stills; and all filter housings of each dry cleaning system maintained according to the recommended manufacturer's specifications?	Yes	No

**Button and lint traps;**

Are button and lint traps cleaned on the manufacturer's suggested intervals <u>and at least once each working day</u> ?	Yes	No
Is lint placed in tightly sealed and properly labeled containers?	Yes	No

**Water cooled condensers that function as the primary control system;**

Are water cooled condensers inspected <u>each week</u> to ensure proper operation?	Yes	No	N/A
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**Exhaust dampers on vented machines;**

Do all exhaust dampers close completely when the machine is not venting?	Yes	No	N/A
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**Cartridge and adsorptive filters (N/A if filter transferred to a separate device to reduce volume of perc);**

Are cartridge filters drained in the filter housing for at least 24 hours before disposal?	Yes	No	N/A
Are adsorptive cartridge filters drained in the filter housing for at least 48 hours before disposal?	Yes	No	N/A

**Refrigerated condensers that function as the primary control system;**

Are condensing coils maintained free of lint and hard lint build-up on interior surfaces?	Yes	No	N/A
Most recent date condensing coils were removed and cleaned (if applicable).	____/____/____		

**Stills (skip section for machines not equipped with a still);**

Does the still only vent emissions into the facility when a vacuum pump exhausts during distillation?	Yes	No
Is the still operated at less than or equal to 75 percent of capacity or other alternative value recommended by the manufacturer?	Yes	No
Is the still cooled to 100°F (38°C) or less before being emptied or cleaned?	Yes	No
Date the still was last cleaned?	____/____/____	

**Wastewater Treatment Units (skip section if facility has no wastewater treatment unit);**

Is the wastewater treated by physical separation (water separator) and double-carbon filtration prior to evaporation and/or allowed disposal or discharge?	Yes	No	
Are the carbon cartridges from the wastewater treatment unit replaced in accordance with manufacturer's specification?	Yes	No	
When were the carbon cartridges from the wastewater treatment unit last replaced?	____/____/____		
Is the evaporator operated to ensure that no liquid solvent or visible emulsion is allowed to vaporize?	Yes	No	N/A

**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form must be kept on-site for at least five (5) years.**

# Part VIII - Corrective Action Log for Alternative Solvent Dry Cleaning Equipment



Any deficiency reported in Parts I, II, III or VII of the Checklists for Alternative Solvent Dry Cleaning Equipment requires completion of this log to describe the corrective action taken to address each noted deficiency. Each alternative solvent machine should have a separate Part VIII log for recording the Date corrective action was taken, applicable Checklist Part and a description of the Corrective Action Taken.

Machine Manufacturer and Model Number: \_\_\_\_\_

Machine Serial Number: \_\_\_\_\_

Date:	Checklist Part:	Corrective Action Taken:
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		
____/____/____		

**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form must be kept on-site for at least five (5) years.**



# Part IX – OCCASIONAL Emergency Response Log for Perc and or Alternative Solvent Dry Cleaning Facilities



Department of  
Environmental  
Conservation

If a perc and/or alternative solvent dry cleaning facility has an uncontrollable release, fire or explosion, the owner or operator must report the event to the department and appropriate emergency response agencies immediately. The corrective action taken in response to the emergency must be recorded on this form. In the event of a solvent release, the owner, operator or a designee must take all reasonable measures to ensure the release is contained. These measures must include, where applicable, stopping processes and operations, increasing room exhaust ventilation, collecting and containing released solvent and removing and maintaining containers. Only one Part IX Emergency Response Log is required for each dry cleaning facility.

Date of event: \_\_\_\_/\_\_\_\_/\_\_\_\_

Time of event: \_\_\_\_\_ AM PM

Machine Manufacturer and Model Number: \_\_\_\_\_

Machine Serial Number: \_\_\_\_\_

Solvent Name: \_\_\_\_\_

Description of uncontrollable release, fire or explosion:

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Estimated duration of incident: \_\_\_\_\_

Describe the corrective action taken in response to the uncontrollable release, fire or explosion:

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Was the NYSDEC Regional Office contacted?  Yes  No

Date contacted: \_\_\_\_/\_\_\_\_/\_\_\_\_

Were other agencies contacted?  Yes  No

If "Yes," identify other agencies and note date contacted:

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**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form must be kept on-site for at least five (5) years.**



# Part XI – MONTHLY Perc Usage Log for Perc Dry Cleaning Facilities



Department of  
Environmental  
Conservation

Each owner or operator of a dry cleaning facility with any perc dry cleaning machine(s) must maintain on-site, and provide upon request, a five-year record with the receipts from all perc solvent purchased and a log of the Quantity Purchased each month with the Running 12 Month Total. This log must be completed each month. Enter 0 (zero) gallons for the Quantity Purchased if no perc was purchased in any given month. Add the Quantity Purchased in each of the previous 12 months as the Running 12 Month Total (e.g., Sum the Quantity Purchased from JAN to DEC as the DEC Running 12 Month Total; FEB to JAN as the JAN Running 12 Month Total; MAR to FEB as the FEB Running 12 Month Total; etc.).

Year:	Month:	Quantity Purchased (Gal.):	Running 12 Month Total (Gal.):
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		

Year:	Month:	Quantity Purchased (Gal.):	Running 12 Month Total (Gal.):
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		

**Failure to complete this form is a violation of 6NYCRR Part 232 and could result in enforcement action, including monetary penalties. This form and receipts must be kept on-site for at least five (5) years.**

# Part XII – MONTHLY Alternative Solvent Usage Log for Alternative Solvent Dry Cleaning Facilities with Transfer Machines



Department of  
Environmental  
Conservation

Each owner or operator of a dry cleaning facility with any alternative solvent transfer machine(s) must maintain on-site, and provide upon request, a five-year record with the receipts from all alternative solvent purchased and a log of the Quantity Purchased each month with the Running 12 Month Total. This log must be completed each month. Enter 0 (zero) gallons for the Quantity Purchased if no solvent was purchased in any given month. Add the Quantity Purchased in each of the previous 12 months as the Running 12 Month Total (e.g., Sum the Quantity Purchased from JAN to DEC as the DEC Running 12 month Total; FEB to JAN as the JAN Running 12 Month Total; etc.). This form and receipts must be kept on-site for at least five (5) years.

Solvent Name: \_\_\_\_\_

Year:	Month:	Quantity Purchased (Gal.):	Running 12 Month Total (Gal.):
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		

Year:	Month:	Quantity Purchased (Gal.):	Running 12 Month Total (Gal.):
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		
	JAN		
	FEB		
	MAR		
	APR		
	MAY		
	JUN		
	JUL		
	AUG		
	SEP		
	OCT		
	NOV		
	DEC		