
Plain English Guide for Perc Dry Cleaners

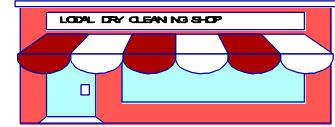


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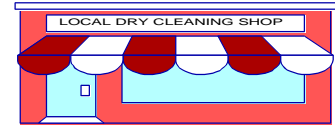
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Part I: Statement of Goals, Guide Overview, and Summary of Perc Waste Sources

Section A: Statement of Goals

The *Plain English Guide for Perc Dry Cleaners* was developed to assist owners and operators of perchloroethylene (perc) dry cleaning facilities in understanding and complying with federal air, hazardous waste, and wastewater regulations. Your state or local government may have additional requirements. EPA regional office air/small business coordinators are listed in Appendix A to help identify your state and local contacts.

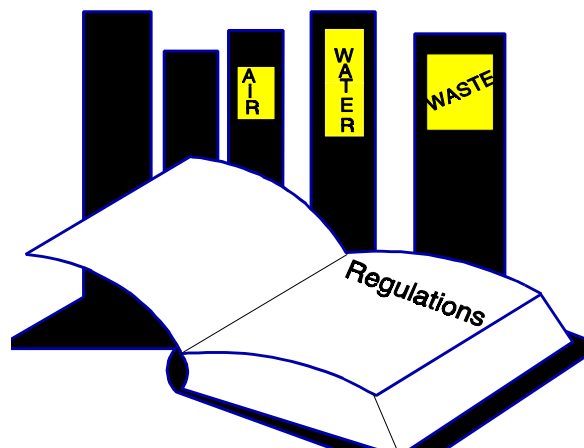
Section B: Guide Overview

Part I describes the statement of goals, guide overview, and the hazards associated with the use of perc. It also summarizes the various sources of perc waste that are produced during the dry cleaning process. **Part II** is a “step-by-step” approach to how dry cleaners comply with the regulations. **Section II-A** summarizes all the requirements and recommended actions that are discussed in this part. **Section II-B** is a simplified version of the federal environmental regulations that apply to perc dry cleaning facilities. **Section II-C** describes the guidelines and procedures for preparing your dry cleaning shop to make sure you comply with federal environmental regulations. **Section II-D** describes how to properly operate your machines and shop to stay in compliance. Remember that your state’s requirements may be stricter than the federal

requirements, so always check with your state agency. **Part III** lists typical questions that an inspector may ask while visiting your perc dry cleaning facility. **Appendix A** lists EPA regional office dry cleaning air coordinators and small business contacts. **Appendix B** contains the following forms used for compliance with federal air regulations:

- Initial Notification Report
- Compliance Report for Pollution Prevention
- Compliance Report for Control Requirements (necessary where compliance with an emission control device is required).

These completed forms must be submitted to the appropriate EPA regional coordinator in Appendix A.



Section C: Types and Sources of Perc Wastes

It is important for you to know the hazards associated with the use of liquid perchloroethylene (perc), and the kinds and sources of perc wastes that are produced by the dry cleaning process. Although perc is the most common cleaning solvent used in the dry cleaning industry, it is also suspected of causing cancer and has been found to be moderately toxic to people. It is classified as a pollutant in both air and water regulations. Its disposal is regulated as a hazardous waste.

Air Emissions

The two largest potential sources of air emissions from the dry cleaning industry are the release of perc vapors into the atmosphere during transfer of clothes from the washer to the dryer and the venting of the dryer exhaust airstream. To eliminate these sources of air pollution, EPA regulations are phasing out the use of transfer machines and phasing in requirements on the installation of control devices for dryer exhaust airstreams.

Hazardous Waste

Dry cleaning facilities typically generate wastes in the form of cooked powder residues, still bottom residues, spent cartridges, and button/lint trap wastes. These wastes are perc-based and have an EPA Hazardous Waste Number of F002. Dry cleaners may also occasionally dispose of unused perc and these wastes have a Hazardous Waste Number of U210. The EPA Hazardous Waste Number is needed when filling out the *Notification of Hazardous Waste Activity* form (Figure II-1, page II-24) when obtaining an EPA

Identification Number for generating hazardous waste. It is also needed when filling out the *Uniform Hazardous Waste Manifest* (Figure II-6, page II-41). This Manifest must accompany each hazardous waste shipment to ensure the hazardous waste arrives at its final destination.

Wastewater

The only source of process wastewater that would be of general concern to a dry cleaner is separator water, since it contains perc. Separator water can be disposed of as a hazardous waste or treated in a mister or an evaporator. Disposal of untreated separator water into on-site disposal systems such as dry wells, cesspools, and septic tanks is prohibited. Disposal into a municipal sewer system is subject to state and local Publicly Owned Treatment Works (POTW) requirements.

Part II: Step-by-Step Approach to Environmental Compliance

Section A. Introduction

Part II of this guide gives you “step-by-step” instructions to how dry cleaners comply with the regulations. **Table II-1** summarizes all the monitoring, record keeping, and reporting requirements you need to follow, as well as recommended actions. The table is divided into three columns: air, hazardous waste, and water. The table shows what requirements you must do to start your dry cleaning business and how to stay in compliance while you are doing business.

The requirements for staying in compliance are further divided into those that must be performed on a daily, weekly, monthly, or occasional basis. Each requirement is discussed in one of the four sections that follow this introduction. They will help you answer four basic questions:

- How do I prepare my shop to comply with environmental regulations?
- What regulations apply to my dry cleaning shop?
- How do I properly operate and maintain my shop?
- What do I do if an accident happens?



**TABLE II-1
GENERAL REGULATORY REQUIREMENTS AND RECOMMENDATIONS**

	AIR	HAZARDOUS WASTE	WATER
Pre-Operation	<ul style="list-style-type: none"> ✓ EPA recommends that serious consideration be given to consulting with a reputable dry cleaning trade association ✓ Check with your EPA Regional Air Office to find out how state and local authorities should be contacted ✓ Purchase correct dry cleaning machine and control equipment ✓ Be sure refrigerated condenser gets down to 45°F ✓ Fill out and send in Initial Notification Report and Pollution Prevention Compliance Report. Include Control Requirements Compliance Report if a control device is required ✓ Check with your EPA Regional Air Office to find out if you are required to obtain a Title V permit 	<ul style="list-style-type: none"> ✓ Obtain a U.S. EPA Identification Number ✓ Select a hazardous waste hauler ✓ Select a hazardous waste management facility ✓ Develop a hazardous waste contingency plan, if it is required 	<ul style="list-style-type: none"> ✓ Contact state and local wastewater authorities for potential permit requirements, including sampling, record keeping, and reporting requirements ✓ EPA recommends you test groundwater for perc contamination under prospective plant site, especially if dry cleaner was on the site previously ✓ EPA recommends not putting anything down the drain with perc in it ✓ Close floor drains connected to drain fields, septic systems, and dry wells
Daily	<ul style="list-style-type: none"> ✓ Follow good housekeeping practices 	<ul style="list-style-type: none"> ✓ Follow proper storage and management procedures 	<ul style="list-style-type: none"> ✓ Do not make discharges to the sewer that exceed local requirements. Do not make any discharges to the septic system or other shallow disposal wells
Weekly	<ul style="list-style-type: none"> ✓ Monitor carbon adsorbers, refrigerated condensers as required ✓ Perform leak detection and repair* 	<ul style="list-style-type: none"> ✓ Inspect waste storage areas ✓ Review manifest log for status of shipped waste (file exception report if no receipt from final destination) 	<ul style="list-style-type: none"> ✓ Follow any sampling, reporting, and record keeping requirements
Monthly	<ul style="list-style-type: none"> ✓ Record solvent purchases and calculate yearly consumption 	<ul style="list-style-type: none"> ✓ Check quantity of hazardous waste to determine generator status ✓ Inspect emergency control equipment 	

**TABLE II-1
CONTINUED**

	AIR	HAZARDOUS WASTE	WATER
Each Time You Ship Hazardous Waste		<ul style="list-style-type: none"> ✓ Complete hazardous waste manifest for each shipment of waste transported off site and enter into manifest log ✓ Follow proper handling procedures for transport (labeling, placarding, forms, etc.) 	
If You Have an Accident or Spill	<ul style="list-style-type: none"> ✓ Follow startup, shutdown, malfunction plan (may be standard operating procedures or an OSHA plan) 	<ul style="list-style-type: none"> ✓ Follow contingency plan, if it is required 	<ul style="list-style-type: none"> ✓ If discharge of perc to sewer is greater than 15 kg/mo, make Hazardous Waste Notification ✓ Report any toxic or hazardous waste discharge to a septic sewer system to state or EPA Underground Injection Control (UIC) program directors

* Small dry cleaners must perform leak detection and repair once every two weeks.

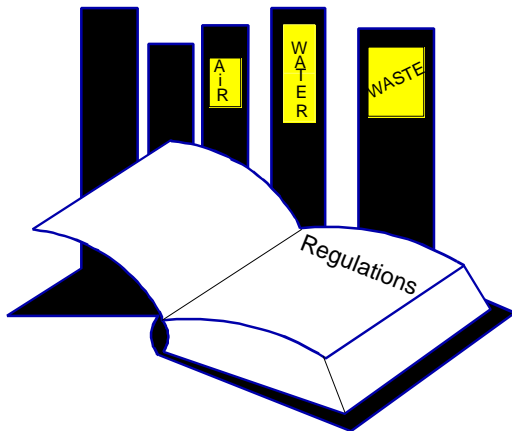
Section B. Which regulations apply to my dry cleaning shop?

First you must determine how your shop is classified under the regulations for air, hazardous waste, and wastewater. Each regulation has its own separate way to determine classification.



YOU MAY NOT BE SUBJECT TO ALL OF THE REGULATIONS.

AIR regulations depend upon: 1) the yearly amount of perc your dry cleaning shop purchases; 2) the type of dry cleaning machine(s) used; and 3) the date the machine(s) was installed. **HAZARDOUS WASTE** regulations depend upon the amount of hazardous waste your shop generates each month or stores on-site. **WASTEWATER PRETREATMENT** regulations for hazardous wastes depend upon the amount of perc your shop releases into the sewer system each month.



This section will help you determine your classification for each of the three sets of regulations.

Step 1: Air



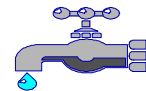
- ▶ Which air requirements apply at your dry cleaning shop.
- ▶ Which air pollution control equipment is needed at your dry cleaning shop.
- ▶ How to determine your yearly perc consumption.

Step 2: Hazardous Waste



- ▶ Which wastes are hazardous wastes.
- ▶ How to determine the quantity of hazardous waste you generate.
- ▶ How to determine your hazardous waste generator classification.
- ▶ How your generator category may change.

Step 3: Water



- ▶ When wastewater pretreatment requirements apply.
- ▶ When requirements for underground injection wells apply.



Step 1: Which federal air requirements apply?

In September, 1993, the U.S. Environmental Protection Agency (EPA) issued regulations to control air emissions of perchloroethylene (perc) from dry cleaners. These regulations set national emission standards for hazardous air pollutants (NESHAP) affecting all perc dry cleaners. The regulations say:

Pollution Prevention

All perc dry cleaners must perform the following **pollution prevention** steps:

- Inspect all equipment at least every other week for leaks that are obvious from sight, smell, or touch. Larger dry cleaners (those required to install control equipment) must inspect every week.
- Repair leaks within 24 hours. Some leak repairs may require the ordering of parts. If so, the part(s) must be ordered within 2 working days of detecting the leak and installed within 5 days of receipt.
- Follow these **Good Housekeeping Practices**:
 - Keep all perc wastes in covered containers with no leaks
 - Drain all cartridge filters in closed containers
 - Keep machine doors closed when not being loaded or unloaded.
- Operate and maintain all equipment according to manufacturers' instructions.
- Keep a **log** of:
 - Leak detection and repair program results
 - Amount and date of perc purchases (at any time know how much perc you purchased during the previous 12 months).

Air Control

The air control requirements depend on the **installation date** of your dry cleaning machines, the **type** of machines (dry-to-dry or transfer), and the **amount of perc purchased each year**.

The date of installation determines if your dry cleaning machine is “**NEW**” or “**EXISTING**.”

EXISTING dry cleaning machines are those installed before **December 9, 1991**.

NEW dry cleaning machines are those installed on or after **December 9, 1991**.

Note: The following amendments to the federal air regulations (NESHAP), for perc dry cleaners, are effective September 19, 1996.

“**New**” transfer machines installed between **December 9, 1991 and September 22, 1993** follow regulations for “**existing**” transfer machines. Also, under no circumstances are “**new**” transfer machines installed after **September 22, 1993** allowed to operate.





Any dry cleaning machine or facility owner that has changed ownership or location must keep records that prove its original installation occurred before December 9, 1991 for dry-to-dry machines and before September 22, 1993 for transfer machines in order to maintain “existing” machine status for regulatory purposes.

The type of machines (dry-to-dry or transfer) in use and the amount of perc you purchase each year determines whether your dry cleaner is a small area source, large area source, or major source of pollution. An example of how to calculate the amount of perc purchased during one year is given on page II-8.

- **Small area sources** are those that (1) have only transfer machines and purchase less than 200 gallons per year of perc or (2) have only dry-to-dry machines or have both transfer and dry-to-dry machines, and purchase less than 140 gallons per year or perc.
- **Large area sources** are those that exceed perc purchase levels for small area sources but do not purchase enough to be classified as a major source.
- **Major sources** are those that (1) have only dry-to-dry machines and purchase more than 2,100 gallons of perc per year or (2) have only transfer machines or have both transfer and dry-to-dry machines, and purchase more than 1,800 gallons or perc per year.

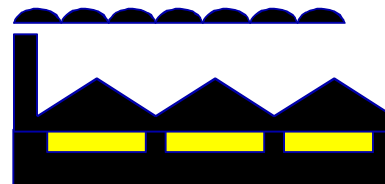
Table II-2 shows the air pollution control requirements for **NEW** and **EXISTING** dry cleaning machines.

Title Five (V) Operating Permit Program

The agency that issues Title V operating permits can be your state or the U.S. EPA. Contact your EPA Regional Coordinator (**See Appendix A**) to determine which agency it is. Then contact that agency to find out when they are planning to issue permits for dry cleaners. Some states have indicated that they will be developing general permits for dry cleaners. If so, dry cleaners in those states will be required to fill out and submit this general permit form. General permits are the simplest type of Title V permit. Note that any dry cleaner defined as a “major source” is required to get a permit. If your dry cleaner is not a major source, you should still check with the appropriate air authorities to determine if your dry cleaner requires a permit.

State and Local Regulations

Existing state and local regulations in effect prior to the NESHAP continue to apply. Note that the NESHAP rule contains the minimum Federal requirements for emission controls. If your state or local rules are more strict, you must comply with them.



**TABLE II-2
AIR CONTROL REQUIREMENTS FOR DRY CLEANERS WITH NEW AND
EXISTING MACHINES ARE BASED ON PERC PURCHASES ***

Small Area Dry Cleaners	Large Area Dry Cleaners	Major Dry Cleaner
Dry-to-Dry Machines ONLY: Less than 140 gal/yr OR Transfer Machines ONLY: Less Than 200 gal/yr OR Transfer AND Dry-to-Dry Machines: Less Than 140 gal/yr	Dry-to-Dry Machines ONLY: 140 to 2,100 gal/yr OR Transfer Machines ONLY: 200 to 1,800 gal/yr OR Transfer AND Dry-to-Dry Machines: 140 to 1,800 gal/yr	Dry-to-Dry Machines ONLY: More Than 2,100 gal/yr OR Transfer Machines ONLY: More Than 1,800 gal/yr OR Transfer AND Dry-to-Dry Machines: More Than 1,800 gal/yr
<p>Install main perc vapor recovery system (refrigerated condenser or carbon adsorber)** for new machines upon start-up.</p> <p>No control equipment required for existing machines.</p> <p>Meet good housekeeping, monitoring, record keeping, reporting, and leak detection/repair requirements described on Pages II-30 through II-34.</p>	<p>Install main perc vapor recovery system (refrigerated condenser or carbon adsorber)** for new machines upon start-up.</p> <p>Install main perc vapor recovery system (refrigerated condenser or carbon adsorber)** for existing machines by 9/23/96.</p> <p>Meet good housekeeping, monitoring, record keeping, reporting, and leak detection/repair requirements described on Pages II-30 through II-34.</p>	<p>Same equipment requirements as for large area sources, plus: install additional carbon adsorber for new machines upon start-up and for existing machines by 9/23/96.</p> <p>Surround all existing transfer machines with room enclosure vented by carbon adsorber by 9/23/96.</p> <p>Meet good housekeeping, monitoring, record keeping, reporting, and leak detection/repair requirements described on Pages II-30 through II-34.</p>

* Usage is based upon the total amount of perc purchased at facility location for all perc machines for the previous 12 months.

** Perc vapor recovery systems should be refrigerated condensers, or alternatively, existing carbon adsorbers installed before September 22, 1993.

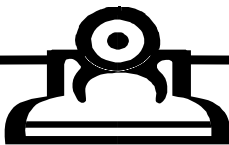




The Amount of Perc Purchased During One Year for Your Dry Cleaning Store

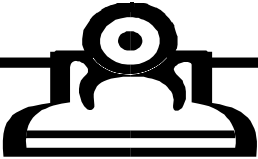
To calculate your yearly perc consumption on a rolling, monthly basis, add together all perc purchases for the previous 12 months for all of the dry cleaning machines at your shop. As each calendar month begins, add the new perc purchases for that month and subtract the perc purchases made in the oldest of the 12 months.

FOR EXAMPLE: at the beginning of January 1994, if your perc purchases were as follows:



1994	Jan:	55 gal
	Feb:	0 gal
	Mar:	55 gal
	Apr:	0 gal
	May:	0 gal
	Jun:	0 gal
	Jul:	55 gal
	Aug:	0 gal
	Sep:	55 gal
	Oct:	55 gal
	Nov:	55 gal
	Dec:	55 gal
		385 TOTAL

Your yearly total would be 385 gal. In February 1994, to calculate your rolling yearly average add the next month's purchases and subtract the oldest month's purchases as follows:



1994	Jan:	55 gal	<i>(Subtract this month's purchases)</i>
	Feb:	0 gal	
	Mar:	55 gal	
	Apr:	0 gal	
	May:	0 gal	
	Jun:	0 gal	
	Jul:	55 gal	
	Aug:	0 gal	
	Sep:	55 gal	
	Oct:	55 gal	
	Nov:	55 gal	
	Dec:	55 gal	
1995	Jan:	0 gal	<i>(Add the new month's purchases)</i>
		330 TOTAL	

Thus, each month you will determine a new yearly average based upon the purchases from the 12 preceding months.



BE SURE TO COUNT YOUR PERC PURCHASES EACH MONTH, EVEN IF YOU MADE ZERO PERC PURCHASES DURING THAT MONTH.





Step 2: Which hazardous waste requirements apply?

Since perc dry cleaning facilities generate and produce hazardous waste, they must comply with hazardous waste regulations under the Federal Resource Conservation and Recovery Act (RCRA). These regulations cover the generation, transportation, and management of hazardous waste and are found in the Code of Federal Regulations under 40 CFR part 260-268. Generator requirements are found in 40 CFR parts 261.5 and 262. The amount of waste generated by a facility determines which RCRA regulations apply. All perc dry cleaners generating hazardous waste should also contact their state hazardous waste office to determine whether their state has additional or stricter hazardous waste requirements. Your EPA regional contact (see **Appendix A**) can supply you with your state contact.

Types of Hazardous Waste

Perc dry cleaners commonly produce four types of hazardous waste:

- (1) **still residues from solvent distillation,**
- (2) **spent filter cartridges contaminated with perc,**
- (3) **process water (such as separator water), and**
- (4) **cooked powder residue.**

Cooked power residue, still residues, process water, and spent cartridge filters containing perc or valclene are “listed” hazardous wastes and have the EPA Hazardous Waste Number F002, since these wastes are perc-based.



How to Count the Quantity of Hazardous Waste

You **MUST** count all quantities of perc wastes that are:

- ▶ Collected on-site (in your shop) prior to treatment or disposal.
- ▶ Packaged and transported off-site (away from your shop).

You do **NOT** have to count perc wastes that:

- ▶ Are left at the bottom of solvent containers that have been emptied by conventional means (for example, pouring or pumping) and no more than 2.5 cm (1 in) of residue remains in the bottom of the container, or no more than 3 percent by weight of the total capacity of the container remains in the container if the container is less than or equal to 110 gallons in size.
- ▶ Are left as residue at the bottom of storage tanks, if the residue is not removed. For example, residues left in the bottom of the perc storage tank are not counted as long as they are not removed when the tank is refilled.
- ▶ You reclaim continuously on-site without storing the waste prior to reclamation. For example, the liquid perc that is recovered during the dry cleaning cycle and returned to your base tank for reuse. (You **do** have to count any residue removed from the machine as well as spent cartridge filters.)
- ▶ You have already counted once during the calendar month, and treated on-site or reclaimed in some manner, and used again.



- ▶ Are directly discharged to a sewer leading to a municipal treatment plant or publicly owned treatment works (POTW) without being stored or accumulated first. **This discharge to a POTW must comply with the Clean Water Act and any local regulations. You should contact your local water authority before discharging any wastes other than sewage into the sewer system. Additional requirements may apply if you dispose of perc into the sewer.**

Table II-3 shows some typical quantities of hazardous waste generated at typical dry cleaners. If you store your waste in drums you should know that one-half of a 55-gallon drum holds about 220 lb (100 kg) of hazardous waste.

**TABLE II-3
TYPICAL AMOUNTS OF HAZARDOUS
WASTE GENERATED BY A PERC DRY
CLEANING FACILITY (FOR EVERY 1,000
POUNDS OF CLOTHES CLEANED)**

Type of Hazardous Waste	Typical Amount of Hazardous Waste (pounds)
Still Residues	25
Spent Cartridge Filters Standard (Carbon Core) Adsorptive (Split)	20 30
Cooked Powder Residue	40

How to Determine Your Hazardous Waste Classification

Count up how much hazardous waste you generate and figure out which generator category applies to you each month. There are three generator categories for hazardous waste producers:

- **Conditionally Exempt Small Quantity Generators (CESQGs)** generate less than or equal to 220 pounds (100 kg) of perc waste per month.
- **Small Quantity Generators (SQGs)** generate more than 220 but less than 2,200 pounds (100 to 1000 kg) of waste per month. Most dry cleaners will be CESQGs or SQGs.
- **Large Quantity Generators (LQGs)** generate 2,200 pounds (1000 kg) or more of waste per month.

The three categories of hazardous waste generators are described in **Table II-4**.

A useful rule-of-thumb is that a 55-gallon drum can hold approximately 440 lbs. (200 kg) of hazardous waste, while a 15-gallon drum can hold approximately 120 lbs. (55 kg) of waste.



**TABLE II-4
CATEGORIES OF HAZARDOUS WASTE GENERATORS**

GENERATOR CATEGORY	MONTHLY HAZARDOUS WASTE GENERATION RATE
Conditionally Exempt Small Quantity Generator (CESQG)	220 pounds (100 kg) or less per month
Small Quantity Generator (SQG)	Greater than 220 pounds (100 kg) but less than 2,200 pounds (1,000 kg) per month
Large Quantity Generator (LQG)	2,200 pounds (1,000 kg) or more per month

Requirements for Hazardous Waste Generators

Requirements for hazardous waste generators cover the storage and handling, treatment, and disposal of the waste, from the time the hazardous waste is generated until it is disposed. The generator is responsible for all steps. **Table II-5** provides a summary of the hazardous waste generator requirements.



YOUR STATE'S REQUIREMENTS MAY BE STRICTER THAN THE FEDERAL REQUIREMENTS, SO

ALWAYS CHECK WITH YOUR STATE AGENCY.

Definitions

The hazardous waste generator requirements found in **Table II-5** are defined below.

Monthly Weight Limits--the measured amount (by weight) of hazardous waste generated at each dry cleaning shop per calendar month.

Maximum On-site Weight Limits--the total weight of hazardous waste that can be accumulated at any time at a dry cleaning facility before it must be shipped off site. Having more than the limits can cause a facility to change generator status, therefore, change the applicable regulatory requirements.

Satellite Accumulation--an area near the point of hazardous waste generation where limited amounts of hazardous waste can be stored temporarily. Satellite accumulation provisions apply only to SQGs and LQGs and allow a generator to accumulate up to 55 gallons of hazardous waste in properly labeled containers at or near its point of generation and under the control of the operator of the process generating the waste. Once the quantity of waste stored in the container(s) has exceeded 55 gallons, the container(s) must be dated. The generator then has 72 hours to remove the container(s) from the satellite accumulation area and to place them in a hazardous waste accumulation or storage area.



**TABLE II-5
SUMMARY OF HAZARDOUS WASTE GENERATOR REQUIREMENTS FOR PERC DRY CLEANERS
IN 40 CFR 261.5 & 262**

REQUIREMENT	TYPE OF HAZARDOUS WASTE GENERATOR		
	* Conditionally Exempt Small Quantity Generator (CESQG)	Small Quantity Generator (SQG)	Large Quantity Generator (LQG)
Monthly Weight Limits	≤ 220 pounds (100 kg)	220 - 2,200 pounds (100 - 1,000 kg)	≥ 2,200 pounds (1,000 kg)
Maximum On-Site Weight Limits	≤ 2,200 pounds ** (1,000 kg)	≤ 13,200 pounds (6,000 kg)	No limit
Maximum On-Site Time Limits	None	≤ 180 days or ≤ 270 days if TSDF is over 200 miles away	≤ 90 days
EPA I.D. Number	Not federally required ***	Required	Required
Uniform Hazardous Waste Manifest	Not federally required ***	Required	Required
Exception Reports	Not federally required	Report within 60 days	Contact transporter and TSDF within 35 days, submit report within 45 days
Biennial Report	Not federally required ****	Not Required ****	Required
Contingency Planning and Notification	Not federally required	Basic plan required	Full plan required
Container Maintenance Requirements	Not federally required	Basic requirements with technical standards under Part 265 for tanks and containers	Full compliance with management of tanks, containers, or drip pads
Personnel Training	Not federally required	Basic training required	Required
Type of Facility Required for Off-Site Management of Waste	State-approved solid waste facility ***** or RCRA permitted/interim status facility or recycling facility	RCRA permitted/ interim status facility	RCRA permitted/interim status facility

- * Provided minimum requirements are met; namely, doing a hazardous waste determination, not exceeding maximum storage limits and properly disposing of wastes.
- ** For CESQGs, if quantity is exceeded, entire waste amount is subject to full SQG requirements. For SQGs and LQGs, if maximum weight limit or time limit is exceeded, the facility is in violation for storing without a permit. Only permitted facilities are authorized to exceed these weight and time limits; permit requirements are extensive.
- *** Transporters typically require. State might also require.
- **** Even a one time generation of 1000 kg or greater in one month of an odd numbered year (1997, 1999, etc.) can make your dry cleaner subject to this requirement.
- ***** Check state requirements. Some states, like Iowa, do not allow hazardous waste to be sent to a sanitary landfill in their state.



EPA Identification Number--an EPA Identification (ID) Number can be obtained by filling out and submitting a Federal "Notification of Hazardous Waste Activity" form (EPA form 8700-12). This EPA ID Number is assigned to the specific street address and the person generating the hazardous waste. If the person generating the hazardous waste moves, they must notify EPA or the state of the new location, submit a new form 8700-12, and obtain a new EPA ID Number. If a person takes over a dry cleaner that already has an EPA ID Number, that person will be assigned the EPA ID Number already designated for that dry cleaner. Federal regulations require only LQGs and SQGs to obtain an ID number.

Some states and most transporters also require CESQGs to obtain an EPA ID Number.

Owners/operators should contact their Federal hazardous waste office to request the appropriate form(s). (See **Appendix A**).

Maximum On-Site Time Limits--the amount of time that hazardous waste can accumulate on site before it must be removed.

Uniform Hazardous Waste Manifest--a multi-copy shipping document. It must accompany each hazardous waste shipment to ensure the hazardous waste arrives at its final destination.

Exception Reports--reports that indicate a missing return copy of the hazardous waste manifest. The final destination receiving the hazardous waste is required to send a copy of the uniform hazardous waste manifest to the hazardous waste generator.

Biennial Report--report (EPA form 8700-13A) that must be submitted by March 1 of each even numbered year to the Regional EPA office by generator facilities that **during any one month of an odd numbered year generated 1000 kg (2,200 pounds) per month or more of hazardous waste**. The report must cover the generator activities conducted during the previous (odd numbered) year.

Container Maintenance Requirements--apply to any portable container in which a material is stored, transported, treated, disposed of, or otherwise handled (e.g., 55-gallon drums containing perc hazardous waste). Several requirements regulate how containers of hazardous waste must be managed. Labeling containers with the words "Hazardous Waste" and the date of generation are two key requirements.

Contingency Planning and Notification--needs to be prepared in case of an emergency.

Personnel Training--training to ensure all employees are familiar with proper waste handling and emergency procedures that are relevant to their responsibilities during normal facility operations and emergencies.

Type of Facility Required for Off-site Management of Waste--SQGs and LQGs are required to send their hazardous waste to a RCRA-permitted facility. Unless subject to stricter state requirements, CESQGs may send their hazardous wastes to a state approved solid waste facility (municipal landfill) or to a RCRA-permitted facility.



Additional Recommended Reading

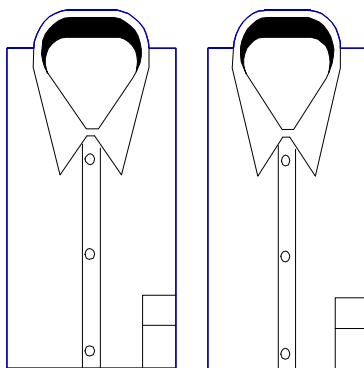
For more information about the hazardous waste regulations that apply to perc dry cleaners, it is suggested that you read the EPA Handbook, *Understanding the Small Quantity Generator Hazardous Waste Rules: A Handbook for Small Business*, Document Number: EPA/530-SW-86-019. This document can be obtained from your Regional EPA Small Business contact listed in **Appendix A**.



REMEMBER: YOU MUST IDENTIFY YOUR GENERATOR CATEGORY EACH MONTH.

What Happens When You Change Generator Categories?

Under the federal hazardous waste management system, you may be regulated under different rules at different times, depending on the amount of hazardous waste you generate in a given month.



For example:

If, in May... You generate 100 kg (220 pounds) or less of hazardous waste

➡ You would be a **Conditionally Exempt Small Quantity Generator (CESQG)**.

If, in June... Your hazardous waste totals more than 100 kg (220 pounds) but less than 1,000 kg (2,200 pounds)

➡ Your generator status changes and you would be subject to the requirements for a **Small Quantity Generator (SQG)**.

If, in July... You generate less than 100 kg (220 pounds)

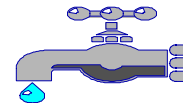
➡ You are once more a **CESQG**.

If, in September... You generate more than 1,000 kg

➡ The wastes you generated in September would be subject to all hazardous waste management regulations applicable to a **Large Quantity Generator (LQG)**. Note that the hazardous wastes you generated in September, as well as the hazardous wastes from previous months, are all subject to the LQG requirements as long as you remain at that status.

As shown by the example above, your generator status may change month to month.





Step 3: Which wastewater requirements apply?

Perc contact water generated by dry cleaners may include separator water, vacuum water, and boiler blowdown. The wastewater requirements that apply to your dry cleaning shop depend upon:

- ▶ whether you dispose of perc contact water from your shop directly into a septic system;
- ▶ whether the septic system you use is capable of handling waste generated by more than 20 people in one day, **even if you do not dispose of perc waste in the system**;
- ▶ whether you dispose of perc contact water from your shop directly into a sewer system routed to a municipal waste treatment plant.

Which Requirements Apply to a Dry Cleaner with a Septic System (Underground Injection Well)?

The Federal underground injection well regulations under the Safe Drinking Water Act prohibit the disposal of perc-contaminated wastewater into a septic system and are shown in **Table II-6**. These regulations prohibit any disposal activity that would “endanger” underground sources of drinking water by risking contamination with pure perc or perc-contaminated wastes. Thus, if your dry cleaner disposes perc waste into a shallow disposal system, a dry well, or an ordinary septic system, you would qualify as a Class V underground injection well and are subject to the “no endangerment” requirement. NOTE: EPA regulates all large household, commercial, and industrial cesspools and septic systems (capable of serving more than 20 people) no matter what they inject.

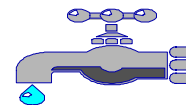
If found in violation of the “no endangerment” requirement, the dry cleaner is subject to enforcement action, remediation (including clean up and/or closure), or may be required to obtain a permit. In most cases, enforcement action is decided by the Federal Underground Injection Control Director of that state program as to what penalties or remediation may be required. EPA-approved state UIC programs have similar restrictions. Contact your EPA Regional Office for the name of the state director (See **Appendix A**).

Hazardous Waste Septic System Discharge Notification

If **ANY** amount of perc is discharged to the septic system, you must notify immediately the EPA Regional Underground Injection Control Program Director and/or the State Underground Injection Control Program Director. A list of these contacts is provided in **Appendix A**.

Which Requirements Apply to a Dry Cleaner That Discharges to the Sewer?

If your dry cleaning shop is connected to a sewer system, you may be subject to federal pretreatment requirements. Separator water and vacuum water (which may have perc in it that is residual in clean clothes and gets into the vacuum water during pressing) may have pretreatment issues associated with them. **Table II-7** presents the wastewater requirements that apply to dry cleaners.



General Prohibitions

The purpose of the federal pretreatment regulations is to prevent discharge of pollutants, such as perc, to the municipal treatment plant that could:

- Interfere with operation of the treatment plant;
- Pass through the plant untreated;
- Create problems with disposal of sludge from the treatment plant; or
- Cause problems to treatment plant or sewer system workers from exposure to chemicals, explosion, or fire hazards of some chemicals.

Record keeping and Reporting Requirements

Reporting and record keeping requirements that apply to perc dry cleaners include:

- Notification of typical discharge characteristics;
- Notification of potential problems, including unusually large discharges and spills;
- Reporting required by the treatment plant authority for industries that are not subject to any federal categorical standards;
- Notification of substantial change in the wastewater discharge;
- Recordkeeping for pollutant and flow feeds that must be monitored or reported;
- Notification of discharge of any hazardous waste; and
- Wastewater sampling records if sampling is required by the treatment plant authority to be conducted.

Because the treatment plant authority must know what is being discharged into its treatment plant, the

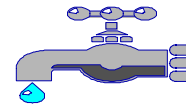
authority may require dischargers to sample their wastewater periodically and report the results, or the treatment plant authority may do the sampling itself. For small industries such as dry cleaners not familiar with how to collect and analyze wastewater samples, the treatment plant authority will do the sampling. The treatment plant authority will let you know if sampling is required.

The treatment plant also needs to know about any problems headed toward it through the sewer. You must notify them immediately of any relatively large discharge of a perc or any other pollutant that might not ordinarily cause a problem when released in small quantities.

If you are required to sample your wastewater, records of all sampling information must be kept. This includes, for all samples:

- The date, exact place, method of sampling, and time of sampling and the names of the person or persons taking the samples;
- The dates analyses were performed;
- The laboratory that performed the analyses;
- The analytical techniques/methods used; and
- The results of such analyses.

Dry cleaners must also keep records of any monitoring conducted, even if it is not required by the treatment plant authority. All of these records must be kept for at least 3 years.



Hazardous Waste Sewer Discharge Notification

In addition to the responses listed in the contingency plan, such as contacting the proper authorities if an accidental release occurs, if **more than 15 kg per month (about 2.4 gallons)** of perc is discharged to the sewer you must notify the treatment plant, your EPA Regional Waste Management Division Director, and the state hazardous waste authority. The notification must be in **writing** and include:

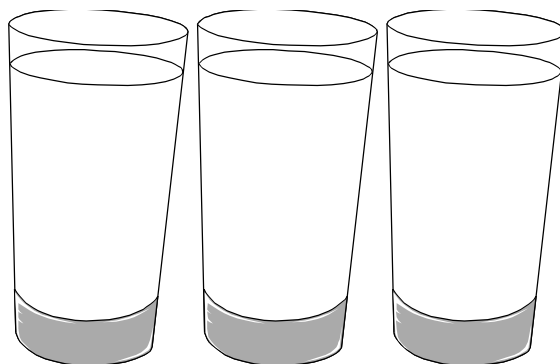
- The name of the hazardous waste ("perchloroethylene").
- The EPA hazardous waste number (For example: "F002" if it is waste from a still bottom, cooked powder residue, or cartridge filter; "U210" if it was unused perc from the machine or storage tank).
- The type of discharge (For example: "batch" for a single event spill, such as a drum or container; or "continuous" for a large spill that is not stopped).

If over 100 kg per month (about 16.6 gallons) is discharged to the sewer then you must also include the following in the notification:

- What hazardous constituents are in the waste (for dry cleaners, it would be perc, or any other potential solvents).
- An estimate of how much (mass and concentration) was discharged during that month.
- An estimate of how much you will discharge in the next 12 months.

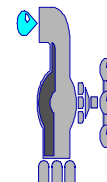


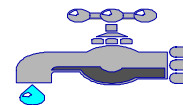
YOUR STATE'S REQUIREMENTS MAY BE STRICTER THAN THE FEDERAL REQUIREMENTS, SO ALWAYS CHECK WITH YOUR STATE AGENCY.



**TABLE II-6
MATERIALS USED AND WASTES GENERATED BY DRY CLEANERS**

Operation	Typical Materials Used	Typical Wastes Generated	Requirements which apply to a dry cleaning shop with a shallow disposal well
Perc-type Mixed-type Valclene-type Petroleum solvent-type	Tetrachloroethylene, water, detergents, additives, filter cartridges Tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, methylene chloride, filter cartridges Trichlorotrifluoroethane, filter cartridges, detergents, additives Stoddard solvent, filter cartridges, detergents, additives	Spent solvents, still residues from solvent distillation, spent filter cartridges (standard and adsorptive type), cooked powder residues from diatomaceous earth or powder filter systems, spotting board residues, drained filter muck, separator water from solvent vapor recovery, machine lint and dust, empty containers. Residuals from industrial dry cleaning operations receiving rags and clothing soiled with various aromatic and chlorinated solvents, oil, and greases, and other hazardous materials	State and/or Federal Underground Injection Control (UIC) programs regulate shallow disposal wells which receive industrial wastes instead of or in addition to solely sanitary wastes. They also prohibit injection of hazardous wastes into or above underground sources of drinking water. Contact your EPA Regional UIC Program Office for restrictions which apply to your state. (See Appendix A.) Penalties can reach \$25,000 for each day of noncompliance, and liability for ground water remediation may exceed one million dollars.
Spot/stain removal	Stain/spot removers & prespot containing chlorinated & aromatic hydrocarbons, amonic detergents, emulsifying, dispersing, & pH controlling agents for removal of fats, oils, greases, paints & enamels (1,1,1-trichloroethane, trichloroethylene, perchloroethylene, methylene chloride, petroleum solvents, amyl acetate, polypropylene glycol, ethylene glycol, monobutyl ether acetate, N-butoxyethanol, cyclohexanol, shell solvent 71, shell cyclosol 63, glycolic acid, pale oil, hexylene glycol, subtilin, sodium tripolyphosphate, diacetone alcohol, butyl cellosolve, potassium hydroxide	Spotting residues, empty containers, waste products	Contact your local government for information about Wellhead Protection Programs and other land use planning programs which may restrict injection practices. Injection practices applicable to dry cleaner shallow disposal wells, e.g., septic systems, floor drains, and sump and separator systems discharge to dry wells or leach lines and dry wells designed for drainage of storm water from industrial and commercial areas

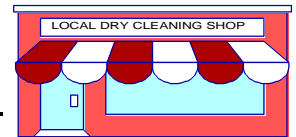




**TABLE II-7
WASTEWATER REQUIREMENTS FOR DRY CLEANERS WITH SEWER SYSTEMS**

Requirements for All Dry Cleaners	Requirements for Dry Cleaners Discharging More Than 15 kg/mo of Liquid Perc
<p><u>General Prohibitions:</u></p> <p>✓ You may not discharge into the sewer any of the following pollutants:</p> <ul style="list-style-type: none"> - Pollutants including heat, petroleum oil, and nonbiodegradable cutting oil, that cause pass through or interference with the municipal treatment plant; - Pollutants that create a fire or explosion hazard in the treatment plant; - Pollutants that will corrode the treatment plant, specifically any wastewater with a pH less than 5; - Solid or viscous pollutants that could obstruct wastewater flow; and - Pollutants that result in toxic gases, vapors, or fumes within the treatment plant at levels that may cause worker safety or health problems. <p><u>Record keeping and Reporting:</u></p> <p>✓ You must follow the notification and record keeping requirements listed in Part II (Section B, Step 3), of this handbook.</p> <p><u>State and Local:</u></p> <p>✓ You must comply with any additional state and local requirements found in your municipality's sewer ordinance. Contact your municipal pretreatment program or treatment plant authority for these requirements.</p>	<p><u>Hazardous Waste Notification:</u></p> <p>✓ If you discharge more than 15 kg/mo of perc into the sewer, you must notify the treatment plant authority, your EPA Regional Waste Management Division Director, and the state hazardous waste authority. You must also comply with the hazardous waste notification requirements listed below:*</p> <ul style="list-style-type: none"> - The name of the hazardous waste ("percchloroethylene). - EPA hazardous waste number (For example: "F002" if it is waste from a still bottom, cooked powder residue, or cartridge filter; "U210" if it was unused perc from the machine or storage tank). - The type of discharge (For example: "batch" for a single event spill, such as a drum or container; or "continuous" for a large spill that is not stopped).

* It is unlikely that a dry cleaner would discharge this much perc on a routine basis. To meet the 15 kg threshold, a dry cleaner would have to discharge in the range of 28,000 gal of wastewater with a typical concentration (150 ppm) found in separator water. However, if there is a spill of pure perc, only 2.4 gallons would need to be released into the sewer to meet this level.



Section C: How do I prepare my shop to comply with environmental requirements?

As you set up a new dry cleaning shop or continue operating your present dry cleaning shop, you must follow certain guidelines to make sure that your facility complies with air, hazardous waste, and water requirements.

Step 1: Air



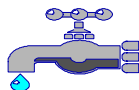
- ▶ Select new dry cleaning equipment and evaluate existing equipment.
- ▶ Submit the appropriate initial reports and compliance reports to EPA to show that air emission requirements are being met.

Step 2: Hazardous Waste



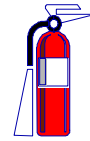
- ▶ Obtain a U.S. EPA Identification number, which registers your dry cleaner as a generator of hazardous wastes.
- ▶ Select a reputable and authorized hazardous waste transporter.

Step 3: Water



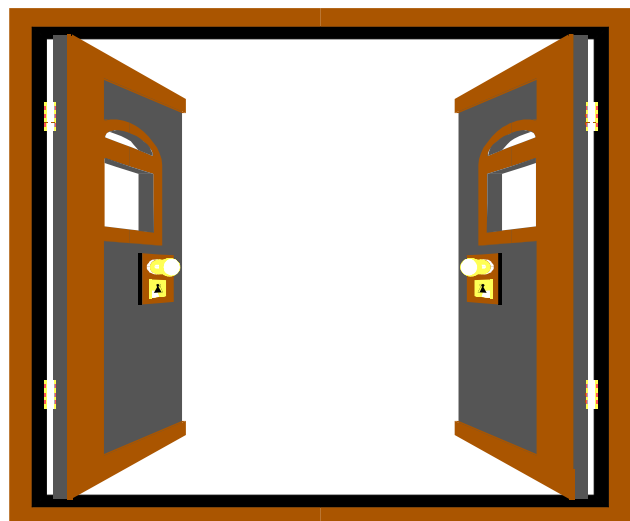
- ▶ Disconnect from the septic system any drains located near the dry cleaning operation where perc contact cooling water may enter them.

Step 4: Emergency Planning



- ▶ Develop a contingency plan in case of an emergency. This plan is required for certain hazardous waste generators (SQGs), and strongly recommended, although not required, for CESQGs.
- ▶ Prepare for accidents and take steps to prevent them.

Although there are no specific operating requirements for complying with federal wastewater pretreatment regulations, it is advised that you contact your state/local wastewater authority to learn if there are any permit requirements that apply to your dry cleaning facility.





Step 1: Preparing a dry cleaning shop to comply with air requirements

Select New Dry Cleaning Machines/Evaluate Existing Machines

All **new** dry cleaning machines must be dry-to-dry machines and have refrigerated condensers (at least). A **Major** machine [any machine located at a dry cleaning facility with combined perc purchases greater than 2,100 (or 1,800) gallons/yr] must also have a carbon adsorber to capture remaining perc vapors inside the dry-to-dry machine drum.

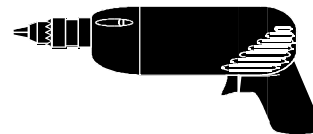
The type of air pollution control required for an **existing** dry cleaning machine is based on the amount of perc purchased for all of the dry cleaning machines in the entire dry cleaning facility. **Table II-2 on Page II-7** helps you determine if you are a small area, large area, or major source and to find out your required controls for an existing machine.

If your dry cleaning machine requires a carbon adsorber as a control equipment, then you must prepare a place for a sampling port in the exhaust stack. You will use the sampling port to measure the concentration of perc in the stack to monitor the efficient operation of the carbon adsorber. Measure the diameter of your duct (or stack). The sampling port must be drilled at **least 8 duct diameters downstream** from any flow disturbance, such as:

- ▶ A bend in the duct,
- ▶ A point where the duct diameter becomes wider or smaller,

- ▶ The place where another duct is piped in or out,
- ▶ The beginning or end of the duct.

If your duct diameter is 10 inches wide, you would multiply this number by 8 and drill the hole at least 80 inches downstream. The sampling port must also be **at least 2 duct diameters upstream** from any flow disturbance. This would be 20 inches if your duct diameter is 10 inches.



Drill a hole (**SAMPLING PORT**) in the duct (or stack) that routes the clean air away from the carbon adsorber. The hole that you drill must be only large enough for the testing colorimetric tube to fit into it (**usually 1/2 inch diameter**). This hole must be covered up when not testing.

Submit Initial Report/Compliance Reports

If you open a new dry cleaning facility and purchase one or more **NEW** dry cleaning machines, you are required to:

- ▶ Submit an **INITIAL REPORT** upon startup. A copy of the recommended form for this initial report is found in **Appendix B**.
- ▶ Submit a **POLLUTION PREVENTION COMPLIANCE REPORT** by 30 days after you begin operating your equipment showing that you are performing all of the required good housekeeping practices at your facility.



- ▶ Submit a **CONTROL DEVICE COMPLIANCE REPORT** by 30 days after you begin operating your equipment. A copy of the recommended form for this report is found in **Appendix B**. Note that some states may request additional information.
- ▶ Make sure that these forms are filled out correctly and that either the dry cleaning plant owner or manager has signed them.

Copies of these forms can be obtained by calling the EPA Regional Office. A list of these contacts is given in **Appendix A**.

For the **CONTROL DEVICE COMPLIANCE REPORT**, you are required to report the amount of perc you purchased over the past 12 months. If you are a new shop, report the amount of perc you purchased during the first month as you start up your new machine. You will not be able to make an annual consumption determination until you have completed one year of operation with the new machines.



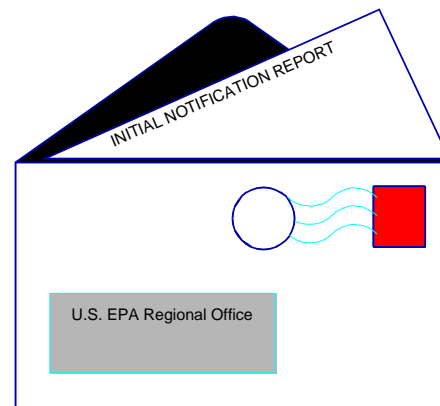
REMEMBER:

- ▶ If the amount of perc you purchased exceeded 140 gallons, you must monitor the temperature of the refrigerated condenser.
- ▶ If the amount of perc you purchased exceeded 2,100 gallons, you must install a supplemental carbon adsorber and monitor the perc levels for either an internal (no vent) or external (vented) carbon adsorber.
- ▶ If you have a change in your dry cleaner status: including a change in ownership or address, purchase of new equipment, or a change in size category, then you must submit within 180 days a revised pollution prevention and control device compliance report stating

your new status. (See **Page II-8** for guidance on how to calculate this 12-month average).

If you have **EXISTING** machines at your dry cleaning plant:

- ▶ You were required to submit the **INITIAL NOTIFICATION** and a **POLLUTION PREVENTION COMPLIANCE REPORT** by **June 18, 1994**.



- ▶ If you are required to install a control device (according to **Table II-2** on **Page II-7**), then you should have submitted a **CONTROL DEVICE COMPLIANCE REPORT** by **October 22, 1996**.
- ▶ If you were not required to install a control device, then you should have submitted a **POLLUTION PREVENTION COMPLIANCE REPORT**. In this report you should have certified that you are performing the required leak detection and repair program and that you are following good housekeeping procedures. A copy of the recommended form for the **POLLUTION PREVENTION COMPLIANCE REPORT** is found in **Appendix B**.



Step 2: Preparing a dry cleaning shop to comply with solid waste requirements

Obtain a U.S. EPA Identification Number

If your dry cleaning facility transports, stores, or disposes more than 100 kg (about 220 pounds or 25 gallons) of hazardous waste in any calendar month (you are an **SQG** or **LQG** according to **Table II-4** on **Page II-11**), you will need to obtain an EPA Identification (ID) Number before the time of your first shipment. Some states also require **CESQGs** to have EPA ID Numbers, so contact your state hazardous waste division to check on specific state requirements. Transporters and facilities that store, treat, or dispose of regulated quantities of hazardous waste generated by dry cleaners must also have EPA ID Numbers. These 12-character Identification Numbers used by EPA and states are part of a national database on hazardous waste activities. **Note that if your dry cleaning facility already has an EPA Identification Number, you do not need to re-register for one.** Note also that if you are a dry cleaner with several cleaning shops, each separate shop needs a unique Identification Number.

To obtain your EPA Identification Number:

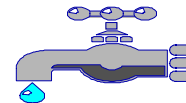
- ▶ Call or write your state hazardous waste management agency or EPA regional office (see **Appendix A**) and ask for a copy of EPA Form 8700-12, "Notification of Regulated Waste Activity." You will be sent a booklet containing the two-page form and instructions for filling it out. **Figure II-1** provides a sample copy of a notification form to show you the kind of information required. (NOTE: A few states use a form that is different from

the form shown in **Figure II-1**. Your state will send you the appropriate form to complete.)

- ▶ Fill in the form with the same kind of information shown in the sample form in **Figure II-1**. This information covers your "installation" (your dry cleaning site) and your hazardous wastes.
- ▶ To complete Item X of the form, you need to identify your hazardous waste by the correct EPA hazardous waste number. Perc wastes will have the hazardous waste number of **F002** or **U210**. The common waste types generated by dry cleaners are:
 - cooked powder residues.
 - still residues.
 - spent cartridge filters.
- ▶ Make sure your form is filled out completely and correctly and sign the certification in Item IX. Send the form to your state hazardous waste contact. This address is listed in the information booklet you received with the form.

This information will be recorded by EPA and the state, and you will be assigned an EPA ID Number. Use this number on all hazardous waste shipping papers.

The EPA ID Number will stay with that particular physical dry cleaning site or location. If you move your dry cleaning business to another location, you must notify EPA or the state of your new location, submit a new form, and obtain a new EPA ID Number. If hazardous waste was previously handled at the new location, and it already has an EPA ID Number, you will be assigned that number for your relocated dry cleaning business.

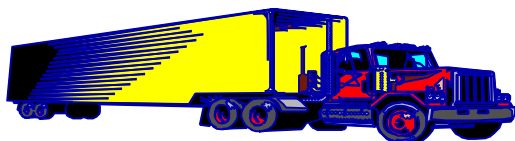


Select a Hazardous Waste Hauler and Designated Waste Treatment Facility

Careful selection of a hauler and a designated waste treatment facility is especially important because you, the dry cleaning shop owner, are **ultimately responsible** for any accidents during transport and the proper disposal of your dry cleaning wastes. This could include liability under Superfund. Before choosing a hauler or designating a facility, check with the following sources:

- ▶ Your friends and colleagues in the dry cleaning business.
- ▶ Your trade association(s).
- ▶ Your Better Business Bureau or Chamber of Commerce.
- ▶ Your state hazardous waste management agency or EPA regional office, which will be able to tell you whether or not a company has an EPA Identification Number.

These sources can supply you with information on possible complaints against or recommendations for specific haulers or treatment facilities.

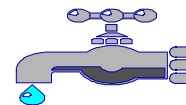


After checking these sources, contact the hauler and designated hazardous waste management facility directly to verify that they each have an EPA Identification Number, and that they can and will handle your waste. In some states, the hauler and

designated facility may be required to have a special license or permit to operate. Make sure that they have the necessary permits and insurance, and that the hauler's vehicles are in good condition. You may also want to ask them:

- ▶ To provide information on their track record.
- ▶ If they have ever been cited for improper practice.

Checking sources and choosing a hauler and designated facility may take some time--try to begin checking before you open your shop, well ahead of the time you will need to ship your waste.



Step 3: Disconnect Drycleaning Process Wastes From Septic System Wastes

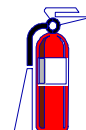
Before beginning operations, check all drains and pipes and know where they lead. If the drains and pipes lead to a septic tank, a dry well, or other shallow disposal system leading to the ground, ensure that no perc contaminated wastes are disposed through this system. Ensure that septic systems are used to dispose solely sanitary wastes. If a dry cleaner has been operated at your location previously, it is recommended that you test the septic tank and groundwater for previous perc contamination. If you do not, in the future, you may become liable for someone else's previous perc contamination.

Disposing of perc contaminated waste through the septic system has the potential to contaminate underground sources of drinking water, including the well that supplies drinking water to the dry cleaning plant. Stopping the contamination of groundwater may require expensive cleanup actions, such as pumping the septic tank and possibly removing soil and ground water around the septic system. Be safe! Save potential cleanup costs, time, and money, and most importantly prevent contamination by physically separating perc containing wastes from sanitary wastes.

If your drains and pipes lead to a municipal sewage system, call your local publicly owned treatment works (POTW) to let them know that you are operating a perc dry cleaner at your site. Ask them about local requirements that may apply. You may need to get a permit prior to beginning operation. It is recommended that you do not dispose of **anything**

down the drain that may contain perc, even if the POTW allows it.





Step 4: Contingency planning and accident prevention

Develop a Contingency Plan

A contingency plan is a plan that prepares for any accidents that could possibly occur. Although a written contingency plan is not federally required for **SQGs** or **CESQGs**, it is strongly recommended. It is also important to check with state and local authorities for any additional contingency plan or emergency preparedness requirements. A contingency plan can be thought of as a set of answers to a series of "what if" questions. For example: "What if there is a fire in the area where perc waste is stored?" or "What if I have a spill of hazardous waste or one of my containers leaks?"

The following list gives some general directions to follow in case of an emergency:

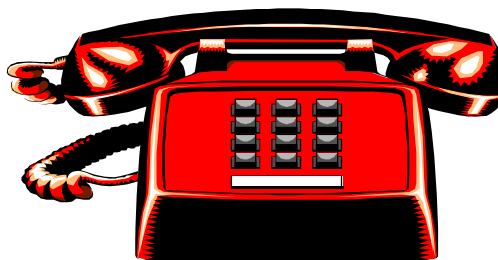


- ▶ In the event of a **fire**, call the fire department or attempt to extinguish the fire using the appropriate type of fire extinguisher.
- ▶ In the event of a **spill** or accidental release (an unusually large discharge) equal to or over 100 pounds of perc or when a spill has reached surface water, you must contain the flow of hazardous waste to the extent possible and notify the National Response Center. The Center operates a 24-hour toll free number:

1-800-424-8802, or in Washington, D.C.: 426-2675. As soon as possible, clean up the hazardous waste and any contaminated materials or soil.

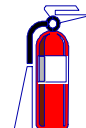
- ▶ In the event of a **fire, explosion, or other release**, which could threaten human health outside of the dry cleaning facility, immediately notify the National Response Center at **1-800-424-8802**.

If you call the National Response Center, give the following information:

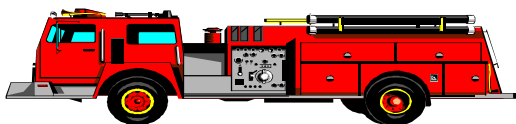


- ▶ Your shop's name, address, and EPA identification number (if you are an SQG).
- ▶ The date, time, and type of incident (for example, if it is a spill or fire).
- ▶ The quantity and type of hazardous waste involved in the incident.
- ▶ The extent of injuries, if any.
- ▶ An estimate of the quantity and location of any recovered materials, if any.

The RCRA regulations require that emergency phone numbers and locations of emergency equipment must be posted near telephones. This means that next to the phone you must post:



- ▶ Name, office and home phone numbers, and address of emergency coordinator.
- ▶ A site plan showing locations of **nearby**:
 - portable fire extinguishers.
 - special extinguishing equipment (if it uses foam, inert gas, dry chemicals, etc.)
 - fire alarms.
 - spill control equipment (absorbent cotton rags).
 - decontaminant equipment (safety shower, eye wash fountain).
 - water at adequate volume and pressure if needed to operate emergency equipment (such as water hoses, automatic sprinklers, water spray systems)
- ▶ The telephone numbers of:
 - fire department
 - police department
- ▶ Although not required, it is strongly recommended that you also post the following phone numbers by the telephone:
 - state or local emergency response teams
 - hospital
 - local ambulance service



- National Response Center
- State Department of Public Safety

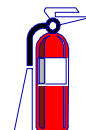
In addition, **all employees** must know proper waste handling and emergency procedures. Review emergency procedures with employees. You must

appoint yourself or an employee to act as the **emergency coordinator** to ensure that emergency procedures are carried out in the event of an emergency. The responsibilities of the emergency coordinator are:

- ▶ He/she (or someone designated by that person) will be available 24 hours a day (at the facility or by phone).
- ▶ He/she will know whom to call and what steps to follow in an emergency.

Because most dry cleaners are small businesses, the owner or operator probably already performs these functions. Therefore, it is not intended (nor is it likely) that you will need to hire a new employee to fill this role.

If you are unsure whether you should report and you have a serious emergency, such as a spill that extends outside of your plant or that could reach surface waters, **IMMEDIATELY CALL THE NATIONAL RESPONSE CENTER (1-800-424-8802) AND GIVE THEM THE INFORMATION THEY ASK FOR.** If you didn't need to call, they will tell you so, **BUT ANYONE WHO WAS SUPPOSED TO CALL AND DOES NOT IS SUBJECT TO A \$10,000 FINE, A YEAR IN JAIL, OR BOTH.** An owner or manager of a dry cleaner who fails to report a release also may have to pay for the entire cost of repairing any damage, even if the facility was not the single or the main cause of the damage.



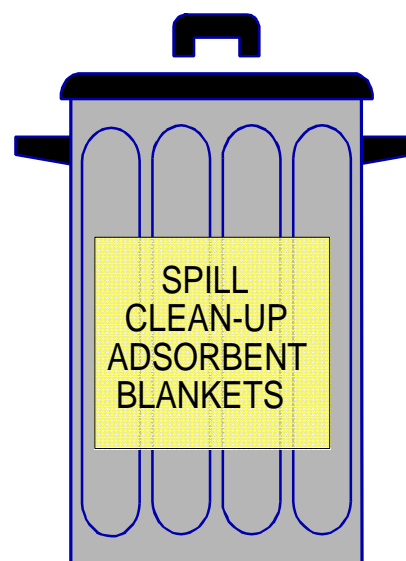
Accident Prevention

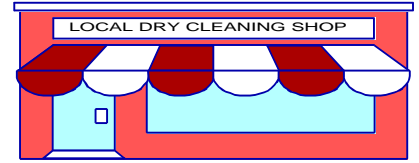
In accordance with RCRA, your facility must have appropriate cleanup materials and emergency communication equipment for handling perc waste at your location. Some steps you should take to prepare for emergencies include:

- ▶ Making sure that there are no floor drains near the area where perc is used that lead to the sewer, septic tank, or storm water drain.
- ▶ Have absorbent cotton blankets in the area where perc solvent is used or stored and keeping them in a container marked with "spill cleanup absorbent blankets."
- ▶ Store hazardous waste in areas away from doorways. The floor in your solvent storage area should be leak-proof (such as concrete with an epoxy coating). If there is a doorway nearby, a concrete barrier must prevent the solvent flowing out of the door in case of a large spill.
- ▶ Provide room for emergency equipment and response teams to get into any area in your facility in the event of an emergency.
- ▶ Write to local fire, police, and hospital officials or state or local emergency response teams explaining that you handle perc wastes and asking for their cooperation and assistance in handling emergency situations.
- ▶ Install and maintain emergency equipment (such as an alarm, a telephone, or two-way portable radios, fire extinguishers, hoses, and automatic sprinklers) in your facility so that it

is immediately available to your employees if there is an emergency.

- ▶ Supervise any transfer of solvent that takes place on your premises. Take extra precautions if your perc solvent is delivered from a tanker truck and piped through a hose into your dry cleaning solvent tank. If the hose breaks or the nozzle slips out of the tank, a large spill could occur.
- ▶ Set up your dry cleaning machine in a containment trough. Although not required by Federal regulations, some local regulations may require this structure for new dry cleaning machines. This structure must be non-porous (constructed of materials such as epoxy-coated concrete, fiberglass, or steel). Contact your EPA Regional Small Business contact or Dry Cleaning Trade Association for names of manufacturers of these products. It must be designed to contain 110% of the perc contained in any single solvent tank. It serves to capture perc leaks from malfunctioning equipment and to contain spills.





Section D: How to properly operate a dry cleaning machine and shop to stay in compliance with environmental regulations?

This section covers what a dry cleaner needs to do during normal operation to comply with air, hazardous waste, and water regulations. These steps include proper operation of equipment, periodic monitoring and reporting, and proper handling and storing of hazardous wastes.

Another important step is **cooperating with inspection officials and using a visit by an inspector as an opportunity to identify and correct problems.** Accompanying state or local inspectors on a tour of your shop will enable you to ask any questions you may have and receive advice on more effective ways of handling your hazardous products and wastes. In addition, guiding the inspectors through your property and explaining your operations may help them to be more sensitive to the particular problems or needs of your business. Accompanying state or local inspectors can also serve as a valuable source of information on record keeping, manifests, and safety requirements for your dry cleaning shop.

Step 1: Staying in compliance with air regulations

Follow Good Housekeeping Practices, Including Leak Detection and Repair

To reduce the amount of perc emissions to the air, all perc dry cleaners must:

- ▶ Conduct a leak detection and repair program once each week while the equipment is operating. Search for all leaks that are obvious to sight, smell, or touch. A sample log sheet that you may use to record this weekly check is provided in **Figure II-2**. [Note that if you are **SMALL AREA** and exempt from installing controls, this program is only required every other week.]
- ▶ Whenever you find any leaks, repair them **within 24 hours**. Or, if parts are needed to repair the equipment, place the order for any repair parts within 2 working days after detecting the leak. Install the repair parts within 5 working days after you receive them.
- ▶ Keep the doors on your dry cleaning machines closed at all times except when loading or removing articles.
- ▶ Keep all perc and perc wastes in leak-proof, tightly covered containers.



- ▶ Place cartridge filters inside leak-proof, tightly covered containers to drain them.



- ▶ Operate and maintain all of your dry cleaning equipment according to the manufacturer's instructions. An operator's manual should be included whenever you purchase dry cleaning equipment. Keep the manual near the equipment and inform all employees where it is kept. If you are unable to locate your manual or operating instructions, contact your local dry cleaning distributor or trade association who will help you find one. If you still do not have manuals for all of your equipment, **call EPA to obtain a copy of document number EPA-4531R-94-07, dated October 1994, for general recommended operating and maintenance.**

Monitor Control Devices

By testing your control equipment each week, you can check to make sure that it is running without problems. If your tests show that you have a problem, you must fix the problem before continuing to operate the machine.

If you have **EXISTING** machines, you should have begun monitoring program for your control equipment by **September 22, 1996**. If you have a **NEW** machine, you must begin a monitoring program **IMMEDIATELY** when you start operating your machine.

If a **REFRIGERATED CONDENSER** (or chiller) is your required control equipment, you need a temperature sensor. The temperature sensor that you use must be designed to measure a temperature range of at least 32 to 120°F and must be accurate to $\pm 2^\circ\text{F}$.

- ▶ You must **MEASURE THE TEMPERATURE OF THE PERC IN THE COOL-DOWN AIR STREAM**. If the air stream leaving the refrigerated condenser is still warm, perc vapors inside the drum will not be removed sufficiently. Measuring the temperature will show whether perc is being removed from the drying clothes and

recycled back into the solvent tank.

- ▶ If you have a dry-to-dry machine or a transfer dryer/reclaimer, you must measure the temperature of the perc air stream on the **OUTLET SIDE** of the refrigerated condenser. The temperature must be **LESS THAN OR EQUAL TO 45°F**.
- ▶ To obtain a temperature sensor, contact your equipment manufacturer, your local dry cleaning equipment distributor, or a trade association.



IF YOU DO NOT HAVE A TEMPERATURE SENSOR TO MONITOR YOUR REFRIGERATED CONDENSER FOR COMPLIANCE, OR IF THE TEMPERATURE DOES NOT FALL BELOW 45°F, EPA STRONGLY URGES YOU TO CONTACT BOTH YOUR TRADE ASSOCIATION AND YOUR EQUIPMENT MANUFACTURER. PROPER INSTALLATION OF THE TEMPERATURE SENSOR IS VERY, VERY IMPORTANT TO YOU. IT MUST BE DONE CORRECTLY. OTHERWISE, COMPLIANCE MAY NEVER BE DEMONSTRATED, AND YOU MAY DO EXPENSIVE DAMAGE TO YOUR EQUIPMENT. EPA ADVISES THAT A REPUTABLE MECHANIC PERFORM THE INSTALLATION, IF ONE IS REQUIRED.

- ▶ If you have a transfer washer, you must measure the **DIFFERENCE** between the temperature of the perc air stream entering and exiting the refrigerated condenser. The temperature difference must be **GREATER THAN OR EQUAL TO 20°F**. For example, if the temperature of the perc air stream entering the refrigerated condenser is 90°F and the temperature of the perc air stream exiting the refrigerated condenser is 50°F, then the **difference** would be:

$$90^\circ\text{F} - 50^\circ\text{F} = 40^\circ\text{F}, \text{ which is greater than } 20^\circ\text{F}$$

If you use a **CARBON ADSORBER** (or "sniffer") for required control of your perc emissions, it must have been **installed before September 22, 1993**.

In addition:

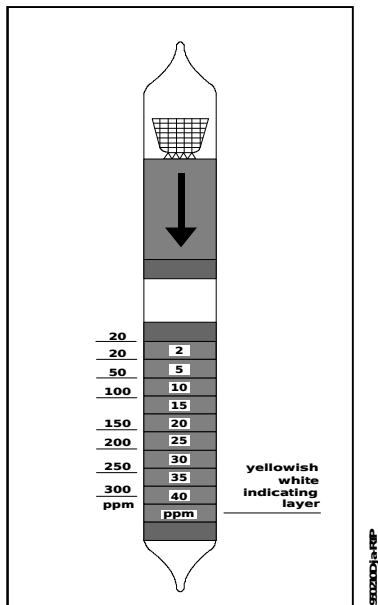


Figure II-3

- ▶ You must **SET UP A REGULAR WEEKLY DESORPTION SCHEDULE**. Your carbon adsorber becomes useless if you do not desorb it, or if you do not dry it thoroughly after desorbing it. Air from your machine will pass through it without removing the perc, and the perc will be sent into the air where people can breathe it.
- ▶ You must **MEASURE THE CONCENTRATION OF PERC IN THE EXHAUST STACK OF THE CARBON ADSORBER ONCE A WEEK** to check that the carbon adsorber is removing the perc and not letting the perc pass by into the exhaust.

Take the measurement during the last aeration cycle using a colorimetric detector tube. See **Figure II-3** for a picture of the type of tube required. Most tubes operate with a simple hand-operated pump (See **Figure II-4**). Some tubes are operated with a bellows pump that is squeezed several times. The tube is small, and can fit in the palm of your hand. It is filled with a chemical substance that changes color (usually varying shades of purple) depending on the perc concentration. Each tube can be used only one time. The result of the colorimetric detector tube test must show that the concentration of perc in the exhaust gas is 100 parts per million (ppm) or less. If the test shows a concentration greater than this level, then you must increase the number of times per week that you desorb, or look for equipment malfunctions. Ask your dry cleaning equipment distributor or trade association where to buy the tubes and to provide a demonstration on how to use them properly.

If you are a new **MAJOR** source that uses a carbon adsorber with a refrigerated condenser on a dry-to-dry machine where the exhaust passes through the carbon adsorber before the machine door is opened, then you must measure a concentration of 300 ppm to an accuracy of ± 75 ppm by volume inside the machine drum with a colorimetric detector tube.

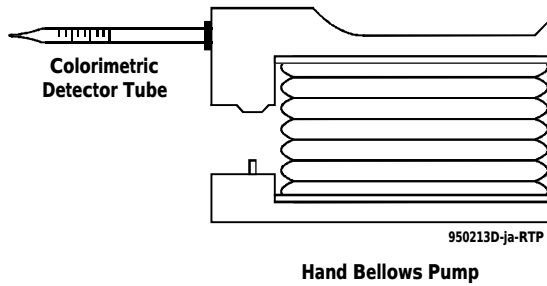


Figure II-4

record the concentration (in ppm).

- ▶ If you are required to measure the temperature of your refrigerated condenser, use the recommended log sheet found in **Figure II-2** on **Page II-31** to record the temperature.

Perform Proper Record keeping and Reporting

Each dry cleaner must keep certain records to show that good housekeeping practices and monitoring are being done:

- ▶ After you search your machine for leaks, you must record your findings. It is recommended that you use a log sheet similar to the one found in **Figure II-2** on **Page II-31**. If repairs are needed, record the types of repairs needed on the log sheet. If you ordered repair parts, also fill in a description of the parts, and the date they were ordered. **A log of all inspections and repairs made must be kept in your shop for 5 years.**
- ▶ Your status of **SMALL AREA, LARGE AREA, or MAJOR** is determined by adding up all of the perc purchases made for **YOUR ENTIRE SHOP** during any 12-month period. (See **Tables II-2** and **II-3**). **SAVE THE RECEIPT EACH TIME YOU HAVE PERC DELIVERED FOR YOUR MACHINE(S).** On the first day of each month, you must add together all of your perc purchases from the previous 12 months and record it. (See **Page II-8** for directions on how to calculate the monthly rolling average). It is recommended that you use a log sheet similar to the one found in **Figure II-5** on **Page II-35** to record your purchases and 12-month totals.
- ▶ If you are required to test the exhaust of your carbon adsorber, use the recommended log sheet found in **Figure II-2** on **Page II-31** to





Step 2: Staying in compliance with hazardous waste regulations

Know On-Site Storage Limits

If you are a CESQG, you may store up to 2,200 lb (1,000 kg) of hazardous waste on your site. There is no time limit for how long you are allowed to store this waste. However, if you exceed this amount, you become an SQG. If you are an SQG, you may store no more than 13,200 lb (6,000 kg) of hazardous waste on your site for up to 180 days, or for up to 270 days if the waste must be shipped to a treatment, storage, or disposal facility that is located over 200 miles away. If you exceed these time or quantity limits, you will be considered a storage facility and you must obtain a storage permit (see below) and meet all of the RCRA storage requirements. These time limits on storage are longer than the 90 days allowed LQGs. SQGs are allowed to store waste for as long as 180 or 270 days so that they will have time to accumulate enough hazardous waste to ship it off-site for treatment or disposal economically.



YOUR STATE'S REQUIREMENTS MAY BE STRICTER THAN THE FEDERAL REQUIREMENTS, SO ALWAYS CHECK WITH YOUR STATE AGENCY.

Follow Requirements for On-site Hazardous Waste Storage

You can store hazardous waste in 55-gallon drums, tanks, or other suitable containers if you follow certain common sense rules that are meant to protect human health and the environment **and** reduce the likelihood of damages or injuries caused by leaks or spills of hazardous wastes.

If you store your hazardous waste in **drums or containers**, you must follow these rules:

- ▶ Clearly mark each container with the words "HAZARDOUS WASTE," and with the date you began to collect waste in that container. (Labels for this purpose are also available from your hauler or trade association.)
- ▶ Although marking the EPA waste code on the drum is not required by federal regulations, it is required by most states and is highly recommended.
- ▶ Keep containers in good condition, handle them carefully, and replace any leaking ones.
- ▶ Do not store hazardous waste in a container if it may cause rupture, leaks, corrosion, or other failure.
- ▶ Keep containers closed except when you are adding or removing wastes.
- ▶ Inspect the container for leaks or corrosion every week.



- ▶ NEVER store in the same container wastes that could react together to cause fires, leaks, or other releases. If all your wastes are perc-related then this requirement is not of concern to you.
- ▶ Make sure that the stored waste is taken off-site to be properly disposed of within 180 (or 270) days if you are an SQG.
- ▶ Use the National Fire Protection Association's (NFPA) buffer zone requirements for tanks containing ignitable or reactive wastes. These requirements specify distances considered as safe buffer zones for various liquids based on the characteristics of all combustible and flammable liquids. Call your local fire department or EPA regional office (see **Appendix A**) if you need help.
- ▶ Make sure that the stored waste is taken off-site to be properly disposed of within 180 (or 270) days if you are an SQG.



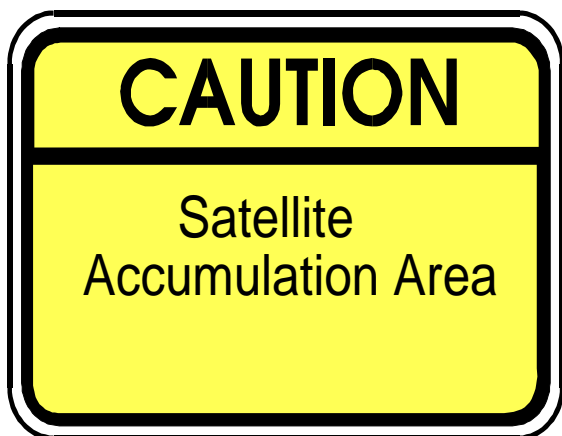
NOTE THAT MOST PERC DRY CLEANERS DO NOT HAVE TANKS.

However, if you do store your waste in **tanks**, you must follow these rules:

- ▶ Don't store hazardous waste in a tank if it may cause rupture, leaks, corrosion, or other failure.
- ▶ Keep tanks covered or provide at least 2 feet of freeboard (space at the top of the tank) in uncovered tanks.
- ▶ If your tanks have equipment that allow the waste to flow into them continuously, provide waste feed cutoff or bypass systems to stop the flow in case of problems.
- ▶ Inspect monitoring or gauging systems on each operating day and inspect the tanks every week for leaks or corrosion.

Know About Accumulating Hazardous Waste in Satellite Areas

A dry cleaner that is an SQG is allowed to collect up to 55 gallons of perc hazardous waste in a properly labeled drum or container kept near the dry cleaning machine. The drum must be marked with the words **HAZARDOUS WASTE** or with other wording that identifies the contents of the container. Such a drum is then located in a "Satellite Accumulation" area. However, once the amount of perc waste in the drum reaches 55 gallons, it must be marked with the date it reaches that amount, and the dry cleaner must move the container to the designated on-site hazardous waste storage area within 72 hours (3 days). The dry cleaning machine operator is responsible for this drum as long as it is kept separate from the designated storage area. If you are an SQG this storage area can contain up to about 13,200 lb (6,000 kg or 30 55-gallon drums).





Reduce the Amount of Hazardous Waste You Generate

Good hazardous waste management can be thought of as performing "good housekeeping" practices. These include: performing proper drying (reclamation) and distillation, using and reusing materials as much as possible; recycling or reclaiming waste; or reducing the amount of waste you generate.

To reduce the amount of waste you generate:

- ▶ Do not mix nonhazardous wastes with hazardous ones. For example, do not put nonhazardous cleaning agents or rags in the same container as perc wastes or the entire contents become subject to the hazardous waste regulations.
- ▶ Avoid mixing several different hazardous wastes. Doing so may make recycling very difficult, if not impossible. It may also make disposal more expensive.



- ▶ Avoid spills or leaks of hazardous products. (The materials used to clean up such spills or leaks also becomes hazardous waste.)
- ▶ Make sure the original containers of hazardous products, such as spotting chemicals, are completely empty before you throw them away. Use **ALL** of the product.
- ▶ Avoid using more of a hazardous product than you need. For example, use no more perc than you need to do the job.

Reducing your hazardous waste means saving money on raw materials and reducing the costs to your business for managing and disposing of your hazardous wastes.

Conduct Weekly Inspections

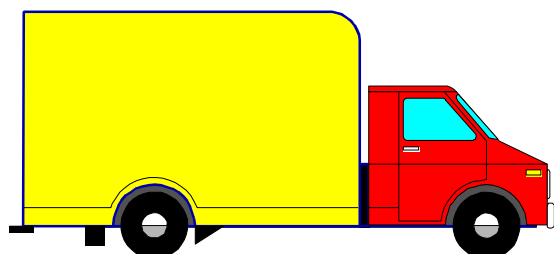
If you are an SQG, you must inspect your hazardous waste storage areas weekly to make sure that drums are in good condition. During your inspection, you must make sure:

- ▶ All drums are labeled/marked appropriately.
- ▶ There is sufficient space to walk in the storage area.
- ▶ All drums are stacked properly.
- ▶ All drum lids are closed tightly.

Any problems should be corrected immediately. If any corrections are made, they should be noted in a permanent record and kept on file for at least 3 years. It is recommended that you place appropriate signs warning other employees that this is a hazardous waste storage area.



REMEMBER: IF YOU ARE STILL UNCERTAIN ABOUT HOW TO HANDLE YOUR HAZARDOUS WASTE, OR HAVE ANY QUESTIONS CONCERNING THE RULES FOR 100-1000 KG/MO GENERATORS, THERE ARE SEVERAL SOURCES LISTED IN APPENDIX A THAT YOU CAN CONTACT FOR ANSWERS. TAKING RESPONSIBILITY FOR PROPER HANDLING OF HAZARDOUS WASTE WILL NOT ONLY ENSURE A SAFER ENVIRONMENT AND WORKPLACE FOR EVERYONE, BUT WILL SAVE YOUR BUSINESS MONEY. SO WRITE OR CALL YOUR STATE HAZARDOUS WASTE MANAGEMENT AGENCY OR THE EPA WITH YOUR QUESTIONS TODAY.



Follow Record keeping and Reporting for Hazardous Waste Management Practices

Each dry cleaner that is an SQG is required to keep records to show that good housekeeping practices and monitoring are being performed. These records must be kept at your facility for 3 years and include:

- ▶ Weekly records showing that the hazardous waste storage area is in good condition or, if a problem is found, a description of the problem and the correction.
- ▶ Records of monthly inspections of emergency equipment.

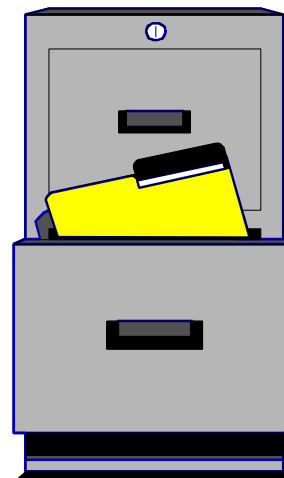
- ▶ Copies of all hazardous waste manifests.
- ▶ A log that includes the number for each hazardous waste manifest and the day it was shipped. This log must be checked weekly to make sure that the return copy of each manifest has been received within 60 days.
- ▶ Copies of all Notification of Hazardous Activity forms submitted to and received from the state or the EPA.

Follow Record keeping and Reporting for Hazardous Waste Shipments:

Fill Out the Uniform Hazardous Waste Manifest

A hazardous waste manifest is a multi-copy shipping document that you must fill out. It must accompany your hazardous waste shipments. This manifest is required for SQGs. Although manifests are not required for CESQGs, they are recommended.

The manifest form is designed so that shipments of hazardous waste can be tracked from their point of generation to their final destination--the so-called "cradle-to-grave" system. The hazardous waste generator, the hauler, and the recipient at the final





destination (the disposal/treatment facility) must each sign this document and keep a copy. The designated facility operator also must send a copy back to you, so that you can be sure that your shipment arrived. You must keep this copy, which will be signed by the hauler and designated facility, on file for 3 years.



REMEMBER: JUST BECAUSE YOU HAVE SHIPPED THE HAZARDOUS WASTE OFF YOUR SITE AND IT IS NO LONGER IN YOUR POSSESSION, YOUR LIABILITY HAS NOT ENDED. YOU ARE POTENTIALLY LIABLE UNDER SUPERFUND FOR ANY MISMANAGEMENT OF YOUR HAZARDOUS WASTE. THE MANIFEST WILL HELP YOU TO TRACK YOUR WASTE DURING SHIPMENT AND MAKE SURE IT ARRIVES AT THE PROPER DESTINATION.

You can obtain blank copies of the manifest from several sources. To determine which source you should use, use this system:

- ▶ Your hauler.
- ▶ The state to which you are shipping your waste.
- ▶ The state where you generate waste.
- ▶ If neither state requires a state-specific manifest, you may use the "general" Uniform Hazardous Waste Manifest--EPA Form 8700-22. Copies are available from some haulers and designated hazardous waste management facilities, or they may be purchased from some commercial printers.

A sample copy of a hazardous waste manifest is shown in **Figure II-6**. When you sign the certification in ITEM 16 you are personally confirming that:

- ▶ The manifest is complete and accurately describes the shipment.

- ▶ The shipment is ready for transport.
- ▶ You have reduced the amount and hazardous nature of your wastes to the greatest extent possible (within your budget constraints).

States, haulers, recyclers, and designated facilities may require additional information; check with them before you prepare a hazardous waste shipment. Your hazardous waste hauler often will be the best source for packaging and shipping information and will help in completing the manifest. If you have any trouble obtaining, filling out, or using the manifest, ask your hauler, your designated facility operator, or one of the contacts listed in **Appendix A** for help.





Figure II-6

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address			A. State Manifest Document Number		
4. Generator's Phone ()			B. State Generator's ID		
5. Transporter 1 Company Name		8. US EPA ID Number		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone	
9. Designated Facility Name and Site Address		10. US EPA ID Number		E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)			12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
			Type		I. Waste No.
a.					
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above			K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name			Signature		Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		Month Day Year
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19					
Printed/Typed Name			Signature		Month Day Year



Exception Reports

An SQG must file an **Exception Report** if the return copy of the hazardous waste manifest is missing. If the manifest copy, which must be hand signed by the final destination facility, is not received by the SQG within 60 days of the date that the waste was initially shipped, the SQG must submit to the EPA Regional Office (See list in **Appendix A**) a copy of the manifest and an explanation that no confirmation of delivery was received. If you do not receive a signed copy from the designated hazardous waste management facility within 30 days, it is a good idea for you to find out why and, if necessary, let the state or EPA know.

Notify Your Management Facility About Land Disposal Restrictions

If you are an SQG (based on requirements given in **Table II-5 on Page II-12**), for **each** shipment of hazardous waste that you send off site, you must provide the designated receiving facility with a **LAND DISPOSAL RESTRICTION NOTIFICATION**.

Although no form has been developed by EPA to report this information, the following information is required:

- ▶ EPA Hazardous Waste number (for perc waste, this is F002).
- ▶ The chemical of concern (which is tetrachloroethylene)
- ▶ Treatability group (wastewater or nonwastewater). For sludge waste, or nonwastewater, the concentration of perc in the waste cannot exceed 6.0 mg per liter. For wastewater, the concentration of perc cannot exceed 0.054 mg/L.

- ▶ The manifest document number for the particular hazardous waste shipment. (**See item 1 on THE HAZARDOUS WASTE MANIFEST**).
- ▶ Waste analysis data (if available).

Step 3: Staying in compliance with wastewater standards

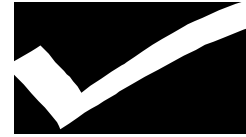


Know General Discharge Prohibitions

You must know how much perc you are allowed to discharge to the sewer based on state/local requirements and the proper reporting and record keeping activities if you exceed these levels. Contact your state or local water agency for the specific requirements on discharges and reporting and record keeping. Section B, Step 3 describes which requirements apply to dry cleaners that are connected to a sewer system.

Know Underground Injection Well Requirements

Do not dispose of any perc waste into your septic system. If you do, you become subject to enforcement action, remediation (cleanup or closure), or obtaining a permit. The specific enforcement action will be determined by the Underground Injection Control Program Director for your state. Section B, Step 3 describes which requirements apply to dry cleaners with a septic system.



Part III: Questions an Inspector May Ask While Visiting Your Dry Cleaning Shop

General



Are you aware of the air, hazardous waste, and wastewater regulations that apply to perc dry cleaners?

Do you know how to contact the small business technical assistance program in your state? Have you received any assistance from them?

How do you usually find out about the local, state, and federal environmental regulations impacting your dry cleaning business?

Are you receiving articles to clean from other dry cleaning stores?

Is your store front name the same as your actual company's name?

Show me where you store your still residues, spent cartridges, cooked powder residue, and other hazardous wastes. Are the containers kept closed and secured? Are they properly labeled? Do you inspect these containers regularly to make sure they are not leaking?

How often do you fill a 55-gallon drum with hazardous waste?

Do you drain spotting chemicals and other chemicals completely to make sure that the container is legally empty and not regulated as a hazardous waste?

Do you treat your hazardous waste on site, or do you use a hazardous waste transporter to remove it off site?

Show me your manifest logs.

Do you have an emergency plan in case of an accident? Are all employees aware of it?

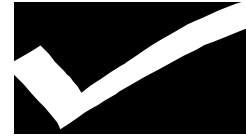
Hazardous Waste



What environmental permits do you have? Can you show them to me?

Do you have a U.S. EPA Identification Number? If so, what is it? Can you show documentation to support it?

Are your perc storage tanks diked, and is the dike coated on the inside with a sealer? Could a leak from your perc storage tank be contained?



Air



Have you sent your Initial Notification Report and your Pollution Prevention Compliance Report to your EPA Regional Office? Have you sent your Control Requirements Compliance Report if a control device is required?

Show me your records of perc purchases and calculations for rolling yearly averages. (These records must be kept in your shop for at least 5 years.)

Do you have a copy of the design specifications and the owner's operation and maintenance manual for your dry cleaning machines and control equipment? Show me your manual. If you do not have one, show me a copy of the EPA document, *General Recommended Operating and Maintenance Practices* (EPA-4531R-94-07), dated October 1994, which you should have on hand instead. Does your manual contain standard operating procedures that could be used as your Startup, Shutdown, Malfunction plan?

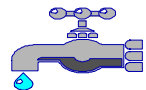
If you are operating a refrigerated condenser as control equipment on your dry-to-dry machine, show me how you take a temperature reading for your compliance test. How often do you perform this test? Show me your log where you record this temperature. What do you do if the outlet temperature is above 45°F?

If you are operating a refrigerated condenser or control equipment on your transfer washer, show me how you measure the inlet and outlet temperature difference on the refrigerator condensers. What do you do if this temperature difference is 20°F or less?

When was your carbon adsorber/sniffer installed? How often do you desorb your carbon adsorber? Show me how you take an outlet perc concentration reading. How often do you perform this test? Show me your log where you record the ppm concentration. What do you do if this outlet concentration exceeds 100 ppm?

Show me how you perform your leak detection test. Show me your log where you record findings. How often do you perform this test? Show me your log where you record repair dates and keep orders for repair parts.

Water



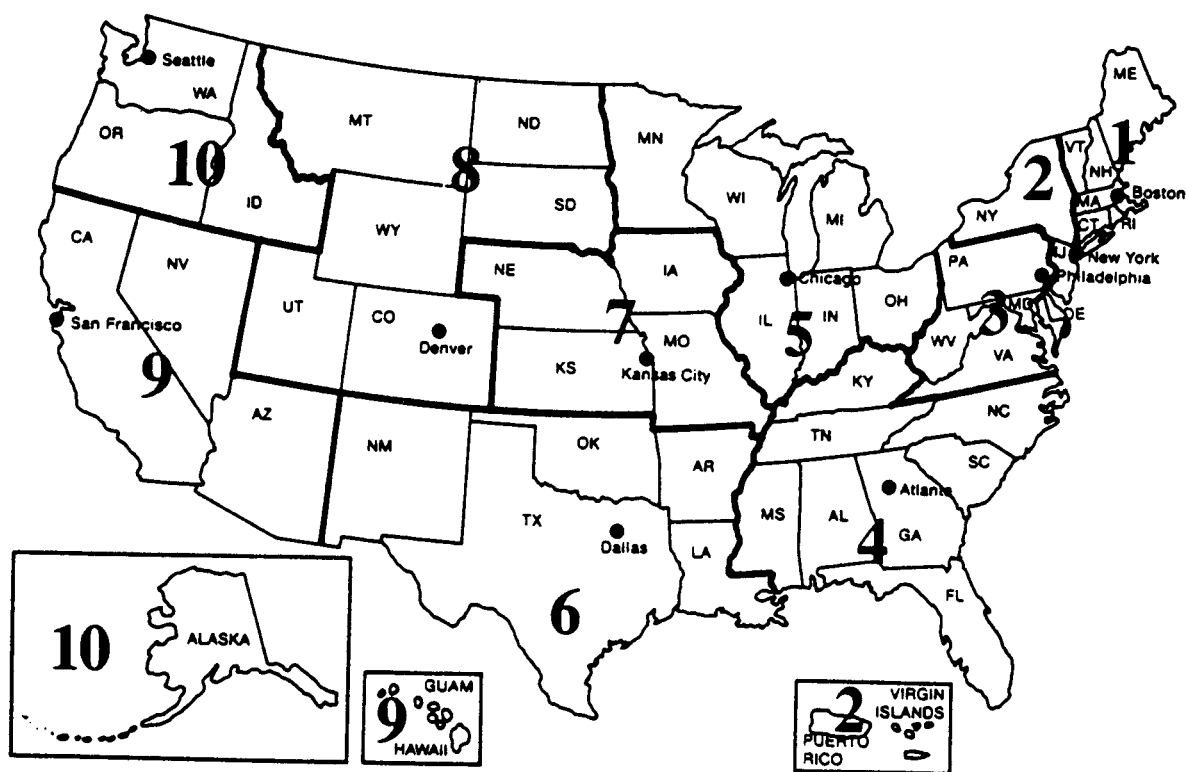
Are your pipes and drains connected to the city/town sewer system? Or a septic system?

What steps would you take if you had a perc spill? What would you do if that perc spill reached your drains?

Do you understand the Federal Underground Injection Control Program? Would you like additional information on the program?



APPENDIX A



- | Regions | Regions | Regions | Regions |
|-----------------|-------------------|--------------------|--------------------|
| 4 — Alabama | 5 — Indiana | 9 — Nevada | 4 — Tennessee |
| 10 — Alaska | 7 — Iowa | 1 — New Hampshire | 6 — Texas |
| 9 — Arizona | 7 — Kansas | 2 — New Jersey | 8 — Utah |
| 6 — Arkansas | 4 — Kentucky | 6 — New Mexico | 1 — Vermont |
| 8 — California | 6 — Louisiana | 2 — New York | 3 — Virginia |
| 9 — Colorado | 1 — Maine | 4 — North Carolina | 10 — Washington |
| 1 — Connecticut | 3 — Maryland | 8 — North Dakota | 3 — West Virginia |
| 3 — Delaware | 1 — Massachusetts | 5 — Ohio | 5 — Wisconsin |
| 3 — D.C. | 5 — Michigan | 6 — Oklahoma | 8 — Wyoming |
| 4 — Florida | 5 — Minnesota | 2 — Oregon | 9 — American Samoa |
| 4 — Georgia | 4 — Mississippi | 3 — Pennsylvania | 9 — Guam |
| 9 — Hawaii | 7 — Missouri | 1 — Rhode Island | 2 — Puerto Rico |
| 10 — Idaho | 8 — Montana | 4 — South Carolina | 2 — Virgin Islands |
| 5 — Illinois | 7 — Nebraska | 8 — South Dakota | |



EPA Regional Office Dry Cleaning Air Contacts

Douglas Koopman
EPA - Region I Mail Code (SEA)
JFK Federal Building
Boston, MA 02203-2211
(617) 565-3252
koopman.douglas@epamail.epa.gov

Venkata Rao
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New York, NY 10007-1866
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James C. Kenney
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US EPA Region IX (AIR-6)
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EPA Regional Office Small Business Contacts

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EPA Region I (SPT)
JFK Federal Building
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Kathleen Malone
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Air Compliance Branch
26 Federal Plaza, 21st floor
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(212) 566-2061

Ray Chalmers
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Philadelphia, PA 19107
(215) 566-2061

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Air Division (A1)
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San Francisco, CA 94105
(415) 744-1102

Dave Dellarco
EPA Region X
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1200 Sixth Ave.
Seattle, WA 98101
(206) 553-4978



EPA Regional Office Dry Cleaning Hazardous Waste Contacts

Region I

Region II

Region III

Elizabeth Sawyer
Region IV
(404) 347-2904 x6377

Region V

Region VI

Gary Bertram
Region VII
(913) 551-7533

Region VIII

Region IX

Region X



EPA Regional Office Dry Cleaning Wastewater Contacts

Region I

Region IX

Region II

Region X

Region III

Al Herndon
Region IV
Pretreatment
(404) 347-2904 x4236

Scott Gordon
Region IV
Underground Injection Control Program
(404) 347-2904 x6666

Richard Zdanowicz
Region V
Underground Injection Control Program
77 West Jackson Blvd.
Chicago, IL 60604

Region VI

Region VII

Region VIII



APPENDIX B

Appendix B includes copies of three types of forms used for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). Every owner or operator of a perc dry cleaning facility is required to fill out **THE INITIAL NOTIFICATION REPORT** and submit it to the appropriate EPA Regional contact given in **Appendix A**.

The owner or operator of each perc dry cleaning facility is required to fill out **THE COMPLIANCE REPORT FOR POLLUTION PREVENTION**. Where compliance with an emission control device is required, the owner or operator must complete **THE COMPLIANCE REPORT FOR CONTROL REQUIREMENTS**. These completed forms must be submitted to the appropriate EPA Regional contact.

If you have any questions concerning these reports, call your EPA Regional contact listed in **Appendix A**.

FACILITY ID NO. _____ (FROM ADDRESS LABEL)



INITIAL NOTIFICATION REPORT

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

Owner/Operator: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Plant Address:

Street Address: _____

City: _____ County: _____

State: _____ Zip: _____

Phone Number: _____

2. Check the box below if:

your dry cleaner is a pick-up store.

your dry cleaning plant has only coin-operated dry cleaning machines that are operated by the customers.

your dry cleaning plant has only petroleum dry cleaning machines.

If you checked either box above, you can STOP HERE and return the form to the address given in the accompanying letter.

3. Write in the total volume of perchloroethylene (perc) purchased for ALL of the machines at the dry cleaning plant over the past 12 months:

_____ gallons

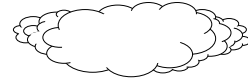
NOTE: If perchloroethylene purchase records have not been kept at the plant, the volume may be estimated for this initial report.

Method of determining gallons (circle one):

actual estimated

4. Next to each machine type listed below, write the number of machines of that type located at your plant:

_____ Dry-to-Dry _____ Transfer



FACILITY ID NO. _____ (FROM ADDRESS LABEL)

5. Provide the following information for EACH MACHINE at your plant. If you have more than four machines at your plant, make additional copies of this page.

	Machine 1	Machine 2	Machine 3	Machine 4
Machine Type (Circle One)	Dry-to-Dry or Transfer	Dry-to-Dry or Transfer	Dry-to-Dry or Transfer	Dry-to-Dry or Transfer
Date Machine Was Installed				
Control Device (Use WORKSHEET on Pages 5 & 6 to Determine Required Control)				
Date Control Device Was Installed or Is Planned to Be Installed				

6. The following pollution prevention practices must be performed at your plant starting on 12/20/93. These practices are listed on an attached sheet that can be posted next to your machine:

- Conduct a weekly leak detection and repair program to inspect all dry cleaning equipment for leaks that are obvious from sight, smell, or touch. NOTE: This program is required every other week if you wrote NO CONTROL REQUIRED in the shaded box in Question 5.
- Repair leaks within 24 hours after they are found, or order repair parts within two working days after detecting a leak that needs repair parts. Install the repair parts by five working days after they are received.
- Keep a log of the weekly (or biweekly) results of the leak detection and repair program.
- Follow good housekeeping practices, which include keeping all perc and wastes containing perc in covered containers with no leaks, draining cartridge filters in closed containers, and keeping machine doors shut when clothing is not being transferred.
- Operate and maintain all dry cleaning equipment according to manufacturers' instructions.



FACILITY ID NO. _____ (FROM ADDRESS LABEL)

7. The following records must be kept at your plant:
- A log of the results of the leak detection and repair program.
 - A log of the amount of perc purchased for the past 12 months, calculated each month.
 - The operation and maintenance manuals for all dry cleaning equipment at the plant.
8. If a room enclosure is installed on a transfer machine as stated in Question 4, the following information about the room enclosure must be attached to this report:
- Description of the materials that the room enclosure is constructed of to show that it is impermeable to perchloroethylene;
 - Explanation of how the room enclosure is operated to maintain a negative pressure at all time while the transfer machine is operating; and
 - Explanation of how the room enclosure exhausts into a carbon adsorber.
9. 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 plant;
- The manager of the dry cleaning plant;
- A government official, if the dry cleaning plant is owned by the Federal, State, City, or County government; or
- A ranking military officer, if the dry cleaning plant is located at a military base.

FACILITY ID NO. _____ (FROM ADDRESS LABEL)



A. To find out if control is required:

I reported less than 140 gallons in Question 3 (page 1).

I reported less than 200 gallons in Question 3 (page 1) **AND** reported only transfer machines in Question 4 (page 1).

can STOP HERE. Write NO CONTROL REQUIRED in the shaded box on page 2 for each machine at your plant that was installed before 12/9/91. For those machines

YOU ARE FINISHED WITH THE WORKSHEET. GO TO QUESTION 6 (page 2).

If you did not check a box above, go to Part B below.

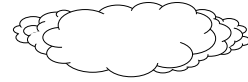
Control is required. Fill out Part B for EACH MACHINE at your plant.

Check the appropriate box:

Machine was installed BEFORE 12/9/91.

If you checked this box, your required control is a refrigerated condenser or a carbon CARBON ADSORBER in the shaded box below the machine on page 2.

Control must be installed by 9/22/96.



FACILITY ID NO. _____ (FROM ADDRESS LABEL)

- Machine was installed ON OR AFTER 9/22/93.

If you checked this box, your required control is a dry-to-dry machine with refrigerated condenser.

Write DRY-TO-DRY MACHINE WITH REFRIGERATED CONDENSER in the shaded box below the machine on page 2. NOTE: NO NEW OR USED TRANSFER MACHINES CAN BE INSTALLED AFTER 9/22/93.

Control must be installed when machine is installed.

- Machine was installed ON OR AFTER 12/9/91 AND BEFORE 9/22/93.

If you checked this box, your required control is a dry-to-dry machine with refrigerated condenser. Write DRY-TO-DRY MACHINE WITH REFRIGERATED CONDENSER in the shaded box below the machine on page 2.

If the machine you have is NOT a dry-to-dry machine with a refrigerated condenser, the machine must use either a refrigerated condenser or carbon adsorber from 9/22/93 until 9/22/96. After 9/22/96, any carbon adsorbers on dry-to-dry machines must be replaced with a refrigerated condenser. If the machine is a transfer machine with a carbon adsorber or a refrigerated condenser, you may keep this installation until 9/22/96. If you plan to keep a dry-to-dry machine with a carbon adsorber or a transfer machine with either a refrigerated condenser or carbon absorber until 9/22/96, also write this information in the shaded box.

C. To find out if additional control is required:

Check all boxes that apply:

- I reported 1,800 gallons or less in Question 3 (page 1).
- I reported 2,100 gallons or less in Question 3 (page 1) **AND** I reported only dry-to-dry machines in Question 4 (page 1).

If you checked either box above, you can STOP HERE. No additional controls are required.

YOU ARE FINISHED WITH THE WORKSHEET. RETURN TO QUESTION 5 (page 2) and write in the dates the controls were or will be installed.

If you did not check a box above, go to Part D below.

FACILITY ID NO. _____ (FROM ADDRESS LABEL)



D. If additional control is required, fill out Part D for EACH machine at your plant:

Check a box below, if it applies:

- Machine is a dry-to-dry machine that was installed ON or AFTER 12/9/91.

If you checked this box, you are also required to install a supplemental carbon adsorber.

Write SUPPLEMENTAL CARBON ADSORBER in the shaded box below the machine on page 2.

- Machine is a transfer machine.

If you checked this box, you are also required to install a room enclosure. Write ROOM ENCLOSURE in the shaded box below the machine on page 2.

YOU ARE FINISHED WITH THE WORKSHEET. RETURN TO QUESTION 5 and write in the dates all controls were or will be installed (page 2).

_____ FACILITY ID NO. _____ (from address label)



COMPLIANCE REPORT FOR POLLUTION PREVENTION

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

Owner/Operator: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Plant Address:

Street Address: _____

City: _____ County: _____

State: _____ Zip: _____

Phone Number: _____

2. Write in the total volume of perchloroethylene (perc) purchased for ALL of the machines at the dry cleaning plant over the past 12 months (based on actual purchase receipts):

_____ gallons

3. The following pollution prevention practices must be performed at your plant as of 12/20/93.

- Conduct a weekly leak detection and repair program to inspect all dry cleaning equipment for leaks that are obvious from sight, smell, or touch. NOTE: This program is required only every other week (biweekly) if you reported NO CONTROLS REQUIRED in the INITIAL NOTIFICATION REPORT.
- Repair leaks within 24 hours after they are found, or order repair parts within two working days after detecting a leak that needs repair parts. Install the repair parts by five days after they are received.
- Keep a log of the weekly (or biweekly) results of the leak detection and repair program.
- Follow good housekeeping practices, which include keeping all perc and wastes containing perc in covered containers with no leaks, draining cartridge filters in closed containers, and keeping machine doors shut when clothing is not being transferred.
- Operate and maintain all dry cleaning equipment according to manufacturers' instructions.

4. The following records must be kept at your plant:

- A log of the results of the leak detection and repair program;

FACILITY ID NO. _____(from address label)



- A log of the amount of perc purchased for the past 12 months, calculated each month; and
 - The operation and maintenance manuals for all dry cleaning equipment at the plant.
5. Print or type the name and title of the Responsible Official for the dry cleaning plant:

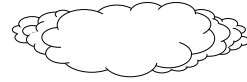
Name: _____

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 plant;
- The manager of the dry cleaning plant;
- A government official, if the dry cleaning plant is owned by the Federal, State, City, or County government; or
- A ranking military officer, if the dry cleaning plant is located at a military base.

_____ FACILITY ID NO. _____ (from address label)



COMPLIANCE REPORT FOR CONTROL REQUIREMENTS

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

Owner/Operator: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Plant Address:

Street Address: _____

City: _____ County: _____

State: _____ Zip: _____

Phone Number: _____

2. Write in the total volume of perchloroethylene (perc) purchased for the dry cleaning plant over the past 12 months (based on actual purchase receipts):

_____ gallons

FACILITY ID NO. _____ (from address label)



3. Fill out the table below for each machine at your plant. Use the WORKSHEET on pages 5 and 6 of the INITIAL NOTIFICATION REPORT to determine required controls. A copy of the INITIAL NOTIFICATION REPORT is attached.

	Machine Type (Dry-to-Dry or Transfer)	Date Machine Purchased	Required Control	Date Control Installed
1				
2				
3				
4				
5				
6				
7				

4. If you listed a required control in Question 3 (page 1) for any machine at your plant, you must monitor your control.

To find out what type of monitoring is required, check all boxes that apply:

- I use a refrigerated condenser on a dry-to-dry machine to meet the required control.

If you checked this box, you are required to perform a weekly monitoring test to show that the temperature on the outlet side of the refrigerated condenser is less than or equal to 45 degrees Fahrenheit.

- I use a refrigerated condenser on a transfer machine to meet the required control.

If you checked this box, you are required to perform a weekly monitoring test to show that the temperature on the outlet side of the refrigerated condenser on the transfer dryer is less than or equal to 45 degrees Fahrenheit AND that the difference between the inlet and the outlet temperature of the refrigerated condenser on the transfer washer is greater than or equal to 20 degrees Fahrenheit.

- I use a carbon adsorber on a dry-to-dry or a transfer machine to meet the required control, OR

FACILITY ID NO. _____ (from address label)



- I use a supplemental carbon adsorber on a dry-to-dry machine and the exhaust passes through the carbon adsorber IMMEDIATELY UPON door opening.

If you checked either of the two boxes above, you are required to perform a weekly monitoring test with a colorimetric detector tube to show that the concentration of perc in the exhaust from the carbon adsorber is not over 100 parts per million.

- I use a supplemental carbon adsorber on a dry-to-dry machine and the exhaust passes through the carbon adsorber BEFORE the machine door is opened.

If you checked this box, you are required to perform a weekly monitoring test with a colorimetric detector tube to show that the concentration of perc inside the dry cleaning machine drum at the end of the drying cycle is not over 300 parts per million.

- I use a room enclosure on a transfer machine.

If you checked this box, you are required to vent all air from inside the room enclosure through a carbon adsorber. The room enclosure must be constructed of materials impermeable to perc, must be designed and operated to maintain a negative pressure at all times while the transfer machine is operating, and must exhaust to a carbon adsorber.

FACILITY ID NO. _____(from address label)



5. Print or type the name and title of the Responsible Official for the dry cleaning facility:

Name: _____ Title: _____

Examples of Responsible Officials:

- The president, vice president, secretary, or treasurer of the company that owns the dry cleaning facility;
- 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.