

Business Environmental Program



College of Business Administration
University of Nevada, Reno

Clark County Dry Cleaning Self-Audit Manual and Checklist March 2010

Business Environmental Program (BEP)

702.866.5927

www.envnv.org



The BEP is indebted to the many inspectors and dry cleaning merchants who have assisted in the ERP program and the creation of this manual. The Inspectors from Southern Nevada Health District, Clark County Department of Air Quality and Environmental Management, and Nevada Division of Environmental Protection provided forms, material and their expertise in the development of this manual. The following individuals have provided guidance and many helpful suggestions.

Kevin I. Dick
UNR – Business Environmental Program

James Trent
Nevada Dept. of Environmental Protection

Mike Richardson
Nevada Dept. of Environmental Protection

Evan Chambers
Nevada Dept. of Environmental Protection

Amy Irani
Southern Nevada Health District

George Bertoty
Southern Nevada Health District

Gary Miller
Clark County Dept. of Air Quality and
Environmental Management

Shibi Paul
Clark County Dept. of Air Quality and
Environmental Management

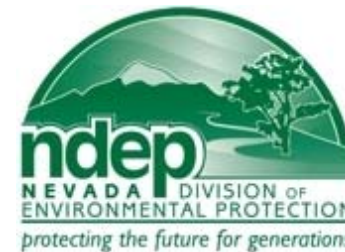
John Richardson
Clark County Dept. of Air Quality and
Environmental Management

Brent Ramenofsky
Boston Cleaners
Western States Dry Cleaning & Laundry Assn.

Dale Pickard
United Cleaners Supply, Inc.

ACKNOWLEDGEMENTS

This document was produced with funding from an Innovations Grant from the U.S. Environmental Protection Agency. The Nevada Division of Environmental Protection (NDEP) and the University of Nevada, Reno's Business Environmental Program (BEP) have developed an Environmental Results Program for dry cleaners using perchloroethylene in Clark County.



10. For more information regarding the Dry Cleaners Environmental Results Program:

Contact:

Business Environmental Program: <http://www.envnr.org>
Las Vegas Office
Hazardous Waste and Pollution Prevention Specialist
Physical Address: 2515 Industrial Road, Las Vegas, NV 89109
Mailing Address: P.O. Box 15225, Las Vegas, NV 89114
Phone: (702) 866-5927 Fax: (702) 866-6800

Clark County Department of Air Quality and Environmental Management:

Air Quality Management Division: <http://www.accessclarkcounty.com/depts/daqem/aq/>
Small Business Assistance Specialist
Physical Address: 500 S Grand Central Pkwy, Las Vegas, NV
Mailing Address: PO Box 555210 Las Vegas, NV 89155-5210
Phone: (702) 455-5942 Fax: (702) 383-9994

Southern Nevada Health District

Environmental Health Division - Solid Waste and Compliance Program:
<http://www.cchd.org/solid-waste/index.php>
Senior Environmental Health Specialist
Physical Address: 400 Shadow Lane #105, Las Vegas, NV
Mailing Address: P.O. Box 3902, Las Vegas, NV 89127
Phone: (702) 759-0600 Fax: (702) 386-8540

NDEP

Bureau of Waste Management: <http://ndep.nv.gov/bwm/index.htm>
Planning Supervisor
Address: 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249
Phone: (775) 687-4670 Fax (775) 687-6396

Bureau of Waste Management, Las Vegas Office
Address: 2030 East Flamingo Road, Suite 230, Las Vegas, Nevada 89119-0837
Phone: (702) 486-2850 Fax (702) 486-2863

About this Manual and Self-Certification Process

This manual is intended to help owners and operators of dry cleaning businesses using Perchloroethylene (Perc) in Clark County, Nevada to understand the permit requirements and environmental regulations that impact their facility and be able to conduct and submit a self-certification of compliance. It points out how to comply with environmental requirements, avoid penalties, improve the work environment for employees and keep your customers and neighbors pleased to be associated with your business.

Performing a self-certification helps to ensure that you understand the requirements that apply to your business, and that you will satisfy what State and/or local agency inspectors will be looking for when they visit your facility. These inspectors are concerned with environmental regulations pertaining to air, hazardous waste, and wastewater. Your efforts in completing the self-certification form and submitting it for your business will provide you with peace of mind that you are meeting your compliance obligations and can provide positive recognition for your business by participating in the Nevada Environmental Results Program for Drycleaners.

The business of managing/operating a dry cleaning facility requires compliance with environmental regulations, but they are not the main focus. Cleaning garments and operating a profitable business is the focus, so we have attempted to organize the self-certification in a way that makes sense for your business operations. This manual and the self-certification forms are organized under the following areas:

- Perc Purchases
- Equipment
- Operations and Maintenance
- Waste Management
- Containment
- Administrative Requirements, Recordkeeping, and Reporting



Self-Certification Process

The Clark County Dry Cleaning Self-Audit Manual and Checklist was developed by the UNR - Business Environmental Program, with funding and/or cooperation from the U.S. Environmental Protection Agency, the Nevada Division of Environmental Protection (NDEP) Bureau of Waste Management, Southern Nevada Health District (SNHD), and Clark County Department of Air Quality and Environmental Management (CCDAQEM). This Self-Auditing Manual and program presents the requirements of these different agencies in an operational format designed for dry cleaners. This format is intended to simplify and clarify the maze of regulations and requirements that dry cleaners must address to maintain environmental compliance for their business.

Dry Cleaners who voluntarily provide self-certifications for their facility are eligible to receive free and confidential assistance in achieving compliance with environmental regulations and requirements from the UNR Business Environmental Program. The self-certification forms and return to compliance plan(s) will not be used as basis for enforcement action by the participating regulatory agencies (NDEP, SNHD, and CCDAQEM). The self-certification is intended as a tool for dry cleaners to use to maintain and improve environmental practices at your business, and receive positive recognition for your actions.

Step 1: Read this manual to become familiar with the intent of the self-certification process.

Step 2: Record the answer to each question in this self-certification manual. You may be asked to skip particular questions. This is because some requirements do not apply to all dry cleaners. Leave those questions blank. This manual is to be used as a guide to help you answer the questions.

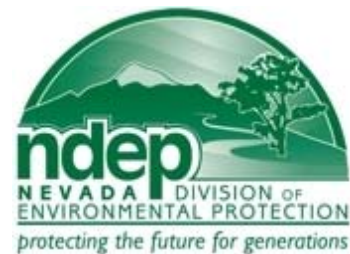
Step 3: If you are “out-of-compliance” with a requirement, the audit question will direct you to complete a Return-to-Compliance (RTC) Plan, which is located on the last page of this self-certification forms. Use the Return-To-Compliance Plan to explain how and when you will return to compliance with the requirements.

Only submit a Return-To-Compliance Plan for violations that you are unable to correct BEFORE submitting your self-audit. If you have questions about a requirement contact the Business Environmental Program (702) 866-5927.

Step 4: Make a copy of the forms and mail the completed Self-Audit Forms and any Return-To-Compliance Plans to the Nevada Department of Environmental Protection.

Nevada Division of Environmental Protection
Attn: Mr. Mike Richardson, Bureau of Waste Management
2030 East Flamingo Road, Suite 230
Las Vegas, Nevada 89119-0837

The forms will be forward to the Business Environmental Program for evaluation of overall compliance and environmental performance of dry cleaning operations in Clark County.



9.16 Does each shipment of hazardous waste have a manifest or receipt from the waste hauler that identifies manifest number and the type and quantity of waste shipped, and are they shipped to a permitted Treatment Storage Disposal Facility (TSDF)?	Yes	No
9.17 Is the waste properly listed on the manifest form or invoice (e.g., F002) and is the quantity shipped entered on the manifest form?	Yes	No
9.18 Are all copies of the manifest, or invoices that are signed by the transporter and disposal facility kept on file for at least 3 years?	Yes	No
9.19 Is a copy of the one-time Land Disposal Restriction (LDR) notification maintained on-site?	Yes	No

The Land Disposal Restriction (LDR) program found in 40 CFR Part 268 requires specific types of treatment to be used to manage different hazardous wastes. An LDR notification accompanies the initial shipment of each type of hazardous waste shipped to a recycling, treatment, or disposal facility and includes such information as the waste code(s), the hazardous constituents present in the waste, and/or waste analysis data. EPA requires subsequent notification only when a different type of hazardous waste is shipped or it is shipped to a different facility. Generally, the hazardous waste transporter will provide the business with the LDR form the first time that they handle the waste for shipment to a disposal facility. The generator is required to maintain a copy of this form with their records. It is typically attached to the manifest for the initial shipment.

9.6 POSTING: Are all permits and licenses posted in a conspicuous area for all to see?	Yes	No
9.7 Is the current ownership the same as the ownership on the permit?	Yes	No
9.8 Is the physical and mailing address the same as on the permit?	Yes	No
9.9 Have there been any changes to machines including additions, removals or modifications.	Yes	No
9.10 Are the hours of operation posted for all to see?	Yes	No
9.11 RECORDS: Are five (5) years of the following records on file and available for an inspector to review? Purchases of Perchloroethylene, chemicals and equipment, records of repairs, hazardous waste manifests or invoices, daily, weekly and monthly machine maintenance logs.	Yes	No

As you know, the paperwork that has been completed and kept on file must be submitted in reports to the regulatory agencies. The reporting frequency is specified as either annually or bi-annually (every other year).

9.12 Was the calendar or monthly machine maintenance and Perc log provided to the Clark County Department of Air Quality and Environmental Management annually during their inspection? Note: Keep a copy in your files for five years.	Yes	No
---	-----	----

The Biennial Generator Report is required to be submitted every other year for each facility with an EPA ID#. The report is for hazardous waste generation and management activities conducted in odd numbered calendar years. The next report is due March 1, 2010. The information to be submitted will be from 2009 activities. The last report covered 2007 activities and was submitted in 2008.

9.13 Did the facility submit a biennial generator report (for the last odd numbered year)?	Yes	No
9.14 Did the facility maintain a copy of the biennial generator report on file?	Yes	No

Manifests and Shipping Records

As mentioned previously, (see page 11), Conditionally Exempt Small Quantity Generators (CESQG) generate less than 220 lbs of hazardous waste in a month and are subject to fewer requirements. A CESQG may use a manifest, but are not required by federal regulations. Both Small Quantity Generators (SQG) and Large Quantity Generators (LQG) are required to use a manifest when shipping hazardous waste off-site. A business is considered a SQG if it generate between 220 and 2,200 pounds (lbs) per month of hazardous waste. A business is considered a LQG if it generates more than 2,200 lbs of hazardous waste or 2.2 pounds (lbs) or more of acutely hazardous waste (P-list) in a month.



Manifest forms are designed to track hazardous and liquid industrial waste shipments from their point of generation to their final destination. These documents are important because they provide you with some assurance that your waste is being properly managed after you ship them off-site. You should either have a manifest or a bill of lading (invoice) for each shipment of hazardous or liquid industrial waste that is hauled away from the facility. Businesses that ship hazardous waste out of the State of Nevada for treatment or disposal must submit a copy of the treatment storage disposal facility (TSDF) signed manifest to the NDEP office.

CESQG Best Management Practices and SQG/LQG compliance requirements:		
9.15 Did the facility ship hazardous waste out of the state? If YES, are copies of the manifest sent to NDEP?	Yes	No

1. Perc Purchases

How to Calculate Your Perc Usage?

On the first business day of each month, you are required to calculate the amount of Perc purchased in the previous month and compute a rolling total of consumption for the past 12 months.

Total from Last Month		
December 2009		55
Subtract Perc Purchased		
December 2008	-	10
Subtotal		
		45
Prior Month Purchase Date	Prior Month Purchase Amount	12 Month Running Total
	+	=
	+	

- For January, enter 12 month running total from last month (December 2009). This number was calculated Dec. 1 2009 and includes purchases through Nov. 2009.
- Subtract the amount of Perc you bought during December 2008. You can find this amount from last year's records or calendar.
- If you bought Perc during December 2009, record the amount. If you bought no Perc write in "0".
- Add your Dec. 2009 Perc purchase amount to the Subtotal. This is your rolling 12 month total of Perc consumption for January.

The Clark County Department of Air Quality and Environmental Management requires this information along with the purchasing receipts, parts/repair invoices be recorded on the Monthly Machine Maintenance and Perchloroethylene Log and maintained in your files for 5 years. You can obtain a copy of the log from the Clark County Department of Air Quality and Environmental Management at (702) 455-5942. To comply with federal air quality regulations keep a copy of your Machine Maintenance and Perchloroethylene logs for five years. BEP provides a copy of a Dry Cleaner Compliance Calendar for download from our website, www.envnv.org. The calendar can be used to assist in tracking Perc usage as well as compliance with air, waste, and wastewater regulations. It is recommended that you also use the calendar to assist with environmental compliance.

1.1 Do you calculate the rolling twelve month total of Perc consumption on the first business day of each month and record this on your Hazardous Waste Calendar or Monthly Machine Maintenance and Perchloroethylene Log?	Yes	No	
1.2 Are Perc purchasing receipts recorded on the monthly machine maintenance log?	Yes	No	
1.3 Did you record the volume of Perc (solvent usage), each time it was added to the machine? Every time Perc (solvent) is added to the machine, you should record the volume on a log. This number is useful in calculating the efficiency of the machine or pounds of clothes per gallon of Perc.	Yes	No	

The amount of Perc purchased over a twelve month period determines the type of dry cleaning source and air quality requirements that apply to your business. For drycleaners with only dry-to-dry machines, the source categories are:

TABLE 1-1: SOURCE CATEGORIES

Type of Machine(s)	Small Area Source	Large Area Source	Major Source
Only Dry-To-Dry	140 gal Perc/ 12 month period	140-2,100 gal Perc/ 12 month period	2,100 gal Perc/ 12 month period

Most dry cleaners in Clark County are small area sources.

Note: Exceedances of the consumption levels in Table 1-1 will not create a change in source category if the exceedances are considered “episodic” (i.e., the exceedances are not repeated on a frequent basis). Any exceedance that occurs at least three years after the most recent prior exceedance would be considered episodic. For example, if a facility purchases a new machine and consequently had to purchase 200 gallons of Perc to fill the storage tank, this increase in the purchase of Perc might move the facility into the next higher source category. However, if the facility has not had any other exceedances in the last three years, then this “fill-up” could be considered episodic and the facility would remain in its current source category.

2. Equipment

As you are aware, air and/or wastewater regulations apply to your dry cleaning machines and wastewater evaporators. This section addresses compliance requirements for this equipment.

2.1 Is the equipment operations manual stored onsite?	Yes	No	
2.2 Does the manual contain equipment design specifications?	Yes	No	
2.3 Does the manual contain Standard Operating Procedures?	Yes	No	
2.4 Is the machine operated according to manufacturers’ specifications?	Yes	No	

Note: If your manual is unavailable - EPA developed a generic owner's manual for dry cleaning equipment. The manual is available on the EPA website; <http://www.epa.gov/ttn/atw/dryperc/dryclpg.html>. In the lower half of the page, under *Implementation Information* is a link to a .pdf or .html documents titled “10/94 - General Recommended Operating and Maintenance Practices for Dry cleaning Equipment (Only for use when Manufacturers’ Information is Unavailable (EPA-4531R-94-073)”.

Dry Cleaning Machines

Questions 2.5 through 2.10 pertain to the specific requirements that your dry cleaning machine may be subject to. Check ‘Yes’ only where appropriate. You will likely only answer ‘Yes’ more than once in this section if you have machines of different generations.



The more Perc that is used by a dry cleaner, the more regulations apply. These regulations are determined by the source categories noted below. There may be significant increases in time and costs associated with the regulations. Therefore, it is important to operate and maintain the equipment at its optimum performance level and minimize the amount of Perc purchased and used.

2.5 Were all the dry-to-dry machines installed before 12/9/91 AND did facility purchase less than 140 gallons of Perc per year during all previous 12-month periods? ¹ (If Yes - Skip to 2.11 existing small area source .)	Yes	No	
Small and Large Dry-to-Dry Machine Control Requirements			
2.6 Do all dry-to-dry machines installed before 12/9/91 have an external refrigerated condenser OR a carbon adsorber (a separate piece of equipment added to the machine) that was installed prior to 9/22/93? ² (Choose N/A if machine installed after 12/9/91) (existing large area source).	Yes	No	N/A
2.7 Do all dry-to-dry machines installed after 12/9/91 have an internal refrigerated condenser (condenser coil that is built into the machine)? ³ (Choose N/A if machine installed before 12/9/91) (new area source).	Yes	No	N/A
¹ If machine was installed before 12/09/91 and you purchased less than 140 gallons of Perc per year for all 12-month periods, you are considered an existing small area source and not required to have control on the machine. ² If machine was installed before 12/09/91 and you purchased more than 140 gallons of Perc per year for all 12-month periods, you are considered an existing large area. ³ If machine was installed after 12/09/91 you are considered a new area source.			

- An EPA ID# that may be used when disposing of Perc waste. (If you generate less than 220 pounds of waste each month, then you are not required to have an EPA ID #. Often an EPA ID # is necessary to ship waste out of state.)

All permits and licenses are required to be posted in a conspicuous location for all to see. If the name on your permits is not the same, it may be necessary to list the various names as alias on other applications. This may cause confusion and additional work. It is suggested that you be consistent and use the same name for all your permits and licenses. If you have any questions regarding permits or the EPA ID #, please call the BEP (702-866-5927) for assistance.



Permits, Licensing and Notifications	Yes	No	If Yes, provide the number
9.1 Is your facility name the same on all permits?	Yes	No	NA
9.2 Does your facility have an Environmental Protection Agency identification Number (EPA ID #)?	Yes	No	
9.3 Does your facility have an air permit number? This permit is issued by Clark County Department of Air Quality and Environmental Management.	Yes	No	
9.4 Does your facility have a current business license? This license is issued by the county and/or the municipality in which your facility is located.	Yes	No	

A permit is a mechanism that the regulator uses to ensure that the regulations are being followed by the dry cleaner. The permit is the binding contract between the regulatory authority and the business. Therefore anything that is written into the permit shall be completed by the business or the business is in violation of the permit. The permit has its legal basis in the ordinance passed by the governing jurisdiction. All of the environmental regulations contain a clause stating Inspectors have legal authorization to review the operations of a business.

9.5 ACCESS: Do you provide access to environmental agency personnel to inspect operations, equipment and records at your business?	Yes	No
--	-----	----

The following questions address requirements in permits. An air permit may be “voided” upon any change in ownership, address or alterations to the permitted equipment. If your permit is determined to be “void”, then it is illegal for you to operate the dry cleaning equipment specified in the permit. Therefore, it is very important that you contact the Clark County Department of Air Quality and Environmental Management **prior to** implementing any change in ownership, billing or physical address or modifications to the permitted equipment.

When there is a change in ownership or a change in location it is imperative that the permitting agency be notified and the permit modified accordingly. If the business has an EPA ID # for the disposal of the hazardous waste, the new owner or manager should complete and submit a form 8700-12 to NV Division of Environmental Protection, Bureau of Waste Management. The form is available on the Business Environmental Program’s website, www.envnv.org.

8. Containment

Since dry cleaning machines are not directly connected to the sewer system, the most likely way Perc enters the sewer is via spills or leaks. Secondary containment has been a successful method of preventing Perc from entering the sewer. Clark County and the municipalities of Las Vegas, N. Las Vegas, and Henderson maintain regulations that require the containment of equipment and materials that are classified as hazardous materials. These regulations are enforced by the wastewater inspectors from these municipalities. Therefore, wastewater inspectors require that equipment or containers that come in contact with Perchloroethylene have secondary containment. The requirements below address these regulations.



8.1 Is secondary containment provided for all dry cleaning equipment, wastewater treatment units, and tanks or containers of unused cleaning solvents, waste cleaning solvent, used filters, sludge, lint and solids contaminated with cleaning solvent?	Yes	No	
8.2 Is secondary containment constructed of material impermeable to solvent and cleaning fluids, and able to withstand the weight of equipment or vessels stored within it?	Yes	No	
8.3 Is the secondary containment leak proof and capable of containing a minimum of 110% of the capacity of the largest vessel within it?	Yes	No	
8.4 Does the secondary containment extend beyond the outside perimeter of all dry cleaning equipment to enable containment of leaks and drips?	Yes	No	
8.5 If dry cleaning process chemicals or wastes are stored outside, are they secured to prevent unauthorized access and covered to protect from contact with storm water?	Yes	No	NA

9. Administrative Requirements, Recordkeeping and Reporting:

As with all aspects of a business, no job is completed until the paperwork is done. Environmental regulations are no exception and generally speaking, they require comprehensive documentation of activities to demonstrate compliance. From permit applications to purchasing receipts and disposal manifests, maintaining accurate and complete documentation in organized files is the key to maintaining compliance with environmental regulations.



The following questions all address administrative and recordkeeping requirements that must be achieved for your facility to be in compliance.

These basic questions are very important because they are the basis for complying with the regulations. Any inconsistencies in the names and addresses on the permits for your business may cause confusion and mistakes on records that could be considered violations. All dry cleaning businesses that maintain dry cleaning equipment on-site should have the following permits/licenses:

- A Clark County Business License;
- A Clark County Department of Air Quality and Environmental Management permit to operate the dry cleaning equipment;

2.8 Do all dry-to-dry machines initially installed after 12/21/05 have an internal carbon adsorber? (Choose N/A if machine installed before 12/21/05). This carbon adsorber is part of the machine.	Yes	No	N/A
2.9 Do all dry-to-dry machines initially installed after 12/21/05 have a refrigerated condenser? (Choose N/A if machine installed before 12/21/05). The condensing coil is part of the machine.	Yes	No	N/A
2.10 If machine was installed after 12/21/05 OR facility purchased more than 2,100 gallons of Perc per 12-month period, is the concentration of the Perc in the dry cleaning machine drum at the end of the cycle measured weekly with a colorimetric detector tube or PCE gas analyzer? (Choose N/A if machine installed before 12/21/05 and purchased less than 2,100 gal Perc/12-mo period)	Yes	No	N/A

The permit is the mechanism that the regulator uses to ensure that the regulations are being followed by the dry cleaner. The permit is the binding contract between the regulatory authority and the business. Therefore anything that is written into the permit shall be completed by the business or the business is in violation and enforcement action (a fine) can be issued by the regulatory agency.

The air permit indicates that the permit is void upon any alterations to the permitted equipment. Therefore, it is very important that you contact the Clark County Department of Air Quality and Environmental Management **prior to** implementing any modifications to the permitted equipment. See section 19.4.1.8 of the county regulations.

2.11 There have not been any changes to machines including additions, removals or modifications.	Yes	No	
2.12 MODIFICATION OF EQUIPMENT: There were no modifications, repairs or adjustments made to the equipment.	Yes	No	

3. Operations and Maintenance

Air regulations require a business to properly maintain dry cleaning equipment according to the manufacturer's specification. Good operating and maintenance practices are essential to achieve the best performance and lowest emissions from even the best equipment. If you inspect your machines often and keep them in good working condition, you can save money, improve the environment and improve working conditions for employees and customers.

3.1 Is the dry cleaning machine door kept closed, except for loading and unloading?	Yes	No	
3.2 Are all cartridge filters drained 24 hours before removal?	Yes	No	
3.3 Was maintenance performed on the vapor collection and control system as specified in the equipment manual?	Yes	No	

Clark County requires that weekly operational checks for each dry cleaning unit be conducted and information from these inspections be recorded in the weekly maintenance logs. The operational check can be conducted using a halogenated hydrocarbon detector or PCE gas analyzer. There are numerous detectors on the market such as, Snap-On, Inficon Inc., Aeroqual Semiconductor, and TIF (Grainger Supply) as well as tube measurement systems such as, Draeger tubes, Gastec tubes, or Sensidyne Kitagawa tubes.



Checking the equipment listed below can reduce the release of Perc vapors into the work area, thus protecting employees and clients. Identifying and preventing the release of Perc vapors will also reduce operating costs arising from having to replace the Perc. The checklist of equipment to check include all hose and pipe connections, fittings, couplings, and valves • Door gaskets • Filter gaskets • Pumps • Solvent tanks and containers • Muck cookers, stills • Water separator • Exhaust dampers • Diverter valves • Cartridge filter housing. Always document these equipment checks by noting them on the maintenance log.

Does the business complete a daily/weekly check list for the following:		
3.4 Was daily leak detection conducted as required by the Clark County Air Permit?	Yes	No
3.5 Is the daily information recorded on a weekly maintenance log?	Yes	No
3.6 Did you record other operation or maintenance information, i.e., the date the part(s) was ordered and received?	Yes	No
3.7 Did you record the volume of chemicals and other supplies used DAILY?	Yes	No
3.8 Did you record the monthly fuel (natural gas) usage or products consumed?	Yes	No

Dry Cleaning Machines with refrigerated condensers:

Proper operation of machines with refrigerated condensers requires that the performance of the refrigeration system be verified by measuring system pressures and/or temperatures. Measuring the temperature of the air as it enters and exits the condenser is the primary method of verifying that the machine is operating as designed to remove Perchloroethylene from exhaust air. The highest reading of the air temperature prior to the end of the cool down cycle must be less than 45 degrees Fahrenheit (F). Furthermore the difference between the entrance and exit temperatures measured for the air stream of the condenser must be greater than or equal to 20 degrees F. The temperature reading and the temperature difference must be recorded weekly unless the pressure gauge information is recorded instead.



If the system is equipped with pressure gauges, the high and low pressure of the refrigeration system can be monitored during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions, rather than the exit temperature. The pressure readings of the refrigeration system are the preferred monitoring measurement since these parameters are the most reliable indicators that the condenser is functioning properly during the drying phase, which represents maximum load conditions. Newer machines have instrumentation for measuring the high and low pressures of the refrigeration system and vendor specifications for the pressure ranges that indicate proper operation of the condenser.

Refrigerated Condensers

3.9 Does the machine have a refrigerated condenser?	Yes	No	
3.10 Is the machine equipped with refrigeration system pressure gauges?	Yes	No Skip to 3.13	
3.11 Are the high and low pressures of the refrigeration system read and recorded on a weekly basis? (Choose N/A if no pressure gauges and skip to 3.13)	Yes	No	N/A
3.12 Are the pressures within those specified by the manufacturer? (Choose N/A if no pressure gauges)	Yes	No	N/A
3.13 Is the outlet temperature less than 45 degrees F?	Yes	No	
3.14 Is the temperature difference of the intake air and exit air greater than or	Yes	No	

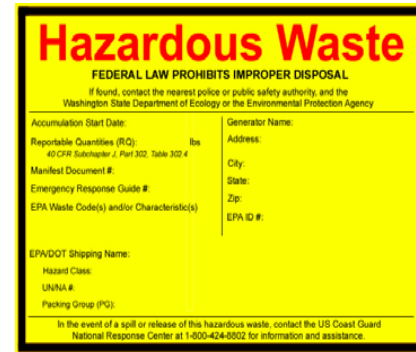
7.1 Are weekly container inspections performed and documented? These inspections are to ensure that the container is properly labeled, the lid is tightly secured and there are no leaks or spills.	Yes	No
7.2 Is each storage container labeled with the name of the contents (e.g., Perc waste, filters), "Hazardous Waste" and is the label readable?	Yes	No
7.3 Is each container that is being shipped, labeled according to the U.S. Department of Transportation (DOT) shipping requirements? (e.g., does it have a completed US DOT shipping label?) (DOT requires that a hazardous waste label be placed on the container which provides information about the waste being shipped and the business shipping the waste. The transporter typically puts a label on the container, but the dry cleaner is legally responsible for the label being affixed and completed correctly.)	Yes	No
7.4 Are containers in good condition and kept closed except when adding or removing waste?	Yes	No
7.5 Are the containers compatible with the type of waste being stored in them and are containers that have wastes which could react with each other separated by a physical barrier, like a dike, berm, or wall, or by a safe distance?	Yes	No
7.6 Are containers of hazardous waste accumulated on-site no longer than 180 days (270 days if shipped more than 200 miles to nearest facility) and is less than 6,000 kilograms (kgs) of waste accumulated on-site?	Yes	No
7.7 Is there adequate aisle space for unobstructed movement of emergency equipment and personnel? (Is adequate space available to respond to an emergency and remove injured personnel? Is the aisle clear of trash and obstacles?)	Yes	No
7.8 Does the facility have a spill kit containing equipment necessary to respond to a spill? (Materials needed to clean up a spill are labeled "spill kit" and located for easy access near potential spills).	Yes	No
7.9 Have employees been trained on how to properly manage waste?	Yes	No
7.10 Is an Emergency Coordinator identified and contact information posted next to the phone?	Yes	No

For Large Quantity Generators (LQGs) there are additional requirements:

7.11 Does the facility generate more than 2,200 lbs of hazardous waste in a month?	Yes	No - Skip 8.1
7.12 Are containers of hazardous waste accumulated on-site no longer than 90 days?	Yes	No
7.13 Is initial and annual refresher training provided to workers?	Yes	No
7.14 Does the facility have a written contingency plan to address spills or other emergency situations?	Yes	No

6. Hazardous Waste Management

Material that comes in contact with Perc and is considered waste, must be managed as hazardous waste. However, by managing these waste materials in a responsible and approved way, you can minimize the regulatory impact on your business. Recycling the solvent is an excellent choice for disposal of spent Perc. Any wastewater from the separator, vacuum presses, mop water, or other wash water should be transferred immediately to the wastewater evaporator unit. This wastewater only counts towards your hazardous waste generator status if it is accumulated or stored prior to treatment in the evaporator unit.



Containers may be labeled using purchased labels, a stencil, or the completed shipping label. Satellite accumulation containers also require the start date and Environmental Protection Agency (EPA) identification (ID) number be recorded on the label. Always store hazardous waste in a container that is compatible with the waste. Make sure it is closed and labeled with the correct information including dates. Any waste materials, contaminated with Perchloroethylene are stored in a compatible container. The containers are properly shipped off site by a licensed hauler for proper recycling or disposal.

6.1 Were solvents collected and recycled as required by the procedures developed to prevent a release to the environment? Vapor collection and control systems will be properly maintained such that solvents are collected and recycled in an efficient manner.	Yes	No
6.2 Are all waste dry cleaning solvents, filters, lint, gloves, etc. from dry cleaning machine cleanout, button trap cleanout, pre-filter cleanout, spent diatomaceous earth, sludge, condensate or separator water, vacuum press condensate, mop water, still bottoms, or any other regulated waste material containing dry cleaning solvent managed as hazardous wastes, if not managed through the wastewater treatment unit and atomizer?	Yes	No
6.3 Are all waste materials stored in a tightly sealed container?	Yes	No

7. Hazardous Waste Storage (SQG/LQG Compliance and CESQG BMPs)

Hazardous waste is commonly stored in portable containers such as pails or 55 gallon drums. The proper storage and labeling of waste helps prevent mismanagement. It is a good idea to put one person in charge of making sure the wastes are correctly identified, labeled, and stored. Labeling also helps to protect the workers. If the contents of the drums are not known, the chances of a worker being exposed to hazards or being injured are increased. Furthermore, labeling keeps the wastes separated which may allow the materials to be recycled or shipped at a lower cost.



Note: If you answered yes to 5.1 or 5.2 above, the questions below represent best management practices and a return to compliance (RTC) plan is not required if you answer no to questions 7.1 – 7.10. However, if you answered yes to question 5.3 the questions below are regulatory requirements and you need to submit a RTC plan if you answer no to any of questions 7.1-7.10.

equal to 20 degrees F?			
3.15 Is the date, temperature sensor or pressure gauge monitoring results recorded weekly?	Yes	No	

Machines with Carbon Adsorbers (as external emission controls)

Monitoring of exhaust concentrations of Perc from carbon adsorbers is required weekly. Carbon adsorbers must be desorbed on a weekly basis. If the detector used for monitoring of exhaust concentrations only provides an audible alarm, check the detector owner's manual (or with the manufacturer) to determine the concentration of Perc that will cause the detector alarm to go off. If the audible alarm used to determine that the concentration of Perc in the exhaust is less than 100 parts per million (ppm) then the alarm setting on the detector must be 100 ppm or less. Otherwise it will be necessary to use a different detector.

Carbon Adsorbers

Did you answer yes to question 2.6?	Yes	Skip to 3.20
3.16 Does the machine have a carbon adsorber?	Yes	No
3.17 Is the carbon desorption process performed weekly?	Yes	No
3.18 Is the concentration of Perc in the exhaust measured and recorded weekly?	Yes	No
3.19 Is the Perc concentration in the exhaust from the carbon adsorber less than 100 parts per million (ppm)?	Yes	No

3.20 Is the machine inspected monthly while in operation with a halogenated hydrocarbon detector or PCE gas analyzer?	Yes	No	
3.21 Did the facility purchase more than 2,100 gallons of Perc in a 12-month period?	Yes	No, Skip to 3.23	
3.22 Is a PCE gas analyzer used for monthly leak detection?	Yes	No	
3.22-A. For equipment that passes exhaust through the carbon adsorber immediately upon the machine door opening; Is the concentration of Perc in the exhaust equal to or less than 100 ppm?	Yes	No	N/A
3.22-B For equipment that passes exhaust through a carbon adsorber prior to the machine door opening; Is the concentration of Perc in the exhaust equal to or less than 300 ppm?	Yes	No	N/A

Equipment Failures:

The Federal Regulations mandate the repair of all leaks within 24 hours. Any parts shall be ordered within 2 days of detecting the leak and the repair parts shall be installed within 5 working days after receipt.

3.23 Did you record the date of any repair and a statement about the repair?	Yes	No
3.24 Are repairs made in accordance with mandated timeframes following problem detection and receipt of necessary parts?	Yes	No

4. Wastewater

Proper control and management of wastewater to avoid the potential for liquids contaminated with Perc from inadvertently being discharged to the sewer is one of the biggest challenges facing dry cleaning operations. The following management recommendations are provided.

We suggest that you forgo mopping the floor and use a towel or dry mop head with a spray bottle of water/cleaning solution to clean the floor. The towel or mop head can be dry cleaned in your machine or disposed of as hazardous waste. This will reduce the volume of wastewater that must be treated or disposed of as hazardous waste.

There are numerous alternative spotting chemicals that don't contain the regulated chemicals Perc or Trichloroethene which can be used to remove difficult stains on garments. Please contact the staff at the Business Environmental Program on 702-866-5927 for additional information on alternative products for use at the spotting tables.



If there is potential for the vacuum water from the spotting table to contain Perc or Trichloroethene it should be managed in a wastewater treatment evaporator/atomizer or disposed of as hazardous waste. It is recommended that vacuum water from the spotting table always be managed this way due to the high potential that it could be contaminated with Perc.

Washing a garment immediately after it has been dry cleaned has the potential for Perc being washed from the garment into the sewer system. Any garment that requires both wet washing and dry cleaning or spotting should be wet cleaned first and then spot cleaned and/or dry cleaned. This will reduce the chance any Perc being released into the sewer from washing the garment. It is important to ensure that garments are properly processed and dried to minimize trace quantities of Perc that might be present in garments removed from the dry cleaning equipment.

Employee's that perform maintenance on the dry cleaning equipment or handle dry cleaning solvents while performing their duties should be required to wear gloves. Gloves should be worn when cleaning the floor and during other maintenance activities that have the potential for contact with Perc. Since the gloves may become contaminated with Perc or other regulated dry cleaning solvents, they should be managed and disposed of as hazardous waste. Care should be taken that gloves potentially contaminated with Perc are not rinsed in the sink or elsewhere which could result in illegal contaminated wastewater discharge. Gloves contaminated with Perc, might be rinsed over the spotting table provided that all vacuum water from the spotting table is managed in a wastewater evaporator or disposed of as hazardous waste.

Perc can also transfer to a person's skin and then be released into the sewer when hands are washed. Therefore, to prevent Perc illegally entering the sewer, employees should be required to wear gloves any time they have the potential for contact with Perc. The use of gloves in handling Perc is recommended on the Material Safety Data Sheet (MSDS) under section 8, Protective Equipment.

Any equipment used for maintenance activities should be dedicated to either the dry cleaning equipment or the wet washing equipment. Lint brushes should not be exchanged between the different machines.

Training of all staff regarding proper handling and management of Perc and other dry cleaning solvents is required and will help reduce the potential of Perc being released to the sewer or ground.

Best Management Practices

4.1 Are the floors cleaned using a spray bottle and dry mop or towel?	Yes	No
4.2 Is the floor immediately in front of the dry cleaning unit covered with a rug?	Yes	No
4.3 Is the mop/towel or rug dry cleaned to remove the dirt?	Yes	No
4.4 Have all the spotting table chemicals been checked to ensure that they do not contain Perc or Trichloroethene or any other regulated solvent?	Yes	No
4.5 Is the condensate from the spotting table(s) disposed of in the wastewater treatment and evaporator unit?	Yes	No
4.6 Are garments that require both wet wash and dry cleaning, managed so that wet cleaning is performed before dry cleaning?	Yes	No
4.7 Are all employees that handle Perc or maintain the dry cleaning machines required to wear gloves?	Yes	No
4.8 Is all equipment that comes in contact with Perc or used to perform maintenance on the dry cleaning machines kept separate from all other equipment?	Yes	No

5. Waste Management

Before you can answer the audit questions in this section you will need to determine how much hazardous waste you generated each month. Facilities that generated less than 220 pounds of hazardous waste per month are considered "conditionally exempt small quantity generators (CESQG)" and subject to fewer requirements than those that generate more than 220 pounds (lbs).

You should be recording how many pounds of hazardous waste your facility generates each month. You can use the hazardous waste calendar located on the [Business Environmental Program website \(www.envnv.org\)](http://www.envnv.org). Using the hazardous waste calendar to calculate the pounds of hazardous waste you generate on a monthly basis allows you to easily determine the volume of hazardous waste generated each month.



The questions below address disposal of your hazardous waste. Questions 5.1 through 5.3 are asked so that you are able to determine your generator status. The less hazardous waste you generate, the fewer the requirements. Therefore, it is important to manage your operation to generate the least amount of waste.

5.1 Does the facility generate less than 220 pounds of hazardous waste per month?	Yes	No - Skip to 5.3
5.2 Are less than 2,200 pounds of hazardous waste accumulated on-site?	Yes	No
5.3 Does the facility generate between 220 and 2,200 lbs of hazardous waste per month?	Yes	No