



Managing Dry Cleaner Wastes

Technical Guidance

This technical guidance document (TGD) was prepared by the Pima County Department of Environmental Quality (PDEQ) to help dry cleaning businesses in Pima County comply with the hazardous waste law and regulations. The Federal Regulations referred to in this document have been incorporated by reference in [Pima County Code \(PCC\) Title 7, Chapter 7.09](#). The purpose of this guide is to help protect our environment by providing guidance to these businesses and assisting them in complying with the state and federal environmental laws as they relate to the dry cleaning industry. In addition to providing information about environmental laws and regulations, this document offers tips on how to reduce and prevent pollution of the environment, and comply with industry specific environmental laws and regulations. Properly using these tips can help you save money and may help you avoid serious violations of environmental laws. The reference section of this document provides for more specific information or questions that you may have related to your business and specific situation. Important contact numbers and website addresses are also provided for your convenience.

HAZARDOUS WASTE

Dry cleaners routinely generate several waste materials that may be considered hazardous waste. These waste materials include perchloroethylene, ignitable (less than 140 degrees F) dry cleaning solvents, still residues from distillation, filters containing perchloroethylene, mop water, and separator water. If you dry clean shop rags, printer rags, and paint body shop rags, your non-hazardous petroleum solvent, sludge, and filters may pick up toxic metals and become hazardous waste.

If these waste materials are not handled correctly, they can harm people and the environment when improperly stored or thrown away. Improper handling of hazardous waste is against the law and can result in fines and expensive cleanup work. Therefore, this guidance has been developed to assist the dry cleaning industry in the proper handling of hazardous wastes, as required by [40 CFR Part 260 et seq.](#)

What Is a Hazardous Waste?

A waste is any solid, liquid, or contained gaseous material no longer useful to your company that can be disposed or thrown away.

Your company may generate waste that can pollute the air, water and/or land if it is not handled and disposed of carefully. These wastes are considered hazardous, and they are currently regulated by Federal and State environmental laws.

There are two types of hazardous waste that companies can generate:

- A. Characteristic Hazardous Waste
- B. Listed Hazardous Waste

Characteristic Hazardous Wastes

A waste is classified as a characteristic hazardous waste if it has one of the following four characteristics:

1. **Ignitability:** It is easily ignited and has a flashpoint of less than 140°F. Examples of ignitable wastes are Stoddard solvent and naphtha. These wastes have an EPA Hazardous Waste Number of 0001 that denotes an ignitable characteristic hazardous waste.
2. **Corrosivity:** It dissolves metals and other materials, burns the skin, and has a pH of 2 or less or 12.5 or greater. Examples are waste acid and alkaline cleaning fluids. Corrosive wastes have an EPA Hazardous Waste Number of 0002.

3. **Reactivity:** It is unstable or undergoes a rapid and/or violent change with water or other materials. An example is a mixture of Clorox and ammonia. Reactive wastes have an EPA Hazardous Waste Number of 0003.
4. **Toxicity:** It is toxic as determined by laboratory testing (a lab test commonly known as the Toxicity Characteristic Leaching Procedure [TCLP]). These wastes contain dangerous amounts of metals, pesticides, herbicides, and organic chemicals. The EPA Hazardous Waste Numbers for materials that have the toxicity characteristic are **0004 - 0043**. The list of toxic materials contains eight metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver), four pesticides, two herbicides, and twenty-five organic chemicals. Examples of characteristic toxic waste for dry cleaners are perchloroethylene (also known as perc, PCE, tetrachloroethylene, tetrachloroethene, or TCE), which has the Hazardous Waste Number **0039**, and trichloroethylene, which has the Hazardous Waste Number **0040** (See Table 2).

Listed Hazardous Wastes

Your waste is classified as a hazardous waste if it appears on any one of the four lists of hazardous wastes found in the hazardous waste regulations. These wastes have been listed because they almost always exhibit one of the hazardous waste characteristics described or contain any number of toxic chemicals that have been shown to be harmful to human health and the environment. The regulations list over 400 hazardous wastes, including waste derived from manufacturing processes and chemicals that are discarded or thrown away. A list of the wastes that may possibly be generated by your company can be found in Table 2.

Determining If Your Waste is "Hazardous"

You can determine if your company is generating a hazardous waste by one of the following three ways:

1. When ordering products for your facility, request that a Safety Data Sheet (SDS) accompanies the products when shipped to you. Review the SDS sheet to see if the product contains hazardous materials. If you eventually dispose of the hazardous material, it may be a hazardous waste; or
 2. Determine if the waste is listed as a hazardous waste (Table 2); or
 3. Collect and send a sample of the waste to a laboratory for a hazardous waste characteristics determination.
- ✓ **Dry Cleaner Tip.** If you determine a waste is listed as a hazardous waste like perc (F002), you do not need to have it tested for the four hazardous waste characteristics.

Categories of Hazardous Waste Generators

There are three categories of hazardous waste generators:

- Very Small Quantity Generators (**VSQG**)
- Small Quantity Generators (**SQG**)
- Large Quantity Generators (**LQG**)

A **VSQG** is defined as any generator of hazardous waste that produces a *total of less than or equal to 220 pounds of hazardous waste in any month and stores no more than 2,200 pounds on site at any time.*

A **SQG** is defined as any generator of hazardous waste that *produces more than 220 and less than 2,200 pounds of hazardous waste in any month and stores no more than 13,200 pounds on site at any time.*

A **LQG** is defined as any generator of hazardous waste that *produces a total of 2,200 pounds or more of hazardous waste in any calendar month.*

- ✓ **Dry Cleaner Tips.** A VSQG's hazardous waste is exempt from regulation but it is recommended that your filters and still residues be placed inside a heavy plastic bag that is sealed before disposal.
- ✓ It is most advantageous to achieve and maintain VSQG status since less hazardous waste is produced and the regulatory requirements for VSQG are considerably less than for SQG or LQG.

What You Must Do as a Hazardous Waste Generator

Once your company determines that it is generating hazardous wastes, you must:

- Determine your generator status (VSQG, SQG or LQG as described above); and
- Comply with the hazardous waste regulations, which are applicable to the amount of hazardous waste produced per month by your company (See Table 1 Hazardous Waste Generator Requirements).

What to do if you determine your generator status to be small quantity or large quantity:

- If you determine your generator status to be small quantity or large quantity, call (520) 724-7400 or go to the PDEQ website at <http://www.deq.pima.gov> and obtain copies of the, the PDEQ and ADEQ Hazardous Waste Generator Handbooks for guidance. Once PDEQ receives the completed Application Form for Hazardous Waste Generators and Hazardous Waste Category Form your company will pay a fee and receive a permit to operate as a registered hazardous waste generator in Pima County. If you do not have an EPA Identification Number for your location, you will first need to obtain one from the state agency, Arizona Department of Environmental Quality (ADEQ). PDEQ staff can assist you with this process.

- If you determine your generator status to elevate to small quantity or large quantity during **any** calendar month, call (520) 724-7400 to notify the agency and ask to receive copies of the, the PDEQ and ADEQ Hazardous Waste Generator Handbooks. The PDEQ handbook will explain the permitting process and how your fees are calculated.
- ✓ **Dry Cleaner Tip -** One full 15-gallon drum of used perc (F002) = 202 pounds of hazardous waste. This representation assumes the waste is Perchloroethylene that weighs 13.47 pounds per gallon. Your hazardous waste could weigh more or less depending on its actual weight per gallon. Call your original supplier for the original weight of the product.

Water/Perc Separator

Perchloroethylene wastewater (F002) is generated from the water/perc mixture. Separator water should not be poured down your septic tank or sanitary sewer (drain), poured out the back door onto the ground, or evaporated in an open boiling pot. Perc is heavier than water. Therefore, it will seep or sink to the bottom. Perc can seep out at the joints in the sanitary sewer line, seep through the bottom of the concrete septic tank, and, if poured out the back door will sink through the soil into the groundwater, which can contaminate drinking water.

Do not evaporate perc separator water in an open boiling pot. Improperly evaporating the separator water in an open boiling pot causes the perc to be emitted to the air where it condenses, then falls to the floor and can seep through the concrete slab.

- ✓ **Dry Cleaner Tip -** Any water that has come into direct contact with perc is a listed hazardous waste with a hazardous waste number of F002. (See Hazardous Waste Table, 2)

Separator, spotting board, and vacuum press water should be disposed of as hazardous waste or treated by passing it through a carbon filter to remove the perc. The filtered water can then be placed in a mister or evaporator.

The International Fabricare Institute (IFI) received a letter from EPA dated June 2, 1993, giving all dry cleaners an exemption to treat their separator water in a tank under the Clean Water Act wastewater treatment exemption.

To receive a copy of this exemption letter from EPA's fax back: Call (202) 651-2060 from your fax machine and follow the instructions to enter document # 11749. For more information on this exemption contact EPA at 1-(800) 424-9346 or IFI at (301) 622-1900.

No Septic Tank System Discharge Allowed

If any amount of hazardous waste including perc separator water is discharged to a septic tank system, you must immediately notify the Arizona Department of Environmental Quality (ADEQ) Aquifer Protection Program at (602) 771-4385.

Public Sewer System Discharge

If any amount of hazardous waste including perc separator water is discharged or is going to be discharged to the Publicly Owned Treatment Works (POTW) sanitary sewer from your facility you should notify the [Industrial Wastewater Control \(IWC\)](#) division of the Pima County Regional Wastewater Reclamation Department at (520) 724-6200.

Blow down Wastewater

Many dry cleaners generate wastewater streams from the boiler blow down and chiller/cooler blow down. These wastewater streams can be discharged into a septic tank or the sanitary sewer. Contact PDEQ at (520) 724-7400 for septic tank discharges or IWC for sanitary sewer discharges to request written approval for these discharges.

What to do in Case of a Spill

Whenever *any amount of solvent* is spilled onto concrete or soil, the solvent must be cleaned up, recycled or disposed of at a permitted facility. The following clean-up procedures for solvent spills are recommended:

1. *If the spill occurs on a concrete floor or the area where drums are stored*, you should immediately use an absorbent material (blanket, rags or cloths) until there is no solvent remaining on the floor. Place the absorbent blanket, rags and/or cloths into the recovery dryer to reclaim the spilled solvent, or in a hazardous waste container to ship off-site for disposal.
2. *If the spill occurs on the soil*, we recommend that the solvent stained soil be removed **immediately**, placed in a closed metal drum, labeled hazardous waste, and dated. If you spill 100 pounds or more of perc onto the soil you must call both of the following agencies immediately and report the spill:

National Response Center:
(NRC)
1-(800) 424-8802

Arizona Department of Environmental Quality
(ADEQ)
(602) 390-7894

- ✓ **Dry Cleaner Tip** - Very small amounts of perc can cause soil and groundwater contamination, so be extremely careful not to spill any, and clean up spills immediately and thoroughly.

The best management practice to prevent a spill is to use a spill pan under all perchloroethylene waste containers. The best practice to prevent a discharge is to block off all drains in the dry cleaning area and coat the floors with a non-porous epoxy coating. (See Pollution Prevention, Best Management Practices, page 9)

The following table is a summary of the requirements for the three types of hazardous waste generators. The X's in the columns for VSQG, SQG, and LOG are the requirements that you must meet to stay in compliance with the hazardous waste regulations. If you need a copy of these Rules, they are also available at [40 CFR Part 260 et seq.](#)

TABLE 1. - HAZARDOUS WASTE GENERATOR REQUIREMENTS

	VSQG	SQG	LQG
INITIAL REQUIREMENTS			
Identify the hazardous wastes produced by your company. Store in closed, non-leaking containers.	X	X	X
Obtain an Environmental Protection Agency Identification Number.		X	X
CONTAINER MANAGEMENT			
Package waste in Department Of Transportation (DOT) approved containers.		X	X
Label drums with a hazardous waste label or words telling what the drum contains during accumulation of the waste.		X	X
Keep all hazardous waste drums closed and secure unless you are adding or removing hazardous waste.		X	X
Place a hazardous waste label on a full accumulation drum, fill in the date and the rest of the information on the label, and move it to the hazardous waste storage area within three days.		X	X
Inspect container (drum) storage area weekly and/or inspect tanks daily and keep a written log.		X	X
CONTINGENCY PLAN			
Post the following information next to the telephone in the hazardous waste storage area: Name and telephone number of the emergency coordinator, the telephone number of the closest fire department or 911, location of fire extinguishers, spill control materials, and fire alarm location.		X	
Select an emergency coordinator, prepare a Contingency Plan, and develop an annual Personnel Training Program.			X
DISPOSAL			
VSQGs must dispose of hazardous wastes at a Solid Waste Disposal Facility permitted by the state for industrial or municipal wastes (such as garbage, trash, or recycling) or a permitted Hazardous Waste Treatment, Storage, and Disposal Facility (TSDF).	X		
SQGs and LOGs must dispose of their hazardous wastes at a permitted, hazardous waste Treatment, Storage, and Disposal Facility (TSDF).		X	X
MANIFEST AND LAND DISPOSAL RESTRICTIONS (LDR)			
Arrange to ship off-site to a TSDF all hazardous wastes using the Uniform Hazardous Waste Manifest. Use a hazardous waste transporter with an EPA ID number.		X	X
Attach a Land Disposal Restriction (LDR) notification form to each Uniform Hazardous Waste Manifest to let the permitted Treatment, Storage and Disposal (TSDF) know the LDR requirements for the waste.		X	X
REPORTING AND RECORD KEEPING			
Keep weekly container (drum) storage inspection and/or daily tank inspection logs.		X	X
Calculate and pay annual Hazardous Waste Management Fees.		X	X
Keep copies of all signed manifests for at least three years from the date of transport.		X	X
Keep copies of any test results, waste analyses, or other lab information for at least three years from the date you shipped your waste off-site.		X	X
Keep copies of Land Disposal Restrictions (LDR) notifications (a form that is used to certify that your waste has been properly treated before disposal on land) and waste analyses for at least three years from the date you shipped your waste off-site.		X	X

TABLE 1. - HAZARDOUS WASTE GENERATOR REQUIREMENTS Cont.	VSOG	SQG	LOG
STORAGE			
Store no more than 2,200 pounds of hazardous waste on the property. If you store more than 2,200 pounds, then you become an SQG and must comply with SQG requirements.	X		
Store no more than 13,200 pounds of hazardous waste on the property.		X	
Your facility can store the waste on-site for no longer than 180 days (270 days if transporting to a disposal facility 200 or more miles away).		X	
Store the wastes on-site for no longer than 90 days. If you store your waste for more than 90 days, you will need to obtain a hazardous waste storage permit from ADEQ.			X
TRAINING			
Develop a training plan for employees that handle hazardous waste. Ensure that employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal operations and emergencies.		X	
Complete an annual program of classroom instruction or on-the-job training on hazardous waste for personnel that handle hazardous waste.			X

Source: Code of Federal Regulations (CFR) [Title 40, Part 262](#) - Standards Applicable to Generators of Hazardous Waste & CFR [Title 40 Part 268](#) - Land Disposal Restrictions.

TABLE 2. - TYPICAL DRY CLEANER HAZARDOUS WASTE

TYPICAL WASTE	EPA HAZARDOUS WASTE NUMBER	SUGGESTED HAZARDOUS WASTE REDUCTION
SPOTTING BOARD		
Unused chemicals for disposal (Example Trichloroethylene)	U228 (Listed for unused solvent)	Use up product until container is empty before disposal.
Flash point less than 140 degrees Fahrenheit (F)	0001 (Characteristic of ignitability)	Use water-based, biodegradable spot removers or a solvent with a flash point equal to or greater than 140 degrees F.
Trichloroethylene	0040 (Characteristic of toxicity)	Use less toxic, non-ozone depleting spot removers.
PETROLEUM SOLVENT		
Flash point less than 140 degrees Fahrenheit (F)	0001	Use a solvent with a flash point equal to or greater than 140 degrees F.
Still residues from distillation	0001	Use a solvent with a flash point equal to or greater than 140 degrees F.

TABLE 2 - TYPICAL DRY CLEANER HAZARDOUS WASTE Cont.

PERCHLOROETHYLENE		
	(Also known as perc, PCE, tetrachloroethylene, tetrachloroethene, or TCE)	
Activated carbon from carbon adsorber, used	F002 (Listed for used solvent)	Regenerate the carbon in the carbon adsorber for the 20-year life before disposal.
Button trap and lint trap waste	D039 (Characteristic of toxicity)	Place on top of a raised screen in a closed container for 24 hours to drain. Recover perc for reuse. Place trash and lint in hazardous waste drum.
Carbon core filter cartridges, used	F002	Place on top of a raised screen in a closed container for 24 hours to drain. Then place filter in a sparging unit and use steam to strip the perc, which will not drain out. Recover perc for reuse. Place cartridge in hazardous waste drum.
Diatomaceous/carbon filter powder, cooked	F002	Use a muck cooker to reduce solvent waste by condensing and reclaiming solvents.
Liquid solvent, used	F002 (Listed for used solvent)	Distill solvent on-site and store with lids tightly fastened.
Mister or evaporator filters, used	F002	Use activated carbon filters that yield perc-free water.
Paper filter cartridges, used	F002	Place on top of a raised screen in a closed container for 24 hours and/or over a weekend to drain. Recover perc for reuse. Place cartridge in hazardous waste drum. Replace paper cartridges with a spin disk filtration system.
Still residues from distillation	F002	Re-distill residues by adding steam after the first boil-down and then boil-down a second time to recover more perc.
Vacuum press water from steam presses	D039 Characteristic of toxicity	Use activated carbon filters that yield perc-free water before pouring water into evaporator.
Water/perc separator	F002	Install a cooling coil in the separator to recover more perc.
UNIVERSAL WASTE		
Fluorescent lamps, used	D009 (Characteristic of toxicity for mercury)	Send to a lamp recycler
Thermostat, used	D009	Send to a lamp recycler
Nickel-cadmium batteries, used	D006 (Characteristic of toxicity for cadmium)	Send to a battery recycler

HAZARDOUS WASTE FEES

PDEQ Fees

Dry cleaners that generate and ship certain amounts of hazardous waste off-site for treatment, storage, disposal, incineration, or recycling are required to pay hazardous waste generator registration fees to PDEQ based upon the amount of hazardous waste generated each year. Most dry cleaners are Very Small Quantity Generators (VSQGs) that produce less than or equal to 220 pounds of hazardous waste in any month of the year and are not required to register with PDEQ. Small quantity generators (SQGs) that produce more than 220 pounds and less than 2,200 pounds of hazardous waste in any month of the year and large quantity generators (LQG) that produce greater than 2,200 pounds in any month of the year are required to register with PDEQ.

ADEQ Fees

Very Small Quantity Generators do not have to pay any hazardous wastes fees to the Arizona Department of Environmental Quality (ADEQ). Small quantity generators are required to pay an *annual fee of \$100.00*. Large quantity generators must pay an *annual fee of \$300.00*. A Large Quantity Generator must also submit Hazardous Waste Management Fees on a per ton basis to ADEQ. Please visit the ADEQ website for additional information: <http://www.azdeq.gov/HazWaste>.

HAZARDOUS SITE RESPONSE

Notification Requirements

Any owner of property where there is a release of a regulated substance subject to notification under the Rules must *notify ADEQ within thirty days of the owner's discovery of the release*.

Releases are commonly discovered during Phase II Environmental Assessments, which are conducted when property is being sold or loans are refinanced. Releases to the environment at dry cleaners usually consist of dry cleaning solvents and the breakdown products of those solvents. Table 3 shows perchloroethylene and its breakdown products in soil.

The three types of dry cleaner spills or releases subject to notification are:

1. A spill or release of perc, petroleum, or another regulated substance which causes the amount of it found in the groundwater to be more than the naturally-occurring background concentration. For dry cleaning solvents, this means any concentration found above the laboratory's detection limit.
2. A release of a regulated substance, which causes the concentration in soil to exceed a concentration in Appendix A of the Arizona Administrative Code (AAC) [R18-7-201 et seq.](#)
3. The throwing away, discarding or abandonment of a regulated substance in barrels, drums, other containers, tanks, storage or transportation vessels, process units or waste management units. For example, this would include an abandoned dry cleaning machine with used filters left in it.

TABLE 3. - PERCHLOROETHYLENE AND ITS BREAKDOWN PRODUCTS

Chemical Name	If you find this concentration in soil, notification is required.
Perchloroethylene (also known as perc, PCE, tetrachloroethylene, tetrachloroethene, or TCE) F002 (Listed for used solvent)	13 mg/kg
Trichloroethylene	65 mg/kg
Dichloroethylene N.O.S. (Not Otherwise Specified)	410 mg/kg
Vinyl chloride	0.75 mg/kg
Source: Arizona Administrative Code (AAC) R18-7-201 et seq. Appendix A. IF ANY OF THESE CHEMICALS ARE DETECTED IN GROUNDWATER, NOTIFICATION IS REQUIRED.	

Release Notification

In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator has knowledge that a spill has reached surface water. **or** When a spill has discharged into a storm sewer or dry well, or such an event has resulted in any other discharge that may reach groundwater, the generator immediately shall notify the National Response Center (using their 24-hour toll-free number 800/424-8802) and ADEQ (using their 24-hour number (602) 771-2330 or 800/234-5677). The report shall contain the following information:

- (1) The name, address, and the EPA Identification Number of the generator;
- (2) Date, time, location, and type of incident (for example, spill or fire);
- (3) Quantity and type of hazardous waste involved in the incident;
- (4) Extent of injuries, if any; and
- (5) Estimated quantity and disposition of recovered materials, if any.

POLLUTION PREVENTION

Pollution prevention is the reduction or elimination of pollutants or wastes at the source. However, what you really want to do is to avoid producing the waste. Helpful information that companies can use to reduce or prevent pollution at dry cleaners are listed in the following sections:

1. Best Management Practices
2. Equipment Changes
3. Preventing Problems
4. Alternatives to Perchloroethylene

1. Best Management Practices (BMPs)

- Keep your storage and work areas neat, clean, and dry.
- Use spigots or pumps to pour liquids; hand transference or open buckets will increase solvent loss and spillage in the work area.
- Practice good inventory control. Place the date you bought materials on the container and use up all old materials before opening new ones.
- Keep all containers closed and properly labeled with the name of the product or waste.
- Reduce the amount of trash or waste by working with customers to use heavy-duty reusable garment bags, reuse/recycle hangers by bringing them back to the store, and recycle plastic wrap.
- Avoid under loading or overloading your machines.
- Place saturated lint on top of a raised screen in a closed waste container to drain and recover the perc for reuse.
- Make sure there are no leaks in storage or drainage containers.
- Keep machine doors closed at all times except when removing clothes.
- Clean button and lint traps on a regular basis. Open traps just long enough to clean them.
- Set solvents and wastes in a spill pan.
- Coat floor with a non-porous material to keep any spills from seeping through the concrete slab. Contact your dry cleaner supplier for the type of epoxy coating to use.

2. Equipment Changes

- Replace the cartridge filters with spin disk filters that can be cleaned without opening the machine.
- Install distillation equipment with an air pump and built-in rake that allows still bottoms to be removed without opening the still; this reduces the vapors from escaping.
- Use a carbon absorber that regenerates with hot air stripping rather than steam stripping.
- Replace a transfer machine with a dry-to-dry machine. If your dry-to-dry machines are old, consider buying a new closed-looped non-vented machine. Install a spill pan under the machine.

3. Preventing Problems

- Immediately: Repair any holes in air and exhaust ducts.
- On a daily basis: Clean lint screens and button traps.
- On a weekly basis:
 - ✓ Inspect all door gaskets to make sure that lint is not stuck on the gasket and causing a leak. Replace gaskets as needed.
 - ✓ Remove residue from distillation units. If not removed, it can reduce the efficiency of the distillation process.
 - ✓ Check tightness of hose connections and couplings.
 - ✓ Clean lint buildup on cooling condenser coils.
 - ✓ Clean drying sensors.

A preventive maintenance program on your equipment will make you money in the long run, because your customers will keep coming back when their clothes are clean and ready on time.

4. Alternatives to Perchloroethylene

Perchloroethylene ("Perc") is the most commonly used dry cleaning solvent. However, there are several other alternatives for garment cleaning that are currently being used in the United States.

- **Petroleum solvent cleaning:** Petroleum solvents (sometimes called Stoddard solvent) can be used to clean a variety of different types of fabrics. The biggest drawback to using petroleum is its flammability, although some alternative cleaning solvents with less flammability are now being marketed as drop-in substitutes for petroleum solvents (greater than 140 degrees F). Petroleum solvents cannot be used in a perc dry cleaning machine. The benefit of petroleum solvent to the dry cleaner is reduced odor. Most used petroleum solvents are regulated as hazardous waste (See Hazardous Waste, Table 2).
- **Wet Process Cleaning:** In this alternative, water is the primary cleaning solvent for the clothing. The wet cleaning process generally consists of four steps:
 1. Visible stains are pre-treated with a variety of spotting agents;
 2. then hand cleaned, or washed in a wet process machine;
 3. garments are dried; and
 4. garments are pressed and packaged the same as dry-cleaned clothes.

Shrinkage of clothing is limited by choosing proper wet cleaning chemicals, drying methods, controlling water and drying temperatures, and properly managing agitation during the cleaning process. Wet cleaning generally requires additional labor costs, but equipment costs and regulations are reduced. Many cleaners who use the wet cleaning process also continue to operate a perc machine for use with some fabrics that cannot be wet cleaned.

- **Other Processes:** Ultrasonic, modified silicone solution and carbon dioxide cleaning are not feasible for commercial operations at this time.

Contacts and Websites

Pima County Department of Environmental Quality (PDEQ)

(520) 724-7400

PDEQ Website: <http://www.deq.pima.gov/waste>

Arizona Department of Environmental Quality (ADEQ)

(602) 771-4673

Inspections and Compliance

ADEQ Website: <http://www.azdeq.gov/HazWaste>

Federal EPA Hazardous Waste Hotline

(800) 227-8917

EPA Region IX Website: <http://www.epa.gov/aboutepa/region9.html>

Spills and Emergency Response

Note: You should immediately notify both the Federal and State agencies to report a spill of 100 pounds or more of perc to the environment.

National Response Center (NRC)

(800) 424-8802

Trade Associations

International Fabricare Institute (IFI)

IFI Website: <http://www.laundryandcleaningnews.com>

Halogenated Solvents Industry Alliance, Inc. (HSIA)

(703) 875-0683

HSIA Website: <http://www.hsia.org/>

Western States Drycleaners & Launderers Association (WSDLA)

(800) 429-3990

WSDLA Website: <http://www.ws-dla.com/>

For additional information regarding proper management of solid or hazardous waste in Pima County, you may contact the Pima County Department of Environmental Quality (PDEQ) at (520) 724-7400, at the address at the beginning of this document, or visit the PDEQ website at <http://www.deq.pima.gov/waste/index.html>.

Updated 12/2019