

Tech WREC Program

Waste Reduction
&
Environmental Compliance

Understanding the Small Quantity Generator Hazardous Waste Rules

A Handbook for Small Businesses

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The Tech WREC Program

The Tech Waste Reduction & Environmental Compliance (WREC) Program of the Georgia Tech Research Institute is a voluntary, non-regulatory technical assistance program funded by the Georgia Legislature through the State University System of Georgia.

The purpose of this book is to help small business owners and managers understand how the federal hazardous waste management laws affect their businesses.

Acknowledgments

This booklet was prepared by the Tech WREC Program using material provided by the United States Environmental Protection Agency, Office of Solid Waste and Emergency Response. The Generator Compliance Program of the Hazardous Waste Management Branch, Georgia Environmental Protection Division, provided technical review.

If you have any questions about the Tech WREC program, or need further assistance, please call the Georgia Tech WREC program at 404/894-3806, or if you would like additional information regarding the management of hazardous waste, please contact the Generator Compliance Program, Hazardous Waste Management Branch, at 404/657-8831.

The Resource Conservation and Recovery Act (RCRA)

In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA), directing the U.S. Environmental Protection Agency (EPA) to develop and implement a program to protect human health and the environment from improper hazardous waste management practices. The program is designed to control the management of hazardous waste from its generation to its ultimate disposal—from “cradle to grave.”

EPA first focused on large companies which generated the greatest portion of hazardous waste. Business establishments producing less than 1000 kilograms (2,200 pounds) of hazardous waste in a calendar month (small quantity generators or SQGs) were exempted from most of the hazardous waste management regulations published by EPA in May 1980.

In November 1984, the Hazardous Solid Waste Amendments to RCRA were signed into law. With these amendments, Congress directed EPA to establish new requirements that would bring SQGs generating between 100 and 1000 kilograms of hazardous waste in a calendar month into the hazardous waste regulatory system. EPA issued final regulations for SQGs on March 24, 1986, the requirements were effective as of September 22, 1986.

What Is a Hazardous Waste?

A waste is any solid, liquid, or contained gaseous material that you no longer use, and either recycle, throw away, or store until you have enough to treat and dispose.

As a result of doing business, a company may generate wastes that can cause serious problems if not handled and disposed of carefully. Such wastes could cause injury, death, or damage, or pollute land, air, or water.

These wastes are considered hazardous, and they are currently regulated by federal and state public health and environmental safety laws.

There are two ways a waste may be brought into the hazardous waste regulatory system: listing and identification through characteristics.

Listed Wastes

Your waste is considered hazardous if it appears on any one of the four lists of hazardous wastes contained in the RCRA regulations. These wastes have been listed because they either exhibit one of the characteristics described below or contain any number of toxic constituents that have been shown to be harmful to health and the environment. The regulations list over 400 hazardous wastes, including wastes derived from manufacturing processes and discarded commercial chemical products. Many of the listed hazardous wastes that you are likely to generate are included in Appendix B of this handbook.

Characteristic Wastes

Even if a waste does not appear on one of the EPA lists, it is considered hazardous if it has one or more of the following characteristics:

- **ignitability:** it is easily combustible or flammable. Examples are paint wastes, certain degreasers, or other solvents.
- **corrosivity:** it dissolves metals, other materials, or burns the skin. Examples are waste rust removers, waste acid, alkaline cleaning fluids, and waste battery acid.
- **reactivity:** it is unstable or undergoes a rapid or violent chemical reaction with water or other materials. Examples are cyanide plating wastes, waste bleaches, and other waste oxidizers.
- **toxicity as determined by Toxicity Characteristic Leaching Procedure (TCLP):** the waste contains high concentrations of heavy metals, specific pesticides and herbicides, and organic chemicals that could be released into the groundwater. This category contains eight heavy metals, four pesticides, two herbicides, and twenty-five organic chemicals.

Wastes that May Be Hazardous to Health, but Are Not Regulated Under RCRA

Certain hazardous wastes are not regulated under RCRA, but are regulated under other rules. Some of these wastes include PCBs, asbestos, radioactive wastes, and biomedical/infectious wastes. For more information, contact your state or federal agency listed in Appendix A.

For Assistance and More Information

Your industry may generate other hazardous wastes beyond the examples mentioned above. It is your responsibility to determine whether your wastes are hazardous. If you need assistance, call:

- **your state hazardous waste management agency, listed in Appendix A**
- **EPA regional office, listed in Appendix A**
- **RCRA/Superfund Hotline
800/424-9346
in Washington DC
202/382-3000**
- **EPA's Small Business Ombudsman Hotline
800/368-5888**
- **your national trade association or its local chapter**
- **in Georgia, contact the Georgia Environmental Protection Division Hazardous Waste Management Branch at 404/657-8831 or the Tech WREC program at 404/894-3806.**

Acutely Hazardous Wastes

Some wastes are considered to be “acutely hazardous.” These are wastes that EPA has determined to be so dangerous in small amounts that they are regulated the same way as are large amounts of other hazardous wastes. Acutely hazardous wastes, for example, may be generated using certain pesticides. They also include dioxin-containing wastes.

If your business generates more than 1 kilogram (approximately 2.2 pounds) of acutely hazardous wastes in a calendar month or stores more than that amount for any period of time, you are subject to all of the regulations that apply to generators that generate more than 1000 kilograms of hazardous waste per calendar month. Contact one of the sources of information listed in Appendix A for more information about acutely hazardous wastes.

What You Must Do as a Hazardous-Waste Generator

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

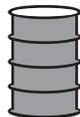
- determine your generator status;
- notify your state environmental office, for example the Georgia Environmental Protection Division (GA EPD), of the hazardous waste activities;
- obtain an EPA Identification Number (in Georgia, obtain a Generator Identification Number [GIN]) if your company generates 220 pounds or more of hazardous waste in a calendar month;
- comply with pre-transport rules;
- manifest and maintain accurate recordkeeping and reporting;
- make an ongoing effort to minimize waste.

Categories of Hazardous Waste Generators

In March 1986, the federal rules for hazardous waste management were modified to bring businesses that generate small amounts of hazardous waste into the regulatory system. Previously, these small quantity generators that generate less than 1000 kilograms (or about 2,200 pounds) of hazardous waste in a calendar month had been exempt from most hazardous waste regulations.

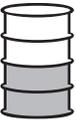
The 1986 rules set new requirements specifically for those generators that generate between 100 and 1000 kilograms of hazardous waste in a calendar month. There are three categories of hazardous waste generators:

- conditionally exempt small quantity generators (CESQG) generate no more than 100 kilograms/month;
- small quantity generators (SQG) generate 100 or more and less than 1000 kilograms/month;
- large quantity generators (LQG) generate 1000 kilograms or more in a month.



Key: 1 barrel = approximately 200 kilograms of hazardous waste, which is about 55 gallons. This representation assumes the waste is water based (weighs 8.3 pounds per gallon). Your waste could weigh significantly more or less depending on the density of the waste.

Conditionally Exempt Small Quantity Generators (CESQG)



If you generate no more than 100 kilograms (about 220 pounds) of hazardous waste and no more than 1 kilogram (about 2 pounds) of acutely hazardous waste in any calendar month, you are a CESQG. Federal hazardous waste laws require you to:

- identify all hazardous wastes you generate
- send this waste to a hazardous waste facility or a landfill or other facility approved by the state for industrial or municipal wastes
- never accumulate more than 1000 kilograms of hazardous waste on your property.

Small Quantity Generators (SQG)

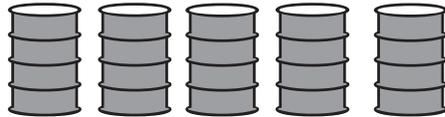


If you generate more than 100 and less than 1000 kilograms (between 220 and 2,200 pounds) of hazardous waste and no more than 1 kilogram (about 2 pounds) of acutely hazardous waste in any month, you are a SQG. Federal laws require you to:

- comply with the 1986 rules for managing hazardous waste, including the accumulation, treatment, storage, disposal requirements described in this handbook.

For a listing of hazardous waste streams typically generated by SQGs, see Table 1.

Large Quantity Generators (LQG)



If you generate 1000 kilograms (about 2,200 pounds or 300 gallons) or more of hazardous waste, or more than 1 kilogram (about 2 pounds) of acutely hazardous waste in any month, you are a LQG. Federal laws require you to:

- comply with all applicable hazardous waste management rules and submit hazardous waste reduction plans with biennial reports.

See Figure 1 on generator requirements.

Table 1: Typical Waste Streams Generated by Small Quantity Generators

Industry	Waste Stream
Building Cleaning and Maintenance	Acid/Bases, Solvents
Chemical Manufacturers	Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents
Cleaning Agents and Cosmetics	Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Pesticides, Solvents
Construction	Acids/Bases, Ignitable Wastes, Solvents
Educational and Vocational Shops	Acids/Bases, Ignitable Wastes, Pesticides, Reactives, Solvents
Equipment Repair	Acids/Bases, Ignitable Wastes, Lead Acid, Batteries, Solvents
Formulators	Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Pesticides, Reactives, Solvents
Funeral Services	Solvents (formaldehyde)
Furniture/Wood Manufacturing & Refinishing	Ignitable Wastes, Solvents
Laboratories	Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents

Industry	Waste Stream
Laundries and Dry Cleaners	Dry Cleaning Filtration, Residues, Solvents
Metal Manufacturing	Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents, Spent Plating Wastes
Motor Freight Terminals and Railroad Transportation	Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Lead Acid Batteries, Solvents
Other Manufacturing (textiles, plastics, leather)	Heavy Metals/Inorganics, Solvents
Pesticide End Users/Application Services	Heavy Metals/Inorganics, Pesticides, Solvents
Printing and Allied Industries	Acids/Bases, Heavy Metals/Inorganics, Ink Sludges, Spent Plating Wastes, Solvents
Vehicle Maintenance	Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Lead Acid Batteries, Solvents
Wood Preserving	Preserving Agents

Additional information on typical waste streams is found in Appendix B.

Figure 1: Generator Requirements

Following are some of the rules for generators of hazardous wastes. This is not a comprehensive listing of all regulations for generators.

A Large Quantity Generator (LQG) generates more than 2,200 pounds of hazardous waste in a calendar month. A Small Quantity Generator (SQG) generates between 220 and 2,200 pounds of hazardous waste in a calendar month. A Conditionally Exempt Small Quantity Generator (CESQG) generates less than 220 pounds of hazardous waste or less than 2.2 pounds of acutely hazardous waste in a calendar month.

	LQG	SQG	CESQG
Identify the hazardous wastes present	✓	✓	✓
Obtain an EPA Generator Identification Number (GIN)	✓	✓	
Package wastes in DOT-approved containers including proper labels, markings, and accumulation start date	✓	✓	
Store the wastes on-site for no longer than 90 days	✓		
Store the wastes on-site for no longer than 180 days (270 days if transporting to a disposal facility more than 200 miles away)		✓	
Never accumulate more than 13,200 pounds of hazardous waste (or 2.2 pounds of acutely hazardous waste) on the property		✓	
Never accumulate more than 2,200 pounds of hazardous waste materials (or 2.2 pounds of acutely hazardous wastes) on the property			✓
Inspect container storage area weekly and/or inspect tanks daily and weekly	✓	✓	
Manifest all hazardous wastes using the Uniform Hazardous Waste Manifest	✓	✓	
Attach a Land Disposal Restriction (LDR) notification form to each hazardous waste manifest to notify the TSD of land disposal restriction requirements for the waste.	✓	✓	

Figure 1: Generator Requirements
continued

	LQG	SQG	CESQG
Designate an emergency coordinator and devise contingency, hazard prevention, and personnel training plans	requires written plan ✓	✓	
Retain copies of all signed manifests for at least three years from the date of transport	✓	✓	
Retain copies of any test results, waste analyses, or other determinations for at least three years from the date of transport	✓	✓	
Retain copies of LDR determinations, notifications, and waste analyses for at least five years from the date of transport	✓	✓	
Submit a report every two years summarizing the types and quantities of hazardous wastes used, methods of disposal employed, and efforts made towards waste minimization and the results of those efforts	✓		
Dispose of all hazardous wastes at an EPA-permitted Treatment, Storage, and Disposal (TSD) facility	✓	✓	
Send the wastes to an EPA-permitted TSD facility or to a landfill or other facility approved by the state for industrial or municipal wastes			✓

Counting Your Hazardous Wastes

Do Count

Count all quantities of “listed” and “characteristic” hazardous wastes as defined earlier that you:

- accumulate on site for any period of time prior to subsequent management;
- package and transport off site;
- place directly in a regulated on-site treatment or disposal unit;
- generate as still bottoms or sludges and remove from product storage tanks.

Do Not Count

Do not count wastes that:

- are specifically exempted from counting, such as spent lead-acid batteries and used oil that will be sent off site for reclamation and have not been mixed with hazardous waste;
- may be left in the bottom of containers that have been completely emptied through conventional means, for example, by pouring or pumping (containers that held an acutely hazardous waste must be more thoroughly cleaned);
- are left as residue in the bottom of product storage tanks, if the residue is not removed from the product tank;

- you reclaim continuously on site without storing the waste prior to reclamation, such as dry cleaning solvents (you do have to count any residue removed from the machine as well as spent cartridge filters);
- you manage in an elementary neutralization unit, a totally enclosed treatment unit, for example a solvent still, or a wastewater treatment unit (an elementary neutralization unit is a regulated tank, container, or transport vehicle [including a ship] which is designed to contain and neutralize corrosive wastes);
- are discharged directly to a publicly-owned treatment works (POTW) without being stored or accumulated first (this discharge to a POTW must comply with the Clean Water Act; POTWs are public utilities, usually owned by the city, county, or state, that treat industrial and domestic sewage for disposal);
- you have already counted once during the calendar month and treated on site or reclaimed in some manner, and used again.

Changing 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 June you generate 100 kilograms or less of hazardous waste, you would be a CESQG for June. If in July your waste totals more than 100 kilograms but less than 1000 kilograms, your status changes and your July wastes would be subject to the requirements for SQG. If in September you generate 1000 kilograms or more of hazardous waste, your September waste would be subject to all applicable hazardous waste management regulations, as would all other hazardous waste you generated in previous months and mixed with your September wastes.

If, after counting your wastes, you have determined that you never generate more than 100 kilograms/month of hazardous waste, you do not need to read the remainder of this booklet. You are a CESQG and must:

- identify your wastes as hazardous;
- dispose of them in a hazardous waste facility, or a landfill, or other facility approved by the state for industrial or municipal wastes;
- never accumulate more than 1000 kilograms of hazardous waste at your facility, or you become subject to all of the

requirements for 100 to 1000 kilograms/month generators.

If, however, you do generate between 100 and 1000 kilograms of hazardous waste in a month, the remainder of this booklet will explain what you must do to handle your hazardous wastes safely and legally.

Remember, many states have different generator categories and requirements. If you have any questions about your generator status, call your state agency listed in Appendix A.

Obtaining a U.S. EPA Identification Number

If your business generates more than 100 kilograms of hazardous waste in any calendar month, you will need to obtain a U.S. EPA Identification Number. Transporters and facilities that store, treat, or dispose of regulated quantities of hazardous waste must also have U.S. EPA Identification Numbers. These twelve-character identification numbers used by the EPA and states are part of a national data base on hazardous waste activities.

To obtain your U.S. 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 2 provides a copy of a notification form. Note: A few states use a form that is different from the form shown in Figure 2. Your state will send you the appropriate form to complete.

The information from this form will be recorded by the EPA and the state, and you will be assigned a U.S. EPA Identification Number. This number will be unique to the site identified on your form. Use this number on all hazardous waste shipping papers.

The U.S. EPA Identification Number will stay with the business site or location. If you move your business to another location, you must notify the

EPA or the state of your new location and submit a new form. If hazardous waste was previously handled at the new location, and it already has a U.S. EPA Identification Number, you will be assigned that number for the site after you have notified EPA.

Some states have their own identification numbers. In Georgia, LQGs and SQGs are required to obtain a Generator Identification Number (GIN). Check with your state regulatory office for your requirements.

Figure 2: Notification of Regulated Waste Activity Form



Pre-transport Rules

As a generator, you must comply with the EPA and the Department of Transportation (DOT) pre-transport requirements. This means the hazardous wastes must be put in proper containers that are marked and labeled properly (including an accumulation start date), and the transporting vehicle must be properly placarded. Your hauler should be able to assist you. You can also consult the requirements for packaging and labeling wastes found in the DOT regulations (49 CFR Part 172).

You must have a Uniform Hazardous Waste Manifest (an EPA standardized form) to serve as documentation from origin to destination of the wastes.

Uniform Hazardous Waste Manifest

A hazardous waste manifest is a multicopy shipping document that you must fill out and use to accompany your hazardous waste shipments. These forms are available from three sources and are discussed in more detail later in this booklet.

Managing Wastes On Site

The three most important things you must know about managing your hazardous wastes on site:

- comply with storage time, quantity, and handling requirements for containers and tanks;
- obtain a storage, treatment or disposal permit if you store, treat, or dispose of hazardous waste on site in a manner requiring a permit;
- take adequate precautions to prevent accidents, and be prepared to handle them properly in the event that they do occur.

Storing Hazardous Waste On Site

SQGs may store no more than 6000 kilograms 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 must obtain a storage permit and meet all of the RCRA storage requirements. These time limits on storage are longer than the 90 days allowed to generators of 1000 kilograms per month or more. You are allowed to store your waste for as long as 180 or 270 days so that you will have time to accumulate enough hazardous waste to ship it off site for treatment or disposal economically.

You can store hazardous waste in 55-gallon drums, tanks, or other containers suitable for the type of waste generated 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 wastes in containers, you must:

- clearly mark each container with the words “HAZARDOUS WASTE” and with the date you began to collect waste in that container;
- keep containers in good condition, handle them carefully, and replace any leaking ones;
- not store hazardous waste in a container if it may cause rupture, leaks, corrosion, or other failure;
- keep containers closed except when you fill or empty them;
- inspect the container for leaks or corrosion every week;
- make sure that if you are storing ignitable or reactive wastes, containers are placed as far as possible from your facility property line to create a buffer zone;
- NEVER store wastes in the same container that could react together to cause fires, leaks, or other releases (see 40 CFR Section 265.177 and 40 CFR Part 265 Appendix V for examples of incompatible wastes);

- make sure that the stored waste is taken off site or treated on site within 180 days, or 270 days if you are taking it to a facility more than 200 miles away.

If you store your waste in tanks, you must:

- not store hazardous waste in a tank if it may cause rupture, leaks, corrosion, or otherwise cause the tank to fail;
- keep a tank covered or provide at least two feet of freeboard (space at the top of the tank) in uncovered tanks;
- provide waste feed cutoff or bypass systems to stop the flow in case of problems if your tanks have equipment that allow the waste to flow into them continuously;
- inspect any monitoring or gauging systems on each operating day and inspect the tanks themselves for leaks or corrosion every week;
- make sure that the stored waste is taken off site or treated on site within 180 (or 270 if going more than 200 miles away) days;
- 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.

Treating Hazardous Waste On Site

You may treat your hazardous wastes on your site without a special permit providing:

- you treat the accumulated hazardous waste within 180 days;
- you comply with the container and tank regulations described above;
- you take steps to prepare for and prevent accidents as described below;
- you treat the hazardous waste in the accumulation tank or container.

If you do not meet each of these requirements and you treat your hazardous waste on your site, you must obtain a hazardous waste treatment permit.

Disposing of Hazardous Waste On Site

You may not dispose of your hazardous waste on your site unless you have obtained a disposal permit. Under certain circumstances, it may be legal to dispose of certain types of hazardous waste on your site without a permit. For example, farmers may dispose of their own waste pesticide provided they triple rinse the empty pesticide container and dispose of the pesticide residue on their own farm in a manner consistent with the instructions on the pesticide label. Even if you are not a farmer, you may be allowed to dispose of certain hazardous wastes by discharging them directly into your sewer drain. However, this is not considered good management practice and in many communities it may be

illegal. For more information concerning wastes which may be disposed of in this manner, contact your local wastewater or sewage treatment office or your state hazardous waste management agency (see Appendix A).

Obtaining a Permit to Store, Treat, or Dispose of Hazardous Waste On Site

If you store, treat, or dispose of your hazardous waste on site in any manner other than those permissible as described above, you must obtain a permit. Obtaining a permit to store, treat, or dispose of your hazardous wastes on site can be a costly and time consuming process. The process is described in Title 40 of the Code of Federal Regulations (40 CFR) Part 270. To obtain such a permit you must:

- notify EPA or your state regulatory agency of your hazardous waste activity;
- complete Part A of the permit application;
- comply with the interim status standards as described in 40 CFR Part 265;
- complete Part B of the permit application;
- comply with the standards described in 40 CFR parts 264 and 266.

If you are not sure whether you need such a permit, or if you are interested in finding out more about it, call your state hazardous waste management agency or EPA regional office (see Appendix A) for help.

Preparing for and Preventing Accidents

Whenever you generate hazardous waste and store it on site, you must take the precautions and steps necessary to prevent any sudden or accidental release to the environment. This means that you must carefully operate and maintain your facility to reduce the possibility of fire, explosion, or release of hazardous waste.

Your facility must have appropriate types of emergency communication and fire equipment for the kinds of waste handled at your site. You must also attempt to make arrangements with local fire, police, or hospital officials as needed to ensure that they will be able to respond to any potential emergencies that could arise. Some of the steps you may need to take to prepare for emergencies at your facility include:

- installing and maintaining emergency equipment such as an alarm, a telephone or a two-way portable radio, fire extinguishers (using water, foam, inert gas, or dry chemicals as appropriate to your waste type), hoses, automatic sprinklers, or spray equipment in your plant so that it is immediately available to your employees if there is an emergency;
- providing enough room for emergency equipment and response teams to get into any area in your facility in the event of an emergency;
- writing to local fire, police, and hospital officials or state or local emergency response teams explaining the types of

wastes you handle and asking for their cooperation and assistance in handling emergency situations;

- training employees in the proper use of equipment and procedures to use in the event of an accident or emergency.

Planning for Emergencies

A contingency plan is a plan that attempts to look ahead and prepare for any accidents that could possibly occur. It 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 the hazardous waste is stored?” or “What if I have a spill of hazardous waste or one of my containers leaks?” While a specific written contingency plan is not required, it is a good idea to make a list of these questions and answer them on paper. This also may be helpful in informing your employees about their responsibilities in the event of an emergency.

Follow these guidelines if you have an emergency:

- In the event of a fire, call the fire department or attempt to extinguish it using the appropriate type of fire extinguisher.
- In the event of a spill, 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: 800/424-8802, or in Washington D.C. call 202/426-2675. 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, immediately notify the National Response Center as required by Superfund regulations. (Superfund is the law that deals with the cleanup of spills and leaks of hazardous waste at abandoned hazardous waste sites).

Post emergency phone numbers and locations of emergency equipment near telephones and inform all employees of the proper waste handling and emergency procedures. You must appoint an employee to act as emergency coordinator to ensure that the appropriate procedures are carried out in the event an emergency arises. The responsibilities of the emergency coordinator are generally that he/she be available 24 hours a day (at the facility or by phone) and know who to contact and what steps to follow in an emergency. For most small businesses, the owner or operator may already perform these functions. You do not need to hire a new employee to fill this role. As stated in 40 CFR Section 265.55:

“The emergency coordinator must be thoroughly familiar with all aspects of the facility’s contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have

the authority to commit the resources needed to carry out the contingency plan.”

Avoid potential risks in this area. If you have a serious emergency and you have to call your local fire department or you have a spill that extends outside your plant or that could reach surface waters, immediately call the National Response Center at 800/424-8802 and give them the information they ask for. If you didn't need to call, they will tell you so. However, anyone who is 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 business 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.

Shipping Hazardous Waste Off Site

The three most important things you should remember about shipping your hazardous waste off site are:

- choose a hauler and facility which have U.S. EPA identification numbers
- package and label your wastes for shipping
- prepare a hazardous waste manifest form.

Under federal regulations, if you are a 100 to 1000 kilograms/month generator, you are allowed to accumulate your hazardous wastes on your premises without a permit for up to 180 days (or 270 days if you must ship it more than 200 miles) as long as you never accumulate more than 6000 kilograms. These limits are set so that a small business can accumulate enough waste to make shipping and disposal more economical.

Choosing a Hazardous Waste Hauler and Designated Waste Management Facility

Carefully choosing a hauler and designating a waste management facility is important. The hauler will be handling your wastes beyond your control while you are still responsible for their proper management. Similarly, the waste management facility will be the final destination of your hazardous waste for treatment, storage, or disposal. Before choosing a hauler or designating a facility, check with the following sources:

- your friends and colleagues in business who may have used a specific hazardous waste hauler or designated facility in the past;
- your trade association(s) which may keep a file on companies that handle hazardous wastes;
- your Better Business Bureau or Chamber of Commerce to find out if any complaints have been registered against a hauler or facility;
- your state hazardous waste management agency or EPA regional office (see Appendix A), which will be able to tell you whether or not a company has a U.S. EPA Identification Number, and may know whether or not the company has had any problems.

After checking these sources, contact the hauler and designated hazardous waste management facility directly to verify that they have U.S. EPA Identification Numbers. Some waste management facilities are permitted to handle only certain types of wastes. Always verify that any waste management facility you work with is permitted to handle your waste. Also make sure that they have the necessary permits and insurance and that the hauler's vehicles are in good condition. Checking sources and choosing a hauler and designated facility may take some time—try to begin checking well ahead of the time you will need to ship your waste. Careful selection is very important.

Preparing Your Hazardous Wastes for Shipment

When you prepare hazardous wastes for shipment, you must put the wastes in containers acceptable for transportation and make sure the containers are properly labeled. Your hauler should be able to assist you. If you need additional information, consult the requirements for packaging and labeling hazardous wastes found in the Department of Transportation (DOT) regulations (49 CFR Part 172). To find out what the regulations are for your wastes, contact your state hazardous waste management agency for the name and telephone number of your state transportation agency. Your state transportation agency, your hauler, or your designated facility can help you understand the DOT requirements.

The Uniform Hazardous Waste Manifest

A hazardous waste manifest is a multicopy shipping document that you must fill out and use to accompany your hazardous waste shipments.

The manifest form is designed so that hazardous waste shipments 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 designated 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. Keep this copy, which will be signed by the hauler and designated facility, on file for three years.

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. 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 three sources:

- the state to which you are shipping: use this source if the state to which you are shipping has its own manifest form. Contact the hazardous waste management agency of that state (see Appendix A), your hauler, or the designated facility you intend to use for manifest forms.
- the state in which the waste was generated: use this source if the state to which you are shipping your hazardous waste does not have its own manifest. Contact your hauler or your state hazardous waste agency for blank forms.
- “General” Uniform Hazardous Manifest—EPA Form 8700-22: use this source if neither state requires a state-specific manifest. Copies are available from some haulers and designated hazardous waste management facilities, or may be purchased from some commercial printers.

A sample copy of a hazardous waste manifest has been filled out for you in Figure 3. 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 considered whether, given your budget, your waste management arrangements are the best to reduce the amount and hazardous nature of your wastes.

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. EPA has also prepared some industry-specific information to help you complete the manifest. This information is available from EPA Regional Offices and a number of trade associations. 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.

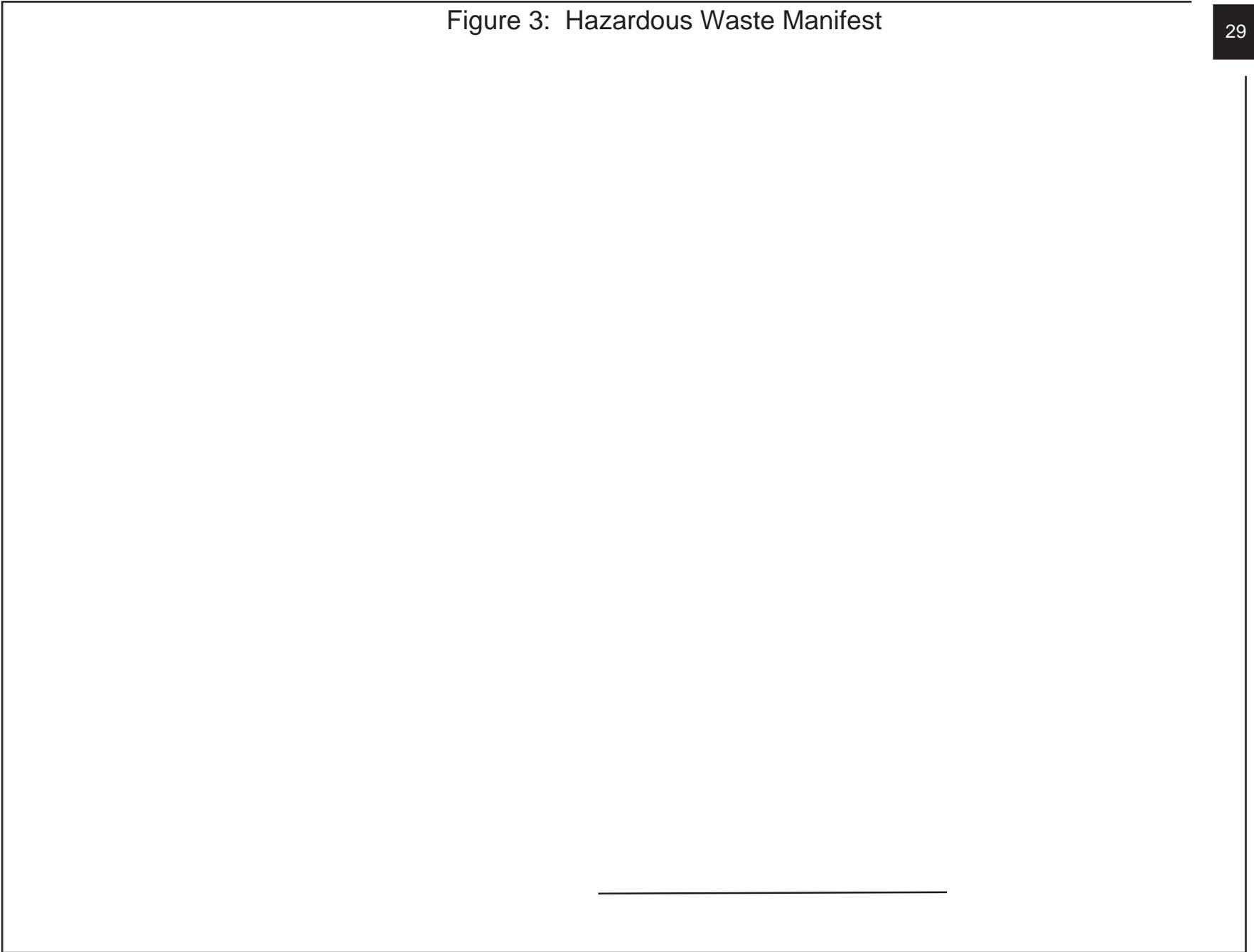
Federal regulations allow you to haul your hazardous waste to a designated facility yourself. You must, however, obtain an EPA transporter identification number and comply with applicable DOT requirements for packaging, labeling, marking, and placarding your shipment. There are also financial responsibilities

and liability requirements under the Federal Motor Carrier Act, but you may be exempt from these if you:

- use a vehicle with a Gross Vehicle Weight Rating of less than 10,000 pounds (van or pickup truck);
- transport your wastes for commerce within your state in non-bulk shipments (i.e., containers of less than 3,500 gallons);
- transport hazardous wastes which meet the “limited quantity exclusion” requirements of Section 172.101 of the DOT regulations.

If you decide to transport your own hazardous wastes, call your state hazardous waste management agency (see Appendix A) to find out what state regulations apply to you. Not all states will allow you to transport your own hazardous wastes. You should also note that if you have an accident during transport, you are responsible for the clean up.

Figure 3: Hazardous Waste Manifest



Maintaining a Safe Environment

The Four Most Important Things to Remember About Managing Your Wastes Properly

- reduce the amount of your hazardous waste
- cooperate with state and local inspectors
- conduct your own self-inspection
- call your state hazardous waste management agency or the U.S. EPA with your questions.

Good hazardous waste management can be thought of as simply “good housekeeping” practices, such as: using and reusing materials as much as possible; recycling or reclaiming waste; treating waste to reduce its hazards; and reducing the amount of waste you generate.

Reducing Hazardous Waste

- Do not mix nonhazardous wastes with hazardous wastes. For example, do not put nonhazardous cleaning agents or rags in the same container as a hazardous solvent 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, or make disposal more expensive.
- Avoid spills or leaks of hazardous products. The materials used to clean up such spills

or leaks also will become hazardous.

- Make sure the original containers of hazardous products are completely empty before you throw them away. Use all the product.
- Avoid using more of a hazardous product than you need. For example, use no more degreasing solvent or pesticide than you need to do the job. Also, do not throw away a container with unused solvent or pesticide in it.

If you reduce your hazardous waste, you will save money on raw materials and reduce the costs to your business of managing and disposing of hazardous wastes.

Note: Large Quantity Generators of hazardous waste in Georgia are required to develop hazardous waste reduction plans and submit them to the Georgia Environmental Protection Division with their biennial reports.

Working with Inspectors

Another aspect of good housekeeping is cooperating with inspection agencies and using a visit by an inspector as an opportunity to identify and correct problems. Accompany your state or local inspectors on a tour of your facility so you can ask any questions you may have and receive advice on more effective ways of handling your hazardous wastes. In addition, guide the inspectors through your property and explain operations to help them to be more sensitive to the particular problems or needs of your business. Inspectors can also serve as a valuable source of

information on recordkeeping, manifests, and safety requirements specific to your facility.

Self-Inspections

The best way to prepare for a visit from an inspector is to conduct your own self-inspection. Make sure that you can correctly answer the following questions, and make sure you have met the requirements.

- Do you have some documentation on the amounts and kinds of hazardous waste you generate and on how you determined that they are hazardous?
- Do you have a U.S. EPA Identification Number (or equivalent state required number, such as the GIN)?
- Do you ship waste off site? If so, by which hauler and to which designated hazardous waste management facility?
- Do you have copies of manifests used to ship your hazardous waste off site? Are they filled out correctly? Have they been signed by the designated facility?
- Is your hazardous waste stored in the proper containers?
- Are the containers properly dated and marked?
- Have you designated an emergency coordinator?
- Have you posted emergency telephone

numbers and the location of emergency equipment?

- Are your employees thoroughly familiar with proper waste handling and emergency procedures?
- Do you understand when you may need to contact the National Response Center?

Remember: if you are still uncertain about how to handle your hazardous waste, or have any questions concerning the rules for generators of 100 to 1000 kilograms/month, there are sources listed in Appendix A that you can contact for answers. In addition, in Georgia you can contact the Tech WREC program at 404/894-3806. 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.

Appendix A

U.S. EPA Regions

EPA Region I

Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont

EPA Region II

New Jersey, New York, Puerto Rico, Virgin Islands

EPA Region III

Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia

EPA Region IV

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

EPA Region V

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

EPA Region VI

Arkansas, Louisiana, New Mexico, Oklahoma, Texas

EPA Region VII

Iowa, Kansas, Missouri, Nebraska

EPA Region VIII

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

EPA Region IX

Arizona, California, Hawaii, Nevada, American Samoa, Guam, Trust Territories of the Pacific

EPA Region X

Alaska, Idaho, Oregon, Washington

U.S. EPA Regional Offices

EPA Region I

RCRA Support Section
JFK Federal Building
Boston, Massachusetts 02203-2211
617/573-5750

EPA Region II

Air and Waste Management Division
290 Broadway, 20th Floor
New York NY 10007-1866
212/637-3725

EPA Region III

RCRA Programs Branch
841 Chestnut Street
Philadelphia PA 19107
215/597-1230 (PA, DC)
215/597-3884 (VA, WV, DE, MD)

EPA Region IV

Hazardous Waste Management Branch
345 Courtland Street NE
Atlanta GA 30365
404/347-3016

EPA Region V

RCRA Activities
PO Box A3587
Chicago IL 60690
312/886-4001

EPA Region VI

Hazardous Waste Management Division
First Interstate Bank Tower
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
214/665-6444

EPA Region VII

RCRA Branch
726 Minnesota Avenue
Attn: ART Division/RCRA
Kansas City KS 66101
913/551-7654

EPA Region VIII

Hazardous Waste Management Division
MC8HWM
999 18th Street, Suite 500
Denver CO 80202-2405
303/294-1361

EPA Region IX

Hazardous Waste Management Division
75 Hawthorne Street, H-3-4
San Francisco CA 94105
415/744-2074

EPA Region X

Waste Management Branch
1200 Sixth Avenue
Seattle WA 98101
206/553-1200

State Hazardous Waste Management Agencies

Alabama

Land Division
Alabama Department of Environmental Management
1751 Cong. Wm. L Dickinson Drive
Montgomery AL 36130
334/271-7730

Alaska

Department of Environmental Conservation
555 Cordova
Anchorage AK 99501
Program Manager: 907/269-7500
fax: 907/269-7652
Northern Regional Office (Fairbanks):
907/451-2360
Southeast Regional Office (Juneau):
907/789-3151

American Samoa

Environmental Quality Commission
Government of American Samoa
Pago Pago, American Samoa 96799
Overseas Operator
Commercial Call: 684/663-2304

Arizona

Hazardous Waste Compliance Unit
Arizona Department of Environmental Quality
3033 N Central Avenue
Phoenix AZ 85012
Hazardous Waste Management: 602/207-4108

Arkansas

Department of Pollution Control and Ecology
PO Box 8913
8001 National Drive
Little Rock AR 72219-8913
501/570-2872

California

Region I:
Department of Toxic Substances Control
PO Box 806
Sacramento CA 95812-0806
916/255-3618

Region II:
Department of Toxic Substances Control
700 Heinz Avenue
Suite 200
Berkeley CA 94710
510/540-3739

Region III:

Department of Toxic Substances Control
1011 N Grantview Avenue
Glendale CA 91201
818/551-2830

Region IV:

Department of Toxic Substances Control
245 West Broadway
Suite 425
Longbeach CA 90802
310/590-4968

Colorado

Colorado Department of Public Health &
Environment
4300 Cherry Creek Drive, South
HMWMD-HWC-B2
Denver CO 80222-1530
303/692-3300

Connecticut

Hazardous Material Management Unit
Department of Environmental Protection
State Office Building
79 Elm Street
Hartford CT 06106
203/424-3372

Delaware

Department of Natural Resources and
Environmental Control
Division of Air and Waste Management
Hazardous Waste Management Branch
PO Box 1401, 89 Kings Highway
Dover DE 19903
302/739-4791

District of Columbia

Department of Consumer and Regulatory Affairs
Environmental Regulation Administration
Hazardous Waste Branch
2100 Martin Luther King Jr., Avenue, S.E.
Washington DC 20020
202/645-6080

Florida

Hazardous Waste Regulation Section
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee FL 32399-2400
904/488-0300

Georgia

Hazardous Waste Management Branch
Suite 1154, East Tower
205 Butler Street SE
Atlanta GA 30334
404/656-7802

Guam

Guam Environmental Protection Agency
Harmon Plaza
Complex Unit B-107
103 Orjas Street
Harmon Guam 96911
671/646-7579

Hawaii

Department of Health
Solid and Hazardous Waste Branch
Five Waterfront Plaza, Suite 250
500 Ala Moana Boulevard
Honolulu HI 96813

Idaho

Department of Environmental Quality
1410 N Hilton, Third Floor
Boise ID 83706
208/334-5879

Illinois

Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield IL 62706
217/785-8452

Indiana

Department of Environmental Management
100 N Senate Avenue
PO Box 6015
Indianapolis IN 46206-6015
317/232-8925

Iowa

US EPA Region VII
RCRA Branch
726 Minnesota Avenue
Kansas City KS 66101
913/551-7646

Kansas

Department of Health and Environment
Hazardous Waste Section
Forbes Field, Building 740
Topeka KS 66620
913/296-1600

Kentucky

Department of Environmental Protection
Cabinet for Natural Resources and Environmental
Protection
Division of Waste Management
Fort Boone Plaza, Building #2
14 Reilly Road
Frankfort KY 40601
502/564-6716

Louisiana

Department of Environmental Quality
Department of Solid and Hazardous Waste
PO Box 82178
Baton Rouge LA 70884-2178
504/765-0332

Maine

Bureau of Oil and Hazardous Materials Control
Department of Environmental Protection
State House Station #17
Augusta ME 04333
207/287-2651

Maryland

Maryland Department of the Environment
Waste Management Administration
Hazardous Waste Program
2500 Broening Highway
Baltimore MD 21224
410/631-3343
410/631-3344

Massachusetts

Division of Solid and Hazardous Waste
Department of Environmental Protection
One Winter Street, 7th Floor
Boston MA 02108
617/292-5854

Michigan

Waste Management Division
Michigan Department of Natural Resources
Box 30241
Lansing MI 48909
517/373-2730

Minnesota

Hazardous Waste Division
Pollution Control Agency
520 LaFayette Road, North
St. Paul MN 55155
612/297-8330

Mississippi

Department of Environmental Quality
PO Box 10385
Jackson MS 39289-0385
601/961-5171

Missouri

Hazardous Waste Management Program
Department of Natural Resources
Jefferson Building
205 Jefferson Street
Jefferson City MO 65101
314/751-3176
Missouri Hotline: 800/334-6946

Montana

Solid and Hazardous Waste Bureau
Department of Health and Environmental
Sciences
PO Box 200901
Helena MT 59620-0901
406/444-1430

Nebraska

Department of Environmental Quality
Hazardous Waste Management Section
State House Station
PO Box 98922
Lincoln NE 68509-8922
402/471-2186

Nevada

Division of Environmental Protection
Waste Management Program
Bureau of Waste Management, Permits Branch
333 West Nye Lane
Carson City NV 89710
702/687-5872

New Hampshire

Division of Public Health Services
Office of Waste Management
Bureau of Hazardous Waste Classification and
Manifests
Department of Health and Welfare
6 Hazen Drive
Concord NH 03301-6527
603/271-2900

New Jersey

Department of Environmental Protection
Solid Hazardous Waste Manifest Section
120 South Stockton Street, CN-421
Trenton NJ 08625-0421
609/292-8341

New Mexico

Hazardous Waste Bureau
333 West Nye Lane
Carson City NM 89710
505/827-1536

New York

Department of Environmental Conservation
Solid and Hazardous Waste Manifest Section
50 Wolfe Road, Room 426
Albany NY 12233
518/457-6858

North Carolina

Solid and Hazardous Waste Management Branch
Division of Health Services
Department of Human Resources
PO Box 27687
Raleigh NC 27611-7687
919/733-2178

North Dakota

Department of Health
 Division of Waste Management
 1200 Missouri Avenue
 PO Box 5520
 Bismarck ND 58506-5520
 701/328-5166

Northern Mariana Islands, Commonwealth of

Department of Public Health and Environmental
 Services
 Division of Environmental Quality
 Saipan, Commonwealth of Mariana Islands 96950
 Overseas Call: 676/234-6984

Ohio

Ohio EPA
 Division of Hazardous Waste Management
 1800 Watermark Drive
 Columbus OH 43215-1099
 614/644-2977

Oklahoma

Department of Environmental Quality
 Hazardous Waste Quality Management Service
 1000 Northeast 10th Street
 Oklahoma City OK 73117-1212
 405/271-5338

Oregon

Oregon Department of Environmental Quality
 Hazardous Waste Operations
 811 Southwest 6th Avenue
 Portland OR 97204
 503/229-5356

Pennsylvania

Pennsylvania Department of Environmental
 Protection
 Bureau of Waste Management
 Land, Recycling, & Waste Management
 Rachel Carlson State Office Building
 Harrisburg PA 17105-8471
 717/787-6239

Puerto Rico

Environmental Quality Board
 Land Pollution Control Area
 Inspection, Monitoring, and Surveillance
 PO Box 11488
 Santurce PR 00910-1488
 809/722-0439

Rhode Island

Solid Waste Program
 Department of Environmental Management
 291 Promenade Street
 Providence RI 02908
 401/277-2797

South Carolina

**Bureau of Solid and Hazardous Waste
Management**
Department of Health and Environmental Control
2600 Bull Street
Columbia SC 29201
803/734-5214

South Dakota

**Department of Environment and Natural
Resources**
Office of Waste Management Programs
523 East Capital Avenue
Pierre SD 57501-3181
605/773-3153

Tennessee

Division of Solid Waste Management
Tennessee Department of Public Health
401 Church Street
LNC Tower, 5th Floor
Nashville TN 37243-1535
615/532-0780

Texas

Industrial and Hazardous Waste Division
Waste Evaluation Section
PO Box 13087, Capitol Station
Austin TX 78711-3087
512/239-2334

Utah

Division of Solid and Hazardous Waste
Department of Environmental Quality
PO Box 144880
Salt Lake City UT 84114-4880
801/538-6170

Vermont

Hazardous Materials Division
Agency of Environmental Conservation
W Office Building
103 South Main Street
Waterbury VT 05671-0404
802/241-3888

Virgin Islands

Department of Planning and Natural Resources
Division of Environmental Protection
Suite 231
Nisky Center Center
St. Thomas Virgin Islands 00802
809/774-3320

Virginia

Virginia Department of Waste Management
Monroe Building, 11th Floor
Richmond VA 23219
804/786-0000

Washington

**Department of Ecology
PO Box 47658
Olympia WA 98504-7658
360/407-6000**

West Virginia

**Department of Commerce, Labor, and
Environmental Protection
Division of Environmental Protection
Office of Waste Management
1356 Hansford Street
Charleston WV 25301**

Wisconsin

**Department of Natural Resources
Bureau of Solid & Hazardous Waste Management
PO Box 7921
Madison WI 53707
608/266-1327**

Wyoming

**EPA Region VIII
Hazardous Waste Management Division
(8HWM-ON)
999 18th Street
Suite 500
Denver CO 80202-2405
303/294-1361**

Appendix B

EPA Hazardous Waste Numbers for Waste Streams Commonly Generated by SQGs

Many SQGs are small businesses and may not be familiar with how hazardous waste materials are identified. Appendix B is designed to help SQGs determine the EPA Hazardous Waste Numbers for their wastes. These numbers are needed to complete the "Notification of Regulated Waste Activity" Form 8700-12. Acutely hazardous wastes are marked with an asterisk (*).

The industries and waste streams described here do not provide a comprehensive list. Except for the pesticide category, this appendix does not include EPA Hazardous Waste Numbers for commercial chemical products that are hazardous when discarded unused. You can find these chemicals and their EPA Hazardous Waste Numbers in 40 CFR 261.33. If you are unclear what Hazardous Waste Number should be applied to your waste stream, consult 40 CFR Part 261.

In those cases where more than one Hazardous Waste Number is applicable, all should be used. For example, benzene would have a Hazardous Waste Number of D001 if it has a flash point less than 140°F; a Hazardous Waste Number of D018 if its concentration as a contaminant for the toxicity characteristic is greater than 0.5 milligrams per liter; a number of F005 if the waste is generated from a non-specific source; and a Hazardous Waste Number of U019 if it is a dis-

carded commercial chemical product. Therefore, waste benzene as a discarded commercial chemical product and having a flash point of less than 140°F would have the Hazardous Waste Numbers U019 and D001. Soil contaminated with a small amount of benzene may just be a D018 if the concentration exceeds 0.5 milligrams per liter, but has a flash point greater than 140°F.

Acids/Bases

Acids, bases or mixtures having a pH less than or equal to 2 or greater than or equal to 12.5, or liquids that corrode steel at 0.25 inches per year or greater are considered to be corrosive (for a complete description of corrosive wastes, see 40 CFR 261.22, Characteristic of Corrosivity). All corrosive materials and solutions have the EPA Hazardous Waste Number of D002. The following are some examples of the more commonly used corrosives:

- Acetic Acid
- Ammonium Hydroxide
- Perchloric Acid
- Chromic Acid
- Phosphoric Acid
- Hydrobromic Acid
- Potassium Hydroxide
- Hydrochloric Acid
- Sodium Hydroxide
- Hydrofluoric Acid
- Sulfuric Acid
- Nitric Acid
- Oleum

Dry Cleaning Filtration Residues

Cooked powder residue (perchloroethylene plants only), still residues, and spent cartridge filters containing perchloroethylene or valclene are hazardous and have an EPA Hazardous Waste Number of F002.

Still residues containing petroleum solvents with a flash point less than 140°F are also considered hazardous, and have an EPA Hazardous Waste Number of D001.

Heavy Metals/Inorganics

Heavy metals and other inorganic waste materials exhibit the characteristic of Toxicity Characteristic Leaching Procedure (TCLP) and are considered hazardous if the extract from a representative sample of the waste has any of the specific constituent concentrations in milligrams per liter as shown in 40 CFR 261.24, Table 1. This may include dusts, solutions, wastewater treatment sludges, paint wastes, waste inks and other such materials which may contain heavy metals/inorganics (note that wastewater treatment sludges from electroplating operations containing nickel and cyanide, are identified as F006). The following table lists TCLP Toxic contaminants, their EPA hazardous waste (HW) number, and the regulatory level in milligrams per liter:

Contaminant	EPA HW No.	Regulatory level (mg/L)
Arsenic	D004	5.0
Barium	D005	100.0
Cadmium	D006	1.0
Chromium	D007	5.0
Lead	D008	5.0
Mercury	D009	0.2
Selenium	D010	1.0
Silver	D011	5.0

Ignitable Wastes

Ignitable wastes include any flammable liquids, nonliquids, and contained gases that have a flashpoint less than 140°F (for a complete description of ignitable wastes, see 40 CFR 261.21, Characteristics of Ignitability). Examples are spent solvents (see also solvents), solvent still bottoms, ignitable paint wastes (paint removers, brush cleaners and stripping agents), epoxy resins and adhesives (epoxies, rubber cements, and marine glues), and waste inks containing flammable solvents. Unless otherwise specified, all ignitable wastes have an EPA Hazardous Waste Number of D001.

Some commonly used ignitable compounds are:

- mineral spirits
- lacquer thinner
- alcohol mixtures greater than 24% alcohol with a flash point of less than 140°F.

Ink Sludges Containing Chromium and Lead

This includes solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used to form ink from pigments, driers, soaps, and stabilizers containing chromium and lead. All ink sludges have an EPA Hazardous Waste Number of K086.

Lead Acid Batteries

Used lead batteries should be reported on the notification form only if they are not recycled. Used lead batteries that are recycled do not need to be counted in determining the quantity of waste that you generate per month, nor do they require a hazardous waste manifest when shipped off your premises. (Note: Special requirements do apply if you recycle your batteries on your own premises — see 40 CFR Part 266.)

- Lead Dross D008
- Spent Acids D002
- Lead Acid Batteries D008, D002

Organic Wastes

Organic Waste materials exhibit the characteristic of TCLP Toxicity and are considered hazardous if the extract from a representative sample of the waste has any of the specific constituent concentrations in milligrams per liter as shown in 40 CFR 261.24. The following are TCLP toxic:

Contaminant	EPA HW No.	Regulatory level (mg/L)
Arsenic	D004	5.0
Barium	D005	100.0
Benzene	D018	0.5
Cadmium	D006	1.0
Carbon tetrachloride	D019	0.5
Chlordane	D020	0.03
Chlorobenzene	D021	100.0
Chloroform	D022	6.0
o-Cresol	D023	200.0
m-Cresol	D024	200.0
p-Cresol	D025	200.0
Cresol	D026	200.0
2,4-D	D016	10.0
1,4-Dichlorobenzene	D027	7.5
1,2-Dichloroethane	D028	0.5
1,1-Dichloroethylene	D029	0.7
2,4-Dinitrotoluene	D030	¹ 0.13
Endrin	D012	0.02
Heptachlor (and epoxide)	D031	0.008
Hexachlorobenzene	D032	¹ 0.13
Hexachlorobutadiene	D033	0.5
Hexachloroethane	D034	3.0
Lead	D008	5.0
Lindane	D013	0.4
Mercury	D009	0.2
Methoxychlor	D014	0.2
Methoxychlor	D014	10.0
Methyl ethyl ketone	D035	200.0
Nitrobenzene	D036	2.0
Pentachlorophenol	D037	100.0
Pyridine	D038	¹ 5.0

*Parathion	P089
Pentachloronitrobenzene	U185
Pentachlorophenol	U242
Phenylmercuric Acetate	D009
*Phorate	P094
*Strychnine	P108
2,4,5-Trichlorophenoxy Acetic Acid	U232
2-(2,4,5-Trichlorophenoxy)- Propionic Acid	U233
*Thallium Sulfate	P115
Thiram	U244
*Toxaphene	P123
Warfarin	U248

Solvents

Spent solvents, solvent still bottoms, or mixtures containing solvents are often hazardous. This includes solvents used in degreasing and paint brush cleaning, and distillation residues from reclamation. The following are some commonly used hazardous solvents (see also ignitable wastes for other hazardous solvents, and 40 CFR 261.31 for most listed hazardous waste solvents):

Benzene	D018
Carbon Disulfide	F005
Carbon Tetrachloride	F001
Chlorobenzene	F002
Cresols	F004
Cresylic Acid	F004
O-Dichlorobenzene	F002
Ethanol	D001

Ethylene Dichloride	D001
Isobutanol	F005
Isopropanol	D001
Kerosene	D001
Methyl Ethyl Ketone	F005
Methylene Chloride (Sludges)	F001
(Still bottoms)	F002
Naphtha	D001
Nitrobenzene	F004
Petroleum Solvents (Flash- point less than 140°F)	D001
Pyridine	F005
1,1,1-Trichloroethane (Sludges)	F001
(Still Bottoms)	F002
Tetrachloroethylene (Sludges)	F001
(Still Bottoms)	F002
Toluene	F005
Trichloroethylene (Sludges)	F001
(Still Bottoms)	F002
Trichlorofluoromethane	F002
Trichlorotrifluoroethane	F002
White Spirits	D001

Reactives

Reactive wastes include reactive materials or mixtures which are unstable, react violently with or form explosive mixtures with water, generate toxic gases or vapors when mixed with water (or when exposed to pH conditions between 2 and

12.5 in the case of cyanide or sulfide bearing wastes), or are capable of detonation or explosive reaction when irritated or heated (for a complete description of reactive wastes, see 40 CFR 261.23, Characteristics of reactivity). Unless otherwise specified, all reactive wastes have an EPA Hazardous Waste Number of D003. The following materials are commonly considered to be reactive:

Acetyl Chloride	D003
Chromic Acid	D003
Cyanides	D003
Organic Peroxides	D003
Perchlorates	D003
Permanganates	D003
Hypochlorites	D003
Sulfides	D003
Crystalline picric acid	D003

Spent Plating and Cyanide Wastes

Spent plating wastes contain cleaning solutions and plating solutions with caustics, solvents, heavy metals, and cyanides. Cyanide wastes may also be generated from heat treatment operations, pigment production, and manufacturing of anti-caking agents. Cyanide wastes are acutely hazardous wastes. Plating wastes are generally Hazardous Waste Numbers F006–F009. Heat treatment wastes are generally Hazardous Waste Numbers F010–F012. See 40 CFR 261.31 for a more complete description of plating wastes.

Wood Preserving Agents

Compounds or mixtures used in wood preserving, including the wastewater treatment sludge from wastewater treatment operations, are considered hazardous. Bottom sediment sludges from the treatment of wastewater processes that use creosate or pentachlorophenol are hazardous, and have an EPA Hazardous Waste Number of K001. Unless otherwise indicated, specific wood preserving components are:

Chromated Copper Arsenate	D004
Creosate	K001
Pentachlorophenol	K001
Wastewaters from wood preserving processes	F032 F034 F035

