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A Dealer Guide to the...

# Federal Hazardous Waste Law

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This Guide was prepared by Douglas I. Greenhaus, Director of Environment, Health and Safety, NADA Legal Department. It is intended to give general advice to dealers on hazardous waste management. It is not intended, nor should it be construed, as specific advice for any dealer. Dealers should consult with their dealership's legal counsel or a waste management consultant on the application of federal and state waste management laws to their particular dealership operations.

# A Dealer Guide to the Federal Hazardous Waste Law

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# A Dealer Guide to the Federal Hazardous Waste Law

## I. BACKGROUND ON THE RULE

On November 8, 1984, Congress amended the Resource Conservation and Recovery Act (RCRA), the federal law that protects human health and the environment from improper waste management practices. These amendments strengthened the national program that regulates hazardous wastes from the point of generation until final disposition ("cradle-to-grave"). The program is administered by the Environmental Protection Agency (EPA) through its Office of Solid Waste, its regional offices and through authorized states.

The 1984 RCRA amendments directed EPA to promulgate regulations for generators of small quantities (100-1,100 kg or 220-2,200 lbs./month) of hazardous waste. Final small quantity generator (SQG) regulations were issued on March 24, 1986. The majority of automobile dealerships are believed to fall into the SQG class (220 lbs. is roughly half a 55-gallon drum). Moreover, according to a March 1985 EPA survey, about half of all SQGs are engaged in the business of vehicle maintenance and repair.

This guide spells out federal regulatory responsibilities, answers frequently asked questions on hazardous waste management, and suggests cost-effective strategies for achieving compliance. Note: Several states have requirements that are stricter than the federal law. Therefore, dealers should carefully review all state dealer association or environmental agency information on these issues.

## II. OUTLINE OF NEW REQUIREMENTS

Federal hazardous waste regulations require most franchised dealers to

- determine the nature and volume of the hazardous wastes they generate;
- obtain a U.S. EPA Identification Number;
- properly accumulate hazardous waste for limited time periods;
- use Uniform Hazardous Waste Manifests when shipping wastes off-site;
- offer wastes only to transporters with EPA I.D. Numbers;
- ensure hazardous wastes managed offsite are done so at a facility with interim status or a permit under RCRA.

### III. WASTE DETERMINATION

Q: As a franchised car or truck dealer, how can I determine if I generate the kinds and quantities of wastes subject to the hazardous waste laws?

A: All dealers must determine the kinds and volumes of wastes they generate. While NADA has identified most of the classes of hazardous waste dealers must be concerned about, it is each dealer's responsibility to determine exactly which wastes are "hazardous." The list of hazardous wastes will vary from dealership to dealership depending on chemical use, management practices, and state law variations. While no specific format is mandated, written waste determinations (e.g. analyses, notes of calls to officials, test results) should be kept in a hazardous waste record file.

A waste may be "hazardous" based on either of the following criteria:

1. It has an ignitability, reactivity, corrosivity or toxicity characteristic.
2. It is one of approximately 400 chemicals listed by EPA as hazardous.

Dealers need not test all of their wastes but rather may apply their knowledge of the wastes, the raw materials, and the generation processes used. Appendix A lists many of the hazardous wastes generated in dealership service and body departments. Questions about specific wastes may be directed to the state Solid and Hazardous Waste Agencies listed in Appendix B.

Q: May I mix hazardous wastes together or with nonhazardous wastes?

A: While there are situations where hazardous wastes may be safely or legally mixed with nonhazardous wastes, as a general rule dealers should not mix wastes. Mixing incompatible wastes may prove to be dangerous. Mixing hazardous wastes with nonhazardous wastes may render the entire mixture "hazardous" as a matter of law (i.e. listed wastes mixed with used oil).

### IV. PAPERWORK

Q: Do I need to obtain an EPA Identification Number?

A: Dealers generating more than 100 kg (roughly half a 55-gallon drum) of hazardous waste per month must obtain an EPA Identification Number by filing EPA form 8700-12. This form is available from any EPA regional office or any state office listed in Appendix B. Note that some states require EPA Identification Numbers for dealers who generate less than 100 kg/month.

Q: May I ship hazardous wastes with a one-way, single copy manifest?

A: No. Dealers generating more than 100 kg/month of hazardous waste must generally use a multiple copy "round trip" Uniform Hazardous Waste Manifest (UHW) when shipping wastes off-site. The appropriate UHW form may be obtained from the state agencies listed in Appendix B or from most hazardous waste

haulers or management facilities. A copy of each manifest sent must be kept on file along with the copy signed and returned to the dealer by the receiving waste facility. Returned manifest copies serve as evidence that waste shipments reached their intended destination. Manifest copies must be retained for at least three years.

Generally, dealers need not use the UHWM when wastes are recycled offsite and a recycled product is returned to the dealership. A waste qualifies for this exemption if it is reclaimed under a contractual agreement pursuant to which

- The type of waste and frequency of shipments are specified.
- The vehicles used to transport the waste to the recycling facility and to deliver regenerated material back to the generator are owned and operated by the waste reclaimer.
- The generator maintains a copy of the agreement for a period of at least three years after its termination or expiration.

Some dealers may have this type of arrangement with their “parts cleaner” company. Note that some states do not recognize this manifesting exemption.

Q: Must I report to EPA if I fail to receive a return copy of the manifest?

A: Yes. There is now an “exception reporting” requirement. Dealers who fail to receive a return manifest within 60 days after a waste was initially shipped must submit a copy of the manifest, with some indication that no confirmation of delivery has been received, to the EPA Regional Administrator for the region in which the dealership is located. Obviously, missing shipments can prove to be a problem if they were mishandled.

Q: Must I file biennial waste reports to EPA?

A: There is no federal annual or biennial reporting requirement for SQGs (although some states do require a periodic filing). However, EPA has occasionally surveyed SQGs for information.

## **V. ON-SITE WASTE ACCUMULATION**

Q: As a generator, I find that I must accumulate waste prior to recycling or off-site shipment. Must I take any special precautions when doing so?

A: Strict time and quantity limits apply to SQGs who accumulate wastes on-site. Most, if not all, dealers accumulate wastes in containers. EPA defines a “container” to be “any portable device in which material is stored, transported, treated, disposed of, or otherwise handled.” Examples include drums in paint shops and small cans hooked up to parts washers.

An SQG may accumulate up to 55 gallons of waste in “satellite” areas before triggering a time or quantity limit. Once the 55-gallon

limit is reached, compliance with the accumulation standards must begin within three days. Containers must be kept inside or under cover, inspected to ensure they are in good condition, compatible with the wastes stored, kept closed (except when wastes are added or removed), and handled to avoid ruptures or leaks.

Containers (in excess of the 55-gallon limit) must be marked with the words "Hazardous Waste" and the date accumulation of the waste begins. Label suppliers can provide dealers with labels that meet these requirements. The accumulation start date is important because SQGs have up to 180 days (270 days if the waste will be sent off-site to a facility 200 or more miles away) before becoming, by law, hazardous waste storage facilities. SQGs will also trigger storage requirements if they accumulate more than 6,000 kg (roughly 13,200 lbs. or [30] 55-gallon drums) of hazardous waste at once.

Thirty (30) day extensions of these time periods are available under emergency conditions by approval of an EPA Regional Office. Both SQGs and under 100 kg/month generators who accumulate between 1,000 and 6,000 kg of waste must comply with the container requirements set out above in the discussion on "satellite" storage. In addition, dealers must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion. To avoid fires, leaks, or waste discharges, incompatible wastes must not be placed in the same container. SQGs are required to store ignitable wastes as far from property boundaries as possible.

Under no circumstances should dealers exceed these time or volume limits. Doing so would trigger a much greater regulatory burden including the need to obtain a waste storage facility permit. Proper waste management techniques should allow virtually any dealer to keep below these limits.

Several preparedness and prevention requirements apply when accumulating hazardous wastes on-site. Dealers must

- maintain and operate the dealership to minimize the possibility of fire, explosion, or unplanned release of hazardous waste or constituents;
- test and maintain accessibility of internal communications or alarm systems, and telephone and fire control equipment;
- maintain sufficient access to allow unobstructed emergency movement of personnel and equipment;
- arrange to familiarize appropriate local and/or state emergency personnel with the dealership. To comply with this last requirement, evaluate the hazardous wastes being accumulated and determine which, if any, emergency personnel may be involved if there is an emergency at the dealership. Signed

and dated letters should then be sent to those personnel (e.g. fire department, police, hospital) inviting them for a facility tour. Keep copies of these letters on file.

Contingency plans, emergency procedures and personnel training requirements also apply. Dealer SQGs must

- designate an employee on premises or on call at all times as the "Emergency Coordinator (EC);" (Service and/or body shop managers are usually designated as ECs as they are best able to take charge or designate someone to take charge when the need arises.)
- post a notice next to a telephone listing the EC's name and telephone number, fire extinguisher, spill control equipment and fire alarm locations, and fire department telephone number (if no direct alarm)
- ensure employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their jobs. Provide waste management and emergency training both for existing personnel in these departments and as a routine matter when orienting new hires.

The EC or a designee must respond to emergencies by

- calling the fire department or attempting to put out fires;
- containing and cleaning up waste spills;
- notifying the EPA National Response Center at 800-424-8802 for threats to human health outside of the dealership or if wastes threaten to reach surface or groundwater.

Q. Is it better to accumulate hazardous wastes in tanks than containers?

A. Few dealers accumulate hazardous wastes in tanks prior to recycling or shipment off-site. Federal tank storage regulations are relatively complex and burdensome to comply with, so avoid tank storage whenever possible.

Q. I am considering transporting my hazardous waste because of trouble finding a licensed transporter in my area. What do I need to do?

A. Reconsider. Generators who self-transport their wastes must obtain an EPA Transporter I.D. Number and comply with all EPA transporter regulations and applicable Department of Transportation regulations for packaging, labeling, marking, and placarding shipments. Moreover, not all states will allow dealers to transport their hazardous wastes. It is best to contact your state agency listed in Appendix B for a list of transporters licensed to handle the wastes you need to ship.

- Q. Are there additional requirements that apply to the treatment, disposal or storage of hazardous waste at a dealership?
- A. Yes. These activities are highly regulated and require a permit. Avoid these activities unless you are interested in going into the hazardous waste business, with its high costs and regulatory obligations. Previously, this guide addressed how to avoid inadvertently becoming a storage facility by being careful not to accumulate hazardous wastes in large amounts or for too long. Below, the advantages of on-site recycling are discussed. Note that SQGs may “treat” accumulated wastes in containers (or tanks) without a permit.

## VI. PREFERRED MANAGEMENT PRACTICES

- Q. I presently generate 150 kg/month of waste, but by reducing the amount and changing the types of materials I use, I can probably reduce our waste generation below 100 kg/month. Are there advantages to doing so?
- A. EPA calls generators of under 100 kg/month of waste “conditionally exempt small quantity generators (CESQGs).” CESQGs are just that; exempt from most federal regulations under certain conditions. CESQGs need only
- conduct waste determinations;
  - comply with all SQG requirements if they accumulate over 1,000 kg;
  - ensure that hazardous wastes that are sent off-site go to approved facilities.

When determining one’s “generator class” status, dealers may exclude the volume of certain “exempt” wastes. The following wastes do not count towards the 100 or 1,000 kg limits under *federal law*:

1. *Wastes discharged to a publicly owned treatment works (POTW).* Wastes may be dischargeable legally to POTWs if they don’t interfere with their operation or with subsequent sludge management. For example, vehicle wash water and floor drain water flowing out through sumps or separators do not count towards generation or accumulation volume limits. However, since dealers must notify their POTW if they discharge more than 15 kg (33 lbs.) of hazardous waste/month, they should institute a policy prohibiting the intentional discharge of any hazardous waste (e.g., waste gasoline, waste solvents) “down the drain.” Moreover, wastes generally considered to be nonhazardous (e.g. used oil, spent antifreeze) may also be prohibited by local, state or federal clean water law. Always check with the local POTW manager before discharging questionable wastes “down the drain.”

Dealers discharging contaminated wastewater into “shallow wells” (septic systems, leach fields, etc.) risk contaminating groundwater and degrading the value of their property.

Lenders and potential buyers almost always require an environmental audit prior to the purchase or financing of commercial property. Never pollute your own backyard with hazardous waste!

2. *Spent lead acid batteries when either returned to a manufacturer or sent to a "battery breaker" (i.e., will be reclaimed).* Take steps to ensure that persons who pick up spent batteries will indeed take them to a reclaimer. Improperly disposed of batteries may result in a Superfund problem. When *disposed of*, batteries will count towards generation or accumulation limits.
3. *Used oil.* Used oil is not a federal hazardous waste, therefore volumes accumulated do not count towards generation or accumulation limits. EPA's used oil management regulations require
  - proper storage in containers, above-ground tanks, or underground tanks (see, NADA Guide to the EPA Underground Storage Tank Regulations). Label storage units with the words "Used Oil."
  - taking corrective action to address releases or spills.
  - using transporters with EPA I.D. numbers for offsite shipments. Dealers may ship up to 55 gallons themselves without becoming an EPA transporter. It is recommended, but not mandatory, that dealers keep a log of their offsite shipments of used oil.

Used oil is exempt from Superfund for dealers accepting "do-it-yourselfer"(DIY) used oil provided they comply with the above requirements.

Consider managing used oil on site in space heaters. It may exempt your storage tank from regulation and will avoid alternative heating costs. Space heaters must be under 500,000 BTUs/hr. in size, vented to the atmosphere, and used to burn only dealership and DIY used oil. Burning in larger units is possible but more strictly regulated.

Filters, rags, and other used-oil-contaminated materials may be disposed of as nonhazardous solid waste absent any free-flowing oil. In the alternative, consider having waste filters picked up for recycling.

Under existing law, used oil mixed with hazardous waste may qualify as a hazardous waste and be counted towards generation and accumulation limits. Therefore, avoid mixing any hazardous wastes into used oil.

4. *Byproducts of in-house reclamation.* These include sludges and residues from paint waste stills or solvent filtration sys-

tems. Since onsite recycling units such as stills, filtration systems, and gun washers usually result in significant cost savings and reduced regulatory burdens, they should be seriously considered. Shop carefully as some units may be safer (i.e., U.L. approved) or more efficient than others. Several dealers may decide to consider investing in a larger solvent still with the idea of mobilizing it for in-house use in each of several facilities. **Caution:** Transporting spent materials without appropriate authorization or operating the still off site without a permit may violate federal or state hazardous waste laws.

Some dealers recycle their still residues as a constituent of undercoating. Recycling activity of this sort exempts the material from the definition of hazardous waste. In the alternative, baking the sludge or residue into a solid pancake should allow it to be disposed of in the dumpster as nonhazardous.

5. *Wastewater sludges and tank wastes.* In 1990, EPA tightened the characteristic test procedure for toxic hazardous wastes. The new test, the "toxicity characteristic leach procedure" (TCLP) requires wastes to be tested for 40 chemical constituents. When one or more of these constituents is found in excess of its legal limit, a waste flunks the TCLP test and is characterized as toxic. Of the forty constituents, lead and benzene are of greatest concern.

Vehicle service operation wastewaters often contain some soils, oils, metals, solvents, and other pollutants. Floor drains and wash bays often lead to oil/water separators or sumps that build up sludges that must periodically be pumped out. Sludges also build up in pipes and tanks. Under the new TCLP test, these sludges may test out as hazardous. Therefore, dealers having sludges pumped out should either pay to have them TCLP tested for metals and benzene or assume they are hazardous and arrange to have them picked up and managed as such. Of course, if they test out or are assumed to be hazardous, they will count towards the generation and accumulation limits.

6. *Waste radiator coolant.* Based on a large amount of data collected by NADA and other organizations representing businesses managing waste radiator coolant (antifreeze), waste antifreeze is not typically hazardous. An effort is underway to obtain a clarification from EPA to this effect. In most communities, waste antifreeze may be disposed of down the drain without interfering with local POTW operations. Never discharge waste antifreeze to a shallow well or directly into surface water. See Appendix C for additional waste antifreeze management recommendations including recycling options. Always consult your vehicle manufacturer before investing in spent antifreeze recycling equipment or using recycled antifreeze in vehicles under warranty.

7. *Miscellaneous Wastes.* Several other common automotive wastes may be hazardous depending on what they are contaminated with. The following materials may be handled as nonhazardous solid waste if managed properly:
  - *Gas filters:* Evaporate gas, recycle as scrap metal or toss in dumpster.
  - *Spray booth filters:* Allow paint to fully dry, toss in dumpster. State restrictions may require off-site recycling. Consider water filtration or cleanable filters. Always install filters for full useful life.
  - *Wipes:* Allow to dry, toss in dumpster. Consider rags/laundry service.
  - *Clean up materials:* Dispose of floor sweep, kitty litter, socks and other adsorbents as hazardous wastes if used to clean up hazardous waste, toss in the dumpster if not.
8. *Good work practices/pollution prevention.* Good work practices and pollution prevention techniques will reduce the amount of hazardous waste generated. Note the following examples:
  - *Painting:* Avoid mixing up more paint than necessary. Use high efficiency application equipment (e.g., HVLP guns). Consider water based paint systems. Consider in-house paint waste recycling.
  - *Gun washing:* Use enclosed cleaning machines to reduce waste solvent.
  - *Parts cleaners:* Consider switching to a non-hazardous parts cleaner. Options include water (aqueous) based cleaners, steam cleaning, terpene based cleaners, and biological cleaners. When shopping for alternatives, consider cost and ease of use. If continuing to use solvents, use for as long as possible between pickups or recycling.
  - *Empty Containers:* Always fully empty any containers and aerosol cans before disposal. So long as they contain less than 1 inch of material, cans and containers are not themselves hazardous wastes. Recycle if possible and economically practicable.

## VII. ENFORCEMENT

The Federal law gives EPA and the states the authority to bring administrative or civil actions for penalties ranging up to \$25,000 per violation, per day. Moreover, actions for criminal sanctions, including jail time, may be brought for intentional violations of RCRA.

## VIII. SOURCES OF REGULATORY INFORMATION

Contact EPA's RCRA/Superfund Hotline for regulatory citations, guidance, interpretations and background information on the hazardous waste program. It can also provide publications available at little or no cost, including special publications concerning SQGs, underground storage tanks and used oil. EPA's Small Business Ombudsman is also available to provide assistance.

In the event of a spill where a reportable quantity of hazardous waste is released into the environment or where a spill of hazardous waste or used oil threatens surface or groundwater, dealers should immediately contact the National Response Center for Oil and Hazardous Materials Spills.

### Hotline

RCRA/Superfund Hotline (800) 424-9346/DC Area (703) 412-9810

Small Business Ombudsman (800) 368-5888/DC Area (703) 305-5938

National Response Center (800) 424-8802/DC Area (202) 267-2675

### Regional Contacts

The following list contains the names, addresses, and telephone numbers for EPA's regional office hazardous waste contacts:

#### **EPA REGION I**

State Waste Programs Branch  
JFK Federal Building  
Boston, MA 02203  
(617) 573-5770  
*Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont*

#### **EPA REGION II**

Hazardous & Solid Waste Programs  
290 Broadway  
New York, NY 10007-1866  
(212) 637-4126  
*New Jersey, New York, Puerto Rico, Virgin Islands*

#### **EPA REGION III**

RCRA Programs Branch  
841 Chestnut St.  
Philadelphia, PA 19107  
(215) 597-0980  
*Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia*

#### **EPA REGION IV**

RCRA Programs Branch  
345 Courtland St., NE  
Atlanta, GA 30365  
(404) 347-3433  
*Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee*

**EPA REGION V**

RCRA Programs Branch  
77 West Jackson Boulevard  
Chicago, IL 60604-3507  
(312) 353-8512  
*Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin*

**EPA REGION VI**

RCRA Programs Branch  
First Interstate Bank Tower at Fountain Place  
1445 Ross Avenue, 12th Floor, Suite 1200  
Dallas, TX 75202-2733  
(214) 665-6656  
*Arkansas, Louisiana, New Mexico, Oklahoma, Texas*

**EPA REGION VII**

RCRA Programs Branch  
726 Minnesota Avenue  
Kansas City, KS 66101  
(913) 551-7051  
*Iowa, Kansas, Missouri, Nebraska*

**EPA REGION VIII**

RCRA Implementation Branch  
999 18th Street, Suite 500  
Denver, CO 80202-2466  
(303) 293-1663  
*Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming*

**EPA REGION IX**

RCRA Programs Branch  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 744-2090  
*Arizona, California, Hawaii, Nevada, American Samoa, Guam,  
Trust Territories of the Pacific*

**EPA REGION X**

Waste Management Branch  
1200 Sixth Avenue  
Seattle, WA 98101  
(206) 553-2782  
*Alaska, Idaho, Oregon, Washington*

**State Agencies**

State agency personnel can identify those requirements of state hazardous waste programs that are more stringent than the Federal law and what state requirements, if any, apply to used oil or underground storage tanks. See Appendix B.

**Further Assistance**

Dealers with questions concerning issues addressed in this guide may contact the NADA Legal Department at (703) 821-7040.

## Appendix A

### WASTES FROM DEALERSHIP OPERATIONS

Car and truck dealerships use a wide variety of oils, solvents, paints, fuels, and other products in their vehicle maintenance and repair operations. Liquids and other materials removed from vehicles during repair, spent commercial products used in maintenance, and waste materials produced in the body shop are all wastes subject to federal regulation. These wastes include:

- *Used or waste oil*-- engine oil, transmission fluid, brake fluid, differential fluid, hydraulic fluid, etc.
- *Spent Solvents* -- degreasers, paint thinners, cold cleaners, mixed industrial solvents, and small cans of adhesives, sealers, cleaners
- *Used lead acid* -- batteries
- *Waste gasoline and diesel fuel*
- *Waste paints and lacquers*
- *Waste strong acids and basic (alkaline) wastes*
- *Contaminated scrap metals and "unempty" containers*

EPA tables on the following pages list many (but by no means all) of the specific wastes likely to be generated by dealerships.

## Vehicle Maintenance

*If you repair or maintain*

- cars
- vans
- trucks
- heavy equipment
- farm equipment

*or if you*

- remove oil or grease
- remove rust, dirt or paint
- repair or rebuild
- refinish or restore
- paint
- replace lead-acid batteries

the products you use on the vehicles, and your equipment, tools, hands, or floor may contain hazardous materials, and the wastes generated by using these products may be hazardous wastes.

## Products Containing Hazardous Materials

Every day mechanics, bodymen and others use products containing hazardous materials, including

- rust removers, which contain strong acid or alkaline solutions
- carburetor cleaners, which contain flammable or combustible liquids
- used rags containing combustible or flammable solvents
- paints with flammable or combustible thinners or reducers
- auto and truck batteries

These products contain chemicals or materials which are hazardous to human health and the environment. Table 1 lists typical operations/processes which use products that may contain hazardous materials and which probably generate hazardous wastes. If you generate 220 pounds (about half of a 55-gallon drum) or more of hazardous waste per month, you must fill out a Uniform Hazardous Waste Manifest when you ship this waste off your property.

## Uniform Hazardous Waste Manifest

Item 11 of the Uniform Hazardous Waste Manifest requires the proper Department of Transportation (DOT) shipping description, which includes the proper DOT shipping name for each waste. To help you complete this item, Table 2 provides this information for some of the hazardous wastes you are most likely to generate. To obtain the DOT shipping name, hazard class and UN/NA identification number follow these instructions:

1. *Select* the typical process/operation from column one of Table 1.
2. *Match* the ingredients from column three and the waste type generated from column four of Table 1 with the waste type and ingredient in column one of Table 2.

Not all vehicle maintenance operations generate hazardous wastes. If you don't see a particular chemical that you use, or if you generate a waste not listed, or if you need any type of help, call your state hazardous waste management agency.

**NOTE:** Under current federal law, you do not have to use a Manifest when you ship either of the following:

- used/dead lead acid batteries that are destined for recycling;
- used motor oil. Be aware, however that the regulations for used oil may change. You should still use environmentally sound methods for the collection, storage and recycling of used motor oil.

Remember, your state may have its own requirements for lead acid batteries or used oil. Be sure to check with your state hazardous waste management agency.

**TABLE 1**

**Typical operations using materials which may generate hazardous wastes**

<b>Typical Process/ Operation</b>	<b>Typical Materials Used</b>	<b>Typical Material Ingredients on Label</b>	<b>General Types of Wastes Generated</b>
Oil and grease removal	degreasers -- (gunk), carburetor cleaners, engine cleaners, varsol, solvents, acids/alkalies	petroleum distillates, aromatic hydrocarbons, mineral spirits	ignitable wastes, spent solvents, combustible solids, waste acid/alkaline solutions
Engine, parts and equipment cleaning	degreasers -- (gunk), carburetor cleaners, engine cleaners, solvents, acids/alkalies, cleaning fluids	petroleum distillates, aromatic hydrocarbons, mineral spirits, benzene, toluene, petroleum naphtha	ignitable wastes, spent solvents combustible solids, waste acid/alkaline solutions
Rust removal	naval jelly, strong acids, strong alkalies	phosphoric acid, hydrochloric acid, hydrofluoric acid, sodium hydroxide	waste acids, waste alkalies
Paint preparation	paint thinners, enamel reducers, white spirits	alcohols, petroleum distillates, oxygenated solvents, mineral spirits, ketones	spent solvents, ignitable wastes, ignitable paint wastes, paint wastes with heavy metals
Painting	enamels, lacquers, epoxies, alkyds, acrylics, primers	acetone, toluene, petroleum distillates, epoxy ester resins, methylene chloride, xylene, VM&P naphtha, aromatic hydrocarbons, methyl isobutyl, ketones	ignitable paint wastes, spent solvents, paint wastes with heavy metals, ignitable wastes
Spray booth, spray guns, and brush cleaning	paint thinners, enamel reducers, white spirits	ketones, alcohols, toluene, acetone, isopropyl alcohol, petroleum distillates, mineral spirits	ignitable paint wastes, heavy metal paint wastes, spent solvents
Paint removal	solvents, paint thinners, enamel reducers, white spirits	acetone, toluene, petroleum distillates, methanol, methylene chloride, isopropyl alcohol, mineral spirits, alcohols, ketones, other oxygenated solvents	ignitable paint wastes, heavy metal paint wastes, spent solvents
Used lead acid batteries	car, truck, boat, motorcycle, and other vehicle batteries	lead dross, less than 3% free acids	used lead acid batteries, strong acid/alkaline solutions

**TABLE 2**  
**Waste Descriptions<sup>1</sup>**

<b>Waste Type</b>	<b>Designations/Trade Names</b>	<b>DOT Shipping Name</b>	<b>Hazard Class</b>	<b>UN/NAID No.</b>
<b>Strong Acid/Alkaline Wastes</b>				
Ammonium Hydroxide	Ammonium Hydroxide, NH <sub>4</sub> OH, Spirit of Hartshorn, Aqua Ammonia	Waste Ammonium Hydroxide (containing not less than 12% but not more than 44% ammonia)	Corrosive Material	NA2672
		(containing less than 12% ammonia)	ORM-A	NA2672
Hydrobromic Acid	Hydrobromic Acid, Hbr	Waste Hydrobromic acid (not more than 49% strength)	Corrosive Material	UN1788
Hydrochloric Acid	Hydrochloric Acid, HCL, Muriatic Acid	Waste Hydrochloric acid	Corrosive Material	NA1789
Hydrofluoric Acid	Hydrofluoric Acid, HF, Fluorohydric Acid	Waste Hydrofluoric Acid	Corrosive Material	UN1790
Nitric Acid	Nitric Acid, HNO <sub>2</sub> , Aquafortis	Waste Nitric Acid (over 40%) (40% or less)	Oxidizer Corrosive Material	UN2031 NA1760
Phosphoric Acid	Phosphoric Acid, H <sub>3</sub> PO <sub>4</sub> , Orthophosphoric Acid	Waste Phosphoric Acid	Corrosive Material	UN1805
Potassium Hydroxide	Potassium Hydroxide, KOH, Potassium Hydrate, Caustic Potash, Potassa	Waste Potassium Hydroxide solution	Corrosive Material	UN1814
		Dry Solid, Flake, Bead, or Granular	Corrosive Material	UN1813
Sodium Hydroxide	Sodium Hydroxide, NaOH, Caustic Soda, Soda Lye, Sodium Hydrate	Waste Sodium Hydroxide Solution	Corrosive Material	UN1824
		Dry Solid, Flake, Bead, or Granular	Corrosive Material	UN1823
Sulfuric Acid	Sulfuric Acid, H <sub>2</sub> SO <sub>4</sub> , Oil of Vitriol	Waste Sulfuric Acid	Corrosive Material	UN1830
Chromic Acid	Chromic Acid	Waste Chromic Acid Solution	Corrosive Material	UN1755
<b>Ignitable Wastes</b>				
Ignitable Wastes NOS <sup>1</sup>	Carburetor Cleaners, Ignitable Wastes, NOS	Waste Flammable Liquid NOS	Flammable Liquid <sup>3</sup>	UN1933
Aromatic Hydrocarbons		Waste Combustible Liquid NOS	Combustible Liquid <sup>4</sup>	NA1993
Petroleum Distillates		Waste Flammable Solid NOS	Flammable Solid	UN1325
<b>Ignitable Paint Wastes</b>				
Ethylene Dichloride	Ethylene Dichloride, 1,2-Dichloroethane	Waste Ethylene Dichloride	Flammable Liquid	UN1184
Benzene	Benzene	Waste Benzene (benzol)	Flammable Liquid	UN1114
Toluene	Toluene	Waste Toluene (toluol)	Flammable Liquid	UN1294
Ethyl Benzene	Ethyl Benzene	Waste Ethyl Benzene	Flammable Liquid	UN1175
Chlorobenzene	Chlorobenzene, Monochlorobenzene, Phenylchloride	Waste Chlorobenzene	Flammable Liquid	UN1134
Methyl Ethyl Ketone	Methyl Ethyl Ketone, MEK, Methyl Acetone, Meeto, Butanone, Ethyl Methyl Ketone	Waste Methyl Ethyl Ketone	Flammable Liquid	UN1193
<b>Spent Solvents</b>				
White Spirits, Varsol	White Spirits, Mineral Spirits, Naphtha	Waste Naphtha	Flammable Liquid Combustible Liquid	UN2553 UN2553
1,1,1-Trichloroethane	Aeothane TT, Chlorlen, Chloroethene, Methyl-Chloroethene, Alpha T, Chlorotene	Waste 1,1,1-Trichloroethane	ORM-A	UN2831
Petroleum Distillates	Petroleum Distillates	Petroleum Distillate	Flammable Liquid Combustible Liquid	UN1268 UN1268
<b>Paint Wastes with Heavy Metals</b>				
Paints with heavy metals Lead, Nickel, Chromium	Heavy Metals Paint	Hazardous Waste, Liquid or Solid, NOS	ORM-E	NA9189

<sup>1</sup>These descriptions may change given variation in waste characteristics or conditions.  
<sup>2</sup>NOS1 Not otherwise specified

<sup>3</sup>A Flammable Liquid has a flash point below 100°F.

<sup>4</sup>A Combustible liquid has a flash point between 100°F and 200°F.

**Appendix B**  
**STATE HAZARDOUS WASTE MANAGEMENT AGENCIES**  
**AS OF JANUARY 1996**

Chief, Land Division  
Dep't. of Environmental Management  
P.O. Box 301463  
Montgomery, AL 36130-1463

Manager, Hazardous Waste Unit  
Air and Water Division/Industrial  
Operations Program  
Dep't. of Environmental Conservation  
410 Willoughby Avenue  
Juneau, AK 99801-1795

Director  
Environmental Quality Commission  
American Samoan Government  
Pago Pago, American Samoa 96799

Assistant Director  
Office of Waste Programs  
Dep't. of Environmental Quality  
3033 North Central Avenue  
Phoenix, AZ 85004

Chief, Hazardous Waste Division  
Dep't. of Pollution Control and Ecology  
8001 National Drive  
P.O. Box 8913  
Little Rock, AR 72219

Deputy Director  
Hazardous Waste Management  
P.O. Box 806  
Sacramento, CA 95812-0806

Manager  
Hazardous Waste Control Program  
Department of Health  
4300 Cherry Creek Drive South  
Denver, CO 80222-1530

Director  
Waste Engineering and Enforcement Div.  
Bureau of Waste Management  
Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106

Manager, RCRA Branch  
Air and Waste Management Division  
Dep't. of Natural Resources &  
Environmental Control  
89 Kings Highway  
P.O. Box 1401  
Dover, DE 19903

Branch Chief  
Hazardous Waste Management Program  
Dep't. of Consumer & Regulatory Affairs/  
Environmental Regulations  
2100 MLK Jr. Ave., S.E. Suite 203  
Washington, D.C. 20020

Bureau Chief  
Bureau of Solid & Hazardous Waste  
Division of Waste Management  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Guam Environmental Protection Agency  
Air & Land Programs  
IT&E Harmon Plaza, Complex Unit D-107  
130 Rojas Street  
Harmon, Guam 96911

Bureau Chief, Hazardous Materials Bureau  
Division of Environmental Quality  
Department of Health & Welfare  
1410 North Hilton Street  
Boise, ID 83706-1290

Chief, Bureau of Land  
Illinois Environmental Protection Agency  
2200 Churchill Road  
P.O. Box 19276  
Springfield, IL 62794-9276

Chief, Hazardous Waste Branch  
Office of Solid & Hazardous Waste Mgmt.  
Dep't. of Environmental Management  
105 S. Meridian Street, P.O. Box 6015  
Indianapolis, IN 46206-6015

Chief, Land Quality Bureau  
Department of Natural Resources  
900 East Grand Avenue  
Henry A. Wallace Bldg.  
Des Moines, IA 50319-0034

Bureau Director  
Bureau of Waste Management  
Division of Environment  
Department of Health & Environment  
Forbes Field, Building 740  
Topeka, KS 66620

Manager, Hazardous Waste Branch  
Department for Environmental Protection  
Frankfort Office Park  
14 Reilly Road  
Frankfort, KY 40601

Administrator, Hazardous Waste Division  
Office of Solid & Hazardous Waste  
Department of Environmental Quality  
P.O. Box 82178  
Baton Rouge, LA 70884-2178

Director, Bureau of Hazardous Materials  
& Solid Waste Control  
Department of Environmental Protection  
State House - Station #17  
Augusta, ME 04333

Division Director  
Division of Environmental Quality  
Department of Public Works  
3rd Floor Morgen's Bldg., San Jose  
P.O. Box 1304, Chalan Kanoa  
Commonwealth of the Northern  
Mariana Islands  
Saipan, MP 96950

Administrator, Hazardous Waste Program  
Waste Management Administration  
Department of the Environment  
2500 Broening Highway  
Baltimore, MD 21224

Director, Hazardous Waste Division  
Bureau of Waste Prevention  
Department of Environmental Protection  
One Winter Street, 7th Floor  
Boston, MA 02108

Chief, Waste Management Division  
Department of Natural Resources  
P.O. Box 30241  
Lansing, MI 48909

Manager, Hazardous Waste Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155

Chief, Hazardous Waste Division  
Office of Pollution Control  
Department of Environmental Quality  
2380 Highway 80 West  
P.O. Box 10385  
Jackson, MS 39289

Director, Hazardous Waste Program  
Division of Environmental Quality  
Department of Natural Resources  
205 Jefferson Street, P.O. Box 176  
Jefferson City, MO 65102

Division Administrator  
Waste Management Division  
Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Assistant Director  
Air & Waste Management Division  
Department of Environmental Control  
1200 North Street, Suite 400  
Lincoln, NE 68508

Bureau of Waste Management  
Division of Environmental Protection  
123 West Nye Lane, Room 120  
Carson City, NV 89710

Administrator  
Planning Bureau Waste Management Div.  
Department of Environmental Services  
6 Hazen Drive  
Concord, NH 03301-6509

Administrator  
Hazardous Waste Regulation Program  
Department of Environmental Protection  
CN 421  
Trenton, NJ 08625

Director  
Water & Waste Management Division  
Environment Department  
1190 St. Francis Drive  
P.O. Box 26110  
Santa Fe, NM 87502

Division Director  
Division of Solid & Hazardous Materials  
Department of Environmental Conservation  
50 Wolf Road  
Albany, NY 12233-7250

Chief, Hazardous Waste Section  
Division of Solid Waste Management  
Dep't. of Environment, Health  
& Natural Resources  
P.O. Box 27687  
Raleigh, NC 27611-7687

Director, Division of Waste Management  
Department of Health and Consolidated  
Laboratories  
1200 Missouri Ave., Room 302  
Box 5520  
Bismarck, ND 58502-5520

Division Director  
Division of Hazardous Waste Management  
Ohio Environmental Protection Agency  
1800 WaterMark Drive, P.O. Box 1049  
Columbus, OH 43266-0149

Director, Waste Management Division  
Department of Environmental Quality  
1000 NE 10th street  
Oklahoma City, OK 73117-1299

Manager  
Hazardous Waste Policy & Program Development  
Hazardous & Solid Waste division  
Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, OR 97204

Chief, Div. of Hazardous Waste Mgmt.  
Bureau of Waste Management  
Department of Environmental Protection  
P.O. Box 8471  
Harrisburg, PA 17105-8741

Chairman, Environmental Quality Board  
Office of the Governor  
P.O. Box 11488  
Santurce, PR 00910

Director, Waste Management Branch  
Division of Air & Hazardous Materials  
Department of Environmental Management  
291 Promenade Street  
Providence, RI 02908

Chief, Bureau of Solid & Hazardous Waste  
Management  
Dep't. of Health & Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Director  
Division of Environmental Regulation  
Dep't. of Environment & Natural Resources  
Foss Building  
523 East Capitol  
Pierre, SD 57501

Director  
Division of Solid Waste Management  
Department of Environment & Conservation  
5th Floor, L & C Tower  
401 Church Street  
Nashville, TN 37247-3530

Director  
Industrial & Hazardous Waste Division  
Office of Waste Management & Pollution  
Texas Natural Resource Conservation Commission  
P.O. Box 13087  
Austin, TX 78711-3087

Dennis R. Downs, Director  
Division of Solid and Hazardous Waste  
Department of Environmental Quality  
288 North 1460 West  
Salt Lake City, UT 84114-4880

Division Director  
Hazardous Materials Management Div.  
Department of Environmental Conservation  
103 S. Main Street  
Waterbury, VT 05671-0404

Director, Div. of Environmental Protection  
Dep't. of Planning and Natural Resources  
Government of the Virgin Islands  
Building 111, Apt. 114  
Christiansted, St. Croix, VI 00820

Director, Waste Division  
Department of Environmental Quality  
P.O. Box 10009  
629 East Main Street, 7th Floor  
Richmond, VA 23240-0009

Program Manager  
Solid and Hazardous Waste Program  
Department of Ecology  
Waste Management Programs  
P.O. Box 47600  
Olympia, WA 98504-7600

Chief, Waste Management Section  
Department of Commerce, Labor &  
Environmental Resources  
1356 Hansford Street  
Chalreston, WV 25301

Chief, Hazardous Waste Mgmt. Section  
Bureau of Solid & Hazardous Waste Mgmt.  
Division for Environmental Quality  
Department of Natural Resources  
P.O. Box 7921  
Madison, WI 53707

Manager, Solid Waste Program  
Division of Solid Waste  
Department of Environmental Quality  
122 West 25th Street  
Cheyenne, WY 82002

Executive Director  
NEWMOA  
129 Portland Street, 5th Floor  
Boston, MA 02114-2014

Director  
Waste Management Policy Division  
Texas Natural Resource Conservation Commission  
P.O. Box 13087  
Austin, TX 78711

Assoc. of State and Territorial Solid Waste  
Management Officials (ASTSWMO)  
444 North Capitol Street, NW  
Suite 315  
Washington, DC 20001

## Appendix C

### VOLUNTARY MANAGEMENT STANDARDS FOR USED ANTIFREEZE GENERATOR FACILITIES

developed by the

*Coalition on Antifreeze and the Environment*  
1750 Pennsylvania Avenue, NW, Suite 1201, Washington, DC 20006

#### Collection

1. In order to minimize the risk of contamination, used antifreeze should be collected using only dedicated equipment (such as drain pans, funnels, transfer buckets, etc.).
2. After being drained from a vehicle, used antifreeze should be transferred *immediately* to a dedicated storage container.

#### Storage Prior to Collection for Recycling

1. Used antifreeze should be stored in a separate container reserved exclusively for used antifreeze. Care should be taken to ensure that the drum or other container is not lined with paint, resin or other materials that could contaminate the used antifreeze. If contamination is suspected, the container should be in good condition with no leaks and a lid that can be secured to keep out rain water and other contaminants.
2. The used antifreeze storage container should be clearly marked USED ANTIFREEZE in order to minimize the risk of accidental contamination.
3. Access to the used antifreeze storage container should be restricted to facility employees or other authorized personnel. If located outside the building, it should be locked or otherwise protected from unauthorized use.

#### Other Generator Management Considerations

1. Mixing used antifreeze with used oil prior to collection for recycling is *strongly discouraged* and could subject the generator facility to additional liability and/or charges from the used oil hauler/processor. In addition, the practice may violate state or local law.
2. Mixing used antifreeze with other shop materials *should not be permitted*. Such mixing can damage recycling equipment, invalidate permits required to utilize the municipal waste treatment systems and subject the facility to fines or other penalties.
3. The generator facility should have an adequate spill avoidance and emergency response plan that accommodates the used antifreeze collection and storage method utilized on-site. This plan should be periodically reviewed with employees.
4. Used antifreeze should be recycled or otherwise managed in accordance with all federal, state, and local laws.

*The above voluntary management standards do not constitute legal or regulatory advice. There is no warranty that following the voluntary management standards will ensure compliance with all environmental laws and regulations or avoid other environmental liability. Please consult federal, state and local environmental officials or an attorney concerning compliance with environmental laws and regulations and avoidance of environmental liability.*



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8400 Westpark Drive  
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[www.nada.org](http://www.nada.org)

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(800) 252-NADA, ext. 2, or (703) 821-7227