ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

The Small Quantity Hazardous Waste Generator's Handbook
[A Guide for Small Businesses]

2018

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CHAPTER 1 HAVE I GENERATED A HAZARDOUS WASTE? 7
DEFINITIONS 7
HAZARDOUS WASTE IDENTIFICATION FLOWCHART 8
WASTE ANALYSIS 11
SOME EXAMPLES OF LISTED HAZARDOUS WASTES 12
COMMON TOXICITY CHARACTERISTIC HAZARDOUS WASTES 13
TYPICAL WASTE STREAMS GENERATED BY SMALL QUANTITY GENERATORS 13
CHAPTER 2 HOW MUCH HAZARDOUS WASTE HAVE I GENERATED? 15
GENERATOR STATUS 15
CHAPTER 3 HOW DO I HANDLE MY HAZARDOUS WASTE? 19
GENERATOR REQUIREMENTS SUMMARY 19
VERY SMALL QUANTITY GENERATOR REQUIREMENTS 20
SMALL QUANTITY GENERATOR REQUIREMENTS 21
EMPLOYEE TRAINING 22
USE AND MANAGEMENT OF SATELLITE ACCUMULATION CONTAINERS 23
MANAGEMENT OF CONTAINERS IN THE HAZARDOUS WASTE ACCUMULATION AREA 23
WHAT MUST BE INCLUDED ON THE WEEKLY INSPECTION LOG OR SUMMARY? 24
SPECIAL REQUIREMENTS FOR SQGS THAT ACCUMULATE HAZARDOUS WASTE IN TANKS 25
WHAT MUST BE INCLUDED ON THE TANK INSPECTION LOGS? 26
EMERGENCY RESPONSE 27
PREPAREDNESS AND PREVENTION 27
LAND DISPOSAL RESTRICTIONS AND RECORDKEEPING 29
CHAPTER 4 SHIPPING HAZARDOUS WASTE OFF-SITE 31
SAMPLE UNIFORM HAZARDOUS WASTE MANIFEST FORM 33
CHAPTER 5 MANAGING UNIVERSAL WASTE 35
WHAT IS THE UNIVERSAL WASTE RULE? 35
WHAT WASTES ARE COVERED BY THIS RULE? 35
WHICH REGULATIONS APPLY TO GENERATORS OF UNIVERSAL WASTE? 36
WHO MAY COMPLY WITH THE UNIVERSAL WASTE RULES? 37
AM I REQUIRED TO MANAGE THESE ITEMS AS A UNIVERSAL WASTE? 37
CHAPTER 6 USED OIL MANAGEMENT STANDARDS 39
WHAT IS USED OIL? 39
WHO MUST COMPLY WITH THE STANDARDS FOR USED OIL GENERATORS? 40
DON'T LET YOUR USED OIL TANKS, CONTAINERS, OR MANAGEMENT AREAS LOOK LIKE THIS: 41
REMEMBER TO KEEP IT C.L.E.A.N. 42
IS IT USED OIL OR HAZARDOUS WASTE? 43
CHAPTER 7 HOW TO AVOID COMMONLY OBSERVED VIOLATIONS 45
CHAPTER 8 MANAGING NON-HAZARDOUS SOLID WASTE 47
APPENDIX A U.S. EPA REGIONAL OFFICES 51
APPENDIX B COMMON SMALL QUANTITY GENERATOR WASTE STREAMS 53
APPENDIX C HELPFUL INFORMATION 53

DISCLAIMER

The purpose of this handbook is to provide information to businesses, industries, and public agencies that may generate small quantities of hazardous waste, and to inform them of their responsibilities for proper hazardous waste management. This handbook does not replace any regulations or relieve a Small Quantity Generator (SQG) of its regulatory obligations. In the event of any inconsistency between this document and the regulatory language, the language in the hazardous waste management regulations controls. It is your responsibility to comply with all applicable laws. Relying on the information in this handbook will not protect you legally and may not be relied upon to create a right or benefit, substantive or procedural, enforceable at law or in equity by any person. Final determination of the proper handling and disposal of waste is the sole responsibility of the generator.

To assure compliance, check the applicable State rule or regulation. Should you need further assistance, please contact ADEM's Land Division at (334) 271-7730, an environmental attorney, or a qualified environmental consultant.

ACKNOWLEDGEMENT

Much of the material in this handbook is reprinted from the Environmental Protection Agency's (EPA) handbook entitled "Understanding the Hazardous Waste Rules—A Handbook for Small Business". EPA's handbook is augmented by additional information collected from EPA technical guidance documents and other states' SQG handbooks and by material pertaining to hazardous waste management requirements specific to Alabama's rules and statutes.

INTRODUCTION

The information in this handbook is intended to assist you in determining which Hazardous Waste Program regulations are applicable to your facility and to inform you (the Small Quantity Generator or SQG) of your responsibilities for proper hazardous waste management.

This handbook will help you determine the following:

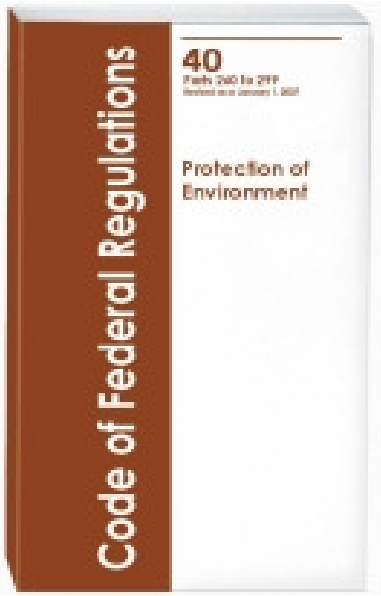
- Whether or not you generate hazardous waste.
- How your hazardous wastes are regulated under Alabama law.
- What you must do to comply with state hazardous waste management regulations.
- How to manage your hazardous waste from generation to final disposal.
- How to manifest (document) your hazardous waste shipment.
- How to dispose of your hazardous waste properly.

This handbook does not replace any regulations or relieve you of your regulatory obligations.

A BRIEF HISTORY OF HAZARDOUS WASTE MANAGEMENT REGULATIONS

In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA), which directed 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 (in other words, from "cradle-to-grave").

EPA first focused on large companies, which generate the greatest portion of hazardous waste. Business establishments producing less than 1000 kilograms (2,200 pounds) of hazardous waste in a calendar month (known as small quantity generators) were exempted from most of the hazardous waste management regulation published by EPA in May 1980. In recent years, however, public attention has been focused on the potential for environmental and health problems that may result from mismanaging even small quantities of hazardous waste. For example, small amounts of hazardous waste disposed on the land may seep into the earth and contaminate underground water used as a source of potable water.



In November 1984, the federal Hazardous and Solid Waste Amendments to RCRA were signed into law. With these amendments, Congress directed EPA to establish new requirements that would bring small quantity generators who generate between 100 and 1000 kilograms (kg) of hazardous waste in a calendar month into the hazardous waste regulatory system. EPA issued final regulation for these 100 to 1000 kg/mo. generators on March 24, 1986. Most of the requirements became effective on September 22, 1986.

The EPA has authorized Alabama to administer its own hazardous waste program. Alabama administers its program under the Alabama Hazardous Waste Management and Minimization Act of 1987(AHWMMA). The state regulations generally parallel the federal program and operate in lieu of the federal scheme to the extent of the EPA's authorization. ADEM has adopted state regulations (Division 14 of ADEM Administrative Code) to include obligations imposed by the federal Hazardous and Solid Waste Amendments of 1984.

Federal regulations: 40 Code of Federal Regulations (C.F.R.), Parts 260 through 280.

State regulations: ADEM Administrative Code, Division 14 (http://www.adem.state.al.us/alEnviroRegLaws/files/Division14.pdf)

CHAPTER 1 Have I Generated a Hazardous Waste?

Almost any business entity, be it an office or a factory, generates some waste – from discarded sandwich wrappers in the break room to spilled paint in the stock room. Part of your task is to determine if the wastes your facility generates are hazardous and how best to manage them.

Regardless of the amount of hazardous waste generated, state and federal environmental regulations require every facility to test or use knowledge of its materials and processes to determine if its waste is a listed hazardous waste or exhibits one of the four hazardous characteristics (i.e., ignitability, corrosivity, reactivity, toxicity). This process is called making a hazardous waste determination.

To determine whether a material is a hazardous waste, a facility must answer four questions about each waste stream:

- First, is the material a "solid waste," as defined by the AHWMMA regulations? The regulatory framework for distinguishing solid and hazardous waste can be found at ADEM Admin. Code rs. 335-14-2-.01(2) and 335-14-2-.01(3).
- Second, does it fit one of the exclusions from the definition of solid or hazardous waste? Materials that have been excluded are listed in ADEM Admin. Code r. 335-14-2-.01(4).
- Third, is it listed or characteristic hazardous waste? Listed and characteristic wastes are defined in ADEM Admin. Code rs. 335-14-2-.02, 335-14-2-.03, and 335-14-2-.04.
- Fourth, has the waste been delisted?

Definitions

Accumulate: To collect or bring together; to amass. The accumulation of hazardous waste is subject to many regulations.

Acutely hazardous waste: The following wastes are considered acutely hazardous waste: any "P" listed wastes, and dioxin wastes with the following EPA hazardous waste numbers: F020, F021, F022, F023, F026 and F027. If you generate more than 2.2 pounds of acutely hazardous waste in a month, you are a large quantity generator for that month.

Generate: To produce as a result of a chemical or physical process. Most manufacturing processes also generate wastes.

Generator: Any person, by individual generation site, whose act or process produces hazardous waste identified or listed in 335-14-2 or whose act first causes a hazardous waste to become subject to regulation.

Storage: The actual or intended containment of wastes, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such wastes. Very similar to "Accumulation". Storage beyond the time limits allowed for your generator status requires a Hazardous Waste Storage Permit.

Hazardous Waste Identification Flowchart

Follow the Hazardous Waste Identification Flowchart to determine if you have a hazardous waste:

Step 1

1 - **Is Your Material a Solid Waste?**

The first step is to determine if the material in question is classified as a solid waste. If the material is NOT a solid waste, it cannot be a hazardous waste.

- The statutory definition of a solid waste is completely irrespective of the physical form of the waste. A "solid" waste can be a liquid or a contained gas. A material is considered a solid waste if it:
  - Is a solid, semi-solid, liquid, or contained gaseous material which is discarded or has served its intended purpose
  - Is abandoned
  - Is being recycled by being placed on the ground (and that is not the normal use), burned for energy recovery, reclaimed, or accumulated more than one year.
  - Is inherently waste-like (e.g., dioxin wastes)
- If the material in question meets any of the provisions above, you may have a solid waste. If you answered NO to all of the above provisions, you do not have a solid waste.

Do you have a solid waste?

YES - go to Step #2 below.

NO - the material does not qualify as a solid waste, and therefore cannot be regulated under the Alabama Hazardous Wastes Management and Minimization Act (AHWMMA).

Step 2

2 - **Is Your Solid Waste Excluded from Hazardous Waste Regulations?**

After you have determined that you have a solid waste on hand, the next step is to determine if that solid waste is excluded from AHWMMA regulation.

- ADEM grants specific exclusions from some hazardous waste regulations if certain conditions are met. Some materials are excluded from the definition of solid waste, while some solid wastes are excluded from the definition of hazardous waste. Knowing these exclusions can be helpful in waste management programs.
- Some materials that are excluded from the definition of solid waste (and therefore are NOT hazardous) include:
  - Domestic sewage
  - Industrial wastewater discharges
  - Radioactive waste
  - Spent wood preserving solutions that are reclaimed and reused in the wood preserving process
  - Processed scrap metal
  - Irrigation return flow
  - In situ mining waste
  - Secondary materials that are reclaimed and returned to the original process, if the reclamation and return process is totally enclosed.

  These wastes are not hazardous because they are not considered solid waste.
- Some solid wastes are excluded from the definition of hazardous wastes:
  - Household waste (pesticides, cleaners)
  - Some agricultural wastes that are returned to the soils as fertilizers
  - Fossil fuel combustion wastes

- Cement kiln dust (unless the facility burns hazardous waste as fuel)
- Arsenically treated wood wastes generated from a person using wood for its intended purpose
- Petroleum-contaminated media that is subject to the Underground Storage Tank (UST) corrective action program
- Used oil filters that have been properly drained
- Used chlorofluorocarbon refrigerants that are being reclaimed for further use.

These solid wastes are excluded from the definition of hazardous waste by ADEM.

- In addition, some recycled materials are not classified as solid waste. Materials are not solid wastes IF:
  - They are being used as substitutes for commercial products
  - They are returned to the original process without first being reclaimed or land disposed.

NOTE: This exemption is not valid if the materials are burned for energy recovery or used to make a product that will be applied to the land.

- Samples collected for lab analysis are exempt from AHWMMA regulation until it is determined that they are to be disposed of.
- Used oil that exhibits hazardous characteristics can be excluded if recycled. It is regulated under Standards for the Management of Used Oil (ADEM Admin Code r. 335-14-17).
- Universal wastes (including batteries; pesticides; mercury-containing thermostats, switches, and thermometers; and electric lamps) may also qualify for reduced regulation.
- The list above is NOT comprehensive. If your waste is not on the list above, it may still be excluded from AHWMMA regulation. See ADEM Admin Code r. 335-14-2-.01(4) for a complete list of those wastes exempt from hazardous waste regulation. Furthermore, if your waste IS listed above, that does not mean you are automatically exempt. Each exemption above is conditional and facility managers should review applicable sections of ADEM Admin Code r. 335-14-2 and contact the State's hazardous waste program for clarification on exemptions.

Is the solid waste excluded from hazardous waste regulation?

YES - the waste is exempt (not regulated) under the AHWMMA.
NO - go to Step #3 below.

Step 3

#3 - **Is Your Solid Waste a Listed Waste?**

Once you have determined that your solid waste is not excluded from AHWMMA requirements, the next step is to determine if the material is a "listed waste".

- ADEM "lists" hazardous wastes that fall into four categories;
  - **F-listed wastes**: The F list includes wastes from common industrial processes. Because they are not specific to one type of industry, they are called wastes from non-specific sources. For example, this list includes many types of spent (or used) solvents. See ADEM Admin Code r. 335-14-2-.04(2) to see if your waste is F-listed.
  - **K-listed wastes**: The K list includes wastes from specific industrial processes, such as wood preservation, organic chemical production, and pesticide manufacturing. See ADEM Admin Code r. 335-14-2-.04(3) for the complete list of manufacturing process wastes to see if your facility might have a K-listed waste.
  - **P- and U-listed wastes**: These two lists designate certain commercial chemical products as hazardous when disposed of unused. These unused chemicals may become wastes in a number of ways. Some can be spilled while in use while others can be intentionally discarded if out of specification. For a waste to qualify as a P- or U-listed waste, it must meet all three of the following criteria:
    - The formulation must contain at least one chemical on the P or U list
    - The chemical in the waste must be unused
    - The chemical in the waste must be in the form of a CCP.
      **A CCP is a chemical that is of technical (commercial) grade, 100% pure, and the only active ingredient in the formulation.*

There are hundreds of P- and U-listed wastes. See ADEM Admin. Code r. 335-14-2-.04(4) to see if chemicals present on-site are hazardous if disposed of unused. Please note that the chemicals with the "P" code are acutely hazardous. Generators with acutely hazardous waste are subject to different accumulation limits for those wastes.

Is the solid waste a listed waste (F, K, P, U)?

YES - the waste is a listed waste and is therefore regulated under the AHWMMA.
NO - go to Step #4 below.

Step 4

#4 - **Is Your Solid Waste a Characteristic Waste**?

If your waste is not listed in ADEM Admin Code r. 335-14-2, it may still be a hazardous waste. The next step is to see if your waste is a characteristic hazardous waste.

- Solid wastes that are not directly listed in ADEM Admin Code r. 335-14-2 may still be hazardous. ADEM uses a classification system based on the four properties of solid wastes. **If a material exhibits at least one of these characteristics, it is classified as a hazardous waste.** The four properties are:
  - **IGNITABILITY**
    A substance is ignitable if it displays any of the following properties.
    - A liquid with a flashpoint of less than 60° C (140° F);
    - A non-liquid that is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes, and when ignited, burns so vigorously and persistently that it creates a hazard;
    - An ignitable compressed gas;
    - An oxidizer (such as a chlorate or peroxide).

    Details on the ignitability characteristic are included in ADEM Admin Code r. 335-14-2-.03(2).
  - **CORROSIVITY**
    A substance is corrosive if it displays any of the following properties:
    - An aqueous material with a pH less than or equal to 2 or greater than or equal to 12.5;
    - A liquid that corrodes steel at a rate of at least 0.25 inches per year at 55° C (130° F); **NOTE**: A waste that is not aqueous and contains no liquid falls outside the definition of ADEM corrosivity.

    Details on the corrosivity characteristic are included in ADEM Admin Code r. 335-14-2-.03(3).
  - **REACTIVITY**
    A substance is reactive if it displays any of the following properties.
    - Normally unstable and readily undergoes violent change without detonating;
    - Reacts violently with water;
    - Forms potentially explosive mixtures with water;
    - A cyanide or sulfide bearing waste which can generate fumes in a quantity sufficient to present a danger to human health.
    - Capable of detonation
    - A forbidden explosive, or a Class A or Class B explosive, as defined in Department of Transportation regulations in 49 CFR Part 173.

    Details on the reactivity characteristic are included in ADEM Admin Code r. 335-14-2-.03(4).
  - **TOXICITY**
    A substance is toxic if it exceeds the concentrations for contaminants listed in the "**Maximum Concentration of Contaminants for the Toxicity Characteristic**" table, presented in ADEM Admin Code r. 335-14-2-.03(5). A specific test, the **Toxicity Characteristic Leaching Procedure (TCLP)** must be conducted to determine if the waste is classified as toxic.

Details on the toxicity characteristic are included in ADEM Admin Code r. 335-14-2-.03(5).

- ADEM designates specific, standardized test methods that are to be used when determining the characteristics of a waste. These techniques are listed in the above mentioned sections.

Is the solid waste a characteristic hazardous waste?

YES - the waste is a characteristic waste and is therefore regulated under the AHWMMA.
NO - go to Step #5 below.

Step 5

#5 - **Is Your Solid Waste Subject to the Mixture Rule?**

Even though your solid waste is not a listed or characteristic waste, it could become a hazardous waste if mixed with materials classified as hazardous. The next step is to determine if your waste is a mixture of a solid waste and a hazardous waste.

- The "**Mixture Rule**" states that mixtures of solid waste and listed hazardous waste must be regulated as hazardous waste. There are two ways to determine if a material is regulated under the mixture rule:
  - If the material is a mixture of a solid waste and a hazardous waste, and the mixture exhibits one or more of the characteristics of hazardous waste;
  - If the material is a mixture of a solid waste and a listed waste.

The mixture rule is intended to discourage generators from mixing wastestreams. More information can be reviewed at ADEM Admin Code r. 335-14-1-.02 and ADEM Admin Code r. 335-14-2-.01(3)(a)2(iv).

Is the solid waste subject to the mixture rule?

YES - the waste is subject to the mixture rule and is therefore regulated under the AHWMMA.
NO - go to Step #6 below.

Step 6

#6 - **Is Your Solid Waste Subject to the Derived-From Rule?**

Your material is not a listed or characteristic waste, nor is it classified as hazardous due to the mixture rule. Yet the material might still be a hazardous waste. Hazardous waste treatment, storage, and disposal processes often generate residues that may contain high concentrations of hazardous constituents. The derived-from rule governs the regulatory status of such waste residues.

- According to the Rule, any solid waste derived from the treatment, storage, or disposal of a hazardous waste is considered hazardous. "Derived from" wastes include sludges, spill residue, ash, emission control dust, and leachate. This principle applies regardless of the actual risk to human or environmental health. More details about the "derived-from" rule and exemptions to the rule are included in ADEM Admin Code r. 335-14-2-.01(3)c and d.

Is the solid waste subject to the derived-from rule?

YES - the waste is subject to the derived-from rule and is therefore regulated under AHWMMA.
NO - the waste is not classified as hazardous under AHWMMA.

Waste Analysis

A solid waste is a hazardous waste if it is a *listed* hazardous waste (defined at ADEM Admin. Code r. 335-14-2-.04) or if it exhibits any of the *characteristics* defined in ADEM Admin. Code r. 335-14-2-.03. To determine whether the waste exhibits any of the characteristics, the generator generally must use analytical methods capable of quantitatively identifying the contaminants in question. Unlike characteristic wastes, listed wastes are generally determined based on the generator's knowledge of its manufacturing process or the chemicals used.

Example A: a facility generates spent acetone and toluene from cleaning and degreasing parts in a maintenance shop and a sludge from the wastewater treatment of spent electroplating solution. In both cases, knowledge of the process that produces the waste is enough to identify the material as a hazardous waste. The spent solvents and the sludge from the wastewater treatment system are both *listed* hazardous wastes.

Example B: a facility generates a spent sandblasting media that contains lead. Generator knowledge of the process is not enough to make a hazardous waste determination; analytical

testing is needed to document *how much* lead is present. If lead is present at levels below 5 parts per million (ppm; also expressed as milligrams per liter or mg/L), the waste is not hazardous for lead; if the level is 5 parts per million or higher, the waste is a toxicity characteristic hazardous waste.

You can meet waste analysis requirements using several methods or combinations of methods. Wherever feasible, the preferred method is to conduct sampling and laboratory analysis because it is more accurate than other options. However, generators can also apply "acceptable knowledge," which includes (1) process knowledge; (2) waste analysis data obtained from facilities with a similar process that send their waste off-site for treatment, storage, or disposal; or (3) records of analysis performed on the waste before the effective date of AHWMMA regulations, assuming the waste stream has not changed.

Process knowledge involves obtaining detailed information on a waste from existing published or documented waste analysis data or studies conducted on hazardous waste generated by processes similar to that which generated the waste. The waste should be retested if the process generating it changes.

When using process descriptions and existing data, you must carefully scrutinize whether (1) there are any differences between the processes documented and your current processes and (2) the data used are accurate and current, including (a) whether any wastes are newly regulated as hazardous wastes, (b) whether existing data are sufficient to identify any new constituent concentration limits, and (c) the information is based on currently valid analytical techniques.

Some Examples of Listed Hazardous Wastes

(For the complete list, consult ADEM Admin. Code r. 335-14-2-.04)

F Listed – Wastes generated in a wide variety of settings

F001 Spent solvents, including trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons, and Methyl Ethyl Ketone

F003 Spent solvents, including xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol.

F005 Spent solvents, including toluene, carbon disulfide, isobutanol, pyridine, and benzene.

F006 Wastewater treatment sludges from electroplating operations.

K Listed – Industry-specific wastes

K001 Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.

K061 Emission control dust/sludge from the primary production of steel in electric furnaces.

P Listed – Acutely hazardous commercial chemical products

P003	Acrolein	P070	Aldicarb
P004	Aldrin	P017	Bromoacetone
P056	Fluorine	P095	Phosgene
P121	Zinc cyanide		

U Listed – commercial chemical products

U002	Acetone	U011	Amitrole
U012	Aniline	U225	Bromoform
U051	Creosote	U061	DDT
U159	Methyl ethyl ketone (MEK)		

Appendix B includes commonly identified listed hazardous wastes generated by conditionally exempt and small quantity generators.

Common Toxicity Characteristic Hazardous Wastes

(For the complete list, consult ADEM Admin. Code r. 335-14-2-.03)

EPA #	Contaminant	CAS #	TCLP Regulatory Level (mg/L or ppm)
D004	Arsenic	7440-38-2	5.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D020	Chlordane	57-74-9	0.03
D007	Chromium	7440-47-3	5.0
D031	Heptachlor	76-44-8	0.008
D008	Lead	7439-92-1	5.0
D009	Mercury	7439-97-6	0.2
D035	Methyl Ethyl Ketone (MEK)	78-93-3	200.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene ("Perc")	127-18-4	0.7
D043	Vinyl Chloride	75-01-4	0.2

Typical Waste Streams Generated By Small Quantity Generators

TYPE BUSINESS	TYPES OF HAZARDOUS WASTE GENERATED
Building Cleaning & Maintenance	Acids/Bases, Pesticides, Solvents
Construction	Acids/Bases, Ignitables, Solvents
Educational & Vocational	Acids/Bases, Ignitables, Solvents, Pesticides, Reactives
Funeral Services	Solvents, Formaldehyde
Laboratories	Acids/Bases, Ignitables, Reactives, Heavy Metals Solvents
Laundries & Dry Cleaners	Solvents, Dry Cleaning Residues
Metal Manufacturing	Acids/Bases, Ignitables, Solvents, Cyanides, Reactives, Heavy Metals, Spent Plating, Sludges
Printing	Acids/Bases, Solvents, Ink Sludges Heavy Metals
Wood Preserving	Arsenic, Creosote, Pentachlorophenol, Chromium

CHAPTER 2 How Much Hazardous Waste Have I Generated?

Generator Status

Basics - A rough* guide to estimate monthly generation:

Hazardous Waste:

One 55-Gallon drum = approximately 440 lb. = approximately 200 kg.

Acute Hazardous Waste:

1 quart (qt) of liquid = approximately 2.2 lb. = approximately 1 kg

{***NOTE**: One kilogram (kg) is roughly equal to 2.2 pounds (lb.) If your waste has a density similar to water (which weighs 8.34 lb. per gallon or about 3.79 kg/gal), a drum that contains about 26 gal (slightly less than half full) will weigh about 220 pounds (or 100 kg). Five drums that are all nearly full (about 53 gallons in each or 264 gallons total) will weigh about 2,200 lb. or 1000 kg. **WARNING**: some materials are much lighter or much heavier than water, so it's important to know how much *your* waste weighs. Generator status is based on weight, not drum count.}

Under Alabama and federal regulations, there are three classifications of hazardous waste generators. Your generator status is based on the amount of hazardous waste you generate in one calendar month; in turn, that determines which regulations apply to your business.

A Very Small Quantity Generator (or **VSQG**) may generate no more than 100 kg (220 lb.) of hazardous waste and no more than 1 kg (2.2 lb.) of acutely hazardous waste in a calendar month. A VSQG may not accumulate more than 1,000 kg (2,200 lb.) of hazardous waste on site at any one time.

When either the volume of hazardous waste produced in one calendar month exceeds 100 kg (220 lb.) or more than 1,000 kg (2,200 lb.) of hazardous waste have accumulated on site, the facility is required to comply with the more stringent standards applicable to a Small Quantity Generator (**SQG**).

When the volume of acutely hazardous waste generated exceeds 1 kg per month, or when the residue, contaminated soil, waste or other debris from cleaning up a spill of acutely hazardous waste exceeds 100 kg, then the waste is subject to standards applicable to a Large Quantity Generator **(LQG**).

HAZARDOUS WASTE GENERATED PER MONTH: To be a **VSQG**, you must generate less than 220 lb. (about one half of a 55-gallon drum per month) of hazardous waste and less than 2.2 lb. of acutely hazardous waste each month.

An **SQG** generates between 100kg (220 lb.) and 1,000 kg (2,200 lb.) of hazardous waste and/or less than 1 kg (2.2 lb.) of acutely hazardous waste in a calendar month. The hazardous waste cannot be accumulated on site for more than 180 days. If the waste is transported more than 200 miles to a treatment, storage and/or disposal facility (TSDF), it may be accumulated for up to 270 days.

At no time may an SQG accumulate more than 6,000 kg (13,227 lb. or about thirty 55-gallon drums) of hazardous waste at the facility. When the volume of hazardous waste generated in one month exceeds 1,000 kg (2,200 lb.) of non-acutely hazardous waste or 1 kg (2.2 lb.) of acutely hazardous waste or the accumulation time is exceeded, the facility is required to comply with the standards for an LQG.

If more than 6,000 kg (13,227 lb.) of hazardous waste is stored on site, the SQG has become a TSDF and is required to obtain a storage permit and comply with the requirements of ADEM Admin. Code ch. 335-14-5, 335-14-6, and 335-14-8.

HAZARDOUS WASTE GENERATED PER MONTH:
As an SQG, you may generate anywhere from 220 lb. up to 2,200 lb. (*from one-half of a 55-gallon drum up to five 55-gallon drums) of hazardous waste and less than 2.2 lb. of acutely hazardous waste each month.

NOTE: VSQGs and SQGs that experience a one-time event that would place them in a higher generator status may wish take advantage of the Alternative Standards for Episodic Generation found at ADEM Admin. Code r. 335-14-3-.13; these rules allow the facility to retain its original generator status provided certain requirements are followed during the episodic event.

An **LQG** generates more than 1,000 kg (2,200 lb.) of hazardous waste and/or more than 1 kg (2.2 lb.) of acutely hazardous waste in a calendar month.

Although there is no limitation to the amount of hazardous waste an LQG may accumulate, a large quantity generator can store its waste on site for no more than 90 days. When the accumulation time limit is exceeded, the LQG is required to obtain a storage permit and comply with the requirements of ADEM Admin. Code ch. 335-14-5, 335-14-6, and 335-14-8.

HAZARDOUS WASTE GENERATED PER MONTH:
An LQG generates more than 2,200 lb. (about five 55-gallon drums) of hazardous waste and/or more than 2.2 lbs of acutely hazardous waste per month.

Do I Need to Notify?

If your business is a VSQG, you MAY obtain an EPA Identification Number (also called an “EPA ID”); however, it is not required. If your business is an SQG or LQG, you MUST obtain an EPA ID. These twelve-character identification numbers are used by EPA and ADEM and are recorded in a national hazardous waste facility database. If you have an EPA ID number, ADEM Admin. Code r. 335-1-3-.01(8) requires that you notify the Department of your regulated waste activities each year. Transporters and facilities that store, treat, or dispose of regulated quantities of hazardous waste must also have EPA Identification Numbers and notify each

year. To obtain an EPA Identification Number:

- ADEM Form 8700-12, "Notification of Regulated Waste Activity" and directions for completing the form can be obtained by visiting ADEM's website at the following web address: www.adem.alabama.gov/DeptForms/Form8700-12.pdf. (The forms are arranged by number, with the 8700-12 near the bottom of the page.)
- Complete one copy of the form for each non-contiguous site or business location where you generate or handle hazardous wastes. Each site or location will receive its own EPA Identification Number.
- Make sure your form is filled out completely and correctly. Mail the form along with the appropriate application/renewal fee to the following address:

  Alabama Department of Environmental Management
  Land Division
  P O Box 301463
  Montgomery, AL 36130-1463

- You can also fill out and submit the form and payment electronically using the Department's e-Pay link: www.adem.state.al.us/moreInfo/epay.cnt.

The information you submit will be recorded by ADEM and you will be assigned an EPA Identification Number. This number will be unique to the site identified on your form. Use this number on all hazardous waste manifests.

The EPA Identification Number is site specific for the business site or location. If you move your business to another location, you must notify ADEM of your new location and submit a new form. If hazardous waste was previously handled at the new location and it already has an EPA Identification Number, you will be assigned that number for the site after you have notified ADEM.

CHAPTER 3 How Do I Handle my Hazardous Waste?

Generator Requirements Summary

	VSQGs	SQGs	LQGs
Monthly Generation Limits ADEM Admin. Code r.	≤100 kg/month of hazardous waste ≤1 kg/month of acute hazardous waste ≤100 kg/month of acute spill residue or soil 335-14-1-.02(1)(a); 335-14-3-.01(3) Table 1	Between 100 - 1,000 kg/month of hazardous waste ≤ 1 kg/month of acute hazardous waste 335-14-1-.02(1)(a); 335-14-3-.01(3) Table 1	≥1,000 kg/month of hazardous waste >1 kg/month of acute hazardous waste >100 kg/month of acute spill residue or soil 335-14-1-.02(1)(a); 335-14-3-.01(3) Table 1
Hazardous Waste Determination ADEM Admin. Code r.	Required 335-14-3-.01(2)	Required 335-14-3-.01(2)	Required 335-14-3-.01(2)
Document Monthly Generation ADEM Admin. Code r.	Not required unless generation or accumulation limits exceeded	Required 335-14-3-.01(2)(f)4.	Required 335-14-3-.01(2)(f)4.
EPA ID Number ADEM Admin. Code r.	Not required but may obtain one if desired 335-14-3-.01(8)(d)	Required 335-14-3-.01(8)(a)	Required 335-14-3-.01(8)(a)
Accumulation Quantity Limits ADEM Admin. Code r.	≤1,000 kg ≤1 kg acute ≤100 kg of acute spill residue or soil 335-14-3-.01(3) Table 1; 335-14-3-.01(4)(a)3. & 4.	≤6,000 kg ≤1 kg acute ≤100 kg of acute spill residue or soil 335-14-3-.01(3) Table 1; 335-14-3-.01(6)(b)1.	No limit
Accumulation Time Limits ADEM Admin. Code r.	None 335-14-3-.01(4)(a)	≤180 days or ≤270 days (if greater than 200 miles) 335-14-3-.01(6)(b) - (d)	≤90 days 335-14-3-.01(7)(a)
Storage Requirements ADEM Admin. Code r.	None	Basic requirements with technical standards for tanks or containers 335-14-3-.01(6)(b)2. & 3.	Full compliance for management of tanks, containers, drip pads, or containment buildings 335-14-3-.01(7)(a)1. – 4.
Hazardous Waste is sent to: ADEM Admin. Code r.	State approved or RCRA permitted/interim status facility 335-14-3-.01(4)(a)5.	RCRA permitted/interim status facility 335-14-3-.01(3)(d)	RCRA permitted/interim status facility 335-14-3-.01(3)(d)
Manifest ADEM Admin. Code r.	Not required	Required 335-14-3-.02(1)(a)	Required 335-14-3-.02(1)(a)
Biennial Report ADEM Admin. Code r.	Not required	Not required	Required 335-14-3-.04(2)(a)
Personnel Training ADEM Admin. Code r.	Not required	Basic training required 335-14-3-.01(6)(b)9.(iii)	Required 335-14-3-.01(7)(a)7.
Contingency Plan ADEM Admin. Code r.	Not required	Have an Emergency Coordinator 335-14-3-.01(6)(b)9(i)	Full plan required plus Quick Response Guide 335-14-3-.14(8) & (10)
Emergency Procedures ADEM Admin. Code r.	Not required	Required 335-14-3-.01(6)(b)9.	Full plan required 335-14-3-.14(13)
DOT Transport Requirements ADEM Admin. Code r.	Yes (if required by DOT)	Yes 335-14-3-.03(1) - (4)	Yes 335-14-3-.03(1) – (4)

Very Small Quantity Generator Requirements

Facilities that generate no more than 100 kg (220 lb.) of hazardous waste and no more than 1 kg (2.2 lb.) of acutely hazardous waste in any calendar month are exempt from most hazardous waste management rules and regulations. As a VSG you are not required to obtain a permit or interim status, provided you comply with the following rules:

- Make a hazardous waste determination on all wastes generated at your site and keep that documentation.
- Generate no more than 100 kg of hazardous waste and no more than 1 kg of acutely hazardous waste in a calendar month.
- Never accumulate more than 1000 kg (2,200 lb.) of hazardous waste at any time. Should you accumulate more than 1000 kg of hazardous waste, the accumulated wastes will be subject to the applicable requirements for small quantity generators and other applicable standards for transporters, treatment, storage, and disposal facilities.
- Never accumulate more than more than 2.2 pounds of acute hazardous waste, or more than 220 pounds of residues from a cleanup of acute hazardous waste, on-site at any one time. Should you accumulate more than 1000 kg of hazardous waste, the accumulated wastes will be subject to the applicable requirements for large quantity generators and other applicable standards for transporters, treatment, storage, and disposal facilities.
- Provide the Department with a plan for the disposal of all hazardous waste generated by the facility should the Department request such a plan.
- Either treat or dispose of hazardous waste in an on-site facility or ensure delivery to a facility that can accept the waste.

In addition to these requirements, it would be prudent for the facility to maintain a log of all hazardous waste generated should the facility's generating status become an issue at a future date.

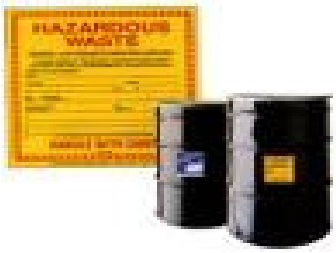
VSQGs should manage hazardous waste generated at their facilities in an environmentally responsible manner at all times. The container and tank management requirements for Small Quantity Generators in the following section identify responsible management practices for handling hazardous wastes. These practices reduce the potential for spills and releases of hazardous wastes. Appropriate labeling and storage of hazardous waste containers significantly reduces incidents of hazardous waste releases, which may affect human health and the environment.

Consult ADEM Admin. Code r. 335-14-3-.01(4) for the full list of regulations applicable to VSQGs of hazardous waste.

Small Quantity Generator Requirements

If your facility generates more than 100 kg (220 lb.) but less than 1000 kg (2,200 lb.) of hazardous waste and no more than 1 kg (2.2 lb.) of acutely hazardous waste in any calendar month, you are a Small Quantity Generator (**SQG**). You are not required to obtain a permit or interim status, provided you comply with the following rules:

- Obtain an EPA identification number (also called an EPA ID number). To obtain a number, you must submit a Notification of Regulated Waste Activity (ADEM Form 8700-12); this form must be submitted to the Department each year. See the section entitled "Do I Need to Notify" for more details and a link to obtain the form.
- Make a hazardous waste determination on all wastes generated at your site.
- Document the amount of hazardous waste you generate each month and keep that documentation.
- Never offer your hazardous waste to transporters that don't have an EPA identification number and an Alabama Hazardous Waste Transporter Permit.
- Never send hazardous waste to treatment, storage, or disposal facilities that have not received an EPA identification number and an Alabama Hazardous Waste Facility Permit or interim status.
- Prepare a Uniform Hazardous Waste Manifest (OMB Control number 2050-0039, EPA form 8700-22) to accompany each shipment of hazardous waste you send to an off-site treatment, storage, or disposal facility. See Appendix I in Chapter 3 of the Division 14 Rules for instructions.

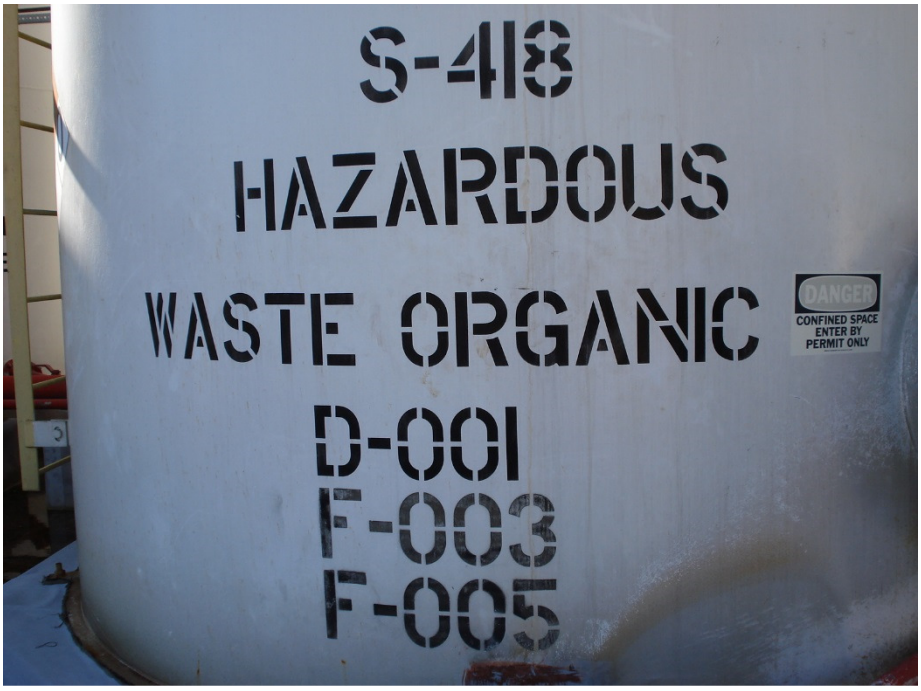


- Comply with the Department of Transportation's pre-transport requirements for packaging, labeling, marking, and placarding for each shipment of hazardous waste.
- Accumulate hazardous waste on-site for up to 180 days.
- Never accumulate more than 6000 kilograms of hazardous waste at your facility. (Consult ADEM Administrative Code Division 14 for the full text of each rule given):
    - If you manage your hazardous waste in containers, read ADEM Admin Code r. 335-14-3-.01(6)(b)2. carefully.
    - If you manage hazardous waste in tanks, consult ADEM Admin Code r. 335-14-3-.01(6)(b)3. and 335-14-6-.02(8)(b).
    - The labeling and dating requirements for both tanks and containers can be found at ADEM Admin Code r. 335-14-3-.01(6)(b)6.(i) and (ii).
    - For Preparedness and Prevention requirements, refer to ADEM Admin Code r. 335-14-3-.01(6)(b)8.
    - Waste Analysis and Recordkeeping requirements can be found at ADEM Admin Code r. 335-14-9-.01(7).

- At all times have at least one employee, either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time), who is responsible for coordinating all emergency response measures. This employee is the emergency coordinator.
- Post the following information next to the telephone:
    - The name and telephone number of the emergency coordinator;
    - The location of fire extinguishers, spill control material, and all fire alarms; and
    - The telephone number of the fire department, unless the facility has a direct alarm.
- Provide training to ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.

REMEMBER:

A FEW MINUTES SPENT ON PROPER HAZARDOUS WASTE MANAGEMANT NOW CAN SAVE YOUR COMPANY **$ $ $ $ THOUSANDS OF DOLLARS $ $ $ $** IN THE FUTURE



Employee Training

Employees must complete an initial training program in hazardous waste management.

Employees involved in the management of hazardous waste, or the documentation of hazardous waste activities, must have training that is relevant to their job duties. It is expected that the job-specific training will be as varied as the job duties present in your facility. The training program should contain basic hazardous waste management procedures for select individuals as necessary. For example, waste identification and determinations, manifest requirements, accumulation time limits, proper container and tank management, and how to properly label hazardous waste containers and tanks are all topics that should be included in the hazardous waste training program, but not all employees will need to be trained in each topic. The training should fit the job.

Employee names, dates of training, and signatures must be maintained to document completion of training and compliance with this training requirement.

All facility personnel, no matter their position, should have emergency response training so they can respond effectively in an emergency involving hazardous waste. For example, if there is an evacuation due to the danger posed by spilled hazardous waste, most of the employees will be responsible for vacating the premises in a predetermined manner. Designated personnel who have been properly trained will be responsible for containing the spill, informing local officials, bringing out firefighting equipment, etc.

Use and Management of Satellite Accumulation Containers

Satellite accumulation containers are drums or other containers placed at or near the point of generation to contain small quantities of waste generated during the course of work. These containers must be under the control of the employees who generate the waste placed in them; they must remain closed at all times, except when waste is being added or removed, and they must be marked with the words “Hazardous Waste” and an indication of the hazards of the contents. You may not exceed 55 gallons of hazardous waste, one quart of liquid acute hazardous waste, or 1 kilogram of solid acute hazardous waste at a satellite accumulation point. When that quantity is reached, the container(s) must be dated at once and moved to your hazardous waste accumulation area within three days.

Management of Containers in the Hazardous Waste Accumulation Area

Safe management of hazardous waste

Poor management of hazardous waste

Once hazardous waste is placed into your 180-day accumulation area, you must meet the following requirements:

(1) Accumulation Start Date: The date when a hazardous waste container becomes full is its accumulation start date. The Accumulation Start Date must be clearly marked and visible for inspection on each container. You may accumulate your hazardous waste for up to 180 days.

(2) Container Labels: While being accumulated on-site, hazardous waste containers must be labeled or marked clearly with the words "Hazardous Waste", an indication of the hazards of the contents, and the appropriate EPA hazardous waste numbers.

(3) Condition of containers. If a container holding hazardous waste is not in good condition, or if it begins to leak, the generator must transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the requirements of Chapter 3 of Division 14.

(4) Compatibility of waste with container. You must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

(5) Management of containers. A container holding hazardous waste must:

(a) Always be closed during storage, except when it is necessary to add or remove waste.

(b) Never be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

(c) Always be staged with adequate aisle space to allow access for inspection and emergency response.

(6) Inspections. You must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors. These inspections should be documented in an inspection log which must be available for review by Department representatives during inspections.

Keep containers marked & closed

Maintain proper aisle space.

Make sure hazardous waste labels and accumulation start dates are visible.

What must be included on the Weekly Inspection Log or Summary?

- Inspector's name (not initials) – make sure it is legible
- Date and time of inspection
- Are all containers in good condition?
- Are there any leaks or other problems? (if so, make a note of the problem and when it was fixed)
- Are all containers closed?
- Are all containers marked with the words "Hazardous Waste", an indication of the hazards of the contents, and the EPA Hazardous Waste number?
- Are all containers dated and are the accumulation start dates visible for inspection (complete and legible)?
- Are any accumulation start dates older than 180 days?
- Are adequate emergency supplies and equipment available and in good condition?

If you discover problems during your inspection (containers that are not closed, dates that are not visible, missing hazardous waste labels, and so on) **CORRECT** the problems on the spot and make a note on the inspection form!

(7) Special requirements for incompatible wastes.

(a) Incompatible wastes and materials must not be placed in the same container.

(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.

(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers or open tanks must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

Special requirements for SQGs that accumulate hazardous waste in tanks

These requirements apply to small quantity generators that accumulate hazardous waste in tanks for less than 180 days (or 270 days if the generator must ship the waste greater than 200 miles), and do not accumulate over 6,000 kg on-site at any time.

(1) As an SQG, you must comply with the following general operating requirements:

(a) Hazardous waste tanks must be labeled or marked clearly with the words "Hazardous Waste", an indication of the hazards of the contents, and the appropriate EPA hazardous waste numbers.

(b) Hazardous wastes must not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.

(c) Uncovered tanks must be operated to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters of the tank.

(d) Where hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow (e.g., waste feed cutoff system or by-pass system to a standby tank).

(2) If you accumulate hazardous waste in tanks, you must inspect, where present:

(a) Discharge control equipment (e.g., waste feed cutoff systems, by-pass systems, and drainage systems) at least once each day, to ensure that it is in good working order;

(b) Data gathered from monitoring equipment (e.g., pressure and temperature gauges) at least once each day to ensure that the tank is being operated according to its design;

(c) The level of waste in the tank at least once each day to ensure compliance with Rule ADEM Admin Code r. 335-14-3-.01(6)(b)3.(ii)c;

(d) The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and

(e) The construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes) at least weekly to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

What should be Included on the Tank Inspection Logs?

- Date & time of each inspection
- Name of inspector - make sure it's legible
- Any observations made (level of tank, pressure readings, temperatures, problems)
- Is any of the waste being held in the tanks for more than 180 days?
- Are adequate emergency supplies and equipment available and in good condition?
- Date & nature of any remedial actions

[Note: As required by ADEM Admin Code r. 335-14-3-.01(6)(b)3.(iii)e, you must remedy any deterioration or malfunction you find and you must keep documentation of the problem and the actions taken to correct it.]

(3) Small Quantity Generators accumulating hazardous waste in tanks must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

(4) At closure, as throughout the operating period, unless the owner or operator can demonstrate that any solid waste removed from his tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Chapters 335-14-3, 335-14-4, and 335-14-6.

(5) Small Quantity Generators must follow these special requirements for ignitable or reactive waste:

(a) Do not place ignitable or reactive waste in a tank unless the waste is stored in such a way that it is protected from any material or conditions that may cause the waste to ignite or react.

(b) If you treat or store ignitable or reactive waste in covered tanks, you must comply with the buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981).

(6) If you generate incompatible wastes, you must comply with the following special requirements:

(a) Incompatible wastes and/or materials must not be placed in the same tank.

(b) Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material.

Emergency Response

The Emergency Coordinator. At all times there must be at least one employee, either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time), with the responsibility for coordinating all emergency response measures specified in ADEM Admin Code r. 335-14-3-.01(6)(b)9.(iv). This person is your emergency coordinator; you may also designate additional employees to take on those responsibilities if the emergency coordinator is not available to do so.

The emergency coordinator (and any designees) must be trained and prepared to respond to any emergencies that arise. The applicable responses are as follows:

(1) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher.

(2) If there are injuries, call the fire department;

(3) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as practicable, clean up the hazardous waste and any contaminated materials or soil;

(4) In the event of a fire, explosion, or other release which could threaten human health outside your facility or when you have knowledge that a spill has reached surface water, you must immediately notify the National Response Center (using their 24-hour toll free number 800-424-8802). Your report must include the following information:

(a) The name, address, and U.S. EPA Identification Number of your facility;

(b) Date, time, and type of incident (e.g. spill or fire);

(c) Quantity and type of hazardous waste involved in the incident;

(d) Extent of injuries, if any; and

(e) Estimated quantity and disposition of recovered materials, if any.

Posted Information. You must post the following information next to the telephone:

- The name and telephone number of the emergency coordinator;
- Location of fire extinguishers, spill control material, and, if present, fire alarm; and
- The telephone number of the fire department, unless the facility has a direct alarm.

Preparedness and Prevention

(1) Maintenance and operation of facility. Your facility must be maintained and operated to minimize the possibility of a fire, explosion, or any release of hazardous waste or hazardous waste constituents to air, soil, surface water, or groundwater which could threaten human health or the environment.

(2) Required equipment. All facilities must be equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as those using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(3) Testing and maintenance of equipment. Test and maintain all communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment as necessary to assure that they will work during an emergency.

(4) Access to communications or alarm system.

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under ADEM Admin. Code r. 335-14-3-.01(6)(b)(8)(ii).

(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under ADEM Admin. Code r. 335-14-3-.01(6)(b)(8)(ii).

(5) Required aisle space. You must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of your facility in an emergency, unless aisle space is not needed for any of these purposes.

(6) Arrangements with local authorities.

(a) You must attempt to make the following arrangements, as appropriate for the type of waste handled at your facility and the potential need for the services of these organizations:

i. Invite police, fire departments, and emergency response teams to visit your facility and become familiar with its layout, the properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, possible evacuation routes and rallying points, and the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;

ii. Where more than one police and fire department might respond to an emergency, make agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

iii. Agreements with State emergency response teams, emergency response contractors, and equipment suppliers.

(b) Maintain documentation of these arrangements in your operating record. Where no arrangements exist, you must document your attempts to make such arrangements.

NOTICE

IF YOU HAVE A SERIOUS EMERGENCY AND YOU HAVE TO CALL YOUR LOCAL FIRE DEPARTMENT OR IF YOU HAVE A SPILL THAT EXTENDS OUTSIDE YOUR PLANT OR THAT COULD REACH SURFACE WATERS (ANY SPILL OUTSIDE OF SECONDARY CONTAINMENT) IMMEDIATELY CALL THE NATIONAL RESPONSE CENTER at: 800-424-8802 AND GIVE THEM THE INFORMATION THEY ASK FOR. 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.

Land Disposal Restrictions and Recordkeeping

You must test your waste, test an extract of the waste, or use knowledge of the waste, to determine if the waste is restricted from land disposal.

If you determine that you are managing a restricted waste and the waste does not meet the applicable treatment standards in ADEM Admin Code r. 335-14-9-.01(7), you must notify the treatment or storage facility in writing, to accompany the initial shipment of waste, of the appropriate treatment standards and any applicable prohibition levels.

If you determine that you are managing a restricted waste and the waste does meet the applicable treatment standards in ADEM Admin Code r. 335-14-9-.01(7), you must notify the treatment, storage, or land disposal facility, with the initial shipment of waste, with a notice and a certification stating that the waste meets the applicable treatment standards and the applicable prohibition levels. You must retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to rule ADEM Admin Code r. 335-14-9-.01(7) for at least three years from the date that the waste was last sent for on-site or off-site treatment, storage, or disposal.

EXAMPLE:
HAZARDOUS WASTE CONTAINER LABEL

HAZARDOUS
WASTE

FERERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE, OR
PUBLIC SAFETY AUTHORITY, OR THE
U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERATOR INFORMATION:

NAME _____

ADDRESS _____

CITY _____ **STATE** _____**ZIP** _____

EPA ID NO. _____ **EPA WASTE NO.** _____

ACCUMULATION START DATE._____ **MANIFEST DOCUMNET NO.** _____

HAZARDOUS CHARACTERISTICS: _____

PROPER D.O.T. SHIPPING NAME _____

UN OR NA# _____

HANDLE WITH CARE!

CONTAINS HAZARDOUS OR TOXIC WASTES

CHAPTER 4 SHIPPING HAZARDOUS WASTE OFF-SITE

An SQG is allowed to accumulate hazardous waste on-site without a permit for up to 180 days (or 270 days if the waste is shipped over 200 miles) provided that the facility never accumulates more than 6000 kilograms (13,200 pounds) on-site at any time. These limits were established so that a small business could accumulate enough waste to make shipping and disposal economical.

As an SQG, you must not offer your hazardous waste to transporters that have not received an EPA identification number and an Alabama Hazardous Waste Transport Permit.

Carefully choose your Hazardous Waste Transporter and Treatment, Storage, or Disposal facility. Under Federal Law, you are always responsible for the hazardous waste generated at your facility even after the waste leaves your facility. This is known as "Cradle to Grave" responsibility.

Preparing Your Hazardous Waste 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 and packaged according to the container manufacturer's packaging specifications. Your hazardous waste transporter should be able to assist you.

If you need additional information, you may wish to consult the requirements for packaging and labeling hazardous wastes found in the Department of Transportation (DOT) regulations (49 CFR Part 172). For more information about DOT requirements, follow this link: www.fmcsa.dot.gov/safety-security/hazmat/complyhmregs.htm.

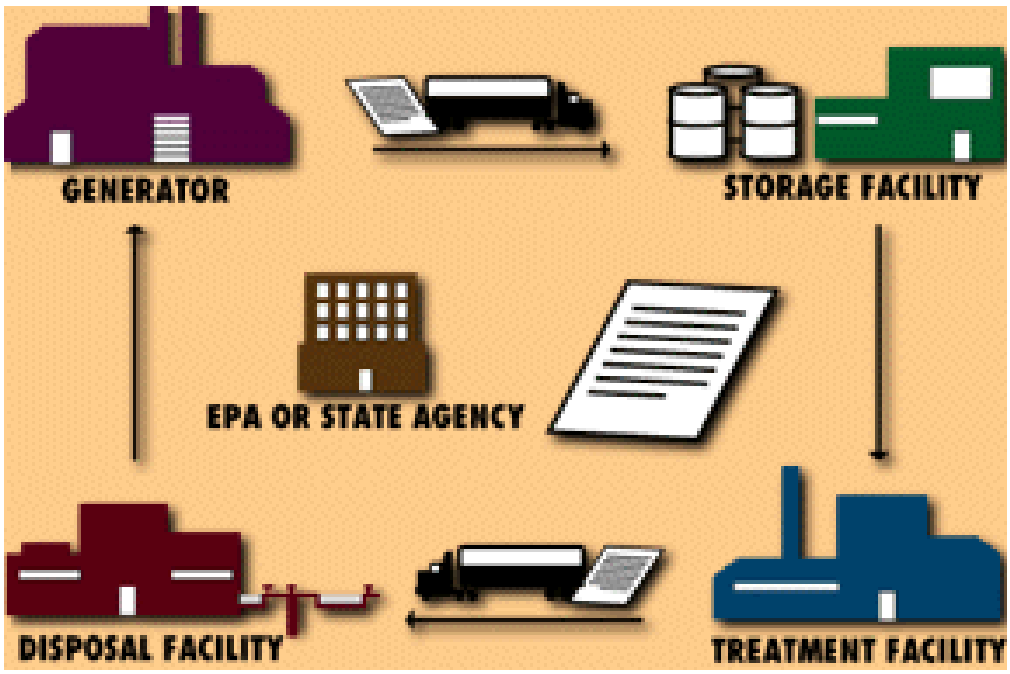
The Uniform Hazardous Waste Manifest.

When you transport, or offer for transportation, hazardous waste for off-site treatment, storage, or disposal, you must prepare a Manifest on EPA form 8700-22 according to the instructions in Appendix I of chapter 335-14-3. You can obtain the blank manifest forms from your designated treatment, storage, or disposal facility (TSD) or from your transporter; you may also use an electronic manifest, so long as it meets the requirements of ADEM Admin. Code r. 335-14-3-.02.

A hazardous waste manifest is a multi-copy shipping document that you must fill out and use to accompany your hazardous waste shipments. The manifest form is designed so that shipments of hazardous waste can be tracked from their point of generation to their final destination (Cradle-to-Grave). The hazardous waste generator, the transporter, and the designated TSD facility must each sign the manifest and keep a copy. The TSD operator must send a copy of the completed manifest back to you. This document is your assurance that the waste has been accepted by the designated TSD. You must keep this copy, which will be signed by the transporter and the TSD facility, on file for three years. If you have not received this copy within 30 days of waste shipment, you should contact the designated TSD facility to determine if the waste was received and the reason for the missing manifest copy. If you have not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter you must submit a legible copy of the manifest, with some indication that you have not received confirmation of delivery (Exception Report) to ADEM.

REMEMBER: YOUR LIABILITY DOES NOT END WHEN YOU SHIP YOUR HAZARDOUS WASTE OFF YOUR SITE AND IT IS NO LONGER IN YOUR POSSESSION. YOU ARE POTENTIALLY LIABLE UNDER THE FEDERAL SUPERFUND FOR ANY MISMANAGEMENT OF YOUR HAZARDOUS WASTE, NO MATTER WHERE IT HAPPENS.

The Hazardous Waste Manifest – it always comes back to you!



SAMPLE UNIFORM HAZARDOUS WASTE MANIFEST FORM

UNIFORM HAZARDOUS WASTE MANIFEST

1 Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month Day Year

EPA Form 8700 - 22 (Rev. 9 - 88) Previous editions are obsolete.

CHAPTER 5 MANAGING UNIVERSAL WASTE

What is the Universal Waste Rule?

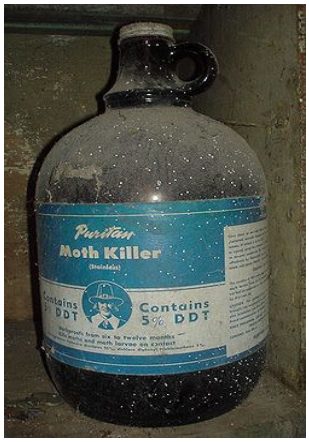
The Universal Waste Rule was established to streamline requirements for certain widely generated hazardous wastes. It became effective in Alabama in March of 1996. Universal Waste regulations are found in Chapter 17 of ADEM's hazardous waste regulations (ADEM Administrative Code 335, Division 14). You are not required to count universal wastes when calculating your generator status.

Criteria for waste to be included in the Universal Waste Rule are:

The waste is generated in a wide variety of settings
The waste is generated by a vast community
The waste may be present in significant volumes in non-hazardous management systems

What Wastes are Covered by This Rule?

Batteries, such as nickel-cadmium (Ni-Cd). Lithium-ion (LI), and sealed lead-acid batteries which are found in many common items in the home or business including electronic equipment, mobile telephones, portable computers, and emergency back-up lighting. All hazardous waste batteries are covered by this rule including wet, dry, Ni-Cd, LI, lead-acid, and caustic mercury.



Pesticides that have been recalled or banned from use. These wastes are often stored in sheds or barns for long periods of time. Only those pesticides which are suspended or canceled as part of a recall and unused pesticides collected as part of a waste pesticide collection program are covered by this rule.

Mercury-containing Equipment is a device or part of a device (excluding batteries and lamps) that contains elemental mercury integral to its function. Thermostats can contain as much as three (3) grams of liquid mercury and are located in almost any building. Mercury-containing thermostats, switches, and other equipment (as well as vials or ampules of mercury removed from such equipment) are covered by this rule.

Lamps (including high intensity discharge lamps, fluorescent lamps, and compact fluorescent lamps), which contain small amounts of mercury, lead, and sometimes cadmium. Only intact lamps can be managed as universal waste. Broken lamps are a solid waste that is subject to a solid/hazardous waste determination. Lamps that have been crushed may NOT be managed as Universal Waste.

Which Regulations Apply To Generators of Universal Waste?

Small Quantity Handlers of universal wastes are facilities that do not accumulate more than 5,000 kilograms (11,000 pounds) of universal waste at any one time. Small Quantity Handlers of Universal Waste:

- Are not required to notify of universal waste handling activity;
- Must manage universal waste in a manner that prevents release to the environment;
- Must label or mark the containers with the words “Universal Waste Batteries”, “Universal Waste Pesticides”, “Universal Waste Mercury-Containing Equipment”, “Universal Waste Lamps”;
- May accumulate universal wastes for no more than one year from the date the waste is first generated or received, and must be able to demonstrate how long the waste has been stored;
- Must inform employees of proper handling and emergency procedures associated with the type of waste at the facility; and
- Must contain releases of universal waste and manage the recovered waste appropriately.
- Manifest and other tracking documents are not required for Small Quantity Handlers of universal waste. If the waste is hazardous waste material as defined by 49 CFR 171-180, appropriate labeling, placarding, and shipping papers must be utilized.

A small quantity handler may accumulate universal waste for longer than one year from the date the universal waste is generated or received from another handler **ONLY** if necessary to collect a sufficient quantity to facilitate proper recovery, treatment, or disposal. However, the handler must be able to prove that the extended accumulation period is specifically solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

Large Quantity Handlers of universal waste are facilities that accumulate more than 5,000 kilograms (11,000 pounds) of universal waste at any one time (this classification is maintained until the end of the calendar year). Large Quantity Handlers of universal wastes must comply with the same requirements as Small Quantity Handlers with the following exceptions:

- Must provide written notification to State/EPA and obtain an EPA identification number. Notification must include company name, mailing address, name and phone number of contact person, physical address, type of waste being handled, and a statement indicating the handler is accumulating more than 5,000 kilograms of universal waste;
- Must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures; and
- Must keep a record of universal waste received and shipped at the facility, to include: name, quantity and type, date shipped or date received. These records must be retained for at least three years.

Transporters of universal waste are people who are engaged in the off-site transportation of universal waste by air, rail, highway, or water. Universal waste transporters are subject to the following regulations:

- Must comply with all applicable US Department of Transportation (DOT) regulations in 49 CFR part 171-180;
- May store waste at a transfer facility for up to ten (10) days;
- Transporters storing waste longer than ten (10) days become a handler and must comply with the applicable universal waste handler requirements; and
- Transporters must immediately contain all releases and make a waste determination on any recovered materials (e.g., determine if the material is a hazardous waste).

Destination Facilities for universal waste are facilities that treat, dispose of, or recycle a particular category of universal wastes. Destination facilities for universal waste are subject to the same requirements as hazardous waste treatment, storage, and disposal facilities, with the following exceptions:

- Must keep a record of each shipment received at the facility;
- Record must include: name and address of universal waste handler, destination facility, quantity of each type of universal waste received, and the date of receipt of the shipment of universal waste; and
- Records must be maintained for three years from the shipment receipt date.

Who may comply with the universal waste rules?

All hazardous waste generators may choose to manage applicable wastes under the universal waste regulations. Households are exempted from complying with these regulations.

Am I required to manage these items as a universal waste?

The universal waste rules are OPTIONAL: a generator has the option to use these less-restrictive rules to manage universal wastes, but is not required to do so. If you decide you don't want to bother with the universal waste rules, you must make a hazardous waste determination on the waste, then manage it appropriately:

- If the materials are not listed and do not display a characteristic of hazardous waste, they are not hazardous waste;
- If the wastes are hazardous and the generator does not choose to use the universal waste regulations, those wastes must be counted and handled as hazardous waste (manifesting requirements, accumulation times, etc. apply to those wastes).

Remember – universal wastes are not counted towards your generator status.

CHAPTER 6 USED OIL MANAGEMENT STANDARDS

In addition to hazardous waste, many small businesses in Alabama also generate used oil, used oil filters, and materials that are contaminated with used oil (such as sorbents used to clean up small leaks and spills of used oil). While used oil is typically not as dangerous to the workers who handle it as most hazardous wastes, when spilled or improperly disposed used oil can still have a devastating impact on the environment. Because of its potential for environmental harm, used oil is regulated under a special set of rules contained in Chapter 17 of ADEM's hazardous waste regulations (ADEM Administrative Code 335, Division 14). This chapter will deal with the management of used oil and the differences between the hazardous waste regulations and the used oil regulations.

What is used oil?

Chapter 335-14-1-.02 defines used oil as "any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities." In addition to the automobile crankcase oil that is traditionally referred to as "used oil", this definition includes nearly any of the petroleum-based or synthetic substances that are used for lubrication, heat transfer, or hydraulic fluid. Below is a partial list of some of the materials that fall under the term "used oil":

These materials ARE Used Oil

Transmission Fluid	Brake Fluid	Off-Road engine oil
Compressor and bearing oil	Hydraulic oil	Gear oil
Electrical oil	Axle Grease	Refrigeration oil

These materials ARE NOT used oil

"Waste oil" - oil that has not been used. For example, new engine oil that has been spilled and is too dirty to use.	Solvents - petroleum-based materials used for their solvent or cleaning properties, such as mineral spirits or kerosene.
Oil-based paint	Antifreeze
Rendered animal fat (such as lard or bacon grease)	Vegetable-based oil or fat

For a full discussion of the used oil requirements, please consult *The Used Oil Management Handbook*. That document and several others can be found at this address:

http://www.adem.state.al.us/programs/land/guidanceReports.cnt

A few basic guidelines can be found in the following pages.

Who must comply with the standards for used oil generators?

According to ADEM Admin Code r. 335-14-17-.03(1)(a), a used oil generator is "any person, by individual generation site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation." Unlike the hazardous waste regulations discussed in the previous chapters of this handbook, the used oil management standards found in chapter 335-14-17 do not exempt any class of generators based on generation rate. With only three exceptions, *any person who produces used oil must comply with the standards for used oil generators*. The three exceptions to the definition of used oil generator are:

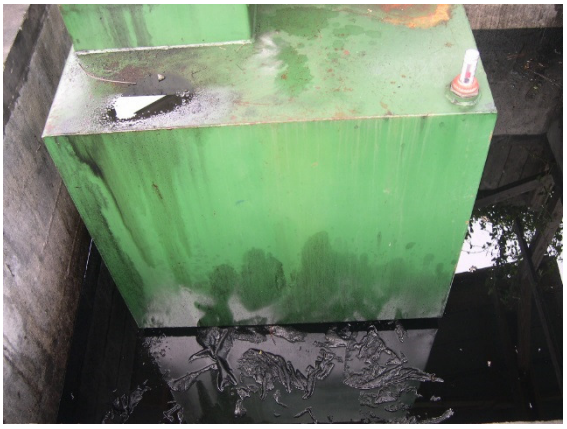
- farmers who produce a yearly average of 25 gallons or less a month;
- household "do-it-yourselfer" used oil generators who change the oil in their own vehicles; and
- vessels who produce used oil on-board ship while at sea or in port.

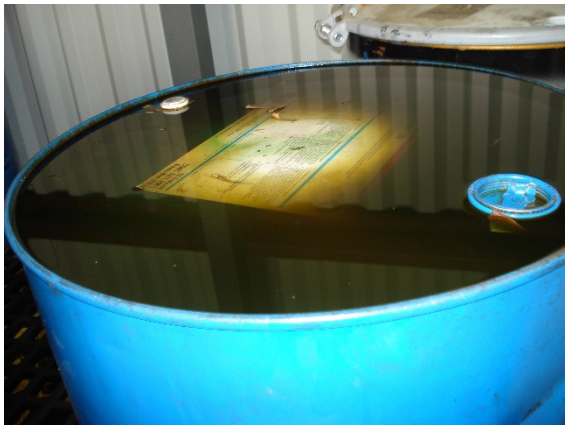
Typical generators of used oil:

- Vehicle repair shops
- Shipyards
- Freight, delivery, and moving companies
- Municipal garages and government motor pools
- Industrial facilities that maintain their own equipment and/or vehicles
- Service stations
- Metalworking industries
- Construction companies
- Car dealers (especially those with a service component)
- Taxi and vehicle rental agencies that maintain their own fleets

Many of the requirements for managing hazardous waste containers also apply to used oil containers: keep them marked, keep them closed, and keep them in good condition.

Don’t let your used oil tanks, containers, or management areas look like these:





Remember to Keep it C.L.E.A.N.

C: Closed

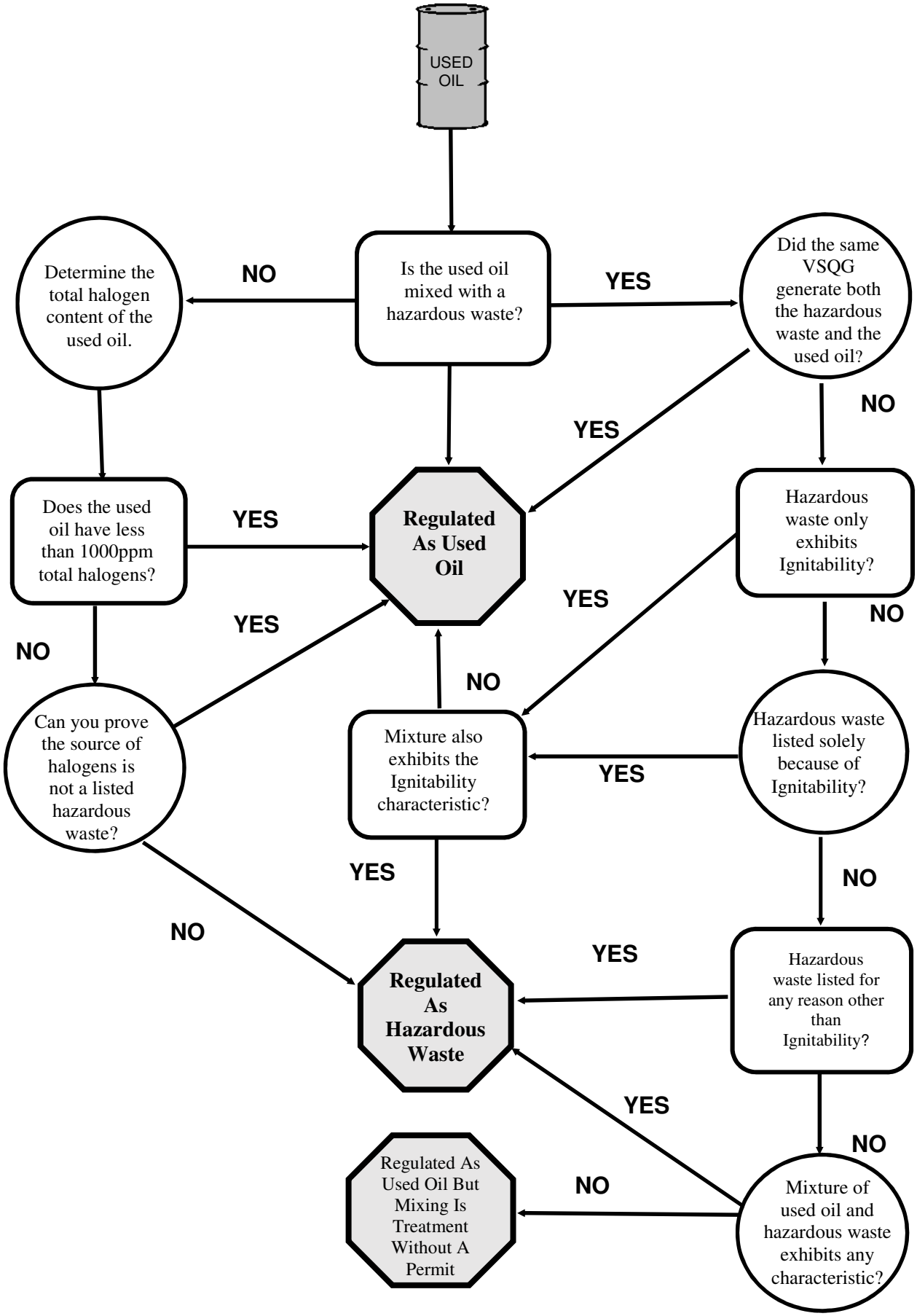
L: Labeled "Used Oil"

E: Ensure Proper Management and Encourage Recycling

A: Abate & Clean Up Discharges

N: Keep it Neat!

Is it Used Oil or Hazardous Waste?



CHAPTER 7 HOW TO AVOID COMMONLY OBSERVED VIOLATIONS

The most commonly observed violations are related to not meeting the following requirements:

- Hazardous Waste Determinations: You must make a Hazardous Waste Determination on any solid waste that is generated at your facility. Hazardous waste determinations can be conducted by laboratory analysis or generator knowledge. If you find unidentified containers during your weekly inspections, you must make a hazardous waste determination on the contents – you have to know what the material is before you can figure out what to do with it. Keep documentation for the hazardous waste determinations on all your facility's waste streams, hazardous or not.
- Container Markings and Management: Containers in the hazardous waste accumulation area must be labeled with the words "Hazardous waste", a description of the hazards associated with the contents, the applicable EPA hazardous waste numbers, and the accumulation start date (the date the container became full). Satellite accumulation containers must be labeled with the words "Hazardous Waste" and a description of the hazards associated with the contents. 30-gallon or larger containers must not be stacked over two containers high. All containers holding hazardous waste must be closed, except when adding or removing waste. "Closed" means the contents cannot spill out if the container is dropped or tipped over.
- Weekly Inspections: You must conduct an inspection of your hazardous waste storage area every week. Those inspections must be documented in an inspection log; that log must include the name of the person conducting the inspection, the date and time of the inspection, the observations made during the inspection and the date and nature of any repairs.
- Used Oil Management: Used Oil containers must be in good condition, kept closed unless material is being added or removed, and labeled with the words "Used Oil". Any release of used oil to the environment must be cleaned up promptly.
- Training: Small quantity generators must train their employees that handle hazardous waste and the designated emergency coordinator(s). This training must be documented and maintained for records.
- Emergency Response and Preparedness Provisions: There must be one employee that is designated as the emergency coordinator. Emergency phone numbers and the location of all emergency equipment must be listed by a centralized telephone. The facility must document coordination with local and state emergency responders (such as police, fire department, hospitals). The facility must provide adequate aisle space in all areas, including the hazardous waste accumulation area: the containers must be arranged so emergency equipment can be maneuvered into the area and can reach any container.
- Recordkeeping Requirements: You must maintain documents related to training, emergency preparedness, emergency response activities, hazardous waste notifications, shipments, and inspections. In most cases, you will need to keep these records for three years.

WHERE CAN I GET ADDITIONAL INFORMATION?

On-line Resources:

ADEM's Hazardous Waste Rules (Division 14):
(http://www.adem.alabama.gov/alEnviroRegLaws/files/Division14.pdf)

ADEM Guidance: (http://www.adem.state.al.us/programs/land/guidanceReports.cnt)

Hazardous Waste Determination
Waste Disposal Approvals
Hazardous Waste: The Basics
Satellite Accumulation Fact Sheet

Telephone Resources:

ADEM Ombudsman • 800-533-ADEM (2336)
Hazardous Waste Compliance Inspectors • • • • • • • • • 334-270-5637

External Links:

EPA's Homepage (http://www.epa.gov)

CHAPTER 8 MANAGING NON-HAZARDOUS SOLID WASTE

In this handbook, we've talked about the proper management of hazardous wastes generated by small businesses in Alabama. However, most businesses also generate other wastes that need proper management. This chapter will deal with the management of non-hazardous solid waste and its effect on the municipal solid waste (MSW) stream.

What is MSW?

Municipal solid waste includes wastes such as durable goods, nondurable goods, containers and packaging, food wastes, yard wastes, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources. Examples of waste from these categories include appliances, newspapers, clothing, food scraps, boxes, disposable tableware, office and classroom paper, wood pallets, and cafeteria wastes.

As of 2010 (the most recent statistics available), the United States generates approximately 249 million tons of MSW annually. The U.S. Environmental Protection Agency (EPA) estimates that 34% of the MSW is being recycled, 12% is managed by combustion, while the remainder, **54 percent,** is buried in landfills. New state and federal landfill regulations will make the disposal of waste in landfills increasingly expensive. Communities should consider other alternatives to landfilling, including waste reduction, recycling and composting.

Small business can play a key role in helping the community meet its waste reduction and recycling goals. A typical MSW stream is composed of the following major elements:

Materials in MSW	Weight
* Paper and Paperboard	28.5%
* Food	13.9%
* Yard Waste	13.4%
* Plastics	12.4%
* Metals	9.0%
Rubber, Leather, Textiles	8.4%
* Wood	6.4%
* Glass	4.6%
Other	3.4%
	100%

(Items with an asterisk can be recycled or composted in most communities)

In years past, commercial firms and small businesses recycled cardboard boxes and scrap metals on a limited basis. Today, recycling has greatly expanded to include materials such as: glass, aluminum cans, wood, office and computer paper, newspaper, plastics, used motor oil, construction and demolition waste, kitchen grease, steel, and automotive batteries.

When it comes to recycling at your facility, the first step is to find out what markets and services are available locally to handle the types and quantities of materials generated at your business. For example, your business may generate enough paper (cardboard, office paper, computer paper, newspaper etc.) that a local waste hauler may come and pick up these materials on a regular basis. Other, smaller volume, items may have to be taken to a recycling drop site or recycling center. Once you have identified the local markets for recyclables, then it is time to establish your program using the following steps as a guide:

1. Get management's support. Have the Director, Chief Executive Officer, President, or "The Boss" send a memo or letter to all employees explaining the program, its benefits, how the revenue will be used, etc.
2. Set up an employee committee to guide the recycling program and assign one individual as the primary contact person to coordinate the program between management, the employees, and the waste hauler/collectors.
3. Organize a collection system for each material in your recycling program. This will include positioning and labeling containers and working with janitorial staff.
4. Establish an education and monitoring program to insure that new employees are informed about the recycling program, uncontaminated recyclables are supplied to the hauler/collectors, and the program is meeting the community's waste reduction/recycling goals.
5. Provide positive feedback to employees so that they feel involved in and committed to the recycling program.

As stated before, yard waste makes up about 13.4% of the MSW stream, and in Alabama during the growing season this could easily increase to 20-25%. With restrictions on the open burning of leaves and increases in tipping fees at landfills, more and more communities are turning to composting. A variety of materials can be composted including, but not limited to: grass clippings and dead plants from landscaped areas; leaves, twigs and branches from tree pruning; vegetable scraps and coffee grounds from cafeterias and kitchens; and saw dust from untreated wood. Check with your local sanitation department or recycling office to see what composting services are available in your community. Compost is a valuable soil conditioner and organic amendment that provides improved soil texture and soil aeration, increased water holding capacity, decreased erosion, and improved regulation of soil temperature. A no-fuss way to recycle grass clippings and leaves is to put a mulching blade on the lawn mower; the leaves and clippings are pulverized and disappear into the grass, where they decompose and provide nutrients back to the lawn. No raking and no disposal needed.

In addition to recycling and composting, there are a variety of other techniques you can use in your daily business operations that can help reduce the amount of waste disposed in landfills. Some of these techniques are listed below:

- Reuse cardboard containers, paper boxes, and envelopes when possible.
- Make two-sided photocopies.
- Consider the recyclability of an item before purchasing it. Look for the recycling symbol.
- Use mugs and glasses instead of disposable cups.
- Use cloth whenever possible (i.e. napkins, towels, and clean-up clothes).
- Purchase items in the large economy size and use concentrates when possible.
- Avoid purchasing disposable products whenever possible.

- Use electronic mail or make interoffice phone calls instead of sending letters and memos.
- Consider the amount of packaging on office supplies before purchasing them. Over-packaging creates waste.
- Consider the amount of packaging of packing and packaging materials used on items that your company ship or mails, too. Over-packaging creates waste for your customers AND costs your company money.
- Use old computer paper and scrap office paper for notes and memos.
- Purchase office products, particularly paper products, made from recycled material when available. Look for the recycling symbol.

This chapter has discussed recycling, composting, and waste reduction. Hopefully, a comprehensive program at your facility will greatly reduce the amount of solid waste being generated. However, no matter how well organized you are or how high participation levels are in your waste reduction/recycling program, there will always be a need for solid waste disposal. Many items such as food-contaminated packaging, multi-layer containers and other unmarketable materials will have to be disposed of in a permitted solid waste disposal facility or taken to a permitted solid waste incinerator.

For more information on recycling and other solid waste management alternatives in your area, contact your city/county recycling or solid waste coordinator. You may also contact:

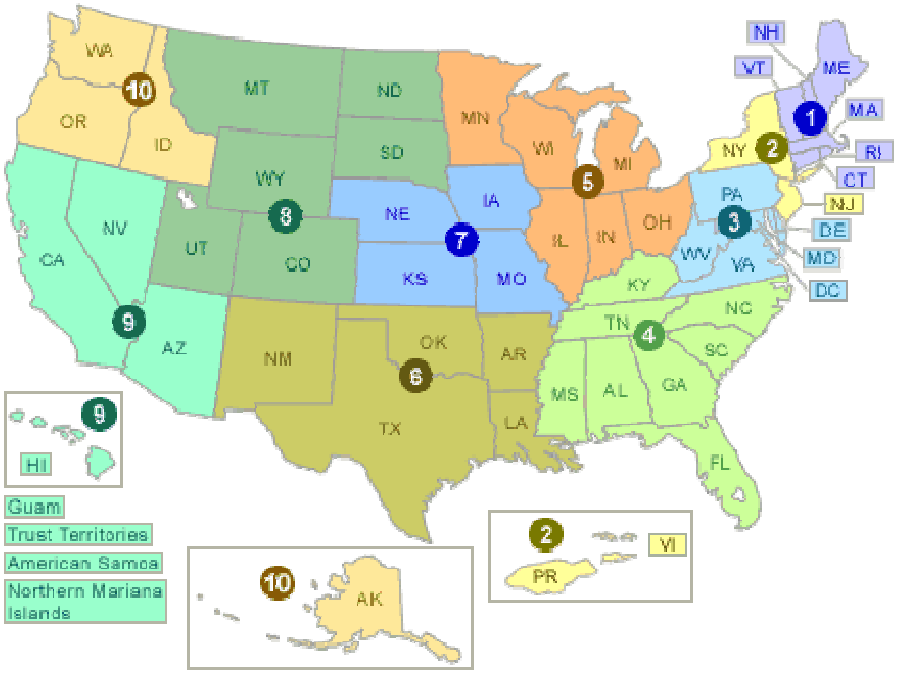
Alabama Department of Environmental Management
Materials Management Section
1400 Coliseum Boulevard
Montgomery, AL 36110

(334) 271-7988

APPENDIX A U.S. EPA REGIONAL OFFICES

EPA REGION 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont State Waste Programs Branch JFK Federal Building Boston, Massachusetts 02203 Phone: (617) 565-3400 New England call center 1-888-372-7341	EPA REGION 2: New Jersey, New York, Puerto Rico, Virgin Islands Main Regional Office 290 Broadway New York, NY 10007-1866 Phone: 212-637-3000
EPA REGION 3: Delaware, Maryland, Virginia, West Virginia, Pennsylvania, District of Columbia Waste Management Branch 841 Chestnut Street Philadelphia, Pennsylvania 19107 Phone: (215) 597-9800	EPA REGION 4 Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee Sam Nunn Atlanta Federal Center 61 Forsyth Street, SW Atlanta, GA 30303-3104 Phone: 1-800-241-1754
EPA REGION 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin RCRA Activities 77 West Jackson Blvd. Chicago, Illinois 60604 Phone: (312) 353-2000	EPA REGION 6: Arkansas, Louisiana, New Mexico, Oklahoma, Texas 1445 Ross Avenue Suite 1200 Dallas, Texas 75202 Phone: (214) 665-6444
EPA REGION 7: Iowa, Kansas, Missouri, Nebraska RCRA Branch 726 Minnesota Avenue Kansas City, Kansas 66101 Phone: (913) 551 7000	EPA REGION 8: Colorado, Montana, Utah, North Dakota, South Dakota, Wyoming Waste Management Division One Denver Place 999 18th Street, Suite 300 Denver, Colorado 80202 Phone: 303-312-6149 Fax: 303-312-6064
EPA REGION 9: Arizona, California, Hawaii, Nevada, American Samoa, Guam, Trust Territories of the Pacific Toxics and Waste Management Div. 75 Hawthorne Street San Francisco, California 94105 Phone: (415) 947-8000	EPA REGION 10: Alaska, Idaho, Oregon, Washington Waste Management Branch 1200 Sixth Avenue Seattle, Washington 98101 Phone: (800) 424-4EPA

MAP of the 10 EPA Regions



Region 1 – CT, ME, MA, NH, RI, VT

Region 2 – NJ, NY, Puerto Rico, U.S. Virgin Islands and 7 Tribal Nations

Region 3 – PA, DE, MD, VA, WV and DC

Region 4 – KY, TN, NC, SC, MS, AL, GA and FL

Region 5 – MN, WI, IL, MI, IN and OH

Region 6 – NM, TX, OK, AR and LA

Region 7 - NE, KS, IA and MO

Region 8 – MT, ND, SD, WY, UT and CO

Region 9 – CA, NV, AZ and HI

Region 10 – OR, WA, ID and AK

APPENDIX B COMMON SMALL QUANTITY GENERATOR WASTE STREAMS

Since many small quantity generators may not be familiar with the manner in which hazardous wastes are identified, Appendix B is provided to aid you in determining the EPA Hazardous Waste Numbers for a few commonly generated waste streams. The industries and waste streams described here are not a comprehensive list, but rather serve as a guide to potential small quantity generators in determining which of their wastes, if any, are hazardous. Except for the pesticide and wood preserving categories, this Appendix does not include a list of EPA Hazardous Waste Numbers for unused commercial chemical products that are hazardous when discarded.

If the specific EPA Hazardous Waste Number that should be applied to your waste stream is unclear, please refer to ADEM Administrative Code Chapter 335-14-2. In those cases more than one EPA Hazardous Waste Number may be applicable to the waste.

IGNITABLE WASTES – D001

Ignitable wastes include any liquids that have a flashpoint less than 140°F, any non-liquids that are capable of causing a fire through friction, absorption of moisture, or spontaneous chemical change, or any ignitable compressed gas as described in 49 CFR 173.300. For a complete description of ignitable wastes, reference Rule 335-14-2-03(2), characteristic of ignitability. Examples are spent solvents, solvent still bottoms, 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. All ignitable wastes have the EPA Hazardous Waste Number of **D001** (but other waste codes may also apply). Some commonly used ignitable compounds are:

Ethylene Dichloride	Ethanol
Isopropanol	Kerosene
Petroleum Distillates	Naphtha
Petroleum Solvents	White Spirits

CORROSIVE WASTES – D002

Acids, bases, or mixtures having a pH of 2 or less, or a pH of 12.5 or greater, are considered corrosive (for a complete description of corrosive wastes, see Rule 335-14-2-.03(3), characteristics of corrosivity). All corrosive materials and solutions have the EPA Hazardous Waste Number **D002**.

CORROSIVE WASTES (Continued)

The following are some of the more commonly used corrosives:

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

REACTIVE WASTES – D003

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 heated or subjected to shock. For a complete description of reactive wastes see Rule 335-14-2-.03(4). Unless otherwise specified, all reactive wastes have the EPA Hazardous Waste Number **D003**. The following materials are commonly considered to be reactive:

Acetyl Chloride	Chromic Acid
Cyanides	Hypochlorites
Organic Peroxides	Perchlorates
Permanganates	Sulfides

TOXIC WASTES – D004 – D043

Heavy metals and other inorganic wastes which exhibit the characteristic of toxicity as determined by the Toxic Characteristics Leaching Procedure (TCLP) are identified by the EPA Hazardous Waste Numbers **D004-D043**. This may include dusts, solutions, wastewater treatment sludges, paint wastes, waste inks and other such materials which contain heavy metals/inorganics (note that wastewater treatment sludges from electroplating operations are identified as **F006**).

Arsenic	D004
Barium	D005
Cadmium	D006
Chromium	D007
Lead	D008
Mercury	D009
Selenium	D010
Silver	D011

Rule 335-14-2-.03(5) identifies all of the hazardous wastes which exhibit toxic characteristics.

SOLVENTS – F-Listed Wastes

Solvents, spent solvents, solvent mixtures, or solvent still bottoms 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 (also see ignitable wastes for other hazardous solvents, and Rule 335-14-2-.04(2) for listed hazardous waste solvents):

Acetone	F003
Benzene	F005
n-Butyl Alcohol	F003
Carbon Disulfide	F005
Carbon Tetrachloride	F001
Chlorobenzene	F002
Cresols	F004
Cresylic Acid	F004
Cyclohexanone	F003
O-Dichlorobenzene	F002
Ethyl Acetate	F003
Ethylbenzene	F003
Ethyl Ether	F003
2-Ethoxyethanol	F005
Isobutanol	F005
Methanol	F003
Methyl Ethyl Ketone	F005
Methylene Chloride	F001, F002
Methyl Isobutyl Ketone	F003
Nitrobenzene	F004
2-Nitropropane	F005
Pyridine	F005
1,1,1-Trichloroethane	F001. F002
1,1,2-Trichloroethane	F002
Tetrachloroethylene (Perchloroethylene)	F001, F002
Toluene	F005
Trichloroethylene	F001, F002
Trichlorofluoromethane	F002
Xylene	F003

DRY CLEANING FILTRATION RESIDUES

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

Still residues containing petroleum solvents with a flashpoint less than 140^{o}F are considered hazardous and have the EPA Hazardous Waste Number **D001**.

LEAD-ACID BATTERIES

Used or spent lead-acid batteries that are recycled do not need to be counted in determining the quantity of hazardous waste generated per month, nor do they require a hazardous waste manifest when shipped from the generator's premises. Spent lead-acid batteries which are not recycled should be counted in your monthly hazardous waste generation and should be accompanied by a hazardous waste manifest upon shipment. See Rule 335-14-7-.07 for more complete regulations regarding spent lead-acid batteries.

Lead Dross	D008
Plates & Groups	D008
Spent Acids	D002
Whole Lead-acid batteries	D002, D008

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 in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. Ink sludges have the EPA Hazardous Waste Number **K086**.

SPENT PLATING & 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 anticaking agents. Plating wastes generally have Hazardous Waste Numbers **F006-F009, with F007-F009** containing cyanide. Cyanide heat treating wastes are generally Hazardous Waste Numbers **F010-F012**. See Rule 335-14-2-.04(2) for a more complete description of plating wastes. Chrome plating waste may also be **D007**.

PESTICIDES

The pesticides listed below are hazardous. Wastes shown in **bold** have been designated acutely hazardous. For a more complete listing, see Rules 335-14-2-.04(3) and (4) for specific listed pesticides, and other wastes, wastewaters, sludges, and by-products from pesticide formulators. (Note: while many of these pesticides are no longer in common use, they are included here for those cases where they may be found in storage.)

Aldicarb	**P070**
Aldrin	**P004**
Arsenic Pentoxide	**P011**
Arsenic Trioxide	**P012**
Copper Cyanides	**P029**
Dieldrin	**P037**
Dinitrocresol	**P047**
Dinoseb	**P020**
Disulfoton	**P039**
Endosulfan	**P050**
Endrin	**P051**
Famphur	**P097**
Heptachlor	**P059**
Methyl Parathion	**P071**
Parathion	**P089**
Phorate	**P094**
Strychnine	**P108**
Thallium Sulfate	**P115**
Toxaphene	**P123**
Disodium Monomethane-arsenate	D004
Ethylmercuric Chloride	D009
2-Methoxy Mercuric chloride	D009
Methoxychlor	D014
Monosodium Methane-arsenate	D004
Phenylmercuric Acetate	D009
Amitrole	U011
Cacodylic Acid	U136
Chlordane	U036
1,2-Dibromo-3-chloropropane	U066
2,4-Dichlorophenoxy-acetic Acid	U240
DDT	U061
Dimethylcarbamoyl-chloride	U097
Hexachlorobenzene	U127
Kepon	U142
Lindane	U129
Pentachloronitro-benzene	U185
Pentachlorophenol	U242
2,4,5-Trichlorophenoxy-acetic Acid	U232
2-(2,4,5-Trichloropheonxy)-propionic Acid	U233
Thiram	U244
Warfarin	U248

WOOD PRESERVING AGENTS

Wastewaters, process residuals, preservative drippage, wastewater treatment sludges from wastewater treatment operations, etc. associated with wood preserving are considered hazardous wastes (K001 - bottom sediment sludges from the treatment of wastewater processes that use creosote and pentachlorophenol). See Rule 335-14-2-.04(2) for a complete description of wood preserving wastes: F027, F032, F034, and F035. In addition, unless otherwise indicated, specific wood preserving compounds are:

Creosote	U051
Pentachlorophenol	F027
Chromated Copper Arsenate	D004, D007

APPENDIX C HELPFUL INFORMATION

ADEM MAIN SWITCHBOARD / INFORMATION: (334) 271-7700

ADEM Montgomery Office
1400 Coliseum Blvd
Montgomery, AL 36110-2059

Mailing Address
P.O. Box 301463
Montgomery, AL 36130-1463

ADEM DIVISION	TELEPHONE	FAX NUMBER	E-MAIL ADDRESS
Administration	(334) 271-7700	(334) 271-7950	Permitsmail@adem.state.al.us
Air	(334) 271-7861	(334) 279-3044	Airmail@adem.state.al.us
Land	(334) 271-7730	(334) 279-3050	Landmail@adem.state.al.us
Water	(334) 271-7823	(334) 279-3051	H2omail@adem.state.al.us
Groundwater	(334) 270-5655	(334) 270-5631	Grdh2omail@adem.state.al.us
Laboratory	(334) 260-2722	(334) 277-6718	Labmail@adem.state.al.us
Permits & Services	(334) 271-7714	(334) 271-7950	Permitsmail@adem.state.al.us
Ombudsman	(800) 533-2336	(334) 394-4383	Rbr@adem.state.al.us
Office of General Counsel	(334) 271-7855	(334) 394-4332	Ogcmail@adem.state.al.us
Office of Education & Outreach	(334) 394-4359	(334) 394-4383	Oeomail@adem.state.al.us

ADEM FIELD OFFICES

Office Location:	Birmingham Field Office	Decatur Field Office	Mobile Field Office
Address:	110 Vulcan Road	2715 Sandlin Road, S.W.	2204 Perimeter Rd.
	Birmingham, AL 35209-4702	Decatur, AL 35603	Mobile, AL 36615-1131
Telephone:	(205) 942-6168	(256) 353-1713	(251) 450-3400
Fax:	(205) 941-1603	(256) 340-9359	(251) 479-2593

OTHER EMERGENCY CONTACTS:

National Response Center
1-800-424-8802

US Department of Transportation
(334) 274-6350

Occupational Safety & Health Administration (OSHA)
(205) 731-1534 (North Alabama)
(251) 441-6131 (South Alabama)

Alabama Law Enforcement Agency
(334) 242-4259

Alabama Department of Transportation
(334) 242-6356

Alabama Department of Public Health
(334) 206-5300

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