HAZARDOUS WASTE COMPLIANCE MANUAL FOR GENERATORS OF HAZARDOUS WASTE

Written by

The Compliance Branch of the
Hazardous Waste Section
Waste Management Division
North Carolina Department of Environment and Natural Resources

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INTRODUCTION

In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA) which directed the U.S. EPA to develop and carry out a program to protect human health and the environment from improper hazardous waste management practices. The RCRA program is designed to control the management of hazardous waste from its generation to its ultimate disposal - from "cradle to grave." In this "management" focus, RCRA is unlike other environmental regulations that focus on abating and/or reducing **existing** environmental threats. RCRA's intent is to **prevent** environmental threats.

In North Carolina RCRA has been adopted as the North Carolina Hazardous Waste Management Rules and is enforced by North Carolina instead of EPA. The rules are enforced by using a variety of inspections, compliance and technical assistance. This course was developed by the inspection staff of North Carolina in an attempt to further understanding and compliance with the hazardous waste regulations.

About this Manual

This manual is designed to help generators of hazardous waste in complying with the North Carolina Hazardous Waste Regulations (RCRA). The Inspection staff of the Hazardous Waste Section wrote the manual and it is therefore directed toward the on-site activities facilities can take to ensure continued compliance. The manual includes the official interpretations of the regulations and policies as viewed by both the North Carolina Hazardous Waste Section and the EPA and will be updated

periodically as these regulations or policies change. As you use this manual, if you have any suggestions or comments that could improve this document, please send them in writing to Roberta Proctor, Chemist, North Carolina Hazardous Waste Section, 59 Woodfin Place Asheville, North Carolina 28801, for possible inclusion in future editions.

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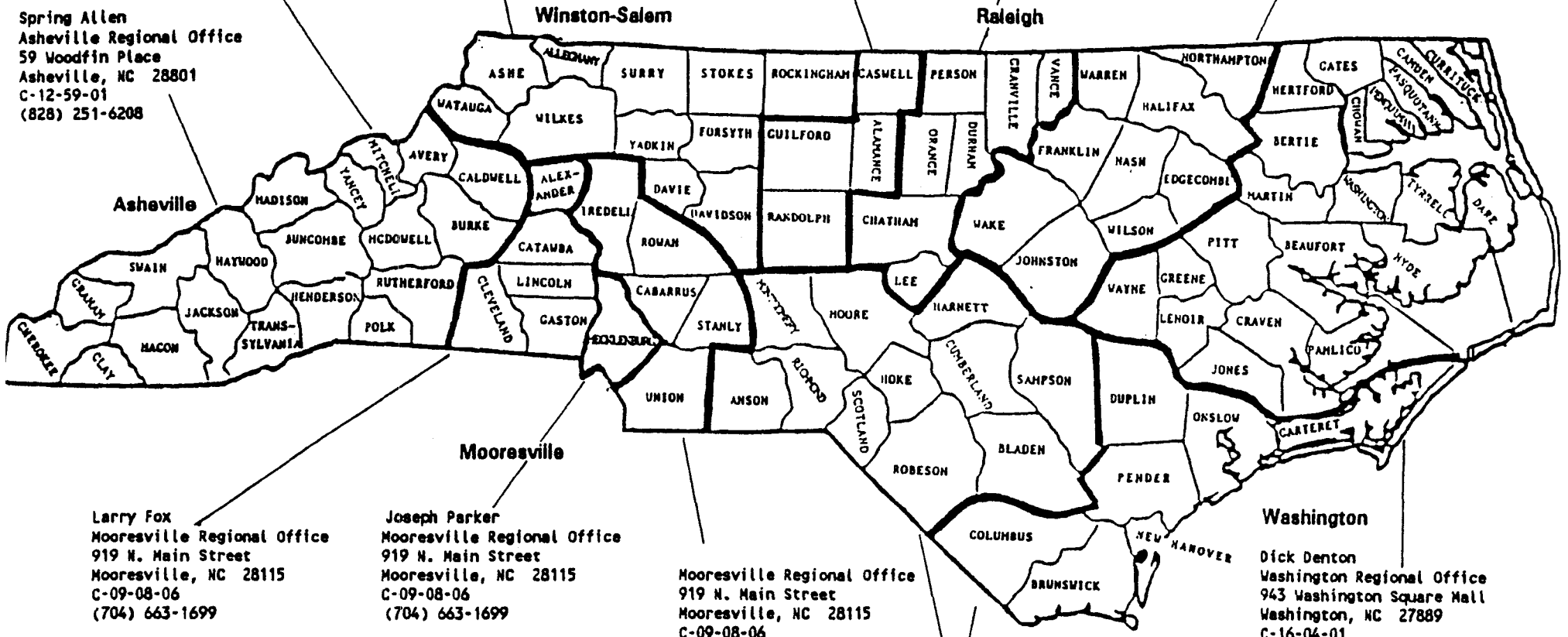

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IDENTIFICATION OF HAZARDOUS WASTES (40 CFR 261)

The purpose of this section is to review the hazardous waste regulations that will affect you and your business. It covers the identification of hazardous and solid wastes and the regulations with which Small and Large generators must comply. Each section starts with the citation for the particular regulation being discussed. For reference you can look up the actual regulation in the "Regulation Citations" in Appendix K of this manual.

Definition of Hazardous Waste

A Hazardous Waste is a solid waste that may:

- Cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating, reversible illness; or
- Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

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

Hazardous Waste Identification (40 CFR 261)

A solid waste is hazardous if it is not excluded from regulation as a hazardous waste **and** it meets any of the following conditions:

- It exhibits any of the **characteristics** of a hazardous waste: ignitable, corrosive, reactive, or toxic. These wastes have the waste codes D001 through D043 that identify the specific type of waste it is. (The Hazardous Waste Code is specific to a particular type of hazardous waste and does not ever change, e.g., all flammable hazardous wastes are D001. Wastes may have more than one code, e.g., if they are listed **and** characteristic).
- It has been named as a hazardous waste and appears on one of four **lists** in the regulations. These wastes have been listed because they exhibit either one or more of the above characteristics, or contain any number of toxic constituents shown to be harmful to health or the environment. These wastes will have the waste code that starts with either F, P, K or U, corresponding to the list that the waste is found in.
- It is a mixture containing a listed waste and a non-hazardous waste.
- It is a waste derived from the treatment, storage, of disposal of a listed hazardous waste.

The exclusions for certain materials from being **solid wastes** are at 40 CFR 261.4(a) and the exclusions for certain materials from being **hazardous wastes** are found at 40 CFR 261.4(b). See Decision Diagram A & B in the next section of the manual for help in making a hazardous waste determination.

Characteristics of Hazardous Wastes (40 CFR 261.20)

The EPA has identified four characteristics of hazardous wastes that are:

- **Ignitability**- D001 - The material is a liquid and is capable of burning or causing fire. Examples include acetone, gasoline, and industrial alcohols. (Flash point less than 140 degrees F).

- **Corrosivity**- D002 - The material is a liquid and can erode materials and human tissue. Examples include alkaline cleaners, some chlorides, fluorides and acids. (pH less than or equal to 2 or greater than or equal to 12.5, or corrodes steel at a rate greater than 1/4 inch per year).

- **Reactivity**- D003 - The material is capable of reacting with air or water, causing an explosion or a release of poisonous fumes. Examples include peroxides, isocynates, cyanides, and chlorine.

- **Toxicity Characteristic**- D004 - D043 - The material can poison humans. Examples include heavy metals and pesticide wastes. Wastes are determined to be TC wastes if they fail the TCLP test which is an analytical method designed to decide how much of a particular contaminant leaches from a material. Forty-three compounds are included, which are listed in the following table. If a material leaches a compound on this list in amounts greater than the regulatory limit, it is a TC waste.

40 CFR

TC CONSTITUENTS AND THEIR REGULATORY LEVELS

(in parts per million)

Benzene (D018)	0.5	Arsenic (D004)	5.0
Carbon tetrachloride (D019)	0.5	Barium (D005)	100
Chlordane (D020)	0.03	Cadmium (D006)	1.0
Chlorobenzene (D021)	100	Chromium (D007)	5.0
Chloroform (D022)	6.0	Lead (D008)	5.0
o-Cresol (D023)	200	Mercury (D009)	0.2
m-Cresol (D024)	200	Selenium (D010)	1.0
p-Cresol (D025)	200	Silver (D011)	5.0
Total Cresol (D026)	200	Endrin (D012)	0.02
1,4-Dichlorobenzene (D027)	7.5	Lindane (D013)	0.4
1,2-Dichlorobenzene (D028)	0.5	Methoxychlor (D014)	10.0
1,1-Dichloroethylene (D029)	0.7	Toxaphene (D015)	0.5
2,4-Dinitrotoluene (D030)	0.13	2,4-D (D016)	10
Heptachlor (D031)	0.008	2,4,5-TP (D017)	1.0
Hexochlorbenzene (D032)	0.13		
Hexochloro-1,3-butadiene(D033)	0.5		
Hexachloroethane (D034)	3.0		
Methyl Ethyl Ketone (D035)	200		
Nitrobenzene (D036)	2.0		
Pentachlorophenol (D037)	100		
Pyridine (D038)	5.0		
Tetrachloroethylene (D039)	0.7		
Trichloroethylene (D040)	0.5		
2,4,5-Trichlorophenol (D041)	400		
2,4,6-Trichlorophenol (D042)	2.0		
Vinyl Chloride (D043)	0.2		

Listing of Hazardous Wastes (40 CFR 261.30)

A solid waste is hazardous if it is named on one of the three following lists (the U-list and the P-list are combined):

- **Non-specific source wastes** (40 CFR 261.31- "F" wastes)- These are generic wastes commonly produced by manufacturing and industrial processes. Examples from this list include spent halogenated solvents used in cleaning and degreasing, or wastewater treatment sludge from electroplating processes.

- **Specific source wastes** (40 CFR 261.32- "K" wastes)- This list consists of wastes from specifically identified **industries** such as wood preserving, petroleum refining, and organic chemical manufacturing. These wastes typically include sludges, still bottoms, waste waters, spent catalysts. An example is wastewater treatment sludge from the production of chrome green pigment (K005).

- **Commercial chemical products** (40 CFR 261.33(e) and f)[P and U lists]- The third list consists of specific discarded commercial chemical products, off-specification products, container residues, and spill residues of any of the chemicals listed. This list includes chemicals such as chloroform and creosote, acids such as sulfuric acid and hydrochloric acid, and pesticides such as DDT and kepone. Waste codes starting with "P" are designated as

acute hazardous wastes and are subject to the reduced quantity limitations of 2.2 pounds per month.

Hazardous Waste Mixtures (40 CFR 261.3(a)(2)(iii)) and Wastes Derived from Hazardous Wastes (40 CFR 261.3(c)(2)(i))

A solid waste mixed with a characteristic hazardous waste is a hazardous waste, if it still exhibits the characteristic. If it is a mixture of a waste that is listed, but only for a characteristic and the mixture does not exhibit the characteristic, it is not a hazardous waste. If it is a mixture of any other listed hazardous waste, the material is a hazardous waste.

Waste derived from the treatment, storage, or disposal of a characteristic hazardous waste is a hazardous waste if it still exhibits the characteristic. Waste derived from the treatment, storage, or disposal of a listed waste is a listed hazardous waste. See the following diagram for clarification. See the diagram below for clarification.

Solid waste + Hazardous waste **listed** solely for characteristic (e.g. F003, K044)	---	Still Characteristic	------->	Hazardous Waste
	|	Not Characteristic	------->	Solid Waste
Solid waste + any other **listed** waste	---------->			Hazardous Waste
Solid waste + **characteristic** hazardous waste (I, C, R, TC)	---	Still Characteristic	------->	Hazardous Waste
	|	Not Characteristic	------->	Solid Waste

Sample Exclusion (40 CFR 261.4(d))

A sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to decide its characteristic or composition, is not subject to the hazardous waste regulations when:

- The sample is being transported to a laboratory for testing; or
- The sample is being transported back to the sample collector after testing; or
- The sample is being stored by the sample collector before transport to a laboratory for testing; or
- The sample is being stored in a laboratory before testing; or

- The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or
- The sample is being temporarily stored in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

Residues of Hazardous Waste in Empty Containers (40 CFR 261.7)

A container is empty if:

- All wastes have been removed that can be removed using practices commonly employed to remove materials from the container (e.g., pouring, pumping, and aspirating), **and**

- No more than one inch of residue remains in the bottom of the container; **or**

- No more than 3% (by weight) of the total capacity of the container remains in the container or inner liner if the container is less than or equal to or equal to 110 gallons; **or**

- No more than 0.3 % (by weight) of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons.

Acute Hazardous Wastes

A container, or inner liner removed from a container, that has held and acute hazardous waste [listed in Part 261.31, 261.32, or 261.33(e)] is empty if the container or inner liner has been triple rinsed using a solvent capable of removing the chemical product. (The rinsate used to triple rinse the container is a hazardous waste, however).

CATEGORIES OF HAZARDOUS WASTE GENERATORS

- **Conditionally Exempt Small Quantity Generators - (CESQG)**

  Hazardous wastes generated are:

  Less than 220 pounds in **any calendar month**

  or

  Less than 2.2 pounds of acute hazardous waste.

- **Small Quantity Generators - (SQG)**

  Hazardous wastes generated are:

  Between 220 - 2200 pounds **in any calendar month**

  or

  Less than 2.2 pounds acute hazardous waste.

- **Large Quantity Generators - (LQG or G)**

  Hazardous wastes generated are:

  Greater than 2200 pounds **in any calendar month**

  or

  Greater than 2.2 pounds acute hazardous waste.

If you need to change your status from one category to another, contact your Waste Management Specialist for the appropriate notification forms and procedures.

Note: See Decision Diagram C in the next section of the manual for assistance in determining your generator category.

REGULATIONS APPLICABLE TO CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS (CESQG) (40 CFR 261.5)

A Conditionally Exempt Small Quantity Generator (CESQG) must:

- Identify wastes generated to determine whether they are hazardous wastes.

- Not accumulate more than 2200 pounds of hazardous waste at any one time (or 2.2 pounds of an acute hazardous waste).

- Ensure that the waste is sent to a:

  - Permitted or interim status TSDF or,
  - A permitted municipal or industrial solid waste facility or,
  - A recycling facility, or
  - Treat or dispose of the waste on-site as long as it does not endanger the environment or human health.

REGULATIONS APPLICABLE TO GENERATORS
(40 CFR 262)

The regulations applicable to **all** generators are found in 40 CFR part 262. There are specific regulations applicable to Small Quantity Generators which are found in 40 CFR 262.34. In general, the requirements for SQG's are not as stringent as those for LQG's. Each of the generator requirements is discussed below and the exceptions for Small Quantity Generators are noted where applicable.

Hazardous Waste Determination (40 CFR 262.11):

Each generator is responsible for determining if the waste generated at that site is hazardous, or not. The steps that must be followed are outlined here.

The first step is to determine if the solid waste is excluded from regulation in Section 262.4. If it is not excluded, the generator must look in Subpart D of 261.4 to see if it is a **listed** waste. If the waste is not a listed waste, the generator must determine if the waste is a **characteristic** in Subpart C of the same section of the regulations. This may be accomplished by either testing the waste using the appropriate analytical method, or using knowledge of the characteristics of the waste, the processes involved, and the materials used.

EPA ID Number (40 CFR 262.12):

Each generator **site** must apply for a unique identification number. Without this number the generator is barred from treating, storing, disposing, or transporting hazardous waste, or offering hazardous waste for transportation. Each site must formally notify the Hazardous Waste Section when changing status, moving, or closing a site.

Pre-Transport Regulations (40 CFR 262.30-33):

These regulations are designed to ensure the safe transportation of hazardous waste from its origins to its ultimate disposal. The EPA adopted the regulations used by the Department of Transportation for transporting hazardous materials (49 CFR Parts 172, 173, 178 and 179).

These DOT regulations require:

- Proper packaging to prevent leakage of hazardous waste during transport.

- Labeling, marking, and placarding of the packaged waste to identify the characteristics and dangers with transporting wastes. (The DOT regulations only apply to generators shipping waste off-site).

Accumulation of Waste (40 CFR 262.34):

Besides adopting the DOT regulations, the EPA developed regulations that cover the accumulation of waste **before** transportation. (Some of these regulations are referenced at the Facility Standards found at 40 CFR 265).
A LQG may accumulate hazardous waste for 90 days or less as long as the following requirements are met:

- **Proper Storage**- the waste is properly stored in containers or tanks marked with the words "Hazardous Waste" and the date which accumulation began.

- **Emergency plan**- (40 CFR 265 Subpart C and D)- A contingency plan and procedures to use in an emergency must be developed. Large generators are required to have a written plan but SQG's are not.

- **Personnel Training**- (40 CFR 265.16)- Facility personnel must be trained in the proper handling of hazardous waste. Large generators are required to have an established, written training program. Small generators are exempt from having a written program but must ensure that employees handling wastes are familiar with proper safety and management procedures.

- **Container Regulations** (40 CFR 265, Subpart I)- Drums and other containers are frequently used to accumulate and store wastes. The container regulations include:

- ✦ Using containers in good condition. Wastes in leaking or damaged containers must be re-containerized.

- ✦ Ensuring the compatibility of the waste with the container (e.g., no corrosive waste stored in metal containers).

Small Quantity generators can store waste for up to 180 days, providing certain criteria are met (40 CFR 262.34(d)):

- ✤ The on-site quantity of waste cannot exceed 13,200 pounds at any time.
- ✤ The facility must have basic safety information (the telephone number of the fire department and the name and phone number for a coordinator for emergency activities) posted at the telephone. (For more information on safety requirements see 40 CFR 262.34(d)).

Additionally, SQG's who must transport their wastes for 200 miles or more for off-site treatment, storage or disposal, are allowed to accumulate waste for up to 270 days (40 CFR 262.34(e)).

The Manifest (40 CFR 262.20-23):

By using a manifest, generators can track the movement of hazardous waste from the point of generation to the point of ultimate treatment, storage, or disposal. RCRA Manifests contain the:

- Name & EPA ID number of the generator, the transporter(s), and the facility where the waste is to be treated, stored or disposed.
- DOT description of the waste being transported
- Quantities of the waste being transported.
- Address of the TSD facility to which the waste is being shipped, called the designated facility.

Record Keeping & Reporting (40 CFR 262.40-44):

The generator regulations in 40 CFR Part 262 contain three primary record-keeping and reporting requirements:

- Biannual Report- which details the generators hazardous waste activities.

- Three year retentions of reports, manifests, and inspection records.

- Exception reports- Generators who ship waste off-site must submit an exception report to the Hazardous Waste Section if they do not receive a copy of the manifest signed and dated by the TSD facility within 45 days from the date which the waste was shipped off-site. Small generators must receive a copy within 60 days or file an exception report.

Land Disposal Restrictions- (40 CFR Part 268):

A generator of a hazardous waste must determine if the waste they generate has to be treated before it can be disposed. This is done by determining if the waste **meets** the treatment standards in 268.40 or 268.45.

If the waste **does not** meet the treatment standard the generator must send, **with the initial shipment of waste to each treatment or storage facility**, a one-time written notice to each treatment or storage facility receiving the waste and a copy must be kept on file at the facility.

The Notice must include:

- The EPA Hazardous Waste and manifest numbers.
- The constituents of concern for F001-F005, and F039 wastes, and the underlying hazardous constituents (for wastes that are not managed in a Clean Water Act (CWA) or CWA-equivalent facility); unless the waste will be treated and monitored for all constituents.
- The applicable wastewater/non-wastewater category and subdivisions made within a waste code (such as D003, reactive cyanide).
- Waste analysis data if available.
- For hazardous debris, when treating with the alternative treatment technologies provided by 268.45, the contaminants subject to treatment and an indication that these contaminants are being treated to comply with 268.45.

Other Specific Regulations:

There are other sections of the hazardous waste regulations may apply to your business depending on how you manage waste at your site. For example, if you accumulate or store waste in tanks, you must comply with 40 CFR 265 Subpart J- the tank regulations. If you are a wood treater, regulations in 40 CFR 265 Subpart W apply to your facility. Both of these regulations as well as the containment buildings requirements (Subpart DD) and used oil regulations (40 CFR 279) are outlined in the Appendices to this Manual. If you manage lights containing mercury, or Universal Wastes at your site, you may read about these regulations in Appendix G and H of this manual. If you recycle waste at your facility there are specific regulations and exemptions you should be aware of, these regulations may be found in the "Waste Minimization" section of the manual.

OVERHEADS USED DURING
THE REVIEW OF THE
REGULATIONS SECTION OF COURSE
(Day One)

DEFINITION OF HAZARDOUS WASTE

Congress defined the term "hazardous waste" in Section 1004(5) of RCRA as a "solid waste", or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

A solid waste is hazardous if it is not excluded from regulations as a hazardous waste and it meets any of the following conditions:

1. **Exhibits a characteristic of a hazardous waste; or**
2. **Has been named as a hazardous waste and is listed as such in the regulation; or**
3. **Is a mixture containing a listed waste and a non-hazardous waste; or**
4. **Is a waste derived from the treatment, storage, or disposal of a hazardous waste.**

HAZARDOUS WASTE IDENTIFICATION 40 CFR 261

Characteristic

Ignitability- Flash point < 140 F degrees D001

Corrosivity- pH ≤ 2.0 or ≥ 12.5 D002

Reactivity- spontaneously reacts with air or water. D003

Toxicity- TCLP contaminants D004

Listed

F- non-specific sources

K- specific sources

P- discarded products, container residues, acutely toxic

U- chemical products, intermediates/ off-specification
virgin products

HAZARDOUS WASTE MIXTURES

40 CFR 261.3(a)(2)(iii)

A solid waste mixed with a characteristic hazardous waste is a hazardous waste, if it still exhibits the characteristic. If it is a mixture of a waste which is listed, but solely for a characteristic and the mixture does not exhibit the characteristic, it is not a hazardous waste. If it is a mixture of any other listed waste, the material is a hazardous waste.

WASTE DERIVED FROM HAZARDOUS WASTE

40 CFR 261.3(c)(2)(i)

Waste derived from the treatment, storage, or disposal of a characteristic hazardous waste is a hazardous waste if it still exhibits the characteristic. Waste derived from the treatment, storage or disposal of a listed waste is a listed hazardous waste.

Solid waste + Hazardous waste **listed** solely for characteristic (e.g. F003, K044)	---	Still Characteristic	------->	Hazardous Waste
	|			
	|	Not Characteristic	------->	Solid Waste

Solid waste + any other **listed** waste	---------->		Hazardous Waste

Solid waste + **characteristic** hazardous waste (I, C, R, TC)	---	Still Characteristic	------->	Hazardous Waste
	|			
	|	Not Characteristic	------->	Solid Waste

RESIDUES OF HAZARDOUS WASTE IN EMPTY CONTAINERS
40 CFR 261.7

A container is empty if:

All wastes have been removed that can be removed using practices commonly employed to remove materials from the container (eg. Pouring, pumping and aspirating); and

No more than one inch of residue remains in the bottom of the container; or

No more than 3% by weight of the total capacity of the container remains in the container or inner liner if the container is $\leq$ 110 gallons or no more than 0.3% by weight is $\geq$ 110 gallons.

RESIDUES OF HAZARDOUS WASTE IN EMPTY CONTAINERS
40 CFR 261.7

Acute Hazardous Waste

A container or inner liner removed from a container that has held an acute hazardous waste listed in Part 261.31, 261.32 or 261.33(e) is empty if:

The container or inner has been triple rinsed using a solvent capable of removing the chemical product.

GENERATORS OF HAZARDOUS WASTE

- **<u>Conditionally Exempt Small Quantity Generators</u> - (CESQG)**
  Hazardous wastes generated are:
  Less than 220 pounds in **<u>any calendar month</u>**
  or
  Less than 2.2 pounds of acute hazardous waste.

- **<u>Small Quantity Generators</u> - (SQG)**
  Hazardous wastes generated are:
  Between 220 - 2200 pounds **<u>in any calendar month</u>**
  or
  Less than 2.2 pounds acute hazardous waste.

- **<u>Large Quantity Generators</u> - (LQG or G)**
  Hazardous wastes generated are:
  Greater than 2200 pounds **<u>in any calendar month</u>**
  or
  Greater than 2.2 pounds acute hazardous waste.

HAZARDOUS WASTE DETERMINATION
40 CFR 262.11

A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:

(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4

(b) He must then determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR Part 261.

c) If the waste is not listed in Subpart D of 40 CFR Part 261, the generator must then determine whether the waste is identified in Subpart C of 40 CFR Part 261 by either:

1. **Testing the waste according to the method set forth in Subpart C of 40 CFR Part 261; or**
2. **Applying knowledge of the hazardous characteristic of the waste in light of the materials or the processes used.**

CONDITIONALLY EXEMPT SQG REQUIREMENTS
40 CFR 261.5

1. **Identify the waste to determine whether it is a hazardous waste (262.11)**

2. **Not accumulate more than 1,000 kilograms (2,200 pounds) of hazardous wase or 1 kilogram (2.2 pounds) of acute hazardous waste at any time.**

3. **Treat or disposal of waste on-site or ensure that the waste is sent to a:**

   Permitted or interim status TSDF; or
   Permitted municipal or industrial solid waste facility; or
   Recycling facility.

SMALL QUANTITY GENERATOR (SQG) REQUIREMENTS 40 CFR 262.34

ship >90 miles

1. **May accumulate hazardous waste for no more than 180 (270) days.**
2. **Quantity never exceeds 6,000 Kg (13,200 lbs.)** - 20 drums
3. **Complies with 40 CFR 265 Subpart I except 265.176, or the SQG tank requirements, 40 CFR 265.201, Subpart J.**
4. **Complies with Subpart C of 40 CFR 265: Preparedness and Prevention.**
5. **Each container or tank is clearly marked with the words "Hazardous Waste."**
6. **Each container is marked with the accumulation start date.**
7. **24-Hour Emergency Coordinator who must follow specific response procedures.**
8. **Certain emergency information must be posted next to the phone.**
9. **Employees must be familiar with hazardous waste procedures.** Training

drum = 500 lbs

GENERATOR REQUIREMENTS
(Large Quantity)

A Generator must comply with 40 CFR Codified at 15A NCAC 13A which includes, but is not limited to, the following:

1. **40 CFR 262 (15A NCAC 13A .0107) Generator Standards**
2. **40 CFR 265 (15A NCAC 13A .0110) Facility Standards:**

Subpart B	**Section 265.16 Personnel Training**
Subpart C	**Preparedness and Prevention**
Subpart D	**Contingency Plan & Emergency Procedures**
Subpart G	**Sections 265.111 and 265.114- Closure and Post-Closure**
Subpart I	**Use and Management of Containers**
Subpart J	**Tanks**
Subpart W	**Drip Pads** – wood treater
Subpart DD	**Containment Buildings**
Subpart CC	**Air emissions**

3. **40 CFR 268 (15A NCAC 13A) Land Disposal Restrictions**

GENERATOR STANDARDS
40 CFR 262

1. **Hazardous waste identification**
2. **EPA Identification numbers** - SQG, LQG
3. **Manifest system**
4. **Packaging, labeling, marking & placarding for transportation**
5. **Accumulation time** - 90 days
6. **Record keeping and reporting** 3 yrs
7. **Exports and imports**
8. **Farmers** - exemption

ACCUMULATION TIME
40 CFR 262.34

1. **The waste is managed properly in:**

*	**Containers**	**Subpart I of 265**
*	**Tanks**	**Subpart J of 265**
*	**Drip pads**	**Subpart of W or 265** **Description of waste removal** **Time and date of removal, every 90 days**
*	**Containment buildings**	**Subpart DD of 265**

2. **The container is clearly marked with the accumulation start date.**
3. **The container or tank is clearly marked with the words "Hazardous Waste."**
4. **The waste is not accumulated for more than 90 days with out a permit or an extension.**
5. **The generator complies with all other applicable sections of 265 and 268.**

calendar date

SATELLITE ACCUMULATION
40 CFR 262.34-c)

1. **At or near the point of generation.**
2. **Under the control of the operator.**
3. **Marked with the words "Hazardous Waste" or other words identifying the contents.** prefer
4. **A total of up to 55 gallons of hazardous waste or one quart of acutely hazardous waste.**
5. **Any excess amount must be marked with the date the excess accumulation began.**

still 90 days
right

PERSONNEL TRAINING
40 CFR 265.16

1. **Personnel must successfully complete a program of classroom or on-the-job training.**
2. **The program must be directed by a person trained in hazardous waste management.**
3. **The training must ensure that personnel are able to respond effectively to emergencies.**
4. **Training must be completed within six months of employment, change in facility, or position.** must be supervised in the mean time
5. **Personnel must receive an annual review of the initial training.**
6. **Records of training must be maintained at the facility.**

CONTINGENCY PLAN AND EMERGENCY PROCEDURES
40 CFR 265 SUBPART D

1. **Facility must maintain a written contingency plan which must include the following:**
   - **response to fire, explosions or hazardous waste release**
   - **local and state agreements made.**
   - **list of qualified emergency coordinators**
   - **list of emergency response equipment and capabilities**
   - **evacuation plans**
2. **The plan and revisions must be maintained at the facility and distributed to local and state authorities.**
3. **Must be amended when necessary.**
4. **24-Hour qualified Emergency Coordinator availability.**
5. **Specific emergency procedures and follow-up procedures.**

PREPAREDNESS AND PREVENTION
40 CFR 265 SUBPART C

1. **Facility maintained and operated to reduce the risk of fire, explosion or hazardous waste release.**
2. **Certain emergency equipment available, tested and maintained as necessary.**
3. **Communication and alarm systems accessible.**
4. **Appropriate aisle space to allow movement of personnel and emergency equipment.** 2 - 2½ ft
5. **Emergency arrangements must be made with local and state authorities.**

USE AND MANAGEMENT OF CONTAINERS
40 CFR 265 SUBPART I

1. **Containers must be in good condition.**
2. **Waste must be compatible with container.**
3. **Closed during storage except when adding or removing waste.** - funnel lid ok with screwed on top
4. **Inspected weekly and maintain a written log of inspections.***
5. **Containers holding ignitable or reactive waste must be located at least 50 feet from the property line.**
6. **Must not store incompatible waste in same container.**

*** A written log is a North Carolina requirement.**

LAND DISPOSAL RESTRICTIONS
40 CFR 268 "LAND BAN"

1. **Determine if the waste has to be treated before being land disposed.**
2. **Send a one-time written notice to each treatment or storage facility receiving the waste.**
3. **Place a copy of the one-time notice in the file for the initial shipment of waste.**

1. Waste code
2. What material being monitored
3. Non waste water or wastewater
4. Waste analysis

Drums pending analysis
" waste pending analysis" - keep paperwork

OVERHEADS USED DURING THE REVIEW OF THE REGULATIONS SECTION OF COURSE (Day Two)

NOTES

Mike Williford

presentation
Hazardous Waste Identification

Identification and Listing of Hazardous Waste

40 CFR 261

This part identifies those solid wastes which are subject to regulation as hazardous waste.

NOTES

261.2(a)(1)

A solid waste is any discarded material that is not excluded by Section 261.4 or that is not excluded by a variance granted under Sections 260.30 and 260.31

261.2(a)(2)

A discarded material is any material which is:

- **Abandoned**
- **Recycled**
- **Considered inherently waste-like**

261.2(b)

Materials are solid waste if they are abandoned by being:

- **Disposed of**
- **Burned or incinerated**
- **Accumulated, stored, or treated before or in lieu of being abandoned by being disposed of, burned, or incinerated.**

NOTES

Exclusions
261.4(a)

Materials which are not solid waste:

- **Domestic sewage**
- **Industrial wastewater discharges**
- **Spent wood preserving solution (used, reclaimed, and reused)**

Solid Waste Variances

260.30 and 260.31

261.4(b) Solid waste which are not hazardous wastes:

- Household waste.
- UST related petroleum contaminated media and debris (D018 thru D043 only) and subject to Part 280.
- Used oil filters that have been gravity hot drained.

NOTES

261.3(a)(2)(ii)

Hazardous wastes which have been delisted under Sections 260.20 and 260.22

261.3(a)(2)(iii)

The solid waste is a mixture of a solid waste and a hazardous waste which is listed because it exhibits a characteristic.

Special Management Practices

261.4(c)

Wastes that are generated and remain in a product or raw material storage tank, transport vehicle or manufacturing process unit (cease operation for more than 90 days).

NOTES

Special Management Practices (continued)

261.4(d)
Samples

Special Management Practices (continued)

261.4(f)
Samples Undergoing Treatability Studies at Laboratories and Testing Facilities

Special Management Practices (continued)

261.7
Empty Containers

NOTES

Waste Determination

Examples

Solvent Blend

Acetone 5%

Toluene 10%

Mineral Spirits 85%

Spent = F003/F005

Virgin = D001

Solvent Blend

Acetone 4 %

Toluene 8 %

Naphtha 88 %

Spent = D001

Virgin = D001

NOTES

Solvent Blend

Acetone 60 %
Naphtha 40 %

Spent = D001
Virgin = D001

Solvent Blend

MEK 8%
Acetone 4%
Tetrachloroethylene 3%
Mineral Spirits 85%

Spent = F002, F003, F005
Virgin = D001, D035, D039

Paint

Acetone 20%
MEK 30%
Naphtha 30%
Pigments 20%

Spent = D001/D035
Virgin = D001/D035

NOTES

Hazardous Debris
268.2 (h)

Debris that contains a listed hazardous waste or that exhibits a characteristic of hazardous waste.

Gasoline Contaminated Soil

D018 or Solid Waste

Paint Contaminated Soil

D006, D007, D008, D035
or
Solid Waste

NOTES

Toluene Contaminated Soil

F005, U220
or
Solid Waste

End of Presentation

DECISION DIAGRAMS

DECISION DIAGRAM A- Determining If Your Waste Is Regulated

Is the material a discarded material?
(See Decision Diagram B) — No → **Not a Solid Waste**

↓ Yes

Is the material excluded under 261.4(a)? — Yes → **Not a Solid Waste**

↓ No

Is the material excluded by a
variance under 260.30 or 260.31? — Yes → **Not a Solid Waste**

↓ No

Material is a Solid Waste.

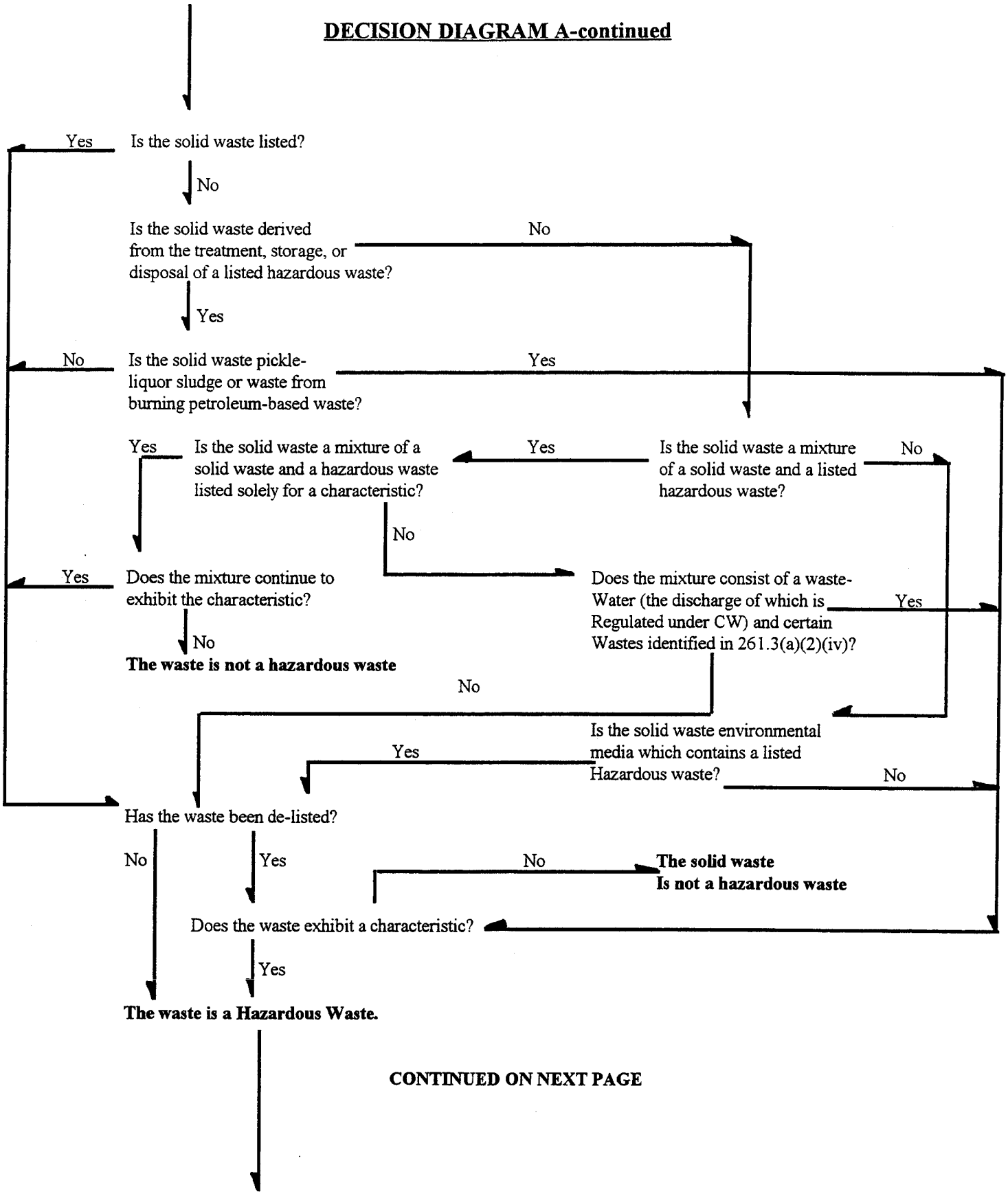
↓ (Continue)

Is the Solid Waste excluded
from consideration as a
hazardous waste under 261.4(b)? — Yes → **Not a Hazardous Waste**

↓ No

CONTINUED NEXT PAGE

DECISION DIAGRAM A-continued



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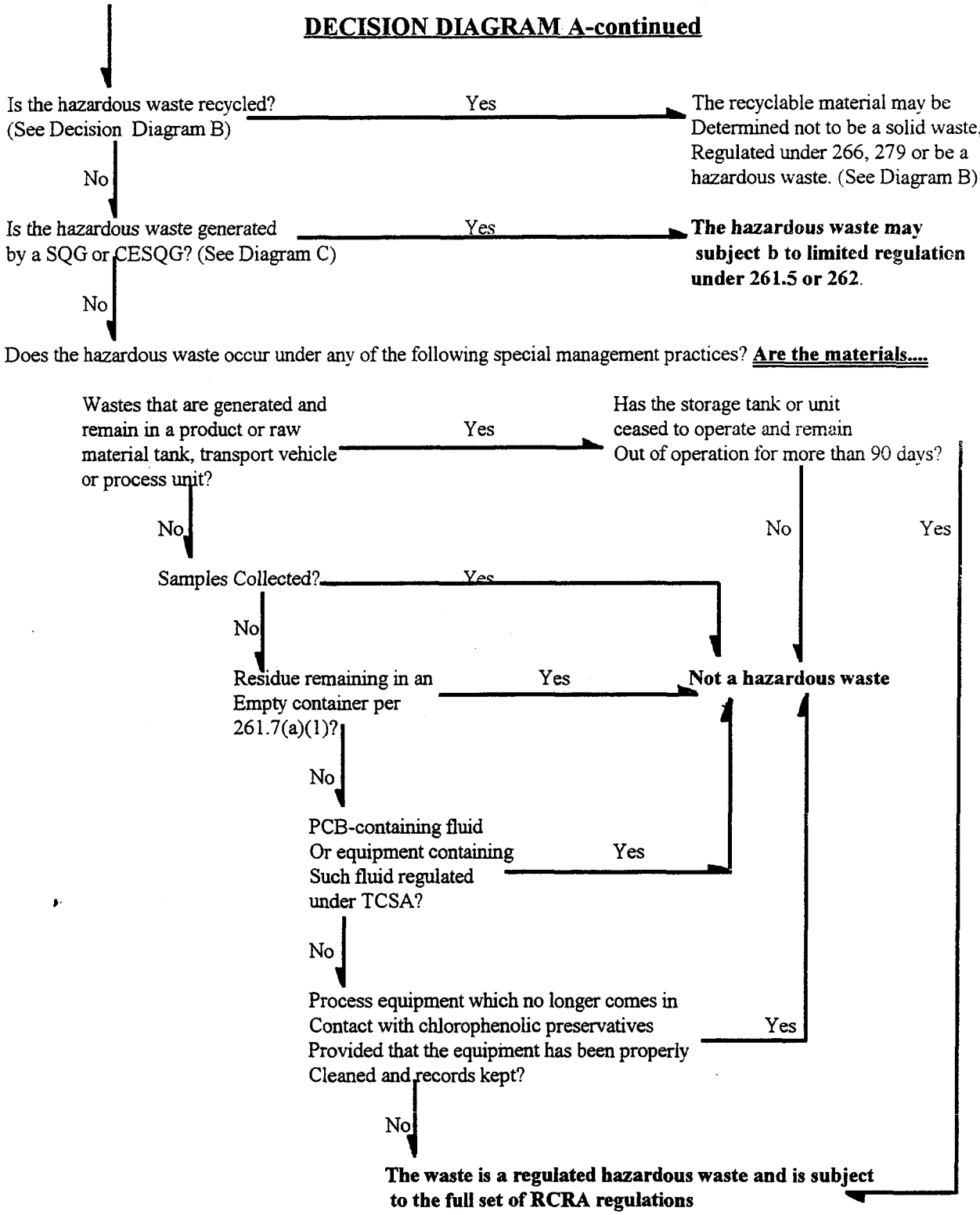
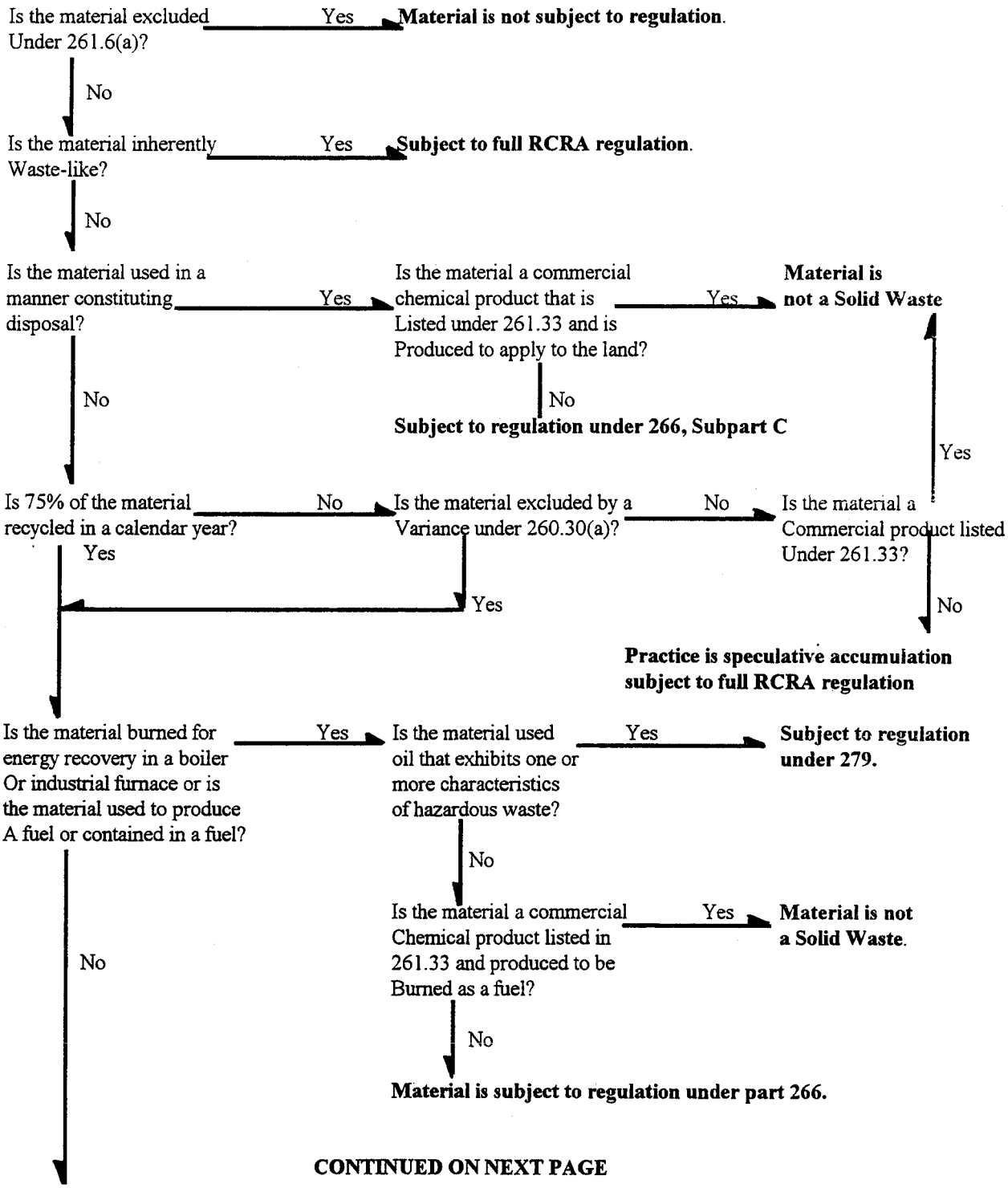
DECISION DIAGRAM A-continued



DECISION DIAGRAM B
Hazardous Waste Recycling



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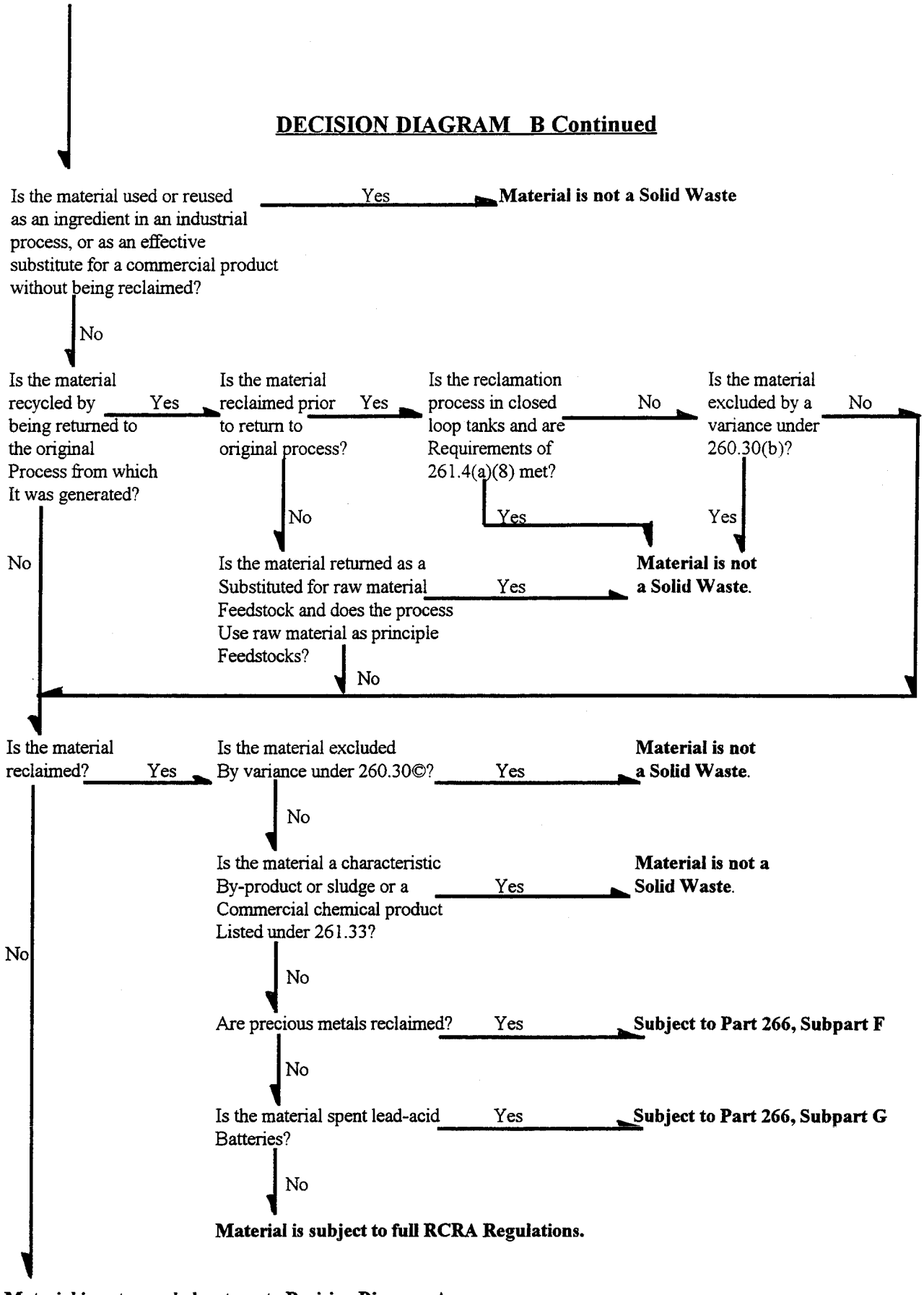
DECISION DIAGRAM B Continued



DECISION DIAGRAM C
Determining Generator Status

Is the facility a potential small quantity generator? — No → **Subject to full Regulation**

Yes ↓

Is the hazardous waste generated subject to RCRA regulation? — No → **The waste is not included In quantity determination.**

Yes ↓

Is the hazardous waste subject to substantive Requirements of 261.5(c)? — No → **The waste is not included in Quantity determination.**

Yes ↓

Is the hazardous waste

Removed from on site storage and has been previously Included in quantity determination? — Yes → **The waste is not included In the quantity determination.**

Or Produced by on site treatment (Including reclamation) of waste already included in quantity determination?

Or Spent material generated, reclaimed, and subsequently reused on site that have already been included in quantity determination?

No ↓

No — Is the Waste an acutely Hazardous waste?

Yes ↓

Is the acute hazardous waste generated at Quantities greater than:
- 1kg per calendar month, or
- 100 kg of any contaminated soil residue, waste, or other debris resulting from a clean-up of a spill of any acute hazardous waste? — Yes → **Subject to full RCRA regulation.**

No ↓

CONTINUED ON NEXT PAGE

DECISION DIAGRAM C Continued

Does the generator comply With requirements in 261.5(f)? — No → **Subject to full RCRA Regulation.**

Yes

The waste is conditionally exempt.

Is the sum of the waste to be included in the quantity determination ≤ 100 kg Of non-acute hazardous Hazardous waste per Callander month? — No → Does the sum of the wastes equal between 100 kg and 1000 kg per calendar month? — Yes → **The waste may be subject to special requirements under Part 262.**

No → **Subject to full RCRA regulation**

Yes

Does generator at any time accumulated more than 1,000 kg of hazardous waste? — Yes → **All of the accumulated wastes are subject to modified Part 262 Regulation at the time accumulation first exceeds 1,000 kg.**

No

Is the hazardous waste mixed With solid waste and the resultant mixture exceed the Quantity limitations? — Yes → Does the mixture exhibit a characteristic? — Yes → **Subject to full RCRA regulation.**

No → **The waste is conditionally exempt.**

No

Is the waste mixed with used oil and is the resultant mixture to be used for energy recovery? — Yes → **The mixture, in addition to any material produced from such a mixture by processing, blending, or other treatment if also destined for energy recovery, is subject To regulation under Part 279.**

No

Does generator comply with Requirements set forth in 251.5(g)? — No → **Subject to full RCRA regulation.**

Yes

The generator is a conditionally exempt small quantity generator during the measured calendar month.

WASTE MINIMIZATION and POLLUTION PREVENTION

There are several good reasons to reduce your hazardous waste and the benefits have been widely documented. These reasons range from the moral: reducing exposure to workers and the environment, and enhancing the company image, to the practical: reducing your cost of disposal, reducing your on site management costs, decreasing future RCRA or CERCLA liabilities, improving energy efficiency and product yields, and possibly changing your generator status.

RCRA is primarily a regulation aimed at the **management** of hazardous wastes. With the passage of the 1984 Hazardous and Solid Waste Amendments (HSWA), hazardous waste **minimization** became a priority. These regulations set out a national policy that declared "... wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible."

written inspection

Section 3002(b) of RCRA requires **All** hazardous waste generators to sign the certification on the manifest that states:

> "... 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;

Hazardous waste generators must also identify in the biennial hazardous waste report: 1) the efforts undertaken during the year to reduce the volume or toxicity of

the waste generated, and 2) the changes in volume and toxicity achieved in comparison to previous years.

The basic elements of a waste minimization "program in place" will allow companies to **properly** certify that they have implemented a program to reduce the volume and toxicity of hazardous waste to the extent "economically practicable." The generator defines the term "economically practicable." The generator has the flexibility to determine what is economically practicable for their own particular circumstances.

Small Quantity Generators are not subject to the same "program in place" certification requirement as large quantity generators. Small Quantity Generators must certify on their hazardous waste manifests that they have "made a good faith effort to minimize" their waste generation. Small quantity generators are, however, encouraged to develop waste minimization programs to show their good faith efforts.

A waste minimization program should contain the following basic elements:

- Top management support.
- Characterization of waste generation and waste generation costs.
- Periodic waste minimization assessments.
- Appropriate cost allocation.
- Encouragement of technology transfer.
- Program implementation and evaluation.

Generators should use these elements to design a multimedia pollution prevention program directed at preventing or reducing wastes, discharges and/or emissions to all environmental media- land, air, water and groundwater.

Past waste management practices used by hazardous waste generators have been "end of pipe" collection, treatment and/or disposal. With the passage of HSWA in 1984, Congress established a new policy concerning hazardous waste management by declaring that the reduction or elimination of hazardous waste at the source should take priority over the management of waste after generation. Section 1003(b) of RCRA declares it a national policy that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. While, the national policy recognized that there will be hazardous waste generated and such waste must be managed in a way that "minimizes" present and future threats to human health and the environment.

The hierarchy established by Congress is: prevention or source reduction, recycling, treatment, then disposal. These are briefly discussed below along with a larger section on recycling regulations.

Source reduction is any practice which reduces the amount of a hazardous substance, pollutant or contaminant entering a waste stream and/or, reduces the hazards to public health and the environment. Source reduction includes equipment or technology modifications, process or procedural modification, reformulation or redesign of products, substitution of raw materials and improvements to housekeeping, maintenance, training or inventory control.

Recycling and its regulation is discussed in detail in the next part of this section.

Treatment and disposal are not waste minimization techniques or practices. Treatment for the purpose of destruction or disposal is not waste minimization but an activity that occurs after other opportunities for waste minimization have been pursued. Transfer of hazardous constituents from one environmental media to another also is not waste minimization (e.g., use of an air stripper to evaporate volatile organic constituents from an aqueous waste stream only shifts the contaminant from water to air).

Dilution for toxicity reduction is **not** waste minimization unless it is a step in the recovery of a waste stream.

Elements of A Waste Minimization Plan

An effective waste minimization program contains the following basic elements (note: this may seem like a lot of work, but keep in mind it only needs to be done once then only as necessary when changes are made to your processes):

- Top Management Support and a Written Policy in Support of Waste Minimization.

  In order to have a **workable** plan you must first convince management (or the owner) of the importance of a waste minimization program. The company must become familiar with the benefits of waste minimization as previously

discussed. At a minimum, the written policy should include the support of employee waste minimization training, statements of financial support for the program implementation, and a description of management's involvement in the waste minimization plan.

- Selection of Personnel to Develop the Plan.

  Using the team approach is best to get expertise and input from different aspects of your business' operations. Include technical, maintenance, purchasing, safety, and manufacturing or "floor" personnel. This planning team should have a definite leader.

- Identification of Process Information.

  Each process in your business must be reviewed including information on all raw products used in each process, amounts used, where they are introduced into the process, where they may be "lost" (e.g. air emissions), etc. Information must include MSD sheets and identification of substances used under SARA, TSCA, etc.

- Identification of Waste Streams.

  Waste streams generated from each manufacturing process must next be reviewed. Development of a flow diagram for each process is helpful in identifying points of generation, amount of raw products put into the process, quantities of each component material in the product, emissions, discharges to treatment systems, etc. Hazardous constituents in each waste stream, the

amount of waste generated per process, and a ratio of waste generated to raw products should be shown.

- Identification of Alternatives for Minimizing Wastes.

  Determine various alternatives that may be applicable to the processes generating waste at your business. Usually there are several different options for each waste stream. Not all of these may be feasible or affordable and will be evaluated in the next steps of this process, so do not limit the alternatives at this point in the planning.

- Determine the Technical Feasibility of Each Alternative Chosen.

  Questions that should be asked for **each** alterative are:

  - Are there potential positive or negative impacts of worker safety, health or the environment?
  - Is space available for the needed changes?
  - How will production be affected?
  - Do employees need to be specially trained?
  - Are new operating procedures required?
  - Determine whether you are truly reducing waste and not simply transferring it to a different media (e.g. air strippers for water treatment remove waste from water into the air but does not minimize the waste).
  - Are there any other concerns with the alternative?

- Determine the Cost of Implementing Each Alternative.

  You must determine the capital cost needed for each alternative including equipment, engineering, construction, consulting, training, start-up, and utility costs. The current cost of managing the waste from each process must be determined. You must include the cost of storage, disposal, on site handling, employee training, waste analysis, equipment, operating costs and liability insurance.

  Compare the two costs to determine which alternatives are feasible at your site. Note that some alternatives have no capital costs such as employee training.

- IMPLEMENT the plan.

  The most important part of this process is selecting the alternatives, writing, then implementing the waste minimization plan.

TAX CERTIFICATION FOR EXEMPTION FROM AD VALOREM TAXES

The Hazardous Waste Section is promoting waste minimization and waste reduction by providing possible tax credits. Equipment used solely for recycling or reclaiming hazardous wastes will be given tax exempt status as an ad valorem tax credit.

A business purchasing or constructing facilities or equipment **exclusively** for the recycling or resource recovery of hazardous waste, may be entitled to special treatment for the following types of tax:

- Real and personal property tax.
- Corporate state income tax.
- Franchise tax on domestic and foreign corporations.

Facilities and equipment used part of the time for recycling or resource recovery do not qualify, and pro-rating of time is not allowed. Division of space is allowed, however, a small space within a larger building can qualify only if used all of the time for recycling. Incidental and supportive facilities and equipment (such as bathrooms and office areas) do not qualify. The standards for special tax treatment are found under Section .1500 of the North Carolina Solid Waste Management Rules.

HOW TO APPLY FOR CERTIFICATION FOR SPECIAL TAX TREATMENT

Submit to the Hazardous Waste Section a formal letter of request for certification that includes the following information:

- description of the recycling project or process;
- listing and description of the recycling or resource recovery equipment and facilities;
- drawings of the facilities that include acreage and general layout of activity areas and equipment;
- name of the individual primarily responsible for management operation and maintenance; and
- construction schedule, or dates of purchase of equipment.

This request should be mailed to the Hazardous Waste Section in Raleigh. Upon receipt of the above information, your Waste Management Specialist will inspect the equipment and facilities and render a decision. If certification is denied, you may request the reasons for the denial be made to you in writing. If you disagree with the results, you have the right to an appeal under the state Administrative Procedures Act.

For income and franchise tax purposes, send a copy of the certification with your annual income tax reporting form.

For property tax purposes, obtain and fill out an application for exemption (Form AV-10) from your county tax assessor's office or the N.C. Department of Revenue [(919) 733-7711]. Send this completed form and a copy of the Hazardous Waste Section's certification to the local county property tax office with your annual reporting form.

EXAMPLES OF WASTE MINIMIZATION TECHNIQUES USED IN INDUSTRY

These are actual facilities in North Carolina that have implemented waste minimization.

- Company A replaced its trichlorethylene degreasing operation with an aqueous cleaner, but found the switch created a new waste stream high in oil and grease content. The aqueous cleaning bath is used to clean and precondition metal parts, but it could only be used for three to four months. The buildup of oil in the tank eventually sacrificed product quality and increased water discharge levels. To replace the spent cleaner generated more than 15,000 gallons of hazardous waste per year and caused a loss of raw material. This cost the company nearly $19,000 per year. To solve this problem the company installed an ultrafiltration system. A modified batch treatment process was connected directly to the companies 5,000 gallon cleaning bath. Process solution from the bath was pumped into a 55-gallon process tank, filtered through the ultrafiltration system and continuously returned to the 5,000 gallon bath for reuse. This resulted in a 15,000 gallon per year reduction in hazardous waste generation which is a 99% reduction in overall hazardous waste generation for this company.

- Company B stopped using 1,1,1-trichloroethane which was directly connected to an elevated distillation unit. This solvent had been used to degrease metal parts prior to entering a chrome anodizing process. The

solvent was replaced with a three-tank cleaning system using a biodegradable detergent followed by hot water rinse tanks. The oil removed was continually skimmed from the tank and collected in a 55-gallon container. From these tanks the parts were rinsed and continued through the anodizing process. This allowed the company to eliminate the use of 1,1,1-trichloroethane and to move the distillation unit to another part of the facility. In the new location the distillation unit will be used to reclaim methylene chloride reducing the amount of waste methylene chloride shipped off-site and lowering raw product costs. By using these waste minimization techniques the company estimated that they would reduce costs by 76% in 1994 and 83% in 1995.

- Company C uses a chromium electroplating process with the chromic acid bath having greater than 1% hexavalent chrome. The plating bath goes "bad" when the hexavalent chrome has been reduced to trivalent chrome. When this happens, the company must replace the solution in the plating bath, which is both time consuming and expensive. It was suggested that the company inject ozone into the air agitation piping in the chrome bath. This would "kick-up" the trivalent chrome to hexavalent chrome. The volume of ozone needed can easily be adjusted and controlled. Using this method the facility will reduce the number of times it must change the plating bath, reducing raw product costs as well as waste disposal costs.

- A local furniture company cleans it spray guns by re-circulating the cleaning solvent through the spray gun and supply lines which are connected to lines

going directly to a waste solvent drum. The spray gun is never cleaned by spraying solvent into the spray booth. This enables the company to classify the spray booth filters as non-hazardous. The filters are disposed of in an industrial landfill reducing disposal costs and the amount of hazardous waste generated at the facility.

- A drum reclamation business initiated cleaning drums with hot water and detergent instead of solvents and charted the following reductions in their listed hazardous wastes.

YEAR	METHYLENE CHLORIDE	111-TRICHLOR.
1987	216,000 LB.	22,500 LB.
1988	261,754	13,594
1989	158,400	36,300
1990	239,316	30,184
1991	188,000	19,800
1992	253,550	6,380
1993	256,503	0
1994	42,822	0
1995	0	0

SAMPLE WASTE MINIMIZATION PLAN

The following is a SIMPLIFIED, SAMPLE waste minimization plan. It is to be used as an illustration only. Your plan must be specific to your facility, it's processes, and the waste generated. Remember you can use the same process for reducing solid wastes as well, or include both in one waste minimization plan.

WASTE MINIMIZATION PLAN
FABRICATED METAL INDUSTRY
"RUSTY'S METAL SHOP"

Rusty's Metal Shop; has encouraged waste reduction in its machining, cleaning, and painting operations for a number of years to reduce the quantity and toxicity of its wastes, conserve natural resources, and reduce costs.

CORPORATE POLICY STATEMENT OF SUPPORT FOR POLLUTION PREVENTION

As evidence of corporate support of the waste minimization program at Rusty's Metal Shop, management dispersed a memo describing the corporate pollution prevention plan and tactics for fulfilling the goals in the plan.

DESCRIPTION OF POLLUTION PREVENTION PLANNING TEAM

Management hired an environmental engineer to coordinate all waste management and minimization efforts at the facility. This waste minimization coordinator communicates monthly with management at Rusty's Metal Shop. The coordinator along with management plan next steps for waste minimization efforts at the facility.

PLAN FOR COMMUNICATING SUCCESSES AND FAILURES OF POLLUTION PREVENTION PROGRAMS WITHIN THE COMPANY

The coordinator will compile an annual report on waste minimization activities at Rusty's Metal Shop and will ensure that the report is made available to all employees.

DESCRIPTION OF THE PROCESSES THAT PRODUCE, USE OR RELEASE HAZARDOUS OR TOXIC MATERIALS (INCLUDING AMOUNTS AND TYPES OF RELEASES)

Machining, cleaning, and painting operations at Rusty's Metal Ship produce hazardous wastes and toxic materials. These wastes are noted on an attached list of wastes.

DESCRIPTION OF CURRENT AND PAST WASTE MINIMIZATION ACTIVITIES AT RUSTY'S METAL SHOP

Primary Waste Minimization Activity

In 1997, Rusty's Metal Shop evaluated possible waste minimization activities, including replacement of selected solvents with aqueous cleaners. This study indicated that Rust's Metal Shop could reduce its waste by making this replacement. The facility implemented this change on a pilot basis for two months at the close of the fiscal year. The facility saw a reduction from its average 120 tons of hazardous waste for a two month period to 105 tons for the two month test period. The activity is being evaluated on other parameters such as process effectiveness, employee safety, and cost. Based on the findings, it may be implemented within the first few months of the fiscal year.

Characterization of Waste

Rusty's Metal Shop has implemented for a number of years, a waste accounting system, which tracks wastes produced at the facility from generation to final destination. The findings from this accounting system are available for review.

Periodic Waste Minimization Assessment

Periodic assessment is incorporated into the waste minimization practices at Rusty's Metal Shop. These practices include tracking waste from generation to final destination to identify source reduction opportunities and calculate the true cost of waste. For example, Rusty's Metal Shop plans to select one waste stream for assessment and identify source reduction opportunities.

Cost Allocation

Waste management costs are calculated for each step in the management process and directed back to the department producing the waste.

Encourage Technology Transfer

Rusty's Metal Shop shares information with other fabricated metal industries though participation in a local trade association.

Program Evaluation

The Waste Minimization Coordinator leads the annual evaluations of Rusty's Metal Shop's waste minimization program. This evaluation is completed through a thorough tracking of all wastes generated in the facility and through interviews with staff members from each area of Rusty's Metal Shop. The Waste Minimization Coordinator submits an annual report on the waste minimization activities to management at Rust's Metal Shop.

WASTE MINIMIZATION AND THE COMPLIANCE INSPECTION

The compliance unit of the Hazardous Waste Section began reviewing facility waste minimization programs October 1, 1993. This review process has become part of the facility hazardous waste inspection.

Hazardous waste generators and facilities have three waste minimization requirements previously described:

- Generators must submit waste minimization information as part of their annual report.
- Generators must certify on their manifest that they have a waste minimization program in place.
- All TSD facilities must certify, in the biannual report, that they have a waste minimization program in place.

The regulations where these items are addressed are:
For generators - 40 CFR 262.20, 262.41(a)(6-8),
For hazardous waste exporters - 40 CFR 262.56(a)(5)(i-ii).
For TSD facilities - 40 CFR 264/265.75(h)(I-j), 264.73(b)(9) and GS 130A-294(k).

During an inspection, the Waste Management Specialist will ask to see a copy of the facility's waste minimization plan. It will be considered a violation for failure to comply with the certification on the manifest if there is not a written plan, the

owner/operator cannot describe a waste minimization program, or cannot show evidence of a program. The inspection will include a visual check of the waste minimization "program in place." Any contradictions between plans, reports and other waste minimization activities on site will be noted in the inspection report as potential violations.

SOURCES OF INFORMATION FOR WASTE MINIMIZATION

- **Your Waste Management Specialist** - See the map at the front of this manual that shows the names and phone numbers for the Waste Management Specialist for your area.

- **Division of Pollution Prevention (DPP)**- The DPP offers free technical assistance to generators and TSD facilities. DPP may provide technical expertise and specific case studies that can provide needed information in determining possible capital expenditures and recommendations specific to your operation in reducing or minimizing the amount of waste generated. DPP is located in Raleigh and their phone number is: (919) 715-6500 or 1-800-832-7828.

- **Southeast Waste Exchange** - The Southeast Waste Exchange acts as a clearing house for generators searching for certain chemical materials or assisting in finding an outlet for materials no longer usable by the generator. This group finds legitimate outlets for used materials that would otherwise require disposal as a hazardous waste.

Southeast Waste Exchange
Urban Institute
The UNC-Charlotte
Charlotte, North Carolina 28223
(704) 547-2307

- **EPA Guidance Documents**
  - May 23, 1993 Federal Register titled: Guidance on the Elements of a Waste Minimization Program.
  - Facility Pollution Prevention Guide, EPA/600/R-2/088, May 1992. Describes how to identify, assess, and implement pollution prevention techniques.

- **EPA Policy Documents**
  - "Clarification of Types of Activities That May be Used to Satisfy Waste Minimization Certification," OSWER Directive 9560.14-85, August 5, 1985.
  - "Submission of Waste Minimization Information," OSWER Directive 9454.001A, May 23, 1986.

- **EPA Resource/Outreach Documents**
  - Innovative Hazardous Waste Treatment Technologies: A Developer's Guide to Support Services, EPA 540/2-91/012, June 1992.
  - Pollution Prevention: A Resource Book for Industry, June 1990.
  - Waste Minimization: Environmental Quality and Economic Benefits (Second Edition), EPA 530-SW-89-049, 1989.
- **The Internet**
  - Waste Minimization information from EPA: www.epa.gov/epaoswer/hazwaste/minimize

- Solvent Alternative Guide (SAGE).

  www.clean.rti.org/sagedown.htm

  This is a program that assists businesses in substituting less toxic or less hazardous solvents from those they may be currently using. Also good for meeting VOC emission reductions.

- Waste Minimization Prioritization Tool (WMPT)

  This tool assists businesses to focus pollution prevention on the "worst" chemicals and hazardous wastes first. The program scores the risks of materials based on their persistence, bioaccumulation, and toxicity. The program is Windows-based, and allows you to identify hazardous waste streams that contain particular chemicals and view the regulatory lists they appear on. The program is available from the RCRA Hotline 1-800-424-9346.

RECYCLING REGULATIONS

After reducing waste at the source, recycling is the preferred for waste minimization. The regulations covering the recycling of hazardous wastes are found in 40 CFR 262.2, 261.6 and 40 CFR 266 and are outlined below.

The general definition for recycling is:

A material is recycled if it is used, reused, or reclaimed (40 CFR 262.1(c)(7)).

Certain materials are not subject to regulation as a hazardous waste when they are recycled. These include:

- Scrap metal;
- A variety of reclaimed oils and oil-derived fuels associated with oil refining;
- Coke and coal tars from the iron and steel production process;
- Industrial ethyl alcohol that is reclaimed;
- Used batteries returned for regeneration; and
- Used oil exhibiting any of the characteristics of hazardous waste that is recycled in a manner other than burning for energy recovery.

Some materials are **not** classified as solid wastes, and therefore not hazardous wastes, when they are recycled. To determine if a material is a solid waste when recycled, the **type** of material and the **manner** of recycling must be considered.

Five **types** of materials are considered: spent materials, sludges, by-products, commercial chemical products, and scrap metal.

- A **spent material** is any material that has been used and, as a result of contamination, can no longer serve its intended purpose without re-processing (40 CFR 261.1(c)(1)). This includes spent solvents, spent plating bath solutions, and spent pickle liquor, among others.

- A **sludge** is a residue from a pollution control device such as waste water treatment plant sludges, baghouse dust, or furnace dust (40 CFR 260.10).

- **By-products** are process residues that are not one of the primary products of a production process such as slag, heavy ends, and distillation column bottoms. By-products should not be confused with **co-products**. A co-product is intentionally produced by the manufacturing process and is ordinarily used in its existing state as a commodity. Co-products must have a recognized use, and must be usable without reprocessing (40 CFR 261.1(c)(3)).

- **Commercial Chemical Products** are those compounds listed in 40 CFR 261.3 (the P and U listed wastes). These materials are unused, pure products (not mixtures), or a product where the compound listed is the sole active ingredient.

- **Scrap metals** are metal pieces and parts which, when worn or superfluous, can be recycled. Examples are scrap automobiles and machine shop turnings.

The **manner** of use must next be examined when determining if a material is a solid waste when recycled. The five types of use that must be considered are: use in a manner constituting disposal; use as a fuel or burning for energy-recovery; reclamation; speculative accumulation; and use/re-use.

- **Use constituting disposal** occurs when the material is applied to or placed on the land or is contained in a product placed on the land (40 CFR 261.2(c)(1)). An example is lindane-containing waste which is used as a pesticide.

- **Burned for energy recovery or used as a fuel** occurs when a material is used to produce a fuel, is contained in a fuel, or is burned for energy recovery in a boiler or industrial furnace (40 CFR 261.2(c)).

- A material is **Reclaimed** if it is processed to recover a usable product or if it is regenerated (40 CFR 261.1(c)(4)). An example of reclamation is distillation.

- **Speculative accumulation** is defined as the accumulation of waste materials prior to recycling without sufficient amounts being recycled. A sufficient amount is defined as using at least 75% of the total quantity generated during a calendar year (40 CFR 261.1(c)(8)).

When you consider the **type** of material and the **manner** in which it will be used, you may now determine whether it is a solid waste when it is recycled. In the chart below, the type of the material is along the side of the chart. The manner of use is listed along the top. If the box has an asterisk (*) in it, that material is a solid waste when it is recycled. If the box is blank, that means that the material is not a solid waste, and therefore, cannot be a hazardous waste, and is not subject to the hazardous waste rules when recycled (RCRA).

	Use Cons-tituting Disposal	Energy Recovery/ fuel	Reclamation	Speculative Accumu-lation
Spent Material	*	*	*	*
Sludges (listed)	*	*	*	*
Sludges (characteri stic)	*	*		*
By-Product (listed)	*	*	*	*
By-Product (Characteri stic)	*	*		*
Commercial Chemical Product (listed)	*	*		
Scrap Metal	*	*	*	*

Use or Reuse

The fifth type of recycling process to be considered is use or re-use. A material is used or re-used if it is employed as an ingredient in an industrial process to manufacture a product, or is employed as an effective substitute for a commercial product (40 CFR 261.1(c)(5)(i and ii)). Recyclable materials are **not** solid wastes when they are used or reused, or returned directly into the original primary production process in which they were generated (40 CFR 261.2(e)(1)). However, materials must be used, re-used or returned to the original process without first being reclaimed. These exclusions do not apply to materials used in a manner constituting disposal, burned for energy recovery, or speculatively accumulated (40 CFR 261.2(e)(2)).

Certain "inherently waste-like" materials are solid wastes when they are recycled in any manner. These include: listed wastes F020, F021, F022, F023, F026, and F028; and secondary materials fed to a halogen acid furnace that exhibit a characteristic of, or are listed as a hazardous waste.

If the material being recycled is defined as a solid waste using the method outlined above (see chart), and it also meets the definition of a hazardous waste, then it is subject to the full set of hazardous waste regulations. Before being reclaimed, materials that are hazardous wastes are also subject to the full set of hazardous waste regulations (40 CFR Parts 262 and references and Part 268 and 270). This includes proper containerization, labeling, dating and storage time limits.

REGULATION OF "RECYCLABLE MATERIALS"
(Not Hazardous Waste)

Certain recycling processes are not subject to the full set of hazardous waste regulations but are addressed in 40 CFR 266 as Recyclable Materials. These regulations cover:

- Material used in a manner constituting disposal (Subpart C)
- Hazardous waste burned for energy recovery (Subpart D)
- Materials utilized for precious metals recovery (Subpart F)
- Spent lead-acid batteries being reclaimed (Subpart G)
- Hazardous waste burned in boilers and industrial furnaces (Subpart H).

and in 40 CFR 279:

- Used oil management prior to recycling and energy recovery.

Note: Decision Diagram B in the front of this manual will help you in deciding how your recyclable materials should be regulated. If you need further assistance contact your Waste Management Specialist.

OVERHEADS FOR DAY TWO OF THE COURSE

RECYCLING REGULATIONS

RECYCLING REGULATIONS

This Section Will Help You Determine:

- If the process you are using is defined as recycling,
- Which regulations, if any, your material will be regulated under,
- When distilled (or recovered) materials are a hazardous waste.

Materials that are Recycled are Regulated under RCRA as one of the following:

- **Not regulated**.
- As a **Hazardous Waste**.
- As **Recycled Materials**.
- As **Used Oil**.

The Citations for Recycled Materials can be found at:

- 261.2- Definition of a Solid Waste
- 261.4- Exclusions from being a Solid Waste
- 261.6- Requirements for Recyclable Materials
- 266 - Standards for the Management of Specific Types of Hazardous Wastes

DEFINITIONS

261.1(c) and 260.10

Definitions

- **Spent Material**- is any material that has been used, and as a result of contamination, can no longer serve its purpose with out reprocessing.
- **Sludge**- a solid, semisolid, or liquid waste generated from a wastewater treatment plant, air pollution control facility, or water supply treatment plant.

Definitions (continued)

- **By-product**- a material that is produced that is not the primary product of a production process and is not separately or solely produced.
- **Co- product**- Same as a by-product but is produced for the public's use and is normally used in the form it is produced.

Definitions (continued)

- **Scrap metal**- bits and pieces of metal parts which, when worn or superfluous, can be recycled.

Definitions (continued)

- **Used or Reused**- a material is used or reused if it is either:
  - Employed as an ingredient in an industrial process to make a product; or
  - Employed as an effective substitute for a commercial product.

Definitions (continued)

- **Reclaimed**- a material is reclaimed if it is processed to produce a usable product or if it is regenerated.
- **Recycled**- a material is recycled if it is *used*, *reused*, or *reclaimed*.

Definitions (continued)

- **Speculative accumulation**- occurs when a material is accumulated before being recycled without a sufficient amount being recycled (75% in a calendar year).

Decision Diagram B- Hazardous Waste Recycling

In Manual under Tab 3

Using the Diagram will Result at the Regulations Applicable for Your Material

Is Material **Excluded** Under 261.6(a)(3) ?

- Industrial ethyl alcohol that is reclaimed.
- Used batteries returned to manufacturer.
- Scrap metal.
- Fuels from refining oil-bearing hazardous waste from petroleum refining.
- Oils reclaimed from above.
- Petroleum coke produced from petroleum. refining.

If "Yes"
the Material is NOT
a Solid Waste

Is Material "Inherently Waste-like" ? (261.2(d))

- Waste numbers:
  - F020, F021, F022, F023, F026, F028.
- Secondary materials fed to a halogen acid furnace.
- Other materials designated by the Administrator.

If "YES" then the Material is Inherently Waste-like and is a Hazardous Waste even when Recycled.

Is Material Used in a Manner that Constitutes Disposal? 261.2(c)(1)(i)

- The material is applied to the land, or
- Used to produce a product that is applied to the land.

If "YES" then the Material is Regulated Under Section 266 Subpart C

UNLESS...

Unless....

- It is a *Commercial Chemical Product* **and** it is produced to apply to the land.
  If this is the case, the material is **NOT** a Solid Waste and therefore, Not a Hazardous Waste.

Is 75% of the material recycled in a calendar year? if "NO" then...

- If the material is **NOT** a Commercial Chemical Product, it is being *Speculatively Accumulated* and is therefore a Hazardous Waste.
- If it **IS** a Commercial Chemical Product, the material is not a Solid Waste.

Is the Material Burned for Energy Recovery?

- If it is a *Used Oil* with a characteristic, it is regulated under the Used Oil Regulations.
- If it is a *Commercial Chemical Product* produced to be a fuel, it is not a Solid Waste.
- Any other material is regulated under 266 Subpart H.

Is it Used as an Ingredient or an Effective Substitute in an Industrial Process Without Being Reclaimed?

- If "YES" then the material is NOT a Solid Waste and therefore, not a Hazardous Waste.

Is the Material Returned to the Original Process?

- If "YES" it is not a Solid Waste if:
  - the material is used as a raw product substitute, or
  - it is reclaimed in a closed loop system and the tanks do not use flame combustion (eg. boilers), the material is not used as a fuel or in a manner constituting disposal; and its not stored > 12 months.

Is the Material Reclaimed?

If "YES" then....

- The material is NOT a Solid Waste if it is a characteristic *By-product* or *Sludge* or a *Commercial Chemical Product*.
- It is regulated under 266 if it is either:
  - lead acid batteries (Subpart G), or
  - precious metals are reclaimed from the material (Subpart F).

If the Material is any Other Product and it is Being Reclaimed then it is a Hazardous Waste

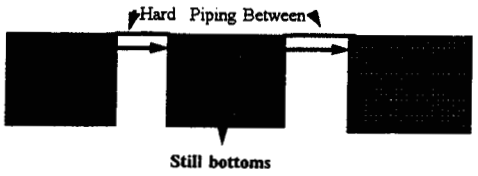
If you have used the Decision Diagram and reached an end point, then the material is NOT being recycled and you must make a waste determination (Use Diagram A)

EXAMPLES

DISTILLATION

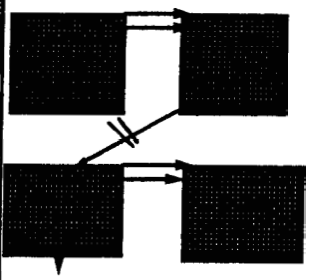
When Materials are Hazardous Wastes Prior to Being Distilled

Distillation- Closed Loop System



Collected Material is NOT a Hazardous Waste

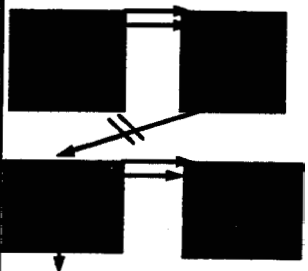
Distillation- Open System



Material is a **Hazardous Waste** at this point until it is placed into unit

Material is **NOT** a Hazardous Waste

Distillation- Open System

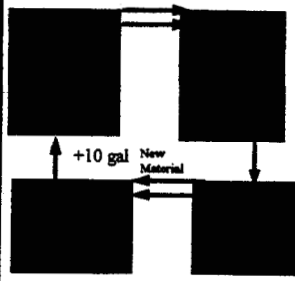


Container must be labeled, closed, dated (unless a Satellite Accumulation Point - no date required)

No labeling or dating requirements under RCRA

Questions ?

Distillation- Open System

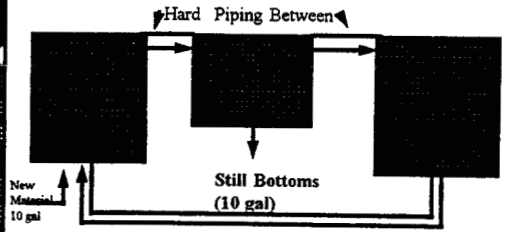


First time count 100gal waste generated plus still bottoms.

Next time count 10 gallo added raw product plus still bottoms.

10 gal still bottom

Distillation- Closed Loop System



Ten gallons of still bottoms are only wastes counted.

THE HAZARDOUS WASTE INSPECTION

Type of inspections

There are many reasons why a hazardous waste inspector (Waste Management Specialist) will show up at the door of your facility. Most of these reasons will be for some type of formal inspection. Sometimes an inspection will be conducted in conjunction with an EPA or State initiative looking at compliance in a particular industry-type, or compliance with a particular section of the regulations. Because North Carolina is "under contract" with EPA, they can accompany the State inspector on an inspection.

The most common type of hazardous waste inspection is the CEI, or Compliance Evaluation Inspection. This inspection evaluates your facility for all of the hazardous waste regulations applicable to your facility. The **usual** frequency of a CEI is once a year for TSD facilities, once per year for generators (>2200 pounds per month), a percentage of small quantity generators, and as needed, i.e., complaint investigations.

Inspections can either be announced or unannounced, most inspections are unannounced. When the inspector arrives at your facility, it is with the intention of conducting **and** completing an inspection. In addition to the primary contact, your facility should have at least one other person on the site who knows where records are kept and is familiar with the basics of your hazardous waste program. This

person can accompany the inspector when the primary facility contact is not available.

Entrance and access to your business:

When the inspector arrives at your facility they will identify themselves with an official DEHNR identification card and tell you why they are there. You may want them to sign in on a log or other document. The inspector will not sign any document or log requiring them to agree to any terms. For personal safety reasons the inspector can sign a visitor log only or leave a business card at the front desk so that you will know they are on-site in case of an emergency.

The inspector is required under OSHA 1910.120 to review or generate a specific site-safety plan before a facility tour can begin. Generally, a review of a facility's current contingency plan will suffice, however, an additional site-safety plan may be filled out by the inspector. A copy of this form will **not** be left at the facility.

Normal inspection equipment includes cameras, sampling equipment and can include recording devices. Photographs will be taken and samples collected to document violations. Copies of documents will be requested for the same reason. Following this section is the citation from the statutes that protects you from the inspector divulging trade secrets or proprietary information.

The order in which the inspection is conducted is determined by the inspector. The inspector will let you know what they will need to see and when. The following is

the citation from the statutes that allows access to all parts of your facility the inspector will need to see to determine compliance with the regulations.

GENERAL STATUTE 130A-304-

CONFIDENTIAL INFORMATION PROTECTED

(a) The following information received or prepared by the Department in the course of carrying out its duties and responsibilities under the Article is confidential information and shall not be subject to disclosure under G.S. 132-6:

(1) Information which the Secretary determines is entitled to confidential treatment, the Secretary shall inform the person who provided the information that determination at the time such determination is made. The Secretary may refuse to accept or may return any information that is claimed to be confidential that the Secretary determines is not entitled to confidential treatment.
(2) Information that is confidential under any provision of federal or state law.
(3) Information compiled in anticipation of enforcement or criminal proceedings, but only to the extent disclosure could reasonably be expected to interfere with the institution of such proceedings.

(b) Confidential information may be disclosed to officers, employees, or authorized representatives of federal or state agencies if such disclosure is necessary to carry out a proper function of the Department or the requesting agency or when relevant in a any proceeding under this Article.

C) Except as provided in subsection (b) of this section or as otherwise provided by law, any

officer or employee of the State who knowingly discloses information designated as confidential under this section shall be guilty of a misdemeanor punishable by a fine of not more than five hundred dollars ($500) or imprisonment for not more than two years or both and shall be removed from office or discharged from employment.

GENERAL STATUTE 130A-17

RIGHT OF ENTRY

The Secretary and local health director shall have the right to entry upon the premises of any place where entry is necessary to carry out the provisions of this Chapter or the rules adopted by the Commission or a local board of health. If consent for entry is not obtained, an administrative search and inspection warrant shall be obtained pursuant to G.S. 15-27.2. However, if an imminent hazard exists, no warrant is required for entry upon the premises.

THE INSPECTION

RECORD REVIEW

All of the documents your facility is required to keep on-site under RCRA may be reviewed by the inspector. All records relating to hazardous waste must be kept **on-site** for at least three years with the exception of training records. This exception will be discussed later in this section.

Manifests (40 CFR 262.20-23)

All hazardous wastes shipped off-site must be accompanied by a hazardous waste manifest. During an inspection, hazardous waste manifests will be reviewed from the date of the last inspection. The inspector may, however, want to see all of your manifests, or just those for the last year. Manifests are reviewed to determine if they are filled out correctly. They are also checked to determine that the wastes shipped off-site matches the wastes generated by your facility, that the quantities shipped match the quantities of waste generated, and the TSD facilities and transporters used are valid facilities.

The inspector is also checking to see if your manifests have been signed by you, the transporter(s), and the TSD facility. If you have not received a signed manifest, you must have filed an exception report within 45 days of the date you shipped the waste. The exception report must have been sent to the Hazardous Waste Section and a copy kept on-site.

Remember, by signing the manifest you are certifying that all of the information is correct, including facility waste minimization information. If you do not fill out the manifest yourself, CHECK IT OVER CAREFULLY. The mistakes made will be violations for your facility.

The inspector may also ask you about shipments of non-hazardous waste if they have reason to believe that any could be hazardous and were shipped without a manifest.

Common problems and violations found during manifest review:

- Not using a unique document number and/or using letters instead of numbers.
- Not using the appropriate Waste codes for the hazardous waste shipped.
- Not describing the waste appropriately.
- Not having a returned copy signed by the TSD facility and/or not having an exception report.
- Failure to provide "land ban" notifications/ certifications. (See next section).

On the next pages you will find a sample manifest and the instructions for filling it out correctly.

NORTH CAROLINA HAZARDOUS WASTE MANIFEST

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* *Form Approved. OMB No. 2050-0039*

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 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*

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. 11-88) Previous editions are obsolete.

INSTRUCTIONS ON BACK SHEET

INSTRUCTIONS FOR COMPLETING THE MANIFEST

US. EPA FORM 8700-22

Read all instructions before completing this form.

This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may be used--press down hard.

FEDERAL REGULATIONS REQUIRE GENERATORS AND TRANSPORTERS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES TO USE THIS FORM (8700-22) AND, IF NECESSARY, THE CONTINUATION SHEET (FORM 8700-22A) FOR BOTH INTER AND INTRASTATE TRANSPORTATION. FEDERAL REGULATIONS ALSO REQUIRE GENERATORS AND TRANSPORTERS OF HAZARDOUS WASTE AND OWNERS OR OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES TO COMPLETE THE FOLLOWING INFORMATION:

* * * * * * * * * * * * *

GENERATORS

Item 1. GENERATOR'S U.S.EPA ID NO. MANIFEST DOCUMENT NUMBER

Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this Manifest (e.g., 00001) by the generator.

Item 2. PAGE 1 OF--------

Enter the total number of pages used to complete this Manifest, i.e., the first page (EPA Form 8700-22) plus the number of Continuation Sheets (EPA Form 8700-22A), if any.

Item 3. GENERATOR'S NAME AND MAILING ADDRESS

Enter the name and mailing address of the generator. The address should be the location that will manage the returned Manifest forms.

Item 4. GENERATOR'S PHONE NUMBER

Enter a telephone number where an authorized agent of the generator may be reached in the event of an emergency.

Item 5. TRANSPORTER 1 COMPANY NAME

Enter the company name of the first transporter who will transport the waste.

Item 6. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the first transporter identified in item 5.

Item 7. TRANSPORTER 2 COMPANY NAME

If applicable, enter the company name of the second transporter who will transport the waste. If more than two transporters are used to transport the waste, use a Continuation Sheet(s) EPA Form 8700-22A) and list the transporters in the order they will be transporting the waste.

Item 8. U.S. EPA ID NUMBER

If applicable, enter the U.S. EPA twelve digit identification number of the second transporter identified in item 7.

NOTE: If more than two transporters are used, enter each additional transporter's company name and U.S. EPA twelve digit identification number in items 24-27 on the Continuation Sheet (EPA Form 8700-22A). Each Continuation Sheet has space to record two additional transporters. Every transporter used between the generator and the designated facility must be listed.

Item 9. DESIGNATED FACILITY NAME AND SITE ADDRESS

Enter the company name and site address of the facility designated to receive the waste listed on this Manifest. The address must be the site address, which may differ from the company mailing address.

Item 10. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the designated facility identified in item 9.

Item 11. U.S. DOT DESCRIPTION [INCLUDING PROPER SHIPPING NAME HAZARD CLASS, AND ID NUMBER (UN/NA)]

Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste as identified in 49 CFR 171 through 177.

NOTE: If additional space is needed for waste descriptions enter these additional descriptions in item 29 on the Continuation Sheet (EPA Form 8700-22A).

Item 12. CONTAINERS [NUMBER AND TYPE]

Enter the number of containers for each waste and the appropriate abbreviation from Table 1 (below) for the type of container.

Table 1 -- Types of Containers

DM = Metal drums, barrels, kegs
DW = Wooden drums, barrels, kegs
DF = Fiberboard or plastic drums, barrels, kegs
TP = Tanks portable
TT = Cargo tanks (tank trucks)
TC = Tank cars
DT = Dump truck
CY = Cylinders
CM = Metal boxes, cartons, cases (including roll-offs)
CW = Wooden boxes, cartons, cases
CF = Fiber or plastic boxes, cartons, cases
BA = Burlap, cloth, paper or plastic bags

Item 13. TOTAL QUANTITY

Enter the total line quantity of waste described on each line.

Item 14. UNIT [WEIGHT/VOLUME]

Enter the appropriate abbreviation from Table II below for the unit of measure.

Table II -- Units of Measure

G = Gallons (liquids only)
P = Pounds
T = Tons (2000 lbs.)
Y = Cubic yards
L = Liters (liquids only)
K = Kilograms
M = Metric tons (1000 kg)
N = Cubic meters

Item 15. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or Bill of Lading information. For international shipments, generators must enter in this space the point of departure (City and State) for those shipments destined for treatment, storage, or disposal outside the jurisdiction of the United States.

Item 16. GENERATOR'S CERTIFICATION

The generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water, or air) inserted in the space below. If another mode in addition to the highway mode is used, enter the appropriate mode (e.g., and rail) in the space below.

Primary exporters shipping hazardous wastes to a facility located outside of the United States must add to the end of the first sentence of the certification the following words "and conforms to the terms of the EPA Acknowledgement of Consent to the shipment."

In signing the waste minimization certification statement, those generators who have not been exempted by stature or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements.

Generators may preprint the words, "on behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator certifications.

NOTE: All of the above information except the handwritten signature required in Item 16 may be preprinted.

* * * * * * * * * * * * * *

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

TRANSPORTERS

Item 17. TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Item 18. TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

NOTE: International Shipments--Transporter Responsibilities.

Exports --Transporters must sign and enter the date the waste left the United States in item 15 of Form 8700-22. Imports --Shipments of hazardous waste regulated by RCRA and transported into the United States from another country must upon entry be accompanied by the U.S. EPA Uniform Hazardous Waste Manifest. Transporters who transport hazardous waste into the United States from another country are responsible for completing the Manifest (40 CFR 263.10(c)(1).

OWNERS, AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES

Item 19. DISCREPANCY INDICATION SPACE

The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any significant discrepancy between the waste described on the Manifest and the waste actually received at the facility.

Owners and operators of facilities located in North Carolina should contact the Hazardous Waste Section of DEHNR for information on State Discrepancy Reports requirements.

Item 20. FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF HAZARDOUS MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 19.

Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Items A-K are not required by Federal Regulations for intra- or interstate transportation. However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items A-K as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage, or disposal facilities are advised to contact State officials for guidance on completing shaded areas of the Manifest.

The North Carolina Commission for Health Services has adopted rules requiring the completion of item D., F., H., and I.

Item D., F., and H. are self explanatory.

Item I. WASTE NUMBER:

See Federal Register 40 CFR part 261, Subpart D. For unlisted hazardous waste, enter the description which you believe best describes the waste. A waste may include more than one code number.

EMERGENCY NUMBER'S

National Response Center:
1-800-424-8802

N.C. Highway Patrol Center:
1-800-662-7956

EXAMPLE:

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS AND ID NO.)	12. CONTAINERS		13. TOTAL QUANTITY	14. UNIT WEIGHT/VOLUME	I WASTE NUMBER
	NUMBER	TYPE			
Waste Acetone, Flammable Liquid (UN 1090)	10	DM	4500	P	U002

FOR ADDITIONAL INFORMATION:
CONTACT MANIFEST SYSTEMS
HAZARDOUS WASTE SECTION
DIVISION OF WASTE MANAGEMENT
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
P.O. BOX 29603, RALEIGH, N.C. 27611
(919) 733-2178

Land Ban Notification (40 CFR 268)

A generator must determine if its hazardous waste must be treated before being land disposed. This is accomplished, either by testing or by waste analysis, then checking the treatment standards listed in 40 CFR 268.40 or 268.45. All supporting information and data used to make this determination must be kept on file at the facility.

The regulations have changed to allow a one-time notification instead of one with each shipment of waste. Also, **a notification is only required when the waste does not meet the treatment standard**. When a generator **first** ships hazardous waste to a TSD facility, the generator must supply a one-time notification. This notification tells the TSDF that the waste does not meet a specific treatment standard. If the waste, processes, or the receiving facility changes, the generator is required to send a new notice to the receiving facility. This new notice must also be kept in the files at the generator's site.

The Notice must include:

- The EPA Hazardous Waste and manifest numbers.
- The constituents of concern for F001-F005, and F039 wastes, and the underlying hazardous constituents (for all wastes), unless the waste will be treated and monitored for all constituents.
- The applicable wastewater/non-wastewater category and subdivisions made within a waste code (such as D003, reactive cyanide).

- ✦ Waste analysis data if available.
- ✦ For hazardous debris, when treating with the alternative treatment technologies provided by 268.45: the contaminants subject to treatment and an indication that these contaminants are being treated to comply with 268.45.
- ✦ Generator signature when certifying that the waste meets the treatment standards.

The notices must be kept on site for three years. This has changed from the previous five year retention time. Electronic filing is allowed, however, there are no standards set for electronic filing at this time.

Many hazardous waste vendors have developed excellent notification forms. Remember, the generator is ultimately responsible for the correctness of the notification and the resulting violations if the forms are filled out incorrectly.

Common errors made on the notification/certification forms are:

- ✤ Not listing the constituents of concern for F001-F005 wastes and underlying hazardous constituents.
- ✤ Failing to identify wastewater or non-wastewater.
- ✤ Failing to retain a copy on-site.
- ✤ Failing sign the notification when certifying that the treatment standards are met.

Please note that individual notifications are necessary with lab-packed waste shipments and must be attached to the manifest and a copy retained on site. There is no distinction between wastewater, nonwastewater, or hazardous debris for lab-packed wastes.

Training Records (40 CFR 265.16)

Content: Because there are so many different types of processes and jobs related to hazardous waste, there is no approved training course specified in the regulations. It is the facility's responsibility to determine what your employees need to know to ensure the facility's compliance with the regulations and to ensure that they will not harm themselves. Each employee who has duties involving hazardous wastes must be trained in their actual duties handling hazardous wastes, or as the regulations state: "relevant to the position in which they are employed." The employees also must be trained in emergency procedures and they must be able to respond EFFECTIVELY to emergencies. The training must include a review of YOUR SITE SPECIFIC contingency plan.

Who can conduct training: The person conducting employee training must be trained in hazardous waste management. Notice, there is no EPA approved training program for instructors. You should have documents at the facility, however, showing that the person conducting the training is qualified to do so.

Who to train: All employees who handle hazardous wastes, or have the potential to handle hazardous waste, must be trained. This includes all personnel who actually handle hazardous wastes, emergency response crews, and emergency coordinators. If an employee's **only** hazardous waste duty is to place hazardous wastes into a satellite container and they would **not** respond if the container leaked or ruptured, that employee does not have to participate in the training. The Hazardous Waste Section, however, recommends that you involve them in the training.

New employees (new employees to the facility **or** employees that are new to that position) have a "grace" period of six months to attend training, however, they cannot work unsupervised around hazardous wastes until they receive the training.

Training documentation required to be present at the facility:

- **Job titles and job descriptions** for positions that include hazardous waste responsibilities and the name of each employee filling that position. The description must include the education and training required for that job. This job description must describe the duties SPECIFIC TO HAZARDOUS WASTE ACTIVITIES expected of that employee.

- **Type and amount of both introductory and continuing training** conducted, i.e., the content of what you trained the employees on.

- **Records that document that training was given**. This can be a sign-off sheet, or other method of verifying that the employees were trained. (See attached examples).

How often: Training must be conducted annually, on or prior to the anniversary date of the previous training, not once per year. This means, if you trained employees on January 22, 1998, they must have their annual update on or before January 22, 1999.

Training documents the exception to the three-year record retention rule. All training documents must be kept **on-site until the facility closes**. Training records for former employees must be kept for three years (minimum) from the time the employee left the facility.

Common errors found in training programs:

- Not maintaining training records at all.
- Job descriptions not specific to hazardous waste duties.
- Job descriptions not including the requisite skills needed to perform that job.
- Not training personnel on the contents of the contingency plan and emergency procedures.
- Not training emergency coordinators.
- Not conducting training annually, by the anniversary date.

JOB DESCRIPTION/TRAINING RECORD FOR HAZARDOUS WASTE MANAGEMENT/DISPOSAL POSITIONS PER 40 CFR 265.16.

This record must be maintained at the facility.

FACILITY: facility name UNIT: Plant number
ADDRESS: address of facility
PHONE: 000-000-0000 DATE: _____
EMPLOYEE NAME: _____
JOB TITLE: _____
HAZARDOUS WASTE RELATED QUALIFICATIONS AND DUTIES (INCLUDE REQUISITE SKILLS, EDUCATION, OR OTHER QUALIFICATIONS).

The above person works with and handles hazardous materials and wastes at the work site located at:_____, city, State. This person has the appropriate qualifications to read, understand, apply, and communicate written and verbal information regarding handling and managing hazardous wastes. Training is required within six months of assuming duty and once a year thereafter. He/She is responsible for proper handling, documenting, inspecting, and transporting hazardous wastes. He/She is also responsible for responding to emergencies. The above individual commenced these duties on _____ 19__.

DATE	DESCRIPTION OF TRAINING (FOR FORMAL TRAINING) FOR INFORMAL TRAINING: ENTER "ON THE JOB TRAINING. ENTER THE TITLE, A BRIEF DESCRIPTION AND THE NAME OF THE INSTRUCTORS.	EMPLOYEE SIGNATURE

RCRA DOCUMENTATION OF TRAINING FOR
WASTE HANDLERS

I do understand the requirements of this position, and having been trained to fulfill these requirements, believe I am fully competent to discharge the responsibilities outlined for the hazardous waste handling.

Waste Handler _____ _____
Date

Trainer _____ _____
Date

Training Documentation

Date:_____

The following persons have completed the training modules listed below as described in material provided at the course. The modules have been designed to be a part of a training plan developed to meet the training requirements of all applicable agencies. The modules were conducted by _____. The employees have demonstrated satisfactory performance in, and comprehension of the material covered. The evaluation was conducted by company testing, which was, where appropriate, verbal, practical, or written.

Training modules:

Basic Hazardous Waste Identification
Generator liability
Training Requirements
Preparedness and Prevention
Contingency plan & emergency procedures
Implications of disposal requirement
Use and management of containers
Generator Shipping Requirements

Printed Name	Signature	Job title

Trainer Signature:_____ **Printed Name:**_____

Specific Hazardous Waste Training Record

Employee Name: _____ ID no:_____

Job Title: _____

"I certify that I have received training in the following areas on the date(s) identified, and that I understand the information presented."

Employee Initials	**Trainer Initials**	**Date**	**Area Covered by Training**
_____	_____	____	1)Specific Hazardous Wastes to be managed: _____ _____ _____
_____	_____	____	2)Proper Containers
_____	_____	____	3)Placement of waste in Containers
_____	_____	____	4) Required labels
_____	_____	____	5) Dating containers
_____	_____	____	6) Satellite accumulation requirements
_____	_____	____	7) Emergency notification and response
_____	_____	____	8) Inspections
_____	_____	____	9) Evacuation

Employee Signature _____ Date _____

Trainer Signature _____ Date _____

Inspection Log (40 CFR 265.174 and 15A NCAC 13A .0010(i))

Facilities are required to inspect the areas where hazardous wastes are stored at least weekly looking for, **at a minimum**, leaks and corrosion of containers. These inspections must be recorded in a log and this log is required to be maintained on site for at least three years. There is no set form for an inspection log, however, it should note specific **items** that you are looking for, specify the **areas** you are looking at, include the signature of the inspector, and the date and the time the inspection was conducted. You should also include any problems noted and what actions were taken to correct them.

We recommend that the inspections include satellite accumulation points and the testing and maintenance of emergency equipment as specified in 40 CFR 265.33.

It is not a violation for problems that you have noted and corrected to appear in your inspection log. Rather, it shows that inspections are being conscientiously conducted. On the other hand, if problems are noted by the inspector in your storage areas but the inspection log notes that everything is okay, it shows that inspections are not being conducted appropriately.

Inspections **must** be conducted weekly. There are no exceptions. If you are on vacation or your plant is closed, arrangements must be made to ensure that stored hazardous wastes are inspected and documented in your inspection log.

The following are **SAMPLE** inspection logs.

Weekly Hazardous Waste Inspection Log

Inspection Date	xxxx xxxx						
Drum Leaks?	Yes						
xxxxxxxxxxx	No						
Drum Closed?	Yes						
xxxxxxxxxxx	No						
Labeled and Dated?	Yes						
xxxxxxxxxxx	No						
Evidence of Spills?	Yes						
xxxxxxxxxxx	No						
Inspector Initials	xxxxx xxx						
Comments:							

HAZARDOUS WASTE MANAGEMENT

WEEKLY SITE INSPECTION

Date: _____

Time: _____

Inspector:_____

	Circle
Log Up to Date	Yes No
Drums Labeled	Yes No
Drums Sealed	Yes No
Drums Dated	Yes No
Oldest Date	Yes No
Aisle Space Adequate	Yes No
Emergency Equipment	Yes No
Phone Working	Yes No

Corrective Action Needed? Yes No

Describe:_____

_____

_____

_____

_____

_____

Date Corrected _____

Contingency Plan (40 CFR 265.50 - 56 Subpart D)

The purpose of a RCRA contingency plan is to describe the procedures that will be used to respond to emergencies related to hazardous waste.

The following is a list of **required** RCRA contingency plan items cited in the regulations and an example of a generic plan. This generic plan is to be used for an example only. A RCRA contingency plan must be SPECIFIC TO YOUR FACILITY.

Required Contingency Plan Items

- Every facility must have a contingency plan.
- The plan must be carried out immediately when there is a significant potential for hazardous waste constituents to be released, or they have been released.
- The plan must describe actions personnel will take in the event of any release of hazardous wastes or constituents.
- The plan must describe agreements made with local emergency response teams, fire departments, police, sheriff and hospitals.
- The names of the emergency coordinators must be listed as well as their home addresses and phone numbers so they can be reached ANYTIME there is an emergency.
- All emergency equipment must be listed including its location and its capabilities.

- An evacuation plan must be in the plan including signals used to begin the evacuation. Both primary and secondary evacuation routes must be specified.
- Copies of the contingency plan must be kept at the facility and sent to local emergency agencies and hospitals.

A contingency plan must be updated IMMEDIATELY when:

- the applicable regulations are changed;
- the plan fails in an emergency;
- the facility changes (changes in facility processes, a floor plan, etc.);
- emergency coordinators change; or
- emergency equipment changes.

The regulations also specify emergency procedures you must take when your plan is used in an emergency. These procedures are specified in 40 CFR 265.56.

Review your contingency plan often to determine if any changes should be made and keep it updated.

The following items are frequently not addressed in a generator's contingency plan:

- Description, capabilities and location of all emergency equipment within the facility.
- Description of alarms used to evacuate the facility (e.g., horn, siren, buzzer, etc.).

- Failure to amend the plan when:
  - Emergency coordinators change or
  - the facility changes.

- Failing to send the plan to emergency responders or not documenting the submittal.
- Not showing both primary and secondary evacuation routes.

The contingency plan is your guide, and an assurance to fellow workers, emergency responders, and the public that your company will respond in the most effective way to emergencies.

It is not a violation to combine this plan with emergency plans required by other regulations, however, we suggest that you have a separate document to ensure that all required elements are included.

Suggested Outline
Hazardous Waste Management Facility Contingency Plan

1. Facility identification and general information
   a. Name of facility, location, address
   b. Phone numbers (office and hours)
   c. Primary Emergency Coordinator, name, home address, home phone
   d. Type of facility
   e. Description of waste management practices
2. Emergency Coordinators
   a. Primary coordinator
   b. Alternate coordinator(s)
   c. Emergency duties and authority to commit resources.
3. Implementation of Contingency Plan
4. Emergency Response Procedures
   a. Notification
   b. Control and containment
   c. Follow-up
5. Emergency Equipment
   a. Inventory
   b. Location
   c. Capabilities
   d. Equipment available from other resources
6. Coordination Agreements
   a. Police
   b. Fire
   c. Other emergency response units
   d. Hospital
7. Evacuation Plan
   a. When to evacuate
   b. Signals to evacuate
   c. Primary evacuation routes
   d. Alternative evacuation routes

HARD CHROME PLATING COMPANY
CONTINGENCY PLAN

1. General Information

* Hard Chrome Plating Company

* Location: 1997 Dismal Lane, Bacon, NC 29898

* Contact: George Washington, 123 Easy St, Bacon, NC 29898. Home: (123)456-7890
Office: (123)654-0987

* Emergency Coordinator:

* Flash Gordon, 2 Super Hero Rd., Bacon NC 29898 home: (123)455-9836
Work: (123)737-9875

* Type of facility: Chrome plating of machine parts primarily for the movie industry.

* Description of wastes:
  - Waste water containing cyanide from plating tanks. (F007)
  - Wastewater treatment sludge from the treatment of plating waste. Contains cyanide and chrome. (F006)

2 Emergency Coordinators:

* Primary: Flash Gordon, 2 Super Hero Rd., Bacon NC 29898. Home:(123)455-9836
Work: (123)737-9875

* Secondary: Robin Batman, Bat Cave Rd., Bacon, NC 29898. Home: (123) 666-6666

* The emergency coordinators can deputize other employees to assist them in the event of an emergency.

* The emergency coordinator has full authority to commit resources needed to respond to emergencies at this facility.

3. Implementation of the Contingency Plan

The contingency plan will be implemented if an incident might threaten human health or the environment. The emergency coordinator has the full authority to make this determination. Examples of emergencies that may call for the implementation of the plan are: Release of plating bath

solutions; formation of hydrogen cyanide gas; release from bulk storage containers.

4. Emergency Response Procedures

* Notification

- Any employee discovering a fire or hazardous release that is not readily controllable with equipment and materials at hand must activate the emergency alarm system. This system automatically pages both the primary and secondary emergency coordinators and contacts the local police and fire department.

- All employees hearing the alarm must close down and secure equipment (if it is safe to do so) and evacuate the building.

- Evacuation routes are specified in the map in Section seven.

- The Emergency Coordinator will contact the National Response Center if appropriate.

- Roll-call of evacuated personnel will be conducted by the emergency coordinator or his deputy.

* Containment and Control

- In the event of a release of cyanide gas the response is to evacuate the facility.

- In the event of a spill or release, absorbent material will be used to contain the flow. Portable pumps will be used to clean up the spill. Recovered material will be declared a hazardous waste if it cannot be used as is.

- In the event of a fire, facility personnel will be evacuated and the control of the site turned over to the fire department upon their arrival.

* Follow-up Actions

- All hazardous wastes generated during the emergency will be managed and disposed of properly.

- All emergency equipment will be replaced or restored to full working order.

- The cause of the emergency will be investigated by the Emergency Coordinator. Necessary steps will be taken to ensure that the incident cannot recur.

5. Emergency Equipment

* Each work unit is supplied with a chemical fire extinguisher and a shower/eye fountain for spills.

* Each work station is supplied with bags of absorbent.

* There are two fire hydrants that supply the facility.

* The hazardous waste storage area and the bulk chemical storage area are supplied with two spill kits, squeegees, additional absorbent materials and shovels.

* The entire facility is equipped with an alarm system with pulls at each work station. Alarms can be heard at all areas in and around the facility.

6. Coordination Agreements

All of the agencies listed below have received a copy of the contingency plan. The fire department and Hospital have copies of MSDS for the facility.
The Hospital has received special information on the hazards of cyanide, metals and the corrosives used at this facility.
The fire department makes yearly site inspections.

Bacon Fire Department and Ambulance Service (911)
(123)-456-9911
So sorry Hospital (123)-777-7777

Bacon Police Department (911)
(123)777-2222

7. Evacuation Plan

Attached map showing primary and secondary routes and congregation points.

Alarm will sound continuously to alert evacuation.

Waste Determination (40 CFR 262.11)

You are **solely** responsible for the accurate characterization of their hazardous waste and its proper disposal. Included in this manual are Decision Diagrams that can guide you in making a correct waste determination.

A generator can choose to call any material a hazardous waste, but then that material **must** be managed as a hazardous waste from that point through disposal.

There are two methods for determining if a waste, is or is not, a hazardous waste: 1) the material can be tested; **or** 2) knowledge of the process generating the waste and its characteristics can be used. Whichever method is used, documentation must be kept on file for at least three years. This documentation may include:

- Testing lab, method used, and analytical results.
- MSD Sheets.
- A description of the generation process and materials used.

Always remember that a listed hazardous waste is always a hazardous waste and is fully regulated unless it has been formally delisted by EPA for your specific.

The most common errors made by generators in making a waste determination are:

- Assuming materials recycled are not hazardous wastes (examples: nickel-cadmium batteries, mercury from broken thermometers).

- ✤ Assuming that a waste is hazardous when it is not. Example: determining a basic material such as Sodium Hydroxide, with a pH less than 12.5 is hazardous.
- ✤ Contamination of a non-hazardous waste with a listed waste but disposed as a non-hazardous waste. Example: solvent contaminated disposable wipers "shop towels".
- ✤ Relying on non-expert advice, call you Waste Management Specialist for help.
- ✤ Disposal of containers that contained acutely hazardous wastes which have not been triple rinsed, as non-hazardous waste.
- ✤ Disposal of containers that are **not** empty as non-hazardous.

Biennial Report (40 CFR 262.41)

A copy of biannual reports must be kept on-site for at least three years. The inspector will check to see if the reports are on-site and may also check to determine if it has been filled out accurately and it reflects the facility manifests, generation, and storage records. The biannual report will also be used when the Inspector is checking your facility's waste minimization efforts. A copy of past reports must be kept on-site for at least three years.

Waste Minimization (40 CFR 262.20, 262.41(a)(6-8), and GS 130A-294(k))

During an inspection, the Waste Management Specialist will ask to see a copy of the facility's waste minimization plan. It will be considered a violation for failure to

comply with the certification on the manifest if there is not a written plan; the owner/operator cannot describe a waste minimization program; or cannot demonstrate evidence of a program. The inspection will include a visual check of the waste minimization "program in place." Any contradictions between plans, reports and other waste minimization activity on site will be noted in the inspection report as potential violations.

FACILITY WALK-THROUGH

If the inspector has not been to your business before, they will want to walk through your entire process to become familiar with it. If they have been there before, they will want to **at least**, see areas where hazardous wastes are being generated, stored, and accumulated.

Generation Areas -

All areas where hazardous wastes are being generated, areas where hazardous wastes **may** be generated, and areas where they are being accumulated will be inspected. Generation points are evaluated to determine that hazardous wastes are being handled correctly, from the point of generation, according to 40 CFR 265.31. Often the generation points are the same areas as the satellite accumulation sites which the inspector will also evaluate.

Satellite Accumulation (40 CFR 262.34)

The purpose of these regulations is to give generators a break on the 90-day accumulation time so partially full drums would not have to be shipped off-site. It is meant for waste streams generated either very slowly or at very small quantities.

To accumulate waste, without a permit, for greater than 90 days, **all** of the following must be met:

- "**Must be in containers**": Hazardous wastes can be accumulated in any type of container as long as it meets the requirements of the container regulations which are described in the "Storage" section following this.

- **Less than 55 gallons**: You may accumulate a **total** of 55 gallons of hazardous waste at an accumulation point, not 55 gallons per each waste stream. total waste

If you accumulate more than 55 gallons at a satellite generation point, you have three days to comply with all of the < 90 day accumulation regulations including dating all of the containers. This area then becomes a storage area and must be indicated on your contingency plan and inspected weekly.

- "**At or near the point of generation and under the control of the operator**": To meet the definition of less than 55 gallons, many generators attempt to separate the containers of waste. The requirement of "at or near the

point of generation" and "under the control of the operator" must be met. "At or near" is deliberately vague to allow for a variety of manufacturing processes. If you are unclear of what would be in compliance at your facility, talk to your inspector at the time of the inspection or call your Waste Management Specialist. You cannot have drums placed at random in the facility, in areas of high hazard, or out of plain view. Usually, designated satellite accumulation areas are established by agreement between the inspector and the facility.

"**Under the control of operator**" means the operator of the process generating the waste can see the containers, respond in an emergency, and in essence, routinely inspect them.

- **Labeled**: Containers at satellite accumulation areas must be labeled with the words "Hazardous Waste" or other markings to identify the waste in the container. The words "Hazardous Waste" must be on the container when placed into storage.

- **Closed**: The containers must be closed except when adding or removing wastes. This means all bungs closed and lids secured to ensure that if the container was tipped over, the waste would not spill out.

Containers meeting **all** five of these requirements do not have to be dated until the container is full or as soon as more than 55 gallons is accumulated (any time within the three-day "grace" period). When the container is full, the container must be

moved to the storage area. The inspector will be checking the condition of the containers, the maintenance of the satellite accumulation area, and looking for releases or potential releases of hazardous wastes.

Common violations and problems found at satellite accumulation areas are:

- Not keeping the containers closed.
- Not labeling the containers with the words "Hazardous Waste" or other identifying words.
- Accumulating more than 55 gallons.
- Having containers that are in poor condition or with evidence of releases.
- Placing the containers in high hazard areas or not "under the control of the operator."

Storage Areas - (40 CFR 265.170 - 177)

In this manual we are discussing areas where hazardous wastes are stored for less than 90 days only, "generator storage," not facilities with a permit to store wastes (TSD facilities). The generator storage regulations are deliberately vague to allow for individual facility variations. Listed first in this section are the **requirements** for storing waste, followed by a few of the Section's **recommendations**.

Requirements for less than 90-day storage areas:

- ✤ All containers must be **dated** with the date the first drop of hazardous waste was placed in that container (or the date the satellite drum was filled) AND these dates must not exceed 90 days. If you store waste for more than ninety days, you are operating as a non-permitted TSD facility.

- ✤ All containers must be **labeled** with the words "Hazardous Waste" and the labels must be visible for inspection. The words "Hazardous Waste" must be present even if you have used other words when the container was in a satellite accumulation area.

- ✤ All containers must be **closed**. (If your waste is volatile, the Subpart CC regulations require that all containers are DOT approved for the waste they contain and are closed with bungs, lids, or other closures to be completely tightened. See Appendix I for clarification).

- ✤ There must be **aisle space** adequate to get spill control, fire, and other emergency equipment to each container of waste, unless it is not needed. If you are claiming that you do not need aisle space you must be able to prove this. There must be enough room to safely inspect all of the containers and see all of the labels.

- ✤ Weekly **inspections** must be conducted and the inspection log maintained on-site.

- From the contingency plan regulations, you must have the required **spill and fire control equipment** and a device available for summoning **outside** emergency help at your storage area.

- There are no specific regulations for how high or in what manner you store wastes in containers except that you must operate your facility in a manner to reduce the threat of a release of hazardous waste (40 CFR 265.31). This includes mismanagement practices such nearby smoking, storage located near heavy traffic, unstable stacking of containers, etc.

- The containers must be in **good condition**, not leaking, not rusting severely, or dented severely.

- If the waste is ignitable or reactive, "No Smoking" signs must be conspicuously posted and the waste must be stored at least 50 feet from your property line.

To ensure that your wastes are stored safely, the Hazardous Waste Section has made some **recommendations**. These include:

- Storing containers on an impervious pad./dyke/cover
- Posting signs indicating that hazardous wastes are stored in that area.
- Having the area fenced and locked.
- Restricting access to only designated people.
- Diking and covering the storage area.

Keep in mind that other regulations may influence how you are allowed to store your wastes, such as local building and fire codes.

Common storage violations found during inspections are:

- Dates older than (exceeding) 90 days.
- Inadequate or no aisle space.
- The words "Hazardous Waste" not present.
- Start accumulation dates not present.
- Labels and dates not visible for inspection.
- Containers open.
- Containers in poor condition.
- Containers with evidence of releases.

Preparedness and Prevention (40 CFR 265.30-37)

The inspector will check to see if you have the required procedures and equipment necessary to protect employees and the public if an emergency should occur. These requirements include:

- Ensuring that your business is operated and maintained in a manner to prevent releases of hazardous wastes or their constituents.

- Adequate alarms or procedures must be available to alert facility personnel to evacuate.

- Adequate communications to summon **outside** emergency assistance must be present.

- Emergency response equipment adequate for your type of waste and the type of emergencies expected must be present.

- The facility must have adequate water volume for fire suppression.

- You must have adequate aisle space between containers of waste to allow access to the containers.

- Employees must have immediate access to an alarm or a communication device when mixing or pouring hazardous waste.

- All emergency equipment must be tested and maintained to ensure that it is functioning in the event of an emergency.

- Arrangements must be made with local emergency responders (police, sheriff, fire, and other emergency response agencies) and local hospitals. These arrangements must include information on the type of wastes you generate, type of emergencies expected, layouts of the facility, and evacuation routes. These coordination agreements must be documented and the documentation kept on-site. To ensure that you have adequate

documentation on-site, we suggest you send all correspondence by certified mail, return-receipt.

When any of the items listed above are not utilized, a detailed explanation must be given why it is not needed and a description of an alternate system included (i.e., using the "Buddy system").

Raw product storage areas and general facility condition (40 CFR 265.31)

Areas where you store raw product chemicals will be evaluated by the inspector to determine if any releases of these materials have occurred. Often these materials can be classified as hazardous wastes when released and must be handled appropriately. The condition of work areas where chemicals are used and areas outside the facility will also be checked for the same reason.

Other RCRA Units

If you have any other hazardous waste units at your facility, we will inspect them for the applicable regulations while we are on-site. The regulations covering tanks, drip pads and containment buildings, and Subpart CC are discussed in the Appendix to this manual.

Other Regulations

The inspector is obligated to report obvious or suspected violations of other regulations that we notice while we are in your facility such as the Clean Air or OSHA regulations. We do not enforce these regulations, but we do report them to the proper agency for investigation.

Exit Interview

When the inspector finishes the inspection, they will review their findings with you. The inspector will always let you know at the end of the inspection of any violations or potential violations that they need to seek guidance on.

ENFORCEMENT ACTIONS
FOR HAZARDOUS WASTE VIOLATIONS

Technical Assistance Recommendations

An Inspector may make recommendations on an inspection report to enhance your business's hazardous waste management practices. These are not violations of the rules. The recommendations may include ideas on improving waste minimization practices, emergency response, or record keeping practices. During the next inspection, the Waste Management Specialist will see if the recommendations have been carried out and how effective they were

Notice of Violation (NOV)

Notices of Violation are issued to businesses that are in violation of the regulations. There are no penalties associated with the Notice. There are three types of NOV's issued:

- **Ticket NOV's** are usually issued on-site at the close of the inspection if there are six or fewer violations. A compliance schedule is indicated, typically for thirty days after the inspection at the discretion of the inspector.

- **Standard NOV's** are developed by the Waste Management Specialist and issued by the Hazardous Waste Section Chief for facilities with more than six violations, repeat violations, or those that have posed a significant,

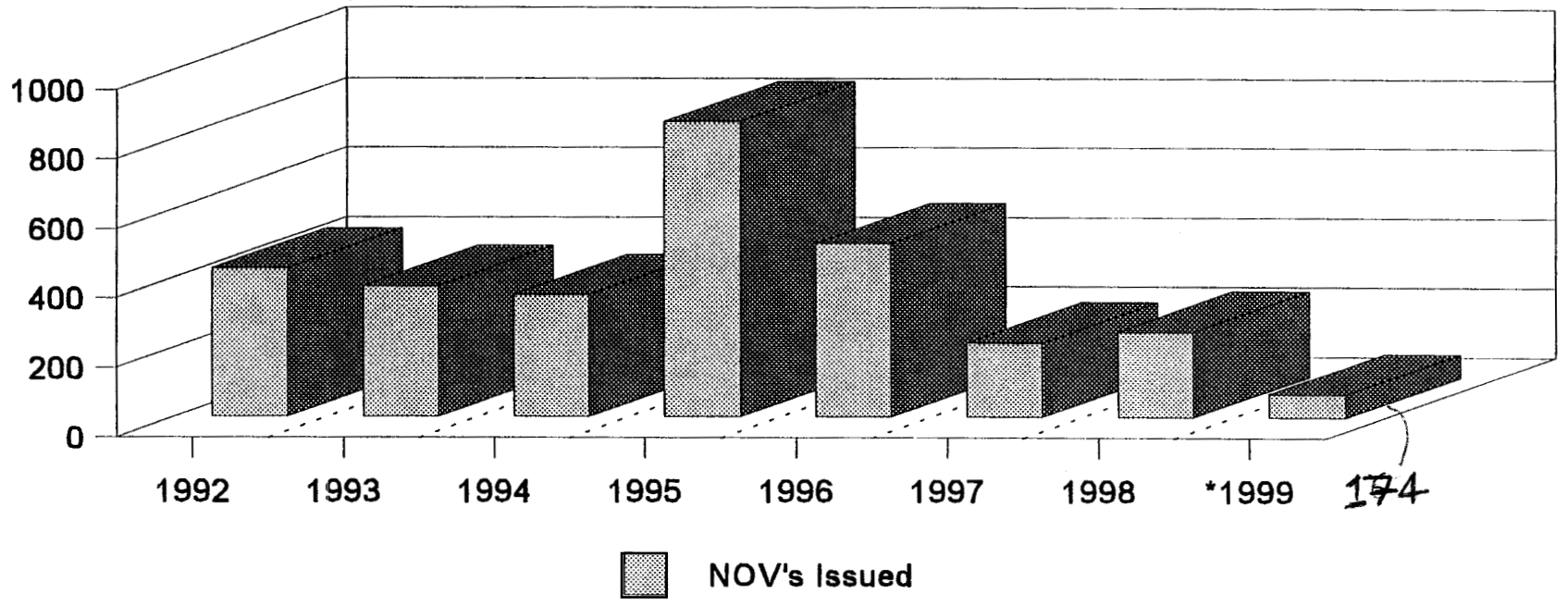
potential threat to human health and the environment. Again, a compliance schedule is indicated, usually for thirty days after the NOV is issued from Raleigh.

- **Imminent NOV's** are developed by the Waste Management Specialist and issued by the Section Chief for violations that pose potential immediate health or environmental threats. They are used in cases involving management of unknowns, spills that have not been remediated, or other situations that can immediately threaten human health or the environment. The compliance schedule will specify steps that must be taken to assess and remediate any environmental contamination.

Follow-up inspections are scheduled for shortly after the specified compliance date. If a facility anticipates that it cannot meet any of the deadlines, it should submit a written extension request to the Hazardous Waste Section Chief as soon as possible. Extensions can be granted for up to 30 days, no longer. Requests **after** the compliance date will be denied. Facilities that are not in compliance at the re-inspection, and have not asked for an extension, can expect further enforcement action.

Hazardous Waste Notices of Violation

* Ocober 1, 1998 to January 31, 1999



Compliance Orders with Administrative Penalty

- **Short Form Orders** are issued to facilities that have not complied with a NOV or have not violated the Rules in a way that creates an imminent **potential** threat to human health or the environment. A maximum penalty of $5,000.00 per violation can be assessed. Examples include violations for record keeping and minor errors on a manifest or land ban forms.

- **Standard Orders** are issued to facilities that have significant violations, have not complied with a NOV, have repeat violations, and/or are cited for a violation that can create an **immediate** threat to human health or the environment. A maximum penalty of $27,500 per day per violation can be assessed. Examples include violations for not having proper waste determinations or treating or disposing of hazardous waste without a permit.

Penalties are assessed according to the civil penalty procedures in 15A NCAC 13A .0700, and are based on the nature of the violation, cost of rectifying any damage, and the violator's previous compliance record. The Waste Management Specialist will document the type of violation and waste involved; the duration of the violation; whether it was due to negligence, recklessness, intentional act, or just forgotten; the potential effect on human health and the environment; and what response was taken to remedy the violation.

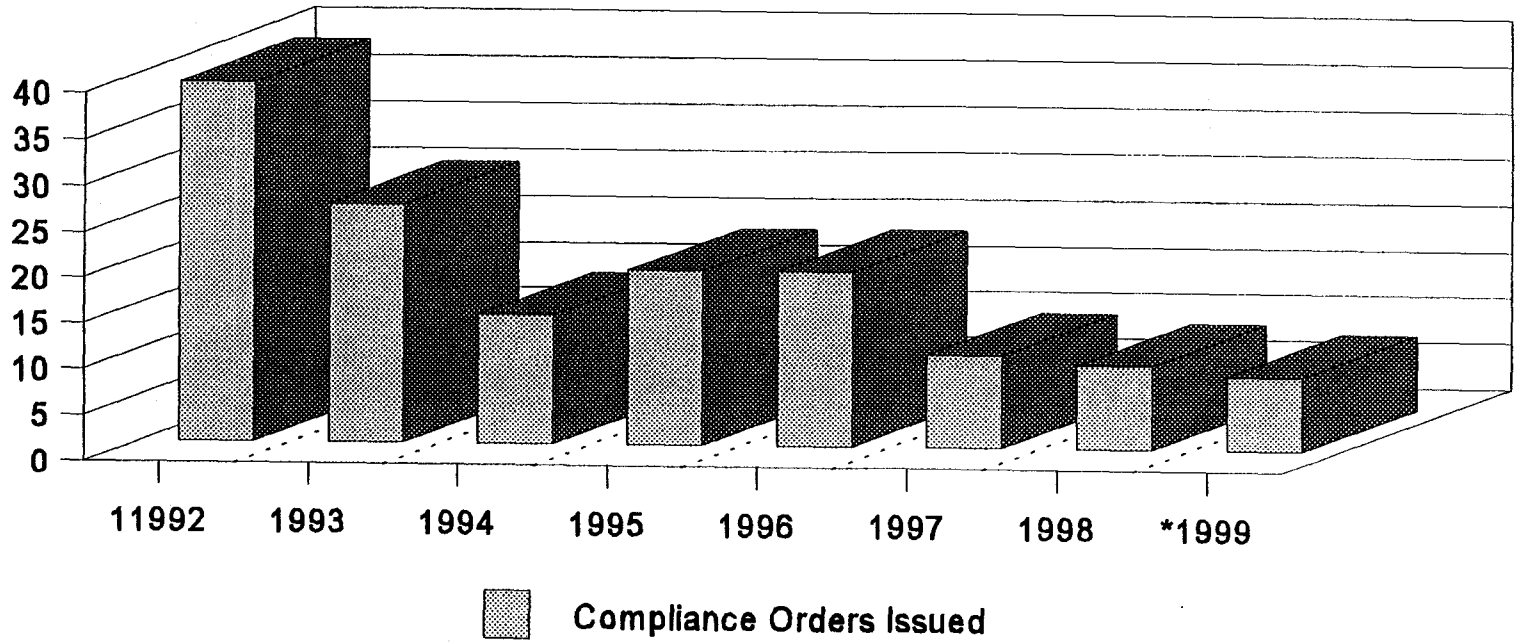
A facility can appeal a Compliance Order by filing an appeal with the Office of Administrative Hearing (OAH) within thirty days of receipt of an Order. The

Hazardous Waste Section will discuss the Order with the facility and try to resolve any issue relating to the violations or the penalty. If the differences cannot be resolved, The Hazardous Waste Section is represented at the hearing by the Attorney General staff.

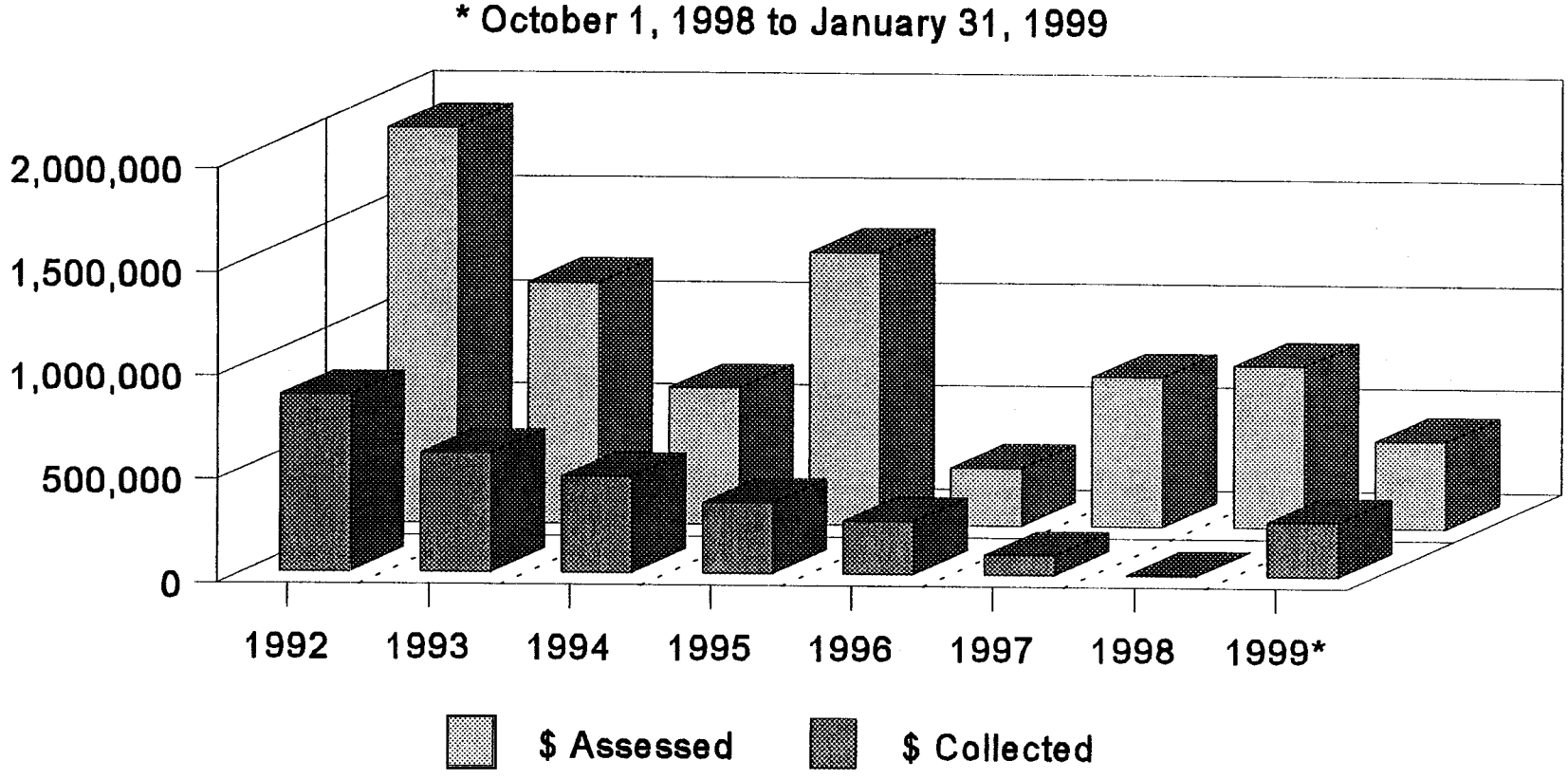
The Department issues monthly press releases on all penalties assessed. This press release identifies the facility, summarizes the violations found, and the total penalty assessed. This information is available for the media and citizens to review.

Hazardous Waste Compliance Orders

*1999 October 1, 1998 to January 31, 1999



Hazardous Waste Penalties



Other Enforcement Actions

- A **Consent Order** is entered by both the Division and a facility based on a resolution to an Order, or can result from a voluntary action of a facility identifying a problem and proposing a remedy to the situation. Typically a stipulated penalty is included.

- A **Civil Injunction** may be obtained by the Hazardous Waste Section to immediately address a violation of the Rules. This action may be used if a facility fails to respond to earlier enforcement actions or if human health or the environment is immediately threatened.

- **Criminal investigations** are conducted on those facilities that knowingly and willingly violate the Rules. These investigations may be conducted in cooperation with the SBI, FBI, or EPA criminal investigation teams. Other environmental agencies such as air and/or water quality may also be involved as multimedia cases.

Settlement Tools

- **Supplemental Environmental Projects** (SEPS)- Facilities may offer to conduct projects or activities that are beyond compliance with the regulations to reduce the penalty they have been assessed. Projects can be a win/win for both the business and the Department: the environment can benefit from a company going beyond just complying with the regulations, and the facility

B. Currently, some members of the regulated community may perceive that internal environmental audit reports and deficiencies identified in those reports may be used against them by regulatory agencies and third parties. As a result, some audit findings and recommendations may not be comprehensive, candidly reported, or performed at all.

C. The Department believes that the public interest and environmental protection would be best served by providing meaningful incentives to the regulated community to promptly identify and correct deficiencies in environmental compliance and protection. This policy aims to maximize incentives for regulated persons or entities who make good faith efforts to comply with environmental regulations to use comprehensive and candid environmental audits; to disclose the results of those audits as fully as possible; and to remedy deficiencies discovered in such audits as promptly as is feasible and in a manner that protects human health and the environment.

Policy

A. Conditions for penalty waiver: Each division within the Department will not seek administrative or civil penalties, beyond the economic benefit of any noncompliance, or initiate criminal investigations, for deficiencies identified in audits or by compliance systems, when the division finds in its sole discretion that all of the following conditions are present:

1. The deficiency was not due to a lack of good faith efforts to understand or comply with

applicable environmental, health, or safety laws, or a lack or good faith efforts to correct past deficiencies.

2. The deficiency was not done knowingly and willingly.

3. The deficiency did not cause a significant harm to the environment or risk to public health.

4. The regulated person or entity voluntarily and promptly notifies the Department of the deficiency before the Department learns of it and completely discloses the deficiency to the Department in writing. (A disclosure is not considered to be "voluntary" if (i) that disclosure is required by law, regulation or permit and if (ii) self-monitoring for such deficiency is required of a facility or part of a facility).

5. The regulated person or entity, upon discovery of the deficiency, takes immediate and effective action under appropriate technical supervision to cease or remediate any continuing violations, avoid repeated violations, and remediated the deficiency or where appropriate, agrees in writing with the Department to take those steps needed to address the deficiency in a manner that is acceptable to the Department.

B. Conditions for penalty reduction: In those cases where any of the above conditions have not been met, the Department may consider the nature and extent of any internal audit or compliance system in deciding the appropriate enforcement response

can benefit with pollution prevention activities that reduce future emissions, disposal costs, etc. The main consideration for approval of a project is its benefit to the environment and human health.

- **Self-confessor Policy** - The Department has established an enforcement penalty policy for self-reported violations. If a company meets the five conditions set forth in the policy (attached), the Department will not seek administrative or civil penalties beyond the economic benefit the company received by non-compliance. If not all of the conditions have been met, the Department may consider the nature and extent of any audit or compliance system in deciding the appropriate enforcement response, and may elect to mitigate civil penalties if one or more of the conditions have been met.

Policy Self-Reported Violations

The following is a copy of the policy as issued by the Department.

Background Statement

The Department of Environment, Health and Natural resources has issued a policy statement, effective September 1, 1995 with the intent of enhancing environmental self-regulation and at the recommendation of the Pollution Advisory Committee. This statement is not intended nor should it be interpreted to be a rule as defined in the Administrative Procedures Act. It is a non-binding interpretive statement within the delegated enforcement authority of the Department that also sets forth criteria and guidelines to be used by the Department staff in settlement of enforcement cases. It does not confer any legal rights. This policy does not apply to resource damage assessments, costs associated with clean up efforts, or costs incurred in response to an environmental emergency. The Department intends to evaluate results of its use over the year following adoption.

I. Purpose

A. Environmental protection is enhanced if deficiencies are identified and corrected as soon as possible. The regulated community is often in the best position to rapidly identify deficiencies, promptly correct them, and with suitable advice and approval, to develop and implement a corrective action plan to ensure that the "root cause" has been addressed and that public health and the environment are protected.

and may elect to mitigate any civil penalties based on a showing that one or more conditions have been met.

C. Recovery of economic benefit: In all cases, the Department may seek to recover any economic benefit afforded to the regulated person or entity from the deficiency in the same manner as if the Department undertook an enforcement action.

D. Burden of persuasion/ documentation: In all cases, the regulated person or entity seeking penalty waiver or reduction must provide sufficient documentation to the Department to prove eligibility for the application of this policy, and must bear the burden of persuasion that waiver or reduction is appropriate and that there has been no economic benefit from the deficiency. The Department will not request copies of audit reports themselves in connection with administration of this policy. However, a regulated person or entity who cannot otherwise demonstrate the nature and extent of its audit practices may wish to produce audit reports for that purpose.

APPENDIX A
LIST OF ACRONYMS

BIF - Boiler and Industrial Furnace

CAA - Clean Air Act

CDI - Case Development Inspection

CEI - Compliance Evaluation Inspection

CESQG - Conditionally Exempt Small Quantity Generator

CFC - Chlorofluorocarbon

CFR - Code of Federal Regulations

CME - Compliance Monitoring Inspection

CO - Compliance Order

CWA - Clean Water Act

DENR - Department of Environment and Natural Resources

D list (D waste) - A waste that exhibits a characteristic of hazardous waste.

DOT - Department of Transportation

DPPEA - Divisions of Pollution Prevention

EPA - Environmental Protection Agency

FBI - Federal Bureau of Investigation

F list (F waste) - Listed hazardous wastes from non-specific sources

HWS - Hazardous Waste Section

HSWA - Hazardous and Solid Waste Amendments

ID # - Identification Number

K list (K waste) - Listed hazardous wastes from specific sources

LCM - Lights Containing Mercury

LQG - Large Quantity Generator

LQHUW - Large Quantity Handler of Universal Waste

MSD(S) - Material Safety Data Sheet

NOV - Notice of Violation

OAH - Office of Administrative Hearings

OSHA - Occupational Safety and Health Administration

P list (P waste) - Listed wastes that are off- specification materials and are acutely hazardous wastes.

POTW - Publicly Owned Treatment Works

RCRA - Resource Conservation and Recovery Act

SBI - State Bureau of Investigation

SEP - Supplemental Environmental Project

SQG - Small Quantity Generator

SQHUW - Small Quantity Handler of Universal Waste

SWMD - Solid Waste Management Division

TC - Toxicity Characteristic

TCLP - Toxicity Characteristic Leaching Procedure

TSD(F) - Treatment, Storage and Disposal (Facility)

U list (U waste) - Listed wastes that are off-specification materials.

VOC - Volatile Organic Compound

WMP - Waste Minimization Plan

APPENDIX B

USEFUL AGENCY NAMES AND NUMBERS

Air Hot Line
1-800-296-1996

Air Permits
Air Quality
Division of Environmental Management (DENR)
919-715-3340

Asbestos Program
Occupational Health Section (DENR)
919-733-0820

Drinking Water
Environmental Health
919-733-2321

Drinking Water (Safe)
EPA Hotline
1-800-426-4791

Emergencies 24 hour
1-800-858-0368

Energy Division Hotline (7:30 am-12:00 pm)
NC Commerce Dept
1-800-662-7131

Environmental Education

Office of Environmental Education
919-733-0711

NC Cooperative Extension Service

Some Available Publications:

* Household Hazardous Waste
* Septage
* Used Oil Videos
* Water Quality & Waste Management

919-515-2770 (NCSU) or County Agent

Environmental Profiles for Property
ERIIScan ($75 each)
1-800-989-0402

Federal Registers (copies)
1-800-424-9346

Fluorescent Light Disposal
Hotline: 202-775-6650
1-888-782-7937

Freon
Air Quality
919-733-1481

Groundwater
(DENR-DWQ)
919-733-3221

Hazardous Waste
Hazardous Waste Section
(DENR-DWM)
919-733-2178

Hazardous Waste Information or Documents
RCRA Hotline
1-800-424-9346

Household Hazardous Waste
Solid Waste Section
(DENR-DWM)
919-733-0692

Indoor Air Pollution
IAQ INFO Clearinghouse
1-800-438-4318

Lead Abatement

Environmental Health
919-715-3293

Certification Program
919-733-0820

LEAD Information Center Hotline
1-800-LEAD-FYI (national)
1-800-532-3394
1-800-424-LEAD

Medical Waste
Solid Waste Section(DENR-DWM)
919-733-0692
OSHA Assistance
919-662-4659

PCP's

TSCA, EPA Region IV
404-562-8980/8977

TSCA Hotline
1-202-554-1404

Pesticides
NC Department of Agriculture
Pesticide Disposal Specialist
919-715-9023

Pesticide Telecommunications Network
1-800-858-7378

Public Water Supply
Environmental Health
919-715-4700

Public Right to Know/Employee Right to Know
OSHA, Dept. Of Labor
919-662-4623

Radioactive Materials
Radiation Safety Section
(DENR)
919-571-4141

Run-off, Water Quality
(DENR-DWQ)
919-733-5083

Safety Hotline
1-800-662-7952

SARA Title III
Emergency Planning & Community Right to Know
Release Reporting
Emergency Management
1-800-451-1403 (24 hours)

Septic Tanks
Environmental Health
919-733-2895

Sewer Discharge or Pre-treatment
your local treatment works or
Water Quality (DENR- DWQ)
919-733-5083

Small Business Ombudsman
1-800-368-5888

Solid Waste Disposal and Landfills
Solid Waste Section (DENR-DWM)
919-733-0692

Storm water
Water Quality Section
919-733-5083

Superfund
Federal Superfund and Inactive Sites
919-733-2801

Toxicology
Epidemiology Section (DENR)
919-733-3410

Transportation of Hazardous Materials

Division of Motor Vehicles
919-733-4077

US-DOT
919-856-4360

Placarding
919-856-4378

Underground Storage Tanks
UST Section(DENR-DWM)
919-733-4996

Waste Exchange
Southeast Waste Exchange
UNC-Charlotte
704-574-4289

Waste Minimization
Pollution Prevention and Env. Ed (DENR)
919-715-6500

Wetlands, EPA hotline
1-800-832-7828

Containment and Detection of Releases (40 CFR 265.193)

In order to prevent releases of hazardous wastes to the environment, secondary containment must be provided for all new tank systems prior to their being put into service. Existing tank systems (in use prior to July 14, 1986) have a delayed requirement for the installation of secondary containment outlined in 40 CFR 265.193.

The secondary containment must be capable of collecting and detecting releases and accumulated liquids, and ensuring that releases are prevented from entering the environment. They must include one (or more) of the following devices: a liner, a vault, or a double-walled tank and be provided with leak detection equipment. Detailed specifications for each of these secondary containment devices are outlined in 40 CFR 265.193(e). All ancillary equipment must also be supplied with secondary containment and leak detection devices with the exception of certain equipment which is inspected on a daily basis. These exceptions are found in 40 CFR 265.193(f).

General Operating Conditions (40 CFR 265.194)

Controls and practices must be employed to prevent spills and overflows from the tank and the secondary containment. These include, at a minimum: spill prevention controls, overfill prevention controls, and the maintenance of sufficient freeboard on uncovered tanks to prevent releases.

APPENDIX C
TANK REGULATIONS
(40 CFR 265.190 - 201, Subpart J)

A tank is defined as "a **stationary** device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide support." (40 CFR 260.10(98)). A tank system is "a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system." If your facility uses a tank, or tank system, to accumulate or store hazardous wastes you must comply with the requirements as outlined below unless the waste in the tank contains no free-liquids (40 CFR 265.190).

Assessment of Integrity (40 CFR 265.191)

You must assess the tank to determine that it is not leaking or that it is fit for use. A written assessment by an independent, qualified, registered engineer must be obtained and kept on file. The assessment must determine that the tank system is adequately designed, has sufficient structural strength and compatibility with the wastes to be stored, ensure that it will not collapse, rupture, or fail. 40 CFR 265.191 and 192 (for new systems) outline specific items that must be included in this assessment.

post-closure requirements of a landfill outlined in 40 CFR 265.310 and Subparts G and H.

Special Requirements for ignitable, reactive and incompatible wastes

Reactive or ignitable wastes cannot be placed into a tank system unless the waste is treated, rendered, or mixed so that the resulting material no longer meets the definition of ignitable or reactive, or the waste is protected from any condition that may cause it to ignite or react. The provisions outlined in 40 CFR 265.17(b) must be met.

Generator Requirements

The words "Hazardous Waste" must be placed on each tank holding hazardous waste and they must be clearly visible (40 CFR 262.34(a)(3)). The tank must not hold the waste for more than 90 days or the facility becomes a storage facility subject to the requirements in 40 CFR 264 and 265 and permit requirements in 40 CFR 270 (40 CFR 262.34(b)).

Inspections (40 CFR 265.195)

The following must be inspected at least once each **operating** day:

- Overfill and Spill control equipment;
- Data gathered from monitoring and leak-detection equipment; and
- The construction materials and the area immediately around the tank looking for evidence or signs of releases of hazardous waste.

Response to Leaks or Spills (40 CFR 265.196)

A tank or secondary containment that has had a release or spill must be removed from service **immediately** and all hazardous wastes removed from the system and prevented from entering the system. The spill or release must be cleaned-up and the tank system either repaired or closed according to 40 CFR 265.197. A report must be filed with the Hazardous Waste Section if there was a release to the environment. Section 265.196 specifies the content and time-frame for this notification and provisions for returning the tank system to operation.

Closure (40 CFR 265.197)

When a tank system is closed, all waste residues, contaminated containment components, soils, and structures must be collected and managed as hazardous wastes. If not all of the contaminated soils can be removed or decontaminated, the tank must be closed as a landfill and a permit obtained meeting all of the closure and

APPENDIX D

CONTAINMENT BUILDINGS

(40 CFR 265.1100 - 1102, Subpart DD)

If hazardous wastes at a generator's facility are not stored in containers, tanks, or drip pads, they must be stored or accumulated in containment buildings if the facility does not have a hazardous waste permit.

Containment buildings must be specifically engineered and designed to keep wastes from entering the environment while being accumulated. The design specifications for these buildings are outlined in 40 CFR 265.1101. Prior to operation the building must be certified that it meets those specifications by an independent, qualified registered engineer and this certification must be maintained at the facility.

These units must be operated safely including not placing any waste into the building that would cause it to fail in any way, taking adequate measures to not track waste out of the building, and controlling fugitive emissions from the building. The building and monitoring equipment must be inspected at least once every seven days and the record of the inspections maintained in a log at the facility. If the containment building fails in any way causing wastes to be released, the impaired portion must be removed from service and promptly repaired. A verbal notice to the Hazardous Waste Section must be made within seven days and a written notice within 14 days. When repairs are made, a certification must be sent to the Hazardous Waste Section by a qualified, registered professional engineer.

40 CFR 265.1102 outlines the activities that must take place upon closure of the containment building. At closure of the containment building, all contaminated residues, building components and soil must be managed as hazardous waste. If not all of the contaminated soils can be removed or decontaminated, the containment building must be closed as a landfill and a permit obtained meeting all of the closure and post-closure requirements for a landfill outlined in 40 CFR 265.310 and Subparts G and H.

APPENDIX E

DRIP PADS

(40 CFR 265.440 - 445, Subpart W)

Definition (40 CFR 260.10(25))

A drip pad is defined as an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving facilities.

The regulations in Subpart W of 40 CFR 265 apply to both new and existing drip pads. This section does not apply to the incidental or infrequent drippage in storage yards as long as the facility maintains and complies with a contingency plan that describes how the owner will clean up the drippage, document the clean up, and manage the contaminated media properly.

Assessment of Existing Drip Pad Integrity (40 CFR 265.441)

A drip pad must be evaluated to determine that it meets all of the requirements of this section. This assessment must be reviewed and certified by an independent, qualified, registered engineer. The assessment must be reviewed and re-certified annually until all upgrades and repairs necessary to achieve compliance are made. A written plan must be developed by the owner for upgrading, repairing, or modifying the drip pad to achieve compliance with this part. The schedule for making these

repairs depends on the age of the drip pad and is outlined in 40 CFR 265.441(b). All documentation, certifications and plans must be maintained at the facility.

If, after evaluating the drip pad, it is found that it is leaking, is unfit for use, or cannot be made to comply with this section, it must be closed according to 40 CFR 265.445.

Design of and Operating Requirements (40 CFR 265.443)

Owners and operators of drip pads may comply with either 40 CFR 265.442 (a) or (b). 40 CFR 265.442(a) requires all drip pads to be constructed of non-earthen materials (not including non-structurally supported asphalt) and be sloping to free-drain liquids to the associated collection system. They must have a berm or curb around the perimeter and they must be of sufficient strength to prevent failure due to physical contact, climactic conditions, or other stresses.

40 CFR 265.442(b) requires that drip pads have a **synthetic liner** that will keep the drip pad from leaking over the entire life of the pad. The liner must be chemically resistant to the waste, installed to prevent rupture due to stresses, and installed to cover the surrounding earth that may contact the waste. A leak detection and collection system must be provided to detect failure or leakage from the drip pad at the earliest possible time and allow for the recovery of the leakage.

Management practices

All drip pads must be maintained free of cracks or corrosion that would allow hazardous waste to be released. The pad and associated collection system must be designed to prevent run-off from the pad and either covered, or a run-on protection system maintained.

Drip pads must be cleaned and waste removed to allow weekly inspections of the units integrity. A log of inspections and the date and time of each cleaning must be maintained. The pad must be managed to minimize the tracking of waste from the pad by personnel or equipment and treated wood must not be removed from the pad until it has stopped dripping. 40 CFR 262.34(a)(1)(iii) requires that the waste be removed from the drip pad every 90 days and a record of each removal be maintained on site. [SQG's must remove waste every 180 days and maintain records of each removal].

If at any time the drip pad fails or causes a release, the owner must remove it from service until repairs can be made or close it if it cannot be repaired. A report to the Hazardous Waste Section must be made and a record of the release event and the steps taken to remediate the release must be kept at the facility.

Inspections (40 CFR 265.444)

In addition to the other inspection requirements, a facility is required to inspect the pad weekly and after storms to detect any deterioration, malfunctions, or improper

operation of the run-on or run-off control systems, the proper functioning of and/or the presence of material in the leak detection systems, and the condition of the pad surface. During construction, all phases of construction must be inspected and certified by an independent, qualified, registered engineer.

Closure (40 CFR 265.445)

At closure of the drip pad, all contaminated residues, components and soil must be managed as hazardous waste. If not all of the contaminated soils can be removed or decontaminated, the drip pad must be closed as a landfill and a permit obtained meeting all of the closure and post-closure requirements for a landfill as outlined in 40 CFR 265.310 and Subparts G and H.

If the owner of an existing drip pad does not comply with the liner requirements in 40 CFR 265.443(b), a closure plan and a post closure plan that include contingencies for not being able to meet clean closure standards (not all contamination can be removed) must be developed and maintained on-site.

APPENDIX F

USED OIL REGULATIONS

(40 CFR 279 and North Carolina General Statutes 130A - 209(b) and 309.15-24)

Used oil and the burning of used oil for energy recovery are now regulated under RCRA at 40 CFR 279.The effective date of these regulations was **October 1, 1993.** These regulations are **in addition** to the already existing requirements for used oil. Some of these existing regulations are: Underground Storage Tank regulations, Clean Water Act, Oil Pollution Act, Spill Prevention Control and Countermeasures, and others. Information on these regulations can be obtained from the agencies listed in Appendix B of this manual.

Definition of "Used oil" (G.S. 130A-209(b))

Any oil which has been refined from crude oil or synthetic oil and, as a result of use, storage or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and is economically recyclable.

EPA presumes that all waste oil is to be recycled if possible. (Burning for energy recovery is considered recycling). If the used oil is to be disposed of instead of recycling then a hazardous waste determination must be made prior to disposal. All handlers of used oil must meet the requirements in this part.

Prohibitions (40 CFR 279.12 and G.S. 130A - 290(b) and G.S. 130A - 309.15)
Used oil **CANNOT**:

- Be knowingly collected, transported, stored, recycled, used, or disposed of in any manner which could endanger the public health or welfare.
- Be discharged into sewers, drainage systems, septic tanks, surface waters, or groundwater.
- Be disposed of in landfills.
- Mixed with solid waste that is to be disposed of in landfills.
- Mixed with hazardous substances that cause it to be unsuitable for recycling.
- Be managed in surface impoundments or waste piles unless they have a hazardous waste permit as required under 40 CFR 264 and 270.
- Be used as a dust suppressant, road oiling, weed abatement, or other purposes that cause used oil to be released to the environment.
- Be burned for energy recovery in units other than:
  - Industrial furnaces.
  - Boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products.
  - Utility boilers used to produce electric power, steam, or heated or cooled air.
  - Used oil-fired space heaters if the burner meets the provisions of 40 CFR 279.23.

Specification of Used Oil and Mixtures (40 CFR 279.10(b)-(e) and 279.11)

All used oil is now classified as either "**on- specification**" (on-spec) or "**off-specification**" (off-spec) according to the criteria below:

Used oil is considered to be off-spec if it exceeds the following standards:

Arsenic	5ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
Flash Point	100 degrees F
Total Halogens	4,000 ppm
	* see below

* Used oil with a total halogen level of 1,000 ppm is presumed to be mixed with hazardous waste and must be managed as such unless this assumption is rebutted (testing). If you have used oil with total halogen levels between 1,000 and 4,000 ppm and you prove that the halogen content did not come from hazardous waste, you have on-spec used oil. If your used oil contains CFC's that are to be **reclaimed** or is metal working fluid/oils that contain chlorinated paraffins and are reclaimed through a tolling agreement you are not required to prove that your used oil has not been mixed with hazardous waste.

If the used oil does not exceed these levels it is **not** subject to these regulations if it is **burned for energy recovery** as long as the person complies with 40 CFR 279.72, 279.73, and 279.74(b).

Mixtures of Used Oil

A mixture of used oil and a listed hazardous waste becomes a listed hazardous waste. If the used oil is mixed with an ignitable characteristic waste and the characteristic is no longer present, the waste is regulated as used oil.

If used oil is mixed with or is part of a solid waste (as in oil filters), all free flowing used oil must be removed. If all visible signs of free flowing used oil are gone, the material is regulated as solid waste, however, it is regulated under 40 CFR 279 **prior** to the separation. If these materials are to be **burned**, all of the burner regulations apply **even** if all of the oil is removed.

(See the end of this section for information specific to oil filters).

Disposal

Placement of used oil onto the ground is considered disposal. A hazardous waste determination is required to prove that used oil is not a hazardous waste if disposed instead of recycling. [see **Prohibitions** section above]. Used oil that exhibits the characteristic of a hazardous waste must be managed as a hazardous waste if disposed. Any liquid, including used oil, is banned from being disposed in a landfill.

Standards for Used Oil Generators
(40 CFR 279.20 - 24)

Used oil generators are different from hazardous waste generators. There are no distinctions based on the amount of used oil generated. A used oil generator is any person(s), **by site**, whose act or process first causes used oil to become subject to regulation except household "do-it-yourself" generators and farmers who generate an average of 25 gallons per month or less from farm vehicles or machinery.

Storage (40 CFR 279.22)

Used oil may only be stored in containers or tanks which are in good condition and are not leaking and are clearly marked with the words "Used Oil". Fill pipes used to transfer used oil into underground storage tanks must also be labeled "Used Oil".

If a container or tank holding used oil leaks the generator must, at least, stop and contain the release, clean up and manage the contaminated material properly and repair the damage to prevent further releases.

It is recommended that secondary containment be provided for both tanks and containers that store used oil to prevent accidental releases.

On-site Burning in Space Heaters (40 CFR 279.23)

A used oil generator can burn used oil in space heaters as long as the heater burns only used oil that the facility generates or used oil received from household do-it-yourself generators; the heater is designed to have no more than 0.5 million Btu per hour; and the gasses are vented to the ambient air. This type of activity **does not** classify the used oil generator as a burner.

Off-site Shipments

A used oil generator can transport, in his own vehicle, up to 55 gallons at one time of his own used oil to an approved collection center without obtaining an ID number as a transporter. Used oil can also be transported by a transporter without an ID number if the used oil is reclaimed under a contractual tolling agreement if the reclaimed oil is returned to the generator. If either of these two exemptions are not met, the used oil generator must ensure that the used oil is transported only by transporters that have an EPA identification number.

A used oil generator does not have to notify the Hazardous Waste Section of used oil activities or get an EPA ID number unless the generator is the first to claim "On-spec" used oil whether it is burned for energy recovery on-site or off-site.

Used oil generators who burn "off-spec" used oil (not including in space heaters) must also comply with the standards for burners. If the used oil is sent **directly** to a burner then the generator must comply with the used oil marketer regulations.

Other Used Oil Regulations

There are specific regulations for used oil transporters, burners, marketers, and processors that have not been included for discussion here. They can be read in the following regulation citations. If you have questions concerning these regulations, contact your Waste Management Specialist.

Procedure for Notifying of Used Oil Activities

A used oil notification form may be obtained from either your Waste Management Specialist or the Raleigh Office (address and phone number below). The completed form is sent to:

The Hazardous Waste Section
P O Box 27687
401 Oberlin Road
Raleigh, North Carolina 27611
(919) 733-2178

After the form is received and processed, you will be issued an EPA identification number which is specific to your site.

You are required to notify the Hazardous Waste Section of your used oil activities if you are a:

- Transporter
- Processor/Re-refiner
- Burner
- Marketer or,
- The first to claim used oil to be burned is on-specification used oil.

Management of Used Oil Filters

Used oil filters must be drained of oil prior to being disposed. All free flowing oil must be removed from the filter. If the filter is hot drained for 24 hours, punctured and drained until all oil is removed, or crushed and drained, it may be sent to a sanitary landfill. This does not apply to TERNE oil filters. (Terne is an alloy of tin and lead). These filters and the contained oil, are classified as hazardous waste for lead (D008).

Used oil filters can be recycled. The Hazardous Waste Section has listings for facilities who will accept crushed and/or drained oil filters. Your Waste Management Specialist can provide this list for you.

Management of CFC's (Chlorofluorocarbons)

CFC's from refrigeration units, chillers, and air conditioners may be managed as used oil as long as they are being reclaimed. You do not have to prove that the CFC's have **not** been mixed with hazardous waste, even if the total halogen concentration is greater than 1,000 ppm, as long as the CFC's are destined to be reclaimed (279.10(b)(ii)(b)). (Used oils contaminated with CFC's from units **other** than chillers, etc. do have to prove that the material has not been mixed with hazardous waste). To allow for reclamation, the CFC's should be managed separately from other used oils or wastes.

APPENDIX G
UNIVERSAL WASTE RULE

The definition of a hazardous waste and the recycling regulations have been reviewed by several EPA task-forces over the last several years, and the agency has devised a streamlined management system for some hazardous wastes. On May 11, 1995, EPA finalized the **Universal Waste Rule** that established simplified guidelines for the accumulation and transportation of waste that otherwise would have to be managed under the full hazardous waste standards. The recycling, treatment, and/or disposal of the wastes, however, is subject to all of the hazardous waste management regulations at the **destination** facility.

The universal waste rule sets up a simplified process for the accumulation of waste, in the hope that it will encourage companies and organizations to efficiently and effectively collect waste and keep it from being sent to municipal landfills. So far, **batteries, pesticides and thermostats** that would otherwise be hazardous wastes are eligible for management under the universal waste program. These wastes: 1) come from a wide variety of generators in large numbers; 2) the risk of managing these wastes under the streamlined program is relatively low compared with other hazardous wastes; 3) collection systems would ensure close stewardship of waste and increase the likelihood that the waste will be diverted from non-hazardous waste systems (municipal landfills, storm sewers, etc.) to recycling, treatment, or disposal in compliance with hazardous waste provisions.

Different groups of universal waste managers are designated, similar to hazardous waste generator categories ("handler" is used as a broader term than "generator").

Small Quantity Handlers of Universal Waste (SQHUW)-

Generates (including contractors who take components out of service), collects, accumulates (but does not treat/dispose) less than **5,000 kg** of universal waste **at any one time** (total amount of all types of universal waste).

Large Quantity Handlers of Universal Waste (LQHUW)-

Generates, collects, accumulates (but does not treat/dispose) greater than 5,000 kg of universal waste at any one time.

Transporter-

- Anyone who transports universal waste on site (includes companies transporting their own wastes to another plant location, no quantity limits).

Destination Facility -

- Facility permitted to receive universal waste for storage, treatment, recycling or disposal.

Requirements for ALL Generators

- Waste must be managed to prevent releases by keeping containers closed; using structurally sound and compatible containers; using tanks that meet the Subpart J (40 CFR 265) requirements; or transport vehicles that are closed, structurally sound, and compatible with the materials being transported. If there is a release it must be immediately contained and managed in compliance with the hazardous waste generator regulations (40 CFR 262).

- Waste must be identified as "Universal Waste _____", "Waste _____", or "Used _____".

- Waste can be accumulated/ stored up to one year. An inventory management or labeling system must be in place to document the storage time.

- Waste must be shipped to another handler or a destination facility. DOT shipping procedures for hazardous materials must be followed.

Small Quantity Handlers

- **No notification** to the State is required unless you accumulate/store more than **5,000 kg of universal waste** (total amount of batteries, pesticides, thermostats) and immediately become a LQHUW.

- ✤ Employees must be **informed** of proper handling and emergency procedures appropriate for the universal waste managed.

- ✤ Shipping records **do not** have to be maintained.

Large Quantity Handlers

- ✤ **Must notify** the state what waste they are managing, if they already have an EPA ID number, they do not have to re-notify.

- ✤ Employees must be **thoroughly familiar** with proper handling and emergency procedures appropriate for the universal waste managed.

- ✤ Shipping records (bill of lading, invoices, etc.) must be maintained for at least three years from the date the waste left the business.

Transporters

Are prohibited from diluting, treating, or disposing of waste; Must comply with applicable DOT requirements for hazardous materials; May store waste for ten days at a transfer facility; Must immediately contain all releases of waste; If the resulting contamination is a hazardous waste, they are subject to the hazardous waste generator regulations; They can only take the waste to a handler or a destination facility.

Destination Facility

Is subject to the full set of hazardous waste TSD regulations. They can only send a waste to another handler or destination facility. If a destination facility rejects a shipment, the facility must send the waste back to the original shipper. If hazardous waste is received that is not a universal waste, the destination facility must immediately notify the EPA. If a non-hazardous/non-universal waste is received, the destination facility must manage the waste in compliance with any applicable waste regulations. Shipping records must be maintained for at least three years from the receipt of the waste.

APPENDIX H
LIGHTS CONTAINING MERCURY (LCM'S)

Pollution prevention can be achieved by increasing the efficiency of energy use. The transition from incandescent, or older fluorescent lamp technology to more energy efficient lighting using either energy efficient fluorescent or high intensity discharge lamps is an example of pollution prevention. Efficient lighting can result in a 50% savings in electricity consumption, with the associated reduction in greenhouse gas as well as reduced mercury emissions from fossil fueled power generation.

Mercury is an essential component of energy efficient lighting. In response to an electrical current, mercury generates ultraviolet rays which react with phosphor coatings to emit visible light (fluorescent); or an electric arc passes through mercury vapor directly emitting visible light (high intensity discharge). Mercury is a toxic, persistent, bioaccumulative metal, and releases to the environment must be controlled to minimize exposure to organisms. When lighting equipment is broken, directly disposed in a landfill, or incinerated, the mercury can contaminate air, surface water, or ground water. Therefore, the transition to energy efficient lighting requires consideration for balancing environmental benefits such as reduced air emissions on the energy consumption side, with the management of mercury containing waste to control releases to the environment. In North Carolina, approximately 13 million lights containing mercury (LCM's) are discarded each year. These LCM's include fluorescent lamps and high-intensity discharge lamps such as high pressure mercury, metal halide, or high pressure sodium lamps.

Generators of any solid waste can evaluate whether their waste is hazardous by testing and/or knowledge. Testing can be expensive. No direct means has been found to discern whether a particular type or brand of currently installed LCM would consistently exhibit the characteristic of hazardous waste for mercury. The Division will use the steps described below to oversee the management of LCM's in North Carolina prior to their treatment or disposal.

Several management options are available depending on the volume of LCM's generated monthly. LCM handlers should evaluate which option, or options, best fit their needs, taking into account current and future liability issues. Contractors can help with evaluating options and making decisions, but the **LCM user is ultimately responsible for the proper management of the waste**. Several issues that should be considered when evaluating the different management options are outlined below:

Using On site Reclamation

- Understand what will happen to each of the components of the LCM (mercury vapor/powder, glass, aluminum end cap).
- Consider what percentage of the mercury will be recovered, and the fate of the residual mercury not recovered.
- Consider current/future liability if a poorly operated reclamation facility should become a contaminated site.

Using On site Crushers

- ✤ Ask how often the filters need to be changed in order to prevent mercury emissions from breaking through and exposing workers.
- ✤ Ask how the filters are managed. Consider whether the mercury is reclaimed.
- ✤ Ask what happens to the crushed waste.

Direct Land filling

- ✤ Consider current/future liability if the landfill should have releases of mercury.

Incineration

- ✤ Not an acceptable means of managing LCM's.

Management Options for LCM's

Enforcement action will not be taken against persons managing LCM's in the manner described below:

Note: when looking at the volumes cited below, consider each company/plant location as a separate source).

LOCATIONS GENERATING LESS THAN 220 POUNDS OF LCM PER MONTH (APPROXIMATELY 300 - 450 LCM'S).

- **Manage the LCM's under the Universal Waste provisions** as long as the LCM's are intact and destined for recycling. Basic requirements include:

  - Store them up to one year.
  - Consolidate the intact bulbs at one location, paying attention to the 5,000 kg/year generation rate for universal waste handlers.
  - No manifest is required for shipments, but records must be kept on how many and where LCM's are sent.
  - Store in a manner to minimize or prevent breakage.
  - Send LCM's to a permitted, licensed or host state approved TSD facility.

- **Treat waste onsite**

  Crush LCM's at the generator site in a container using equipment that operates within OSHA worker safety standards. If the crushed waste is hazardous waste, the waste can be sent to a reclamation or disposal facility. The shards can be solidified with cement to make it non-hazardous and arrangements could be made with a landfill for disposal (a lined landfill is preferred):

  - Treat the crushed material inside the container by adding an equal portion of wet cement, mixing it, and allowing the contents to solidify; and

- **Obtain permission from a landfill to dispose of the solidified mixture.**

If the crushed waste is not a hazardous waste, manage it as any other non-hazardous waste.

- **Manage the LCM as Hazardous waste**

- **Take the LCM to any landfill in North Carolina UPON RECEIVING THE LANDFILL'S APPROVAL.** The landfill may have additional requirements such as testing/ lab analysis.

LOCATIONS GENERATING MORE THAN 220 POUNDS BUT LESS THAN 2200 POUNDS OF LCM PER MONTH (APPROXIMATELY 3,000 - 3,500 LCM'S).

- **Manage as Universal Waste as described above.**
- **Crush LCM's** at the generator site as described above.
- **Manage LCM's as any other hazardous waste** including all applicable standards such as:
  - manifesting;
  - record keeping and labeling/dating; containers;
  - weekly inspections of containers;

- ✦ biannual reporting (the volume of LCM's would be counted as hazardous waste in the biannual report and added to the generator status).

- ✤ **Ensure that the LCM's are non-hazardous** waste and package LCM's in a manner similar to their original packaging for shipment to a North Carolina **lined** landfill. Contact the landfill to determine if they will require laboratory analysis before they will accept them, or if they prefer other packaging.

LOCATIONS GENERATING MORE THAN 2200 POUNDS OF LCM PER MONTH (GREATER THAN APPROXIMATELY 3,000 - 4,500 LCM'S).

- ✤ All of the same options as described above except if taking the LCM's to a landfill. The LCM's **must** be tested for mercury under the TCLP test method and the laboratory data submitted to the landfill prior to receiving approval for disposal. If the results show that the LCM's have 0.2 ppm or more of mercury, the LCM's **cannot go to any landfill** and must be handled by one of the other three options.

SUMMARY TABLE

	< 220 lbs./month	>220 <2200 lbs./month	> 220 lbs./month
Manage intact LCM's destined for recycling under Universal Waste Rule	Yes	Yes	Yes
Treat LCM's on site in a container or tank	Yes	Yes	Yes
Manage LCM's under hazardous waste rules	Yes	Yes	Yes
Dispose of <u>untested</u> LCM's in a NC landfill with approval of operator	Yes	**NO**	**NO**
Dispose of <u>non-hazardous</u> LCM's in a NC landfill	Unlined: Yes Lined: Yes	Unlined: **NO** Lined: Yes	Unlined: **NO** Lined: Yes

Further Information

This policy is subject to change until EPA issues a final rule on LCM's at the federal level.

LCM manufacturers have been making significant strides in reducing how much mercury in their products as well as increasing their energy efficiency. EPA's Green Lights Program offers free workshops for those companies interested in replacing lighting systems with energy efficient ones. The Green Lights Hot-Line can be reached at (202) 775-6650. A list of LCM recyclers can be obtained by calling your Waste Management Specialist or the Office of Waste Reduction at (919) 571-4100. If you have questions about on site or on site management of LCM's please call your Waste Management Specialist or the Raleigh Hazardous Waste Office (numbers at the front of this manual).

APPENDIX I
SUBPART CC RULES
AIR EMISSIONS CONTROLS AT
WASTE MANAGEMENT FACILITIES

The purpose of these regulations is to reduce air emissions from units (containers, tanks, etc.) where hazardous wastes are being stored.

Effective Dates:

Subpart CC is a HSWA rule and is effective in all States on December 6, 1996. States must adopt the regulations by July 1, 1998. **Large Quantity Generators** must comply with these rules by December 6, 1996.

Applicability:

This rule applies to wastes that have, at the point of generation, an **average volatile organic concentration of greater than or equal to 500 ppm by weight,**

AND

- Are at TSD's or generators (SQG's exempt).
- In <90 day storage areas (satellite accumulation is exempt).
- In containers, tanks, or surface impoundments, or in Subpart X units (containers < 26.4 gallons are exempt).

Exemptions and Exclusions from CC Rules:

- ✤ Farmers disposing of waste pesticides;
- ✤ Universal waste handlers;
- ✤ Transporters holding waste at a transfer facility;
- ✤ Absorbent materials added to hazardous wastes in containers;
- ✤ RCRA empty containers;
- ✤ Units associated with RCRA, or CERCLA remediation (not voluntary cleanups);
- ✤ Mixed radioactive and hazardous wastes;
- ✤ Units used to recycle hazardous wastes into useable products (AA and BB may apply);
- ✤ CESQG and SQG's;
- ✤ Satellite accumulation points;
- ✤ Containers less than 26.4 gallons;
- ✤ Wastewater treatment and elementary neutralization units;
- ✤ Totally enclosed treatment units;
- ✤ Units used solely for emergency spill management.
- ✤ Units in closure
- ✤ Units operating with attached CAA air emission controls.
- ✤ Units that meet the LDR standards for organic wastes.
- ✤ Biological treatment units.

Waste Determination:

A determination of volatile organic concentration is made at the point of generation of the waste. This is, for LQG's, prior entering the unit (container or tank) and for TSD's, at the point where the owner/operator accepts delivery or takes possession of the waste (when the facility accepts the manifest). Generator Knowledge or Testing may be used. Documentation for the waste determination must be kept on site. If using generator knowledge, documentation is required such as: information on the constituents of the waste (ingredients) and other processes that may alter the waste.

If testing is used, the owner/operator must collect a minimum of four individual samples (no mixing) for an averaging period of up to one year. Sampling, and collection methods must be in accordance with SW-846.
Analytical methods can be EPA methods: 25D, 624, 625, 1624, 1625.

Information on these test methods is available from your Waste Management Specialist or can be found on the Internet at: http://ttnwww.RTPNC.EPA.GOV
Select: "emtic" bulletin board and choose: "rec.promul.methods".

The waste determination must be updated annually for both LQG's and TSD's. The update can be the assertion that nothing has changed in the generating process or constituents of the waste.

For TSD facilities, these procedures must be part of the written sampling plan.

Compliance Options:

Containers are regulated according to **size** and organic **content**.

- **Level 1 container**- is greater than 26.4 gallons but less than 122 gallons, or greater than 122 gallons and **not** managing waste in light material service.

- **Level 2 container**- greater than 122 gallons and managing waste in light material service.

- **Level 3 container**- greater than 26.4 gallons and it is used to stabilize waste that has an average volatile organic concentration of greater than 500 ppm.

"In light material service" means that the hazardous waste in the container meets both conditions:

- *The vapor pressure of one or more of the organic constituents in the waste is greater than 0.3 kilopascals (kPa) at 20 C.*
- *The total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 C is equal to or greater than 20% by weight.*

Level 1 Controls (three options):

- Use a container that meets DOT regulations under parts 172, 173, 178, 179 and 180, no exceptions are allowed except for lab packs specified in 49 CFR 173.12(b).

- ✤ Use a cover and control device on the container to ensure there are no visible gaps (bungs and rings tightened). Conservation vents may be used.

- ✤ Organic vapor suppression barriers on or above the hazardous waste in the container so that no waste is exposed to the atmosphere, (example: organic vapor-suppressing foam).

Other Level 1 requirements:

The container must be kept closed except when transferring waste into or out of the container. The container must be closed between batch transfers that exceed 15 minutes.

Repair requirements: attempt to repair within 24 hours, maximum five days or empty the container and remove from service.

Inspections are required when transferring waste into a container to ensure that the container is closed when transfer is complete.

Level 2 Controls (three options):

- ✤ Use a container that meets DOT regulations under parts 172, 173, 178, 179 and 180, no exceptions are allowed except for lab packs specified in 49 CFR 173.12(b).

- ✤ Use a container that operates with no detectable organic emissions as tested using Method 21 and having no emissions above 500 ppm. Monitoring is required when the container is filled.

- ✤ Use a container demonstrated to be vapor tight within the last 12 months using Method 27.

Other Level 2 requirements:

Waste must be transferred into or out of the container in a way that minimizes the exposure of the waste to the atmosphere. Examples are: submerged-fill pipe or method, using a vapor-balancing system or a vapor recovery system. All covers and closure devices secured and kept closed, except during filling and removal operations.

Repair requirements: attempt to repair within 24 hours, maximum five days, or empty the container and remove from service.

Inspections are required when transferring waste into a container to ensure that the container is closed and closure devices are in good condition when the transfer is complete.

Level 3 Controls:

There are two options available but they are not discussed in detail here as these containers are only found at TSD's.

SUMMARY TABLE FOR CONTAINERS

Level	Conditions	Controls
1	< 122 gallons, or > 122 gallons not in light service, and No waste stabilization.	Use a container that meets DOT regulations, or Use organic suppression barrier, or Use a cover and control device.
2	> 122 gallons in light service	Use container that meets DOT Regulations, or Use container that operates with no detectable organic emissions (Method 21), or Use container that is vapor-tight by Method 27.
3	> 26.4 gallons used for stabilization	Place container inside an enclosure vented directly to a control device, or Vent container opening directly to a control device. Use a Closed-vent system and control device.

Tanks

CC rules do **NOT** apply if the waste has an average volatile organic concentration less than 500 ppm by weight.

Level 1- (must meet ALL three conditions)

- Maximum organic vapor pressure of the waste is less than the cut off for the tank design capacity.
- There is no heating to temperatures greater than the temperature at which the vapor pressure is determined.
- No waste stabilization is allowed in the tank.

Level 1 controls-

Consists of a stationary fixed roof (does not fluctuate with the level of the material in the tank). It may separate from the rest of the tank but may have no visible cracks, holes, gaps or other open spaces in the seams and mountings. It must be maintained in a closed position except when necessary to access the waste. A pressure relief device is allowed. It must be inspected when it first is subject to CC rules at least once per year thereafter.

Level 2 tanks-

- Tanks that exceed the Level 1 vapor pressure.
- Hold wastes that have a maximum organic vapor concentration of > 500 ppm by weight.

Level 2 Controls- (five options)

- Fixed roof with an internal floating roof;
- External floating roof;
- Cover vented to a control device;
- Pressure tank;
- Tank inside enclosure vented to a combustion control device.

Each of these options has detailed inspection, record keeping, waste transfer, repair, and operation requirements as well as safety device requirements. These will not be discussed here but copies of the requirements are available through your Waste Management Specialist if needed.

SUMMARY TABLE FOR TANKS

Level	Conditions	Controls
1	Waste maximum organic Pressure less than cut-off for tank design capacity, and No heating to temperatures at which vapor pressure is determined, and No waste stabilization in the tank.	Tank size and vapor limits consistent with existing CAA-NSPS standards for volatile organic liquid storage, and Tank must be equipped with a fixed roof with no visible cracks, holes, gaps or other open spaces in roof seams and mountings, and Closure devices must be maintained in a closed position.
2	If the Level 1 conditions cannot be met.	Fixed roof with floating roof, or External floating roof, or Cover vented to control device, or Pressure tank, or Tank inside closure vented to combustion control device.

Surface impoundments and the regulations that are specified for **closed vent systems, incinerators, flares**, etc. will not be discussed in this course as they are only found at TSD facilities. Information about these requirements is available through your Waste Management Specialist if needed.

APPENDIX J
REGULATION CITATIONS

This is not a complete set of the regulations. The sections that are applicable to generators (large and small) are included with the exception of the land disposal restrictions.

Sections Included are: Page No.

Definitions (260.10) ..... .0102 **1 to 15**

Identification of Hazardous Wastes (261) ..... .0106 **1 to 72**

Standards Applicable to Generators of Hazardous Waste (262) ..... .0107 **1 to 26**

Personnel Training (265.16) ..... .0110 **7**

Preparedness and Prevention (265.31-37) ..... .0110 **10 to 11**

Contingency Plan (265.50-56) ..... 0110 **12 to 14**

Use and Management of Containers (265.170-178) ..... .0110 **55 to 56**

Tanks (265.190-201) ..... 0110 **57 to 67**

Containment Buildings (265.1100-1102) ..... 0110 **155 to 158**

Recyclable Materials (266) ..... 0111 **1 to 3**

- Use Constituting Disposal
- Precious Metals
- Spent Lead-Acid Batteries

Standards for the Management of Used Oil (279) ..... 0118 **1 to 30**

Management of Universal Waste (273) ..... 0119 **1 to 19**

NORTH CAROLINA HAZARDOUS WASTE MANAGEMENT RULES

and

SOLID WASTE MANAGEMENT LAW

DIVISION OF WASTE MANAGEMENT
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State of North Carolina
James B. Hunt Jr., Governor

Department of Environment and Natural Resources
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.0102 DEFINITIONS

(a) The definitions contained in G.S. 130A-290 apply to this Subchapter.

(b) 40 CFR 260.10 (Subpart B), Definitions, has been incorporated by reference, including subsequent amendments and editions except that the Definitions for "Disposal", "Landfill", "Management or hazardous waste management", "Person", "Sludge", "Storage", and "Treatment" are defined by G.S. 130A-290 and are not incorporated by reference.

{**Note**: Definitions contained in 40 CFR 270.2 are found in Rule .0113, Paragraph (a)(2) and definitions contained in 40 CFR 124.2 are found in Rule .0105 (2)}.

SUBPART B - DEFINITIONS

260.10 Definitions.

When used in parts 260 through 266, 268, and 270 through 273 of this chapter, the following terms have the meanings given below:

Aboveground tank means a device meeting the definition of "tank" in 260.10 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

Act or *RCRA* means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 6901 et seq.

Active life of a facility means the period from the initial receipt of hazardous waste at the facility until the Regional Administrator receives certification of final closure.

Active portion means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after the effective date of Part 261 of this chapter and which is not a closed portion. (See also "closed portion" and "inactive portion".)

Administrator means the Administrator of the Environmental Protection Agency, or his designee.

Ancillary equipment means any device including, but not limited to such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site.

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Authorized representative means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

Boiler means an enclosed device using controlled flame combustion and having the following characteristics:

(1) (i) The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

(ii) The unit's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section (s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of

integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and

(iii) While in operation, the unit must maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

(iv) The unit must export and utilize at least 75 percent of the recovered energy calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or

(2) The unit is one which the Regional Administrator has determined, on a case-by-case basis, to be a boiler, after considering the standards in Section 260.32.

Carbon regeneration unit means any enclosed thermal treatment device used to regenerate spent activated carbon.

Certification means a statement of professional opinion based upon knowledge and belief.

Closed portion means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)

Component means either the tank or ancillary equipment of a tank system.

Confined aquifer means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

Container means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Containment building means a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of subpart DD of parts 264 or 265 of this chapter.

Contingency plan means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

Corrective action management unit or CAMU means an area within a facility that is designated by the Regional Administrator under part 264 subpart S, for the purpose of implementing corrective action requirements under Section 264.101 and RCRA section 3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

Corrosion expert means a person who, by reason of his knowledge of the physical sciences and the principals of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

Designated facility means a hazardous waste treatment, storage, or disposal facility which (1) has received a permit (or interim status) in accordance with the requirements of Parts 270 and 124 of this chapter, (2) has received a permit (or interim status) from a State authorized in accordance with Part 271 of this chapter, or (3) is regulated under Section 261.6(c)(2) or Subpart F of Part 266 of this chapter, and (4) that has been designated on the manifest by the generator pursuant to Section 262.20. If a waste is destined to a facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility must be a facility allowed by the receiving State to accept such waste.

Destination facility means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in paragraphs (a) and (c) of Sections 273.13 and 273.33 of this chapter. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

Dike means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

Discharge or *hazardous waste discharge* means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

"Disposal" See G.S. 130A-290

Disposal facility means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

Drip pad is an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

Elementary neutralization unit means a device which:

(1) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in Section 261.22 of this chapter, or are listed in Subpart D of Part 261 of the chapter only for this reason; and,

(2) Meets the definition of tank, tank system, container, transport vehicle, or vessel in Section 260.10 of this chapter.

EPA hazardous waste number means the number assigned by EPA to each hazardous waste listed in Part 261, Subpart D, of this chapter and to each characteristic identified in Part 261, Subpart C, of this chapter.

EPA identification number means the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

EPA region means the states and territories found in any one of the following ten regions:

Region I - Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.
Region II - New York, New Jersey, Commonwealth of Puerto Rico, and the U.S. Virgin Islands.
Region III - Pennsylvania, Delaware, Maryland, West Virginia, Virginia and the District of Columbia.
Region IV - Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina, and Florida.
Region V - Minnesota, Wisconsin, Illinois, Michigan, Indiana, and Ohio.
Region VI - New Mexico, Oklahoma, Arkansas, Louisiana, and Texas.
Region VII - Nebraska, Kansas, Missouri, and Iowa.
Region VIII - Montana, Wyoming, North Dakota, South Dakota, Utah, and Colorado.
Region IX - California, Nevada, Arizona, Hawaii, Guam, American Samoa, Commonwealth of the Northern Mariana Islands.
Region X - Washington, Oregon, Idaho, and Alaska.

Equivalent method means any testing or analytical method approved by the Administrator under Sections 260.20 and 260.21.

Existing hazardous waste management (HWM) facility or *existing facility* means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

(1) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(2) (i) A continuous on-site, physical construction program has begun; or

(ii) The owner or operator has entered into contractual obligations--which cannot be cancelled or modified without substantial loss--for physical construction of the Facility to be completed within a reasonable time.

Existing portion means that land surface area of an existing waste management unit, included in the original Part A permit application, on which wastes have been placed prior to the issuance of a permit.

Existing tank system or *existing component* means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all Federal, State, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either (1) a continuous on-site physical construction or installation program has begun, or (2) the owner or operator has entered into contractual obligations – which cannot be canceled or modified without substantial loss – for physical construction of the site or installation of the tank system to be completed within a reasonable time.

Explosives or munitions emergency means a situation involving the suspected or detected presence of unexploded ordnance (UXO), damaged or deteriorated explosives or munitions, an improvised explosive device (IED), other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, eliminate the threat.

Explosives or munitions emergency response means all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions and/or transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and

munitions emergency responses can occur on either public or private lands and are not limited to responses at RCRA facilities.

Explosives or munitions emergency response specialist means an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include Department of Defense (DOD) emergency explosive ordinance disposal (EOD), technical escort unit (TEU), and DOD-certified civilian or contractor personnel; and other Federal, State, or local government, or civilian personnel similarly trained in explosives or munitions emergency responses.

Facility means: (1) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

(2) For the purpose of implementing corrective action under Section 264.101, all contiguous property under the control of the owner or operator seeking a permit under subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h).

Federal agency means any department, agency, or other instrumentality of the Federal Government, any independent agency or establishment of the Federal Government including any Government corporation, and the Government Printing Office.

Federal, State and local approvals or permits necessary to begin physical construction means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

Final closure means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under Parts 264 and 265 of this chapter are no longer conducted at the facility unless subject to the provisions in 262.34.

Food-chain crops means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

Free liquids means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

Freeboard means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

Generator means any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.

Ground water means water below the land surface in a zone of saturation.

Hazardous waste means a hazardous waste as defined in Section 261.3 of this chapter.

Hazardous waste constituent means a constituent that caused the Administrator to list the hazardous waste in Part 261, Subpart D, of this chapter, or a constituent listed in Table 1 of Section 261.24 of this chapter.

Hazardous waste management unit is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

In operation refers to a facility which is treating, storing, or disposing of hazardous waste.

Inactive portion means that portion of a facility which is not operated after the effective date of Part 261 of this chapter. (See also "active portion" and "closed portion".)

Incinerator means any enclosed device that:

(1) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or

(2) Meets the definition of infrared incinerator or plasma arc incinerator.

Incompatible waste means a hazardous waste which is unsuitable for:

(1) Placement in a particular device or facility because it may cause corrosion or decay or containment materials (e.g., container inner liners or tank walls); or

(2) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases. (See Part 265, Appendix V, of this chapter for examples.)

Individual generation site means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

Industrial furnace means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

(1) Cement kilns

(2) Lime kilns

(3) Aggregate kilns
(4) Phosphate kilns
(5) Coke ovens
(6) Blast furnaces
(7) Smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces)
(8) Titanium dioxide chloride process oxidation reactors
(9) Methane reforming furnaces
(10) Pulping liquor recovery furnaces
(11) Combustion devices used in the recovery of sulfur values from spent sulfuric acid
(12) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3%, the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of 20% as-generated.
(13) Such other devices as the Administrator may, after notice and comment, add to this list on the basis of one or more of the following factors:
  (i) The design and use of the device primarily to accomplish recovery of material products;
  (ii) The use of the device to burn or reduce raw materials to make a material product;
  (iii) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;
  (iv) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
  (v) The use of the device in common industrial practice to produce a material product; and
  (vi) Other factors, as appropriate.

Infrared incinerator means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

Inground tank means a device meeting the definition of "tank" in 260.10 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

Injection well means a well into which fluids are injected. (See also "underground injection".)

Inner liner means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

Installation inspector means a person who, by reason of his knowledge of the physical sciences and the principals of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

International shipment means the transportation of hazardous waste into or out of the jurisdiction of the United States.

"Landfill" See G.S. 130A-290

Landfill cell means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

Land treatment facility means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

Leachate means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

Leak-detection system means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls [e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks] or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

Liner means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

"Management or hazardous waste management" See G.S. 130A-290

Manifest means the shipping document EPA form 8700-22 and, if necessary, EPA form 8700-22A, originated and signed by the generator in accordance with the instructions included in the Appendix to Part 262.

Manifest document number means the U.S. EPA twelve digit identification number assigned to the generator plus a unique five digit document number assigned to the Manifest by the generator for recording and reporting purposes.

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense or the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include non-nuclear components of nuclear devices, managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act. of 1954, as amended, have been completed.

Mining overburden returned to the mine site means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

Miscellaneous unit means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR Part 146, containment building, corrective action management unit, or unit eligible for research, development, and demonstration permit under Section 270.65.

Movement means that hazardous waste is transported to a facility in an individual vehicle.

New hazardous waste management facility or *new facility* means a facility which began operation, or for which construction commenced after November 19, 1980. (See also "Existing hazardous waste management facility".)

New tank system or *new tank component* means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of 264.193(g)(2) and 265.193(g)(2), a new tank system is one for which construction commences after July 14, 1986. (See also "existing tank system".)

On ground tank means a device meeting the definition of "tank" in 260.10 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that external tank bottom cannot be visually inspected.

On-site means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

Open burning means the combustion of any material without the following characteristics:

(1) Control of combustion air to maintain adequate temperature for efficient combustion.
(2) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and
(3) Control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment".)

Operator means the person responsible for the overall operation of a facility.

Owner means the person who owns a facility or part of a facility.

Partial closure means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of Parts 264 and 265 of this chapter at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

"Person" See G.S. 130A-290

Personnel or *facility personnel* means all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of Parts 264 or 265 of this Chapter.

Pesticide means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

(1) Is a new animal drug under FFDCA section 201(w), or
(2) Is an animal drug that has been determined by regulation of the secretary of Health and Human Services not to be a new animal drug, or

(3) Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by paragraph (1) or (2) of this definition.

Pile means any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

Plasma arc incinerator means any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

Point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Publicly owned treatment works or *"POTW"* means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality" [as defined by Section 502(4) of the CWA]. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Qualified Ground-Water Scientist means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in ground-water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding ground-water monitoring and contaminant fate and transport.

Regional Administrator means the Regional Administrator for the EPA Region in which the facility is located, or his designee.

Remediation waste means all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under Section 264.101 and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.

Replacement unit means a landfill, surface impoundment, or waste pile unit (1) from which all or substantially all of the waste is removed, and (2) that is subsequently reused to treat, store, or dispose of hazardous waste. "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or EPA or State approved corrective action.

Representative sample means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

Run-off means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-on means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Saturated zone or *zone of saturation* means that part of the earth's crust in which all voids are filled with water.

"Sludge" **See G.S. 130A-290**

Sludge dryer means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

Small Quantity Generator means a generator who generates less than 1000 kg of hazardous waste in a calendar month.

Solid waste means a solid waste as defined in Section 261.2 of this Chapter.

Sorbent means a material that is used to soak up free liquids by either adsorption or absorption, or both. *Sorb* means to either adsorb or absorb, or both.

State means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

"Storage" **See G.S. 130A-290**

Sump means any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serves to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

Surface impoundment or *impoundment* means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes

containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

Tank means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

Tank System means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Thermal treatment means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning".)

Thermostat means a temperature control device that contains metallic mercury in an ampule attached to a bi-metal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).

Totally enclosed treatment facility means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

Transfer facility means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held during the normal course of transportation.

Transport vehicle means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

Transportation means the movement of hazardous waste by air, rail, highway, or water.

Transporter means a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.

Treatability Study means a study in which a hazardous waste is subjected to a treatment process to determine:

(1) Whether the waste is amenable to the treatment process,
(2) what pretreatment (if any) is required,
(3) the optimal process conditions needed to achieve the desired treatment,
(4) the efficiency of a treatment process for a specific waste or wastes, or
(5) the characteristics and volumes of residuals from a particular treatment process. Also included in this definition for the purpose of the Section 261.4(e) and (f) exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

"Treatment" **See G.S. 130A-290**

Treatment Zone means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

Underground injection means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well".)

Underground tank means a device meeting the definition of "tank" in 260.10 whose tire surface area is totally below the surface of and covered by the ground.

Unfit for use tank system means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

United States means the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements of 40 CFR part 273:

(1) Batteries as described in 40 CFR 273.2;
(2) Pesticides as described in 40 CFR 273.3; and
(3) Thermostats as described in 40 CFR 273.4.

Universal Waste Handler:

(1) Means:
  (i) A generator (as defined in this section) of universal waste; or
  (ii) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
(2) Does not mean:

(i) A person who treats (except under the provisions of 40 CFR 273.13(a) or (c), or 273.33(a) or (c)), disposes of, or recycles universal waste; or

(ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Universal Waste Transporter means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

Unsaturated zone or *zone of aeration* means the zone between the land surface and the water table.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

Used Oil means 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.

Vessel includes every description of watercraft, used or capable of being used as a means of transportation on the water.

Wastewater treatment unit means a device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act; and

(2) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in Section 261.3 of this chapter, or that generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in Section 260.10 of this chapter.

Water (bulk shipment) means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

Well means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

Well injection: (See "underground injection").

Zone of engineering control means an area under the control of the owner/operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

(c) The following additional definitions shall apply throughout this Subchapter:

(1) "Section" means the Hazardous Waste Section, in the Division of Solid Waste Management, Department of Environment, Health, and Natural Resources.

(2) The "Department" means the N.C. Department of Environment, Health, and Natural Resources (DEHNR).

(3) "Division" means the Solid Waste Management Division (SWMD).

(4) "Long Term Storage" means the containment of hazardous waste for an indefinite period of time in a facility designed to be closed with the hazardous waste in place.

(5) "Off-site Recycling Facility" means any facility that receives shipments of hazardous waste from off-site to be recycled or processed for recycling through any process conducted at the facility, but does not include any facility owned or operated by a generator of hazardous waste solely to recycle their own waste.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. September 1, 1979;
Amended Eff. June 1, 1989;
June 1, 1988; February 1, 1987; October 1, 1986;
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Transferred and Recodified from 10 NCAC 10F .0002 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 1, 1990.
Recodified from 15A NCAC 13A .0002 Eff. December 20, 1996.

LAW-ARTICLE 9; WASTE MANAGEMENT LAW
FOR ADDITIONAL DEFINITIONS THAT APPLY SEE THE SOLID WASTE MANAGEMENT LAW IN PART II OF THIS PUBLICATION (G.S. 130A-290).

.0106 IDENTIFICATION & LISTING OF HAZARDOUS WASTES - PART 261

(a) 40 CFR 261.1 through 261.9 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

261.1 Purpose and scope.

(a) This Part identifies those solid wastes which are subject to regulation as hazardous wastes under Parts 262 through 265, 268 and Parts 270, 271, and 124 of this chapter and which are subject to the notification requirements of Section 3010 of RCRA. In this Part:
  (1) Subpart A defines the terms "solid waste" and "hazardous waste", identifies those wastes which are excluded from regulation under Parts 262 through 266, 268 and 270, and establishes special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.
  (2) Subpart B sets forth the criteria used by EPA to identify characteristics of hazardous waste and to list particular hazardous wastes.
  (3) Subpart C identifies characteristics of hazardous wastes.
  (4) Subpart D lists particular hazardous wastes.

(b) (1) The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing Subtitle C of RCRA. For example, it does not apply to materials (such as nonhazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled.
  (2) This part identifies only some of the materials which are solid wastes and hazardous wastes under Sections 3007, 3013, and 7003 of RCRA. A material which is not defined as a solid waste in this part, or is not a hazardous waste identified or listed in this part, is still a solid waste and a hazardous waste for purposes of these sections if:
    (i) In the case of Sections 3007 and 3013, EPA has reason to believe that the material may be a solid waste within the meaning of Section 1004(27) of RCRA and a hazardous waste within the meaning of Section 1004(5) of RCRA; or
    (ii) In the case of Section 7003, the statutory elements are established.

(c) For the purposes of Sections 261.2 and 261.6:
  (1) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing;
  (2) "Sludge" has the same meaning used in Section 260.10 of this chapter;
  (3) A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.
  (4) A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.
  (5) A material is "used or reused" if it is either:
    (i) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or
    (ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).
  (6) "Scrap metal" is bits and pieces of metal parts (e.g.,) bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

(7) A material is "recycled" if it is used, reused, or reclaimed.

(8) A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that -- during the calendar year (commencing on January 1) -- the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. *In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under Section 261.4(c) are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation). Materials are no longer in this category once they are removed from accumulation for recycling, however.*

(9) "Excluded scrap metal" is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

(10) "Processed scrap metal" is scrap metal whjich has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal which has been baled, scredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e., sorted), and, fines, drosses and related materials which have been agglomerated. *(Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (§261.4(a)(13)).*

(11) "Home scrap metal" is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

(12) "Prompt scrap metal" is scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

261.2 Definition of solid waste.

(a) (1) A solid waste is any discarded material that is not excluded by Section 261.4(a) or that is not excluded by variance granted under Sections 260.30 and 260.31.

(2) A discarded material is any material which is:

(i) Abandoned, as explained in paragraph (b) of this section; or

(ii) Recycled, as explained in paragraph (c) of this section; or

(iii) Considered inherently waste-like, as explained in paragraph (d) of this section or;

(iv) *A military munition* identified as a solid waste in 40 CFR 266.202.

(b) Materials are solid waste if they are abandoned by being:

(1) Disposed of; or

(2) Burned or incinerated; or

(3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

(c) Materials are solid wastes if they are recycled--or accumulated, stored, or treated before recycling--as specified in paragraphs (c)(1) through (c)(4) of this section.

(1) Used in a manner constituting disposal.

(i) Materials noted with a "*" in Column 1 of Table 1 are solid wastes when they are:

(A) Applied to or placed on the land in a manner that constitutes disposal; or

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.

(2) Burning for energy recovery.

(i) Materials noted with a "*" in column 2 of Table 1 are solid wastes when they are:

(A) Burned to recover energy;

(B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste.

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are themselves fuels.

(3) *Reclaimed.* Materials noted with a "*" in column 3 of Table 1 are solid wastes when reclaimed except as provided under 40 CFR 261.4(a)(15)). Materials noted with a "___" in column 3 of Table 1 are not solid wastes when reclaimed (except as provided under 40 CFR 261.4(a)(15)). .

(4) Accumulated speculatively. Materials noted with a "*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

TABLE 1

	Use constituting disposal (§261.2(c)(1))	Energy recovery/ fuel (§261.2(c)(2))	Reclamation (§261.2(c)(3)) (except as provided in 261.4(a)(15) for mineral processing secondary materials)	Speculative accumulation (§261.2(c)(4))
	(1)	(2)	(3)	(4)
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	___	(*)
By-products (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	___	(*)
Commercial chemical products listed in 40 CFR Section 261.33	(*)	(*)	___	___
Scrap metal other than excluded scrap metal (see 261.1(c)(9))	(*)	(*)	(*)	(*)

Note: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in Section 261.1.

(d) Inherently waste-like materials. The following materials are solid wastes when they are recycled in any manner:

(1) Hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.

(2) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in subparts C or D of this part.

(i) The material must contain a bromine concentration of at least 45 percent: and

(ii) The material must contain less than a total of 1 percent of toxic organic compounds listed in appendix VIII; and

(iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping).

(3) The Administrator will use the following criteria to add wastes to that list:

(i) (A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in Appendix VIII of Part 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(e) Materials that are not solid waste when recycled.

(1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or

(ii) Used or reused as effective substitutes for commercial products; or

(iii) In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at Section 261.4(a)(15) apply rather than this provision.

(2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs (e)(1)(i) through (iii) of this section:

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section.

(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

261.3 Definition of hazardous waste.

(a) A solid waste, as defined in Section 261.2 is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under Section 261.4(b); and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in Subpart C of this part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under Section 261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table I to Section 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

(ii) It is listed in Subpart D and has not been excluded from the lists in Subpart D under Sections 260.20 and 260.22 of this chapter.

(iii) It is a mixture of a solid waste and a hazardous waste that is listed in Subpart D of this part solely because it exhibits one or more of the characteristics of hazardous waste identified in Subpart C of this part, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C of this part, or unless the solid waste is excluded from regulation under Section 261.4(b)(7) and the resultant mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed. However, nonwastewater mixtures are still subject to the requirements of part 268 of this chapter, even if they no longer exhibit a characteristic at the point of land disposal).

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this paragraph under Sections 260.20 and 260.22 of this chapter; however, the following mixtures of solid wastes and hazardous wastes listed in Subpart D are not hazardous wastes (except by application of paragraph (a)(2)(i) or (ii) of this Section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and:

(A) One or more of the following spent solvents listed in Section 261.31-carbon tetrachloride, tetrachloroethylene, trichoroethylene-Provided, That the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or

(B) One or more of the following spent solvents listed in Section 261.31-methylene chloride, 1.1.1-trichlorethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents-provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 25 parts per million; or

(C) One of the following wastes listed in Section 261.32 heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050); or

(D) A discarded commercial chemical product, or chemical intermediate listed in Section 261.33, arising from de minimis losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subparagraph, "de minimis" losses include those from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in Subpart D, Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(F) One or more of the following wastes listed in Section 261.32--wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157)--Provided that the maximum weekly usabe of formaldehyde, methyl choride, methylene chloride, and triethylamine (including all amounts that can not be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight; or

(G) Wastewaters derived from the treatment of one or more of the following wastes listed in Section 261.32--organic waste (including heavy ends, still bottoms, light ends spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156).--Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter.

(v) *Rebuttable presumption for used oil.* Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available for the cost of $110.00 from the Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954. 202-783-3238 (document number 955-001-00000-1).

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(b) A solid waste which is not excluded from regulation under paragraph (a) (1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in Subpart D, when the waste first meets the listing description set forth in Subpart D.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in Subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

(c) Unless and until it meets the criteria of paragraph (d):

(1) A hazardous waste will remain a hazardous waste.

(2) (i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Wastes from burning any of the materials exempted from regulation by Section 261.6(a)(3) (iv) through (vi).

(C)(1) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K026 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for "Industrial furnace" in 40 CFR 260.10), that are disposed in Subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

Constituent	Maximum for any single composite sample TCLP) (mg/l)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony.....	0.10
Arsenic.....	0.50
Barium.....	7.6
Beryliium.....	0.010
Cadmium.....	0.050
Chromium(Total).....	0.33
Lead.....	0.15

Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

Generic exclusion levels for F006 nonwastewater HTMR residues

Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryliium	0.010
Cadmium	0.050
Chromium (Total)	0.33
Cyanide (Total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

(2) A one-time notification and certification must be placed in the facility's files and sent to the EPA region or authorized state for K061, K062 or F006 HTMR residues that meet the generic exclusion levels for all contituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possiblity of fine and imprisonment."

(D) Biological treatment sludge from the treatment of one of the following wastes listed in Section 261.32--organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157).

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Subpart C. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of Part 268, even if they no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in Subpart D, it also has been excluded from paragraph (c) under Sections 260.20 and 260.22 of this chapter.

(e) Reserved

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 of this chapter does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 40 CFR parts 260, 261 to 266, 268, or 270:

(1) Hazardous debris as defined in part 268 of this chapter that has been treated using one of the required extraction or destruction technologies specified in Table 1 of Section 268.45 of this chapter; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

(2) Debris as defined in part 268 of this chapter that the Regional Administrator, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

261.4 Exclusions.

(a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this Part:

(1) (i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the Clean Water Act, as amended.

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

(3) Irrigation return flows.

(4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in Section 261.1(c) of this chapter.

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in Section 261.1(c) of this chapter.

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance:

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators):

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9) Spent wood preserving solutions that have been used and are reclaimed and reused for their original intended purpose.

(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(iii) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs (a)(9)(i) and (a)(9)(ii) of this section, so long as they meet all of the following conditions:

(A) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose;

(B) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both;

(C) Any unit used to manage wastewaters and/or spent wood preserving solutions prior to reuse can be visually or otherwise determined to prevent such releases;

(D) Any drip pad used to manage the wastewaters and/or spent wood preserving solutions prior to reuse complies with the standards in part 265, subpart W of this chapter, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and

(E) Prior to operating pursuant to this exclusion, the plant owner or operator submits to the appropriate Regional Administrator or State Director a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language:

"I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation."

The plant must maintain a copy of that document in its on-site records for a period of no less than 3 years from the date specified in the notice. The exclusion applies only so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the appropriate Regional Administrator or State Director for reinstatement. The Regional Administrator or State Director may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that violations are not likely to recur.

(10) EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the Toxicity Characteristic (TC) specified in Section 261.24 of this part when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar.

(11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

(12) Recovered oil from petroleum refining, exploration and production, and from transportation incident thereto, which is to be inserted into the petroleum refining process (SIC Code 2911) at or before a point (other than direct insertion into a coker) where contaminants are removed. This exclusion applies to recovered oil stored or transported prior to insertion, except that the oil must not be stored in a manner involving placement on the land, and must not be accumulated speculatively, before being so recycled. Recovered oil is oil that has been reclaimed from secondary materials (such as wastewater) generated from normal petroleum refining, exploration and production, and transportation practices. Recovered oil includes oil that is recovered from refinery wastewater collection and treatment systems, oil recovered from oil and gas drilling operations, and oil recovered from wastes removed from crude oil storage tanks. Recovered oil does not include (among other things) oil-bearing hazardous wastes listed in 40 CFR part 261 D (e.g., K048-K052, F037, F038). However, oil recovered from such wastes may be considered recovered oil. Recovered oil also does not include used oil as defined in 40 CFR 279.1.

(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

(14) Shredded circuit boards being recycled provided that they are:
- (i) Stored in containers sufficient to prevent a release to the environment prior to recovery; and
- (ii) Free of mercury switches, mercury relays and nichel-cadmium batteries and lithium batteries.

(15) Condensates derived from the overhead gases from kraft mill stream strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates.

(16) Comparable fuels or comparable syngas fuels (i.e., comparable/syngas fuels) that meet the requirements of Section 261.38.
- (i) The secondary material is legitimately recycled to recover minerals, acids, cyanide, water or other values;
- (ii) The secondary material is not accumulated speculatively;
- (iii) Except as provided in paragraph (a)(15)(iv) of this section, the secondary material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support (except smelter buildings may have partially earthen floors provided the secondary material is stored on the non-earthen portion), and have a roof suitable for diverting rainwater away from the foundation; a tank must be free standing, not be a

surface impoundment (as defined in 40 CFR 260.10), and be manufactured of a material suitable for containment of its contents. a container must be free standing and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner/operator must operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings must be designed, constructed and operated to prevent significant releases to the environment of these materials.

(iv) The Regional Administrator or the State Director may make a site-specific determination, after public review and comment, that only solid mineral processing secondary materials may be placed on pads, rather than in tanks, containers, or buildings. Solid mineral processing secondary materials do not contain any free liquid. The decision-maker must affirm that pads are designed, constructed and operated to prevent significant releases of the secondary material into the environment. Pads must provide the same degree of containment afforded by the non-RCRA tanks, containers and buildings eligible for exclusion.

(A) The decision-maker must also consider if storage on pads poses the potential for significant releases via groundwater, surface water, and air exposure pathways. factors to be considered for assessing the groundwater, surface water, air exposure pathways are: the volume and physical and chemical properties of the secondary material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constitutents migrating from the pad via each exposure pathway, and the possibility and extent of harm to human and environmental receptors via each exposure pathway.

(B) Pads must meet the following minimum standards: be designed of non-earthen material that is compatible with the chemical nature of the mineral processing secondary material, capable of withstanding physical stresses associated with placement and removal, have run on/runoff controls, be operated in a manner which controls fugitive dust, and have integrity assurance through inspections and maintenance programs.

(C) Before making a determination under this paragraph, the Regional Administrator or State Director must provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers, or broadcasting notice over local radio stations.

(v) The owner or operator provides a notice to the Regional Administrator or State Director, identifying the following information: the types of materials to be recycled; the type and location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the cycling process.

(vi) For purposes of Section 261.4(b)(7), mineral processing secondary materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste.

(b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel), or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle, if such facility:

(i) Receives and burns only:

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combustion of coal or other fossil fuels, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste.

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6) (i) Wastes which fail the test for the Toxicity Characteristic because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in paragraphs (b)(6)(i)(A), (B) and (C) (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are:

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal), phosphate rock and overburden from the mining of uranium ore, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste.

(i) For purposes of Section 261.4(b)(7) beneficiation of ores and minerals is restricted to the following activities; crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentaration; magnetic separation; elextrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and hea;, dump, vat, tank, and in situ leaching.

(ii) For the purposes of Section 261.4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes as generated:

(A) Slag from primary copper processing;

(B) Slag from primary lead processing;

(C) Red and brown muds from bauxite refining;

(D) phosphogypsum from phosphoric acid production;

(E) Slag from elemental phosphorus production;

(F) Gasifier ash from coal gasification;

(G) Process wastewater from coal gasification;
(H) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
(I) Slag tailings from primary copper processing;
(J) Fluorogypsum from hydrofluoric acid production;
(K) Process wastewater from hydrofluoric acid production;
(L) Air pollution control dust/sludge from iron blast furnaces;
(M) Iron blast furnace slag;
(N) Treated residue from roasting/leaching of chrome ore;
(O) Process wastewater from primary magnesium processing by the anhydrous process;
(P) Process wastewater from phosphoric acid production;
(Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;
(R) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
(S) Chloride process waste solids from titanium tetrachloride production;
(T) Slag from primary zinc processing;

(iii) A residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials remains excluded nder paragraph (b)ot this section if the owner or operator:
(A) Processes at least 50 percent by weigh normal beneficiation raw materials; and,
(B) Legitimately reclaims the secondary mineral processing materials.

(iv) Phosphogypsum from phosphoric acid production;
(v) Slag from elemental phosphorus production;
(vi) Gasifier ash from coal gasification;
(vii) Process wastewater from coal gasification;
(viii) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
(ix) Slag tailings from primary copper processing;
(x) Fluorogypsum from hydrofluoric acid production;
(xi) Process wastewater from hydrofluoric acid production;
(xii) Air pollution control dust/sludge from iron blast furnaces;
(xiii) Iron blast furnace slag;
(xiv) Treated residue from roasting/leaching of chrome ore;
(xv) Process wastewater from primary magnesium processing by the anhydrous process;
(xvi) Process wastewater from phosphoric acid production;
(xvii) Basic oxygen furnace and open hearth furnace air pollution control dust-sludge from carbon steel production;
(xviii) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
(xix) Chloride process waste solids from titanium tetrachloride production;
(xx) Slag from primary zinc processing.

(8) Cement kiln dust waste, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste.

(9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use.

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of Section 261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action regulations under part 280 of this chapter.

(11) Injected groundwater that is hazardous only because it exhibits the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only) in Section 261.24 of this part that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For groundwater returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, until (insert date six months after publication). New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

(i) Operations are performed pursuant to a written state agreement that includes a provision to assess the groundwater and the need for further remediation once the free phase recovery is completed; and

(ii) A copy of the written agreement has been submitted to: Characteristics Section (OS-333), U. S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

(13) Non-terne plated used oil filters that are not mixed with wastes listed in Subpart D of this part if these oil filters have been gravity hot-drained using one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining,

(ii) Hot-draining and crushing;

(iii) Dismantling and hot-draining; or

(iv) Any other equivalent hot-draining method that will remove used oil.

(14) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under Parts 262 through 265, 268, 270, 271, and 124 of this chapter or to the notification requirements of Section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

(d) Samples.

(1) Except as provided in paragraph (d)(2) of this section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this part or Parts 262 through 268 or Parts 270 or 124 of this chapter or to the notification requirements of Section 3010 of RCRA, when:

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing; or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraph (d)(1)(i) and (ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(1) The sample collector's name, mailing address, and telephone number;

(2) The laboratory's name, mailing address, and telephone number;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1) of this section.

(e) Treatability Study Samples

(1) Except as provided in paragraph (e)(2) of this section, persons who generate or collect samples for the purpose of conducting treatability studies as defined in section 260.10 are not subject to any requirement of Parts 261 through 263 of this chapter or to the notification requirements of Section 3010 of RCRA, nor are such samples included in the quantity determinations of Section 261.5 and Section 262.34(d) when:

(i) The sample is being collected and prepared for transportation by the generator or sample collector, or

(ii) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility, or

(iii) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

(2) The exemption in paragraph (e)(1) of this section is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(i) The generator or sample collector uses (in "treatability studies") no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

(ii) The mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may include 2500 kg of media contaminated with acute hazardous waste, 1000 kg of hazardous waste, and 1 kg of acute hazardous waste, and

(iii) The sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of paragraph A or B of this subparagraph are met.

(A) The transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(B) If the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

(1) The name, mailing address, and telephone number of the originator of the sample.

(2) The name, address, and telephone number of the facility that will perform the treatability study;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample, including its EPA Hazardous Waste Number.

(iv) The sample is shipped to a laboratory or testing facility which is exempt under Section 261.4(f) or has an appropriate RCRA permit or interim status.

(v) The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:

(A) Copies of the shipping documents;

(B) A copy of the contract with the facility conducting the treatability study;

(C) Documentation showing:

(1) The amount of waste shipped under this exemption;

(2) The name, address, and EPA identification number of the laboratory or testing facility that received the waste;

(3) The date the shipment was made; and

(4) Whether or not unused samples and residues were returned to the generator.

(vi) The generator reports the information required under paragraph (e)(v)(C) of this section in its biennial report.

(3) The Regional Administrator may grant requests on a case-by-case basis for up to an additional two years for treatability studies involving bioremediation. The Regional Administrator may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs (e)(2)(i) and (ii) and (f)(4) of this section, for up to an additional 5000 kg of media contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste and 1 kg of acute hazardous waste:

(i) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.

(ii) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when: There has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(iii) The additional quantities and timeframes allowed in paragraph (e)(3) (i) and (ii) of this section are subject to all the provisions in paragraphs (e)(1) and (e)(2)(iii) through (vi) of this section. The generator or sample collector must apply to the Regional Administrator in the Region where the sample is collected and provide in writing the following information:

(A) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed.

(B) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treataability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;

(C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

(D) If such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protech against further breakdowns; and

(E) Such other information that the Regional Administrator considers necessary.

(f) *Samples Undergoing Treatability Studies at Laboratories and Testing Facilities.*

Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirement of this Part, Part 124, Parts 262-266, 268, and 270, or to the notification requirements of Section 3010 of RCRA provided that the conditions of paragraphs (f) (1) through (11) of this section are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to paragraphs (f) (1) through (11) of this section. Where a group of MTUs are located at the same site, the limitations specified in

(f) (1) through (11) of this section apply to the entire group of MTUs collectively as if the group were one MTU.

(1) No less than 45 days before conducting treatability studies, the facility notifies the Regional Administrator, or State Director (if located in an authorized State), in writing that it intends to conduct treatability studies under this paragraph.

(2) The laboratory or testing facility conducting the treatability study has an EPA identification number.

(3) No more than a total of 10,000 kg of "as received" media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste or 250 kg of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste, 1000 kg of non-acute hazardous wastes other than contaminated media and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous solid waste) added to "as received" hazardous waste.

(5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

(6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(7) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample;

(ii) The date the shipment was received;

(iii) The quantity of waste accepted;

(iv) The quantity of "as received" waste in storage each day;

(v) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

(vi) The date the treatability study was concluded;

(vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.

(8) The facility keeps, on-site, a copy of the treatability study contract and any shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date of each treatability study.

(9) The facility prepares and submits a report to the Regional Administrator, or State Director (if located in an authorized State), by March 15 of each year that estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and includes the following information for the previous calendar year:

(i) The name, address, and EPA identification number of the facility conducting the treatability studies;

(ii) The types (by process) of treatability studies conducted;

(iii) The names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);

(iv) The total quantity of waste in storage each day;

(v) The quantity and types of waste subjected to treatability studies;

(vi) When each treatability study was conducted;

(vii) The final disposition of residues and unused sample from each treatability study.

(10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under Section 261.3 and, if so, are subject to Parts 261 through 268, and Part 270 of this Chapter, unless the residues and unused samples are returned to the sample originator under the Section 261.4(e) exemption.

(11) The facility notifies the Regional Administrator, or State Director (if located in an authorized State), by letter when the facility is no longer planning to conduct any treatability studies at the site.

261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity Generators.

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (j) of this section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the notification requirements of Section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g), and (j) of this section.

(c) When making the quantity determinations of this part and 40 CFR part 262, the generator must include all hazardous waste that it generates, except hazardous waste that:

(1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; or

(2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10; or

(3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2); or

(4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279; or

(5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266, subpart G; or

(6) Is universal waste managed under 40 CFR 261.9 and 40 CFR part 273.

(d) In determining the quantity of hazardous waste generated, a generator need not include:

(1) Hazardous waste when it is removed from on-site storage; or

(2) Hazardous waste produced by on-site treatment (including reclamation) of his hazardous waste, so long as the hazardous waste that is treated was counted once; or

(3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

(e) If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the notification requirements of Section 3010 of RCRA:

(1) A total of one kilogram of acute hazardous wastes listed in Sections 261.31, 261.32, or 261.33(e).

(2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water of any acute hazardous wastes listed in Sections 261.31, 261.32, or 261.33(e).

[Comment: "Full regulation" means those regulations applicable to generators of greater than 1,000 kg of non-acutely hazardous waste in a calendar month.]

(f) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in paragraph (e)(1) or (e)(2) of this section to be excluded from full regulation under this section, the generator must comply with the following requirements:
  (1) Section 262.11 of this chapter;
  (2) The generator may accumulate acute hazardous waste on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in paragraph (e)(1) or (e)(2) of this section, all of those accumulated wastes are subject to regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of Section 262.34(d) of this chapter, for accumulation of wastes on-site begins when the accumulated wastes exceed the applicable exclusion limit.
  (3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:
    (i) Permitted under Part 270 of this chapter;
    (ii) In interim status under Parts 270 and 265 of this chapter;
    (iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under Part 271 of this chapter;
    (iv) Permitted, licensed, or registered by a State to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Part 258 of this chapter;
    (v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in Sections 257.5 through 257.30 of this chapter; or
    (vi) A facility which:
      (A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or
      (B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or
    (vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(g) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of less than 100 kilograms of hazardous waste during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements:
  (1) Section 262.11 of this chapter;
  (2) The conditionally exempt small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of Part 262 applicable to generators of between 100 kg and 1000 kg of hazardous waste in a calendar month as well as the requirements of Parts 263 through 266, 268 and Parts 270 and 124 of this chapter, and the applicable notification requirements of Section 3010 of RCRA. The time period of Section 262.34(d) for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1000 kilograms:
  (3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:
    (i) Permitted under Part 270 of this chapter;
    (ii) In interim status under Parts 270 and 265 of this chapter;
    (iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under part 271 of this chapter.
    (iv) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste;
    (v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in Section 257.5 through 257.30 of this chapter; or
    (vi) A facility which:
      (A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or
      (B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or
    (vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(h) Hazardous waste subject to the reduced requirements of this section may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in Subpart C.

(i) If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation.

(j) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to part 279 of this chapter if it is destined to be burned for energy recovery. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated if it is destined to be burned for energy recovery.

{Note: State rules for off-site recycling are found in Rule .0113, Paragraph (m).}

261.6 Requirements for recyclable materials.

(a) (1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under Subparts C through H of Part 266 of this chapter and all applicable provisions in Parts 270 and 124 of this chapter:

(i) Recyclable materials used in a manner constituting disposal (Subpart C);

(ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under Subpart O of Part 264 or 265 of this chapter (Subpart H);

(iii) Recyclable materials from which precious metals are reclaimed (Subpart F);

(iv) Spent lead-acid batteries that are being reclaimed (Subpart G).

(3) The following recyclable materials are not subject to regulation under Parts 262 through 266, or Parts 268, 270 or 124 of this chapter, and are not subject to the notification requirements of Section 3010 of RCRA:

(i) Industrial ethyl alcohol that is reclaimed, except that, unless provided otherwise in an international agreement as specified in Section 262.58:

(A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in Sections 262.53, 262.56 (a)(1)-(4),(6), and (b), and 262.57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Subpart E of Part 262, and provide a copy of the EPA Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;

(B) Transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the EPA Acknowledgment of Consent, must ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment.

(ii) Scrap metal that is not excluded under §261.4(a)(13);

(iii) Scrap metal.

(iv) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under Section 261.4(a)(12);

(v) (A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under Section 279.11 of this chapter and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

(B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under Section 279.11 of this chapter; and

(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under Section 279.11 of this chapter; and

(vi) Petroleum coke produced from petroleum refinery hazardous wastes containing oil by the same person who generated the waste, unless the resulting coke product exceeds one or more of the characteristics of hazardous waste in part 261, subpart C.

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of parts 260 through 268 of this chapter, but is regulated under part 279 of this chapter. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy-recovery, or reprocessed.

(5) Hazardous waste that is exported to or imported from designated member countries of the Organization for Economic Cooperation and development (OECD) (as defined in Section 262.58(a)(1)) for purpose of recovery is subject to the requirements of 40 CFR part 262, subpart H, if it is subject to either the Federal manifesting requirements of 40 CFR Part 262, to the universal waste management standards of 40 CFR Part 273, or to State requirements analogous to 40 CFR Part 273.

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of Parts 262 and 263 of this chapter and the notification requirements under Section 3010 of RCRA, except as provided in paragraph (a) of this section.

(c) (1) Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of Subparts A through L, AA, BB, and CC of Parts 264 and 265, and under Parts 124, 266, 268, and 270 of this chapter and the notification requirements under Section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in Section 261.6(d).)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (a) of this section:

(i) Notification requirements under Section 3010 of RCRA;

(ii) Sections 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies) of this chapter;

(iii) Section 261.6(d) of this chapter.

(d) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264 or 265 of this chapter.

261.7 Residues of hazardous waste in empty containers.

(a) (1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under Parts 261 through 265, or Part 268, 270 or 124 of this chapter or to the notification requirements of Section 3010 of RCRA.

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under Parts 261 through 265, and Parts 268, 270 and 124 of this chapter and to the notification requirements of Section 3010 of RCRA.

(b) (1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in Sections 261.31, 261.32, or 261.33(e) of this chapter is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, or

(iii) (A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size, or

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in Sections 261.31, 261.32, or 261.33(e) is empty if:

(i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

261.8 PCB Wastes Regulated Under Toxic Substance Control Act.

The disposal of PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under part 761 of this chapter and that are hazardous only because they fail the test for the Toxicity Characteristic Hazardous Waste Codes D018 through D043 only) are exempt from regulation under parts 261 through 265, and parts 268, 270, and 124 of this chapter, and the notification requirements of section 3010 of RCRA.

261.9 Requirements for Universal Waste.

The wastes listed in this section are exempt from regulation under parts 262 through 270 of this chapter except as specified in part 273 of this chapter and therefore are not fully regulated as hazardous waste. The wastes listed in this section are subject to regulation under 40 CFR part 273:

(a) Batteries as described in 40 CFR 273.2;
(b) Pesticides as described in 40 CFR 273.3; and
(c) Thermostats as described in 40 CFR 273.4.

(b) 40 CFR 261.10 through 261.11 (Subpart B), "Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Waste", are incorporated by reference including subsequent amendments and editions.

SUBPART B - CRITERIA FOR IDENTIFYING THE CHARACTERISTICS OF HAZARDOUS WASTE AND FOR LISTING HAZARDOUS WASTE

261.10 Criteria for identifying the characteristics of hazardous waste.

(a) The Administrator shall identify and define a characteristic of hazardous waste in Subpart C only upon determining that:
  (1) A solid waste that exhibits the characteristics may:
    (i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
    (ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and
  (2) The characteristic can be:
    (i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or
    (ii) Reasonably detected by generators of solid waste through their knowledge of their waste.

261.11 Criteria for listing hazardous waste.

(a) The Administrator shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:
  (1) It exhibits any of the characteristics of hazardous waste identified in Subpart C.
  (2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute Hazardous Waste.)
  (3) It contains any of the toxic constituents listed in Appendix VIII and, after considering the following factors, the Administrator concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.
    (i) The nature of the toxicity presented by the constituent.
    (ii) The concentration of the constituent in the waste.
    (iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph (a)(3)(vii) of this section.
    (iv) The persistence of the constituent or any toxic degradation product of the constituent.
    (v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.
    (vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.
    (vii) The plausible types of improper management to which the waste could be subjected.
    (viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.
    (ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.
    (x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.
    (xi) Such other factors as may be appropriate.

Substances will be listed on Appendix VIII only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated Toxic wastes.)

(b) The Administrator may list classes or types of solid waste as hazardous waste if he has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in Section 1004(5) of the Act.

(c) The Administrator will use the criteria for listing specified in this section to establish the exclusion limits referred to in Section 261.5(c).

(c) 40 CFR 261.20 through 261.24 (Subpart C), "Characteristics of Hazardous Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART C - CHARACTERISTICS OF HAZARDOUS WASTE

261.20 General.

(a) A solid waste, as defined in Section 261.2, which is not excluded from regulation as a hazardous waste under Section 261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this subpart.

[Comment: Section 262.11 of this chapter sets forth the generator's responsibility to determine whether his waste exhibits one or more of the characteristics identified in this subpart.]

(b) A hazardous waste which is identified by a characteristic in this Subpart is assigned every EPA Hazardous Waste Number that is applicable as set forth in this Subpart. This number must be used in complying with the notification requirements of Section 3010 of the Act and all applicable recordkeeping and reporting requirements under Parts 262 through 265, 268, and 270 of this chapter.

(c) For purposes of this subpart, the Administrator will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of Part 260 of this chapter.

[Comment: Since the Appendix I sampling methods are not being formally adopted by the Administrator, a person who desires to employ an alternative sampling method is not required to demonstrate the equivalency of his method under the procedures set forth in Sections 260.20 and 260.21.]

261.21 Characteristic of ignitability.

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
   (1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see Section 260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see Section 260.11), or as determined by an equivalent test method approved by the Administrator under procedures set forth in Sections 260.20 and 260.21.
   (2) It is not a liquid and 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.
   (3) It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the Administrator under Sections 260.20 and 260.21.
   (4) It is an oxidizer as defined in 49 CFR 173.151.
   Note: See 49 CFR 173.127(b).

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

261.22 Characteristic of corrosivity.

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
   (1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW–846, as incorporated by reference in Section 260.11 of this chapter.
   (2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of

Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11) of this chapter.

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

261.23 Characteristic of reactivity.

(a) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number D003:
  (1) It is normally unstable and readily undergoes violent change without detonating.
  (2) It reacts violently with water.
  (3) It forms potentially explosive mixtures with water.
  (4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
  (5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
  (6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
  (7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
  (8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

261.24 Toxicity Characteristic.

(a) A solid waste exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procecure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter, the extract from a representative sample of the waste contains any of the contaminants listed in table 1 at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section.

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table I which corresponds to the toxic contaminant causing it to be hazardous.

Table I - Maximum Concentration of Contaminants
for Toxicity Characteristic

EPA hazardous waste number[1]	Contaminant	CAS No[2]	Regulatory Level (mg/l.)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon Tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	[4]200.0
D024	m-Cresol	108-39-4	[4]200.0
D025	p-Cresol	106-44-5	[4]200.0
D026	Cresol	.....	[4]200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	[3]0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	[3]0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	[3]5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP Silvex	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

[1]Hazardous waste number.

[2]Chemical abstracts service number.

[3]Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

[4]If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

(d) 40 CFR 261.30 through 261.35 (Subpart D), "Lists of Hazardous Wastes" are incorporated by reference including subsequent amendments and editions.

SUBPART D - LISTS OF HAZARDOUS WASTES

261.30 General.

(a) A solid waste is a hazardous waste if it is listed in this Subpart, unless it has been excluded from this list under Sections 260.20 and 260.22.

(b) The Administrator will indicate his basis for listing the classes or types of wastes listed in this Subpart by employing one or more of the following Hazard Codes:

Ignitable Waste.....(I)
Corrosive Waste.....(C)
Reactive Waste.....(R)
Toxicity Characteristic Waste.....(E)
Acute Hazardous Waste.....(H)
Toxic Waste.....(T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in Sections 261.31 and 261.32.

(c) Each hazardous waste listed in this Subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of Section 3010 of the Act and certain recordkeeping and reporting requirements under Parts 262 through 265 and Part 270 of this chapter.

(d) The following hazardous wastes listed in Section 261.31 or Section 261.32 are subject to the exclusion limits for acutely hazardous wastes established in Section 261.5: EPA Hazardous Wastes Nos. FO20, FO21, FO22, FO23, FO26, FO27.

261.31 Hazardous waste from non-specific sources.

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under Sections 260.20 and 260.22 and listed in Appendix IX:

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic		
F001.....	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and and spent solvent mixtures.	(T)
F002.....	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene. 1, 1, 1-trichloroethane chlorobenzen. 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, orthodichiorobenzene, trichlorofluoromethane, and 1, 1, 2-trichloroethane; all spent solvent mixtures/blends containing before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic	or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003.....	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004.....	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and the still bottoms from the recovery of these solvents.	(T)
F005.....	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and the still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I, T)
F006.....	Wastewater treatment sludges from electroplating except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum orzinc-aluminum plating on carbon steel; (5) cleaning/ stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007.....	Spent cyanide plating bath solutions from electroplating operations	(R, T)
F008.....	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process	(R, T)
F009.....	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R, T)
F010.....	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R, T)
F011.....	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R, T)
F012.....	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019.....	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	(T)
F020.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5- trichlorophenol.	(H)
F021.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic		
F022.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,3,5-trichlorophenol).	(H)
FO24.....	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.31 or Section 261.32).	(T)
F025.....	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	(T)
F026.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027.....	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorobenzene synthesized from prepurified 2,4,5-trichlorophenol as the sole component).	(H) ✓
F028.....	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	(T)
F032.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Section 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F034.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic	formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F035.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F037.....	Petroleum refinery primary oil/water/solids separation sludge--Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in Section 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	(T)
F038.....	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge --Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in Section 261.31(b)(2) (including sludges and floats generated in aggressive additional units after wastewaters have been treated in aggressive biological treatment units) and F037; K048, and K051 wastes are not included in this listing.	(T)
F039.....	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under Subpart D of this Part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028).	(T)

* (I,T) should be used to specify mixtures containing ignitable and toxic constituents.

(b) Listing Specific Definitions:

(1) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.

(2) (i) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter, rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and (A) the units employ a minimum of 6 hp per million gallons of treatment volume; and either (B) the hydraulic retention time of the unit is no longer than 5 days; or (C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic.

(ii) Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that: (A) the unit is an aggressive biological treatment unit as defined in this subsection; and (B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit:

(3) (i) For the purpose of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(ii) For the purposes of the F038 listing, (A) sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement and (B) floats are considered to be generated at the moment they are formed in the top of the unit.

261.32 Hazardous waste from specific sources.

The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under Sections 260.20 and 260.22 and listed in Appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Wood Preservation:		
K001.....	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic Pigments:		
K002.....	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003.....	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004.....	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005.....	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006.....	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007.....	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008.....	Oven residue from the production of chrome oxide green pigments.	(T)
Organic Chemicals:		
K009.....	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K010.....	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011.....	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R,T)
K013.....	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R,T)
K014.....	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015.....	Still bottoms from the distillation of benzyl chloride.	(T)
K016.....	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017.....	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018.....	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019.....	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020.....	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021.....	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022.....	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023.....	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024.....	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K025.....	Distillation bottoms from the production of nitrobenzene by the nitration of benzene..	(T)
K026.....	Stripping still tails from the production of methylethyl pyridines.	(T)
K027.....	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028.....	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029.....	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K030.....	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083.....	Distillation bottoms from aniline production.	(T)
K085.....	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K093.....	Distillation light ends from the production of phthalic anhydride orthoxylene.	(T)
K094.....	Distillation bottoms from the production of phthalic anhydride from orthoxylene.	(T)
K095.....	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096.....	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K103.....	Process residues from aniline extraction from the production of aniline.	(T)
K104.....	Combined wastewater streams generated from nitrobenzene/aniline..	(T)
K105.....	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)
K107.....	Column bottoms from product separation from the production of 1,1-dimethyl-hydrazine (UDMH) from carboxylic acid hydrazines.	(C, T)
K108.....	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(I, T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carbolylic acid.	(T)
K110.....	Condensed column overheads from Intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K111.....	Product wastewaters from the production of dinitrotoluene via nitration of toluene.	(C, T)
K112.....	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K113.....	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114.....	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115.....	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116.....	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	(T)
K117.....	Waste water from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118.....	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136.....	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K140.....	Floor sweepings, off-specification product and spent filter media from the production of 2,4,6-tribromophenol.	(T)
K149.....	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (The waste does not include still bottoms from the distillation of benzyl chloride.).	(T)
K150.....	Organic residuals, excluding spent carbon adsorbent from the spent chlorine gas and hydrochloric add recovery processes associated with the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151.....	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzyl chlorides, and compounds with mixtures of these functional groups.	(T)
K156.....	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate).	(T)
K157.....	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate).	(T)
K158.....	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate).	(T)
K159.....	Organics from the treatment of thiocarbamate wastes.	(T)
K161.....	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126).	(R, T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Inorganic Chemicals:		
K071.....	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073.....	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106.....	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
Pesticides:		
K031.....	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032.....	Wastewater treatment sludge from the production of chlordane.	(T)
K033.....	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034.....	Filter solids from the filtration of hexachloro-cyclopentadiene in the production of chlordane.	(T)
K097.....	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K035.....	Wastewater treatment sludges generated in the production of creosote.	(T)
K036.....	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037.....	Wastewater treatment sludges from the production of disulfoton.	(T)
K038.....	Wastewater from the washing and stripping of phorate production.	(T)
K039.....	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040.....	Wastewater treatment sludge from the production of phorate.	(T)
K041.....	Wastewater treatment sludge from the production of toxaphene.	(T)
K098.....	Untreated process wastewater from the production of toxaphene.	(T)
K042.....	Heavy ends or distillation residues from the distillation of tetra-chlorobenzene in the production of 2,4,5-T.	(T)
K043.....	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K099.....	Untreated wastewater from the production of 2,4-D.	(T)
K123.....	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt.	(T)
K124.....	Reactor vent scrubber water from the production of ethylenebis-dithiocarbamic acid and its salts.	(C,T)
K125.....	Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126.....	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)
K131.....	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C,T)
K132.....	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
Explosives:		
K044.....	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045.....	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046.....	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047.....	Pink/red water from TNT operations.	(R)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Petroleum Refining:		
K048.....	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049.....	Slop oil emulsion solids from the petroleum refining industry.	(T)
K050.....	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051.....	API separator sludge from the petroleum refining refining industry.	(T)
K052.....	Tank bottoms (leaded) from the petroleum refining industry.	(T)
Iron and Steel:		
K061.....	Emission control dust/sludge from the primary production of steel in electric furnaces.	(T)
K062.....	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	(C, T)
Primary copper:		
K064	Acid plant blowdown slurry/ sludge resulting from the thickening of blowdown slurry from primary copper production.	(T)
Primary lead:		
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.	(T)
Primary zinc:		
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.	(T)
Primary aluminum		
K088	Spent potliners from primary aluminum reduction.	(T)
Ferroalloys:		
K090	Emission control dust or sludge from ferrochromium-silicon production.	(T)
K091	Emission control dust or sludge from ferrochromium production.	(T)
Secondary Lead:		
K069.....	Emission control dust/sludge from secondary lead smelting (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay. EPA will publish a notice of the action in the Federal Register.	(T)
K100.....	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	(T)
Veterinary Pharmaceuticals:		
K084.....	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K101.....	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102.....	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
Ink Formulation:		
K086.....	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.	(T)
Coking:		
K060.....	Ammonia still lime sludge from coking operations.	(T)
K087.....	Decanter tank tar sludge from coking operations.	(T)
K141.....	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	(T)
K142.....	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143.....	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)
K144.....	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145.....	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147.....	Tar storage tank residues from coal tar refining.	(T)
K148.....	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)

261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded, as described in Section 261.2(a)(2)(i), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section.

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraphs (e) or (f) of this section.

(c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section, unless the container is empty as defined in Section 261.7(b) of this chapter.

[**Comment**: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, reuse, recycling or reclamation, EPA considers the residue to be intended for discard, and thus a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any commerical chemical product or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this Section, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[**Comment**: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in ..." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraphs (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraphs (e) or (f), such waste will be listed in either Sections 261.31 or 261.32 or will be identified as a hazardous waste by the characteristics set forth in Subpart C of this part.]

(e) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to be the small quantity exclusion defined in Section 261.5(e).

[**Comment**: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.	Chemical Abstracts No.	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide(R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-),bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H_3AsO_4
P012	1327-53-3	Arsenic oxide As_2O_3
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
PO54	151-56-4	Aziridine
PO67	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol,4-[1-hydroxy-2-(methylamino) ethyl]-,(R)-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis) -1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1).
P001	[1]81-81-2	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-,& salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide $Ca(CN)_2$
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino) carbonyl]-5-methyl-1H- pyrazol-3-yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H- pyrazol-5-yl ester
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate
P030	.....	Cyanides(soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride(CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
PO04	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)-
PO60	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-,(1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-
PO37	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
PO51	[1]72-20-8	2,7:3,6-Dimethanonaphth[2,3b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
PO46	122-09-8	alpha,alpha-Dimethylphenethylamine
P191	644-64-4	Dimetilan
P047	[1]534-52-1	4,6-Dinitro-o-cresol and salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramide, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)- carbonyl]oxime
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin & metabolites
P042	51-43-4	Epinephrine

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
P066	16752-77-5	Ethanimidothioic acid, N[[(methylamino)carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fluminic acid, mercury(2+) salt (R,T)
P198	23422-53-9	Formetanate hydrochloride
P197	17702-57-7	Formparanate
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyltetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	15339-36-3	Manganese dimethyldithiocarbamate
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[l(methylamino)-carbonyl]oxy]phenyl]-,monohydrochloride
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-(methyl-4-[l (methylamino)carbonyl)oxy]phenyl]-carbonyl]oxy]phenyl]-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-,5a,6,9,9a-hexahydro-,3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a, 4,7,7a-tetrahydro-
P199	2032-65-7	Methiocarb
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methyllactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb
P128	315-18-4	Mexacarbate

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl, $Ni(CO)_4$(T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide, $Ni(CN)_2$
P075	[1]54-11-5	Nicotine and salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO_2
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO_4,(T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P194	23135-22-0	Oxamyl
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P048	51-28-5	Phenol, 2,4-dinitro-
P047	[1]534-52-1	Phenol, 2-methyl-4,6-dinitro-, and salts
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio) ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl,S-[(ethylthio) methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S[2-(methylamino)-2-oxoethyl]ester
P043	55-91-4	Phosphorofluoric acid bis(1-methylethyl)-ester
P089	56-38-2	Phosphorothioic acid,O,O-diethyl O-(4-nitrophenyl)ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl) phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid,O,O-dimethyl O-(4-nitrophenyl)ester
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P110	78-00-2	Plumbane, tetraethyl-

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-,O-[(methylamino) carbonyl)oxime
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-,O-[(methylamino) carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	[1]54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S), & salts
P204	57-47-6	Pyrrolo (2,3-b]indol-5-0l, 1,2,3,3a,8,8a-hexahydro-1,3a, 8-trimethyl-, methylcarbamate (ester), (3aS-cis)-.
P114	12039-52-0	Selenious acid, dithalium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	[1]57-24-9	Strychnidin-10-one, and salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	[1]57-24-9	Strychnine and salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl_2O_3
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V_2O_5
P120	314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-.
P001	[1]81-81-2	Warfarin & salts, when present at concentrations greater than 0.3%
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-,
P122	1314-84-7	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)
P205	137-30-4	Ziram

[1]CAS Number given for parent compound only.

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes [T], unless otherwise designated and are subject to the small quantity generator exclusion defined in Section 261.5(a) and (g).
[**Comment**: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.	Chemical Abstracts No.	Substance
U394	30558-43-1	A2213
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl
U240	[1]94-75-7	Acetic acid, (2,4-dichlorophenoxy), salts & esters
U112	141-78-6	Acetic acid, ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium (1+) salt
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	70-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8, 8a,8b-hexahydro-8a-methoxy-5-methyl- [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-
U280	101-27-9	Barban
U278	22781-23-3	Bendiocarb
U364	22961-82-6	Bendiocarb phenol
U271	17804-35-2	Benomyl
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-,hydrochloride
U093	60-11-7	Benzenamine, N-N'-dimethyl-4-phenylazo-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)- alpha-hydroxy, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexy)] ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	1330-20-7	Benzene, dimethyl-(I,T)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	[1]81-07-2	1,2-Benzisothiazol-3-(2H)-one, 1,1-dioxide and salts
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rst]pentaphene
U248	[1]81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3(3-oxo-1-phenylbutyl)- & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	(1,1'-Biphenyl)-4,4'diamine
U073	91-94-1	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*), 7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester
U238	59-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, dimethyl ester
U097	79-44-7	Carbamic chloride, dimethyl- orthothioselenious acid
U114	[1]111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U062	2303-16-4	Carbamothioc acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-phenylmethyl) ester
U279	63-25-2	Carbaryl
U372	10605-21-7	Carbendazim
U367	1563-38-8	Carbufuran phenol
U215	6533-73-9	Carbonic acid, dithallium (I+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbo oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H_2CrO_4, calcium salt
U050	218-01-9	Chrysene
U051	.....	Creosote
U052	1319-77-3	Cresols (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	194-75-7	2,4-D, salts and esters

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U395	5952-26-1	Diethylene glycol, dicarbamate
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615--80-1	N,N-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl-S-methyl-Dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbestrol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U404	121-44-8	Ethanamine, N,N-diethyl-
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis- (I)
U025	111-44-4	Ethane 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis [(methylimino)carbonyloxy]]bis-, dimethyl ester
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, 2-chloroethoxy-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl (ether (I)
U114	[1] 111-54-6	Ethylenebisdithiocarbamic acid, salts and esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethylmethanesulfonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	Furandione
U213	109-99-9	Furan, tetrahydro- (I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U206	18883-66-4	Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)- D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H_2S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I,T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I,T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I,T)

Hazardous Waste No.	Chemical Abstracts No.	Substance
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxyl-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine,N,N-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-[1,1'-biphenyl]-4,4'diyl)-bis(azo)bis[5-amino-4-hydroxy]-tetrasodium salt
U279	63-25-2	1-Naphthalenol, methylcarbamate
U166	130-15-4	1,4,Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea

Hazardous Waste No.	Chemical Abstracts No.	Substance
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-Methylenebis[3,4,6-trichloro-
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+)salt(2-3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl- S-methyl ester
U189	1314-80-3	Phosphorous sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
U179	100-75-4	Picoline,1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-Nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile

Hazardous Waste No.	Chemical Abstracts No.	Substance
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	108-60-1	Propane, 2,2'oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxyl)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propanenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U373	122-42-9	Propham
U411	114-26-1	Propoxur
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4(1H,3H)-Pyrimidinedione,5-[bis(2-chloroethyl) amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	[1]81-07-2	Saccharin and salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS_2 (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,2,4,6-Tetrachlorophenol

Hazardous Waste No.	Chemical Abstracts No.	Substance
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride Tlcl
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamid
U410	59669-26-0	Thiodicarb
U153	74-93-1	Thiomethanol(I,T)
U244	137-26-8	Thioperoxydicarbonic diamide, $[(H_2N)C(S)]_2S_2$, tetra-methyl-
U409	23564-05-8	Thiophanate-methyl
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate
U011	61-82-5	1H-1,2,4,-Triazol-3-amine
U408	118-79-6	2,4,6-Tribromophenol
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	[1]81-81-2	Warfarin, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide, Zn_3P_2 when present at concentrations of 10% or less

[1]CAS Number given for parent compound only.

261.35 Deletion of Certain Hazardous Waste Codes Following Equipment Cleaning and Replacement.

(a) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of paragraphs (b) and (c) of this section. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

(b) Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner which minimizes or eliminates the escape of hazardous waste or waste constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

(1) Generators shall do one of the following:

(i) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this section:

(ii) Prepare and follow an equipment replacement plan and replace equipment in accordance with this section; or

(iii) Document cleaning and replacement in accordance with this section, carried out after termination of use of chlorophenolic preservations.

(2) Cleaning Requirements.

(i) Prepare and sign a written equipment cleaning plan that describes:

(A) The equipment to be cleaned;

(B) How the equipment will be cleaned;

(C) The solvent to be used in cleaning;

(D) How solvent rinses will be tested; and

(E) How cleaning residues will be disposed.

(ii) Equipment must be cleaned as follows:

(A) Remove all visible residues from process equipment;

(B) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(iii) Analytical requirements.

(A) Rinses must be tested in accordance with SW-846, Method 8290.

(B) "Not detected" means at or below the lower method calibration limit (MCL) in Method 8290, Table 1.

(iv) The generator must manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(i) Prepare and sign a written equipment replacement plan that describes:

(A) The equipment to be replaced;

(B) How the equipment will be replaced; and

(C) How the equipment will be disposed.

(ii) The generator must manage the discarded equipment as F032 waste.

(4) Documentation requirements.

(i) Document that previous equipment cleaning and/or replacement was performed in accordance with this section and occurred after cessation of use of chlorophenolic preservatives.

(c) The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:

(1) The name and address of the facility;

(2) Formulations previously used and the date on which their use ceased in each process at the plant;

(3) Formulations currently used in each process at the plant;

(4) The equipment cleaning or replacement plan;

(5) The name and address of any persons who conducted the cleaning and replacement;

(6) The dates on which cleaning and replacement were accomplished;

(7) The dates of sampling and testing;

(8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

(9) A description of the tests performed, the date the tests were performed, and the results of the tests;

(10) The name and model numbers of the instrument(s) used in performing the tests;

(11) QA/QC documentation; and

(12) The following statement signed by the generator or his authorized representative:

I certify under penalty of law that all process equipment required to be cleaned or replaced under 40 CFR 261.35 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

(e) The Appendices to 40 CFR Part 261 are incorporated by reference including subsequent amendments and editions.

APPENDIX I - REPRESENTATIVE SAMPLING METHODS

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid - ASTM Standard D140-70 Crushed or powdered material - ASTM Standard D346-75 Soil or rock-like material - ASTM Standard D420-69 Soil-like material - ASTM Standard D1452-65

Fly Ash-like material - ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103].

Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"[1a] U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460. [Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268].

Liquid waste in pits, ponds, lagoons, and similar reservoirs. - "Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods."[1a]

This manual also contains additional information on application of these protocols.

Appendix II to Part 261--Method 1311
Toxicity Characteristic Leaching Procedure
(TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

APPENDIX III TO PART 261 – CHEMICAL ANALYSIS TEST METHODS

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
F001.....	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluoro-carbons
F002.....	Tetrachloroethylene,; methylene chloride trichloroethylene, 1, 1, 1-trichloroethane 1, 1, 2-trichloroethane, chlorobenzene, 1,1, 2-trichoro-1, 2,2-trifluoro-ethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003.....	N.A.
F004.....	Cresols and cresylic acid, nitrobenzene
F005.....	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-othoxyethanol, benzene 2-nitropropane.
F006.....	Cadmium, hexavalent chromium, nickel, cyanide (complexed)
F007.....	Cyanide (salts)
F008.....	Cyanide (salts)
F009.....	Cyanide (salts)
F010.....	Cyanide (salts)
F011.....	Cyanide (salts)
F012.....	Cyanide (complexed)
F019.....	Hexavalent chromium, cyanide (complexed)
F020.....	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021.....	Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-penta-, and hexachlorodibenzofurans.
F023.....	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetra-chlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024.....	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethanel, 2 dichloroethane, trans-1–2 dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadine, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorbenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene,

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
	hexachlorobenzene, toluene, naphthalene
F025.....	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrechloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butatiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans
F027.....	Teta-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-.penta-, and exachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032.....	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.
F034.....	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.
F035.....	Arsenic, chromium, lead.
F037.....	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F038.....	Benzene, benzo(a)pyrene chrysene, lead, chromium.
F039.....	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and non-wastewaters) under 40 CFR 268.43(a), Table CCW.
K001.....	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)-anthracene, acenaphthalene
K002.....	Hexavalent chromium, lead
K003.....	Hexavalent chromium, lead
K004.....	Hexavalent chromium
K005.....	Hexavalent chromium, lead
K006.....	Hexavalent chromium
K007.....	Cyanide (complexed), hexavalent chromium
K008.....	Hexavalent chromium
K009.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid
K010.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde
K011.....	Acrylonitrile, acetonitrile, hydrocyanic acid
K013.....	Hydrocyanic acid, acrylonitrile, acetonitrile
K014.....	Acetonitrile, acrylamide
K015.....	Benzyl chloride, chlorobenzene, toluene, benzotrichloride
K016.....	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene
K017.....	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers] trichloropropane, dichloropropanols

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K018.....	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene
K019.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene,tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride
K020.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-trachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride
K021.....	Antimony, carbon tetrachloride, chloroform
K022.....	Phenol, tars (polycyclic aromatic hydrocarbons)
K023.....	Phthalic anhydride, maleic anhydride
K024.....	Phthalic anhydride, 1,4-naphthoquinone
K025.....	Meta-dinitrobenzene, 2,4-dinitrotoluene
K026.....	Paraldehyde, pyridines, 2-picoline
K027.....	Toluene diisocyanate, toluene-2, 4-diamine
K028.....	1,1,1-trichloroethane, vinyl chloride
K029.....	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform
K030.....	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride
K031.....	Arsenic
K032.....	Hexachlorocyclopentadiene
K033.....	Hexachlorocyclopentadiene
K034.....	Hexachlorocyclopentadiene
K035.....	Creosote, chryene, naphthalene, fluoranthene benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene
K036.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K037.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K038.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters
K039.....	Phosphorodithioic and phosphorothioic acid esters
K040.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters
K041.....	Toxaphene
K042.....	Hexachlorobenzene, ortho-dichlorobenzene
K043.....	2,4-dichlorophenol, 2,6-dichlorophenol 2,4,6-trichlorophenol
K044.....	N.A.
K045.....	N.A.
K046.....	Lead
K047.....	N.A.
K048.....	Hexavalent chromium, lead
K049.....	Hexavalent chromium, lead
K050.....	Hexavalent chromium
K051.....	Hexavalent chromium, lead
K052.....	Lead
K060.....	Cyanide, napthalene, phenolic compounds, arsenic
K061.....	Hexavalent chromium, lead, cadmium
K062.....	Hexavalent chromium, lead
K064.....	Lead, cadmium
K065.....	Do
K066.....	Do
K069.....	Hexavalent chromium, lead, cadmium

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K071.....	Mercury
K073.....	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane
K083.....	Aniline, diphenylamine, nitrobenzene, phenylenediamine
K084.....	Arsenic
K085.....	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride
K086.....	Lead, hexavalent chromium
K087.....	Phenol, naphthalene
K088.....	Cyanide (complexes)
K090.....	Chromium
K091.....	Do
K093.....	Phthalic anhydride, maleic anhydride
K094.....	Phthalic anhydride
K095.....	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane
K096.....	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane
K097.....	Chlordane, heptachlor
K098.....	Toxaphene
K099.....	2,4-dichlorophenol, 2,4,6-trichlorophenol
K100.....	Hexavalent chromium, lead, cadmium
K101.....	Arsenic
K102.....	Arsenic
K103.....	Aniline, nitrobenzene, phenylenediamine
K104.....	Aniline, benzene, diphenylamine, nitrobenzene phenylenediamine
K105.....	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol
K106.....	Mercury
K107.....	1,1-Dimethylhydrazine (UDMH).
K108.....	1,1-Dimethylhydrazine (UDMH).
K109.....	1,1-Dimethylhydrazine (UDMH).
K110.....	1,1-Dimethylhydrazine (UDMH).
K111.....	2,4-Dinitrotoluene
K112.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K113.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K114.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K115.....	2,4-Toluenediamine
K116.....	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene
K117.....	Ethylene dibromode
K118.....	Ethylene dibromode
K123.....	Ethylene thiourea
K124.....	Ethylene thiourea
K125.....	Ethylene thiourea
K126.....	Ethylene thiourea
K131.....	Dimethyl sulfate, Methyl bromide
K132.....	Methyl bromide
K136.....	Ethylene dibromode
K140	2,4,6-Tribromophenol
K141.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K142.....	Benzene,benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K143.....	Benzene, benz(a)anthracene, benzo(b)fluoranthene benzo(k)fluoranthene.
K144.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene.

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K145.....	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthrancene, naphthalene.
K147.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene. benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K148.....	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K149.....	Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1, 2, 4,5-tetrachlorobenzene, toluene.
K150.....	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4-5-tetrachlorobenzene, 1,1-2-2-tetrachloroethene, tetrachloroethylene, 1,2-4-trichlorobenzene.
K151.....	Benzene, carbon tetrachloride, chloroform, hexachorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene.
K156.....	Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine
K157.....	Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine
K158.....	Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride
K159.....	Benzene, butylate, eptc, molinate, pebulate, vemolate
K160.....	Benzene, butylate, eptc, molinate, pebulate, vemolate
K161.....	Antimony, arsenic, metam-sodium, ziram

N.A. - Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

APPENDIX VIII TO PART 261 HAZARDOUS CONSTITUENTS

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
A2213	Ethanimidothioic acid, 2- (dimethylamino) N-hydroxy-2-oxo-, methyl ester	30558-43-1	U394
Acetonitrile	Same	75-05-8	U003
Acetophenone	Ethanone, 1-phenyl-	98-86-2	U004
2-Acetylaminefluarone	Acetamide, N-9H-fluoren-2-yl	53-96-3	U005
Acetyl chloride	Same	75-36-5	U006
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2	P002
Acrolein	2-Propenal	107-02-8	P003
Acrylamide	2-Propenamide	79-06-1	U007
Acrylonitrile	2-Propenenitrile	107-13-1	U009
Aflatoxins	Same	1402-68-2	.....
Aldicarb	Propanal, 2-methyl-2-(methylthio)- O-[(methylamino) carbonyl]oxime	116-06-3	P070
Aldicarb sulfone	Propanal, 2-methyl-2- (methylsulfonyl)-, 0-[(methylamino) carbonyl]'oxime	646-88-4	P203
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10, 10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-	309-00-2	P004
Allyl alcohol	2-Propen-1-ol	107-18-6	P005
Allyl chloride	1-Propane, 3-chloro	107-18-6	
Aluminum phosphide	Same	20859-73-8	P006
4-Aminobiphenyl	(1,1'-Biphenyl)-4-amine	92-67-1	
5-(Aminomethyl)- 3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4	P007
4-Aminopyridine	4-Pyridinamine	504-24-5	P008
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5	U011
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6	P119
Aniline	Benzenamine	62-53-3	U012
Antimony	Same	7440-36-0	
Antimony compounds, N.O.S.[1]	.....	.....	.....
Aramite	Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1- dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	.....
Arsenic	Same	7440-38-2	.....
Arsenic compounds, N.O.S.[1]	.....	.....	.....
Arsenic acid	Arsenic acid H_3AsO_4	7778-39-4	P010
Arsenic pentoxide	Arsenic oxide As_2O_5	1303-28-2	P011
Arsenic trioxide	Arsenic oxide As_2O_3	1327-53-3	P012
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8	U014
Azaserine	L-Serine, diazoacetate (ester)	115-02-5	U015
Barban	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	101-27-9	U280
Barium	Same	7440-39-3	.....
Barium compounds, N.O.S.[1]	.....	.....	.....
Barium cyanide	Same	542-62-1	P013
Bendiocarb	1,3-Benzodioxol-4-oi, 2,2-dimethyl-, methyl carbamate	22781-23-3	U278
Bendiocarb phenol	1,3-Benzodioxol-4-oi, 2,2-dimethyl-	22961-82-6	U364
Benomyl	Carbamic acid, (1- [(butylamino) carbonyl)- 1H-benzimidazol-2-yl]- methyl	17804-35-2	U271
Benz[c]acridine	Same	225-51-4	U016
Benz[a]anthracene	Same	56-55-3	U018
Benzal chloride	Same	71-43-2	U019
Benzenearsonic acid	Arsonic acid,phenyl-	98-05-5	.....

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Common name	Chemical abstracts name	Chemical abstracts No.	Hazardous waste No.
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5	U021
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2	.....
Benzo[j]fluoranthene	Same	205-82-3	.....
Benzo(k)fluoranthene	Same	207-08-9	.....
Benzo[a]pyrene	Same	50-32-8	U022
p-Benzoquinone	2,5-Cyclohexadiene- 1,4-dione	106-51-4	U197
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7	U023
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	P028
Beryllium	Same	7440-41-7	P015
Beryllium compounds,N.O.S.[1]	.....	.....	.....
Bis (pentamethylene)-thiuram tetrasulfide	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-	120-54-7	.....
Bromoacetone	2-Propanone, 1-bromo-	598-31-2	P017
Bromoform	Methane, tribromo-	75-25-2	U225
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy	101-55-3	U030
Brucine	Strychnidin-10-one, 2,3-dimethoxy	357-57-3	P018
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	.....
Butylate	Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester	2008-41-5	.....
Cacodylic acid	Arsinic acid, dimethyl	75-60-5	U136
Cadmium	Same	7440-43-9	.....
Cadmium compounds, N.O.S.[1]	.....	.....	.....
Calcium chromate	Chromic acid, H_2CrO_4, calcium salt	13765-19-0	U032
Calcium cyanide	Calcium Cyanide $Ca(CN)_2$	92-01-8	P021
Carbaryl	1-Naphthalenol, methylcarbamate	63-25-2	U279
Carbendazim	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605-21-7	U372
Carbofuran	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	1563-66-2	P127
Carbofuran phenol	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563-38-8	U367
Carbon disulfide	Same	75-15-0	P022
Carbon oxyfluoride	Carbonic difluoride	353-50-4	U033
Carbon tetrachloride	Methane, tetrachloro-	56-23-5	U211
Carbonsulfan	Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7- benzofuranyl ester	55285-14-8	P189
Chloral	Acetaldehyde, trichloro-	75-87-6	U034
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethy)amino	305-03-3	U034
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8 -octachloro-2,3,3a,4,7,7a-hexahydro-	57-74-9	U036
Chlordane, (alpha and gamma isomers)	.....	.....	U036
Chlorinated benzenes, N.O.S.[1].	.....	.....	.....
Chlorinated ethane, N.O.S.[1]	.....	.....	.....
Chlorinated fluorocarbons, N.O.S.[1]	.....	.....	.....
Chlorinated naphthalene N.O.S.[1]	.....	.....	.....
Chlorinated phenol,N.O.S.[1]	.....	.....	.....
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)	494-03-1	U026
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0	P023

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Chloroalkyl ethers, N.O.S.[1]	.....	.....	.....
p-Chloroaniline	Benzenamine, 4-chloro	106-47-8	P024
Chlorobenzene	Benzene, chloro	108-90-7	U037
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8	U042
Chloroform	Methane, trichloro-	67-66-3	U044
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2	U046
beta Chloronaphthalene	Napthalene, 2-chloro	91-58-7	U047
o-Chlorophenol	Phenol, 2-chloro-	95-57-8	U048
1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1	P026
Chloroprene	1,3-Butadiene,2-Chloro-	126-99-8	.....
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7	P027
Chromium	Same	7440-47-3	.....
Chromium compounds, N.O.S.[1]	.....	.....	.....
Chrysene	Same	218-01-9	U050
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]	6358-53-8	.....
Coal tar creosote	Same	8007-45-2	.....
Copper cyanide	Copper cyanide CuCN	544-92-3	P029
Copper dimethyldithiocabamate.	Copper, bis-dimethylcarbamodithioato-S,S')-	137-29-1	.....
Creosote	Same	.....	U051
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3	U052
Crotonaldehyde	2-Butenal	4170-30-3	U053
m-Cumenyl methylcarbamate	Phenol, 3-(methylethyl)-, methyl carbamate	64-00-6	P202
Cyanides (soluble salts and complexes) N.O.S.[1]	.....	.....	P030
Cyanogen	Ethanedinitrile	460-19-5	P031
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3	U246
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4	P033
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy) methyl	14901-08-7	.....
Cycloate	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	1134-23-2	.....
2-Cyclohexyl-4,6-dinitrophenol. Phenol,	2-cyclohexyl-4,6-dinitro	131-89-5	P034
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N,-bis) 2-chloroethyl)tetrahydro-,2-oxide	50-18-0	U058
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	U240
2,4-D, salts, esters	.....	.....	U240
Daunomycin	5,12-Naphthacenedione, -8-acetyl-10- [(3-amino-2,3,6-trideoxy-alpha-*L*-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-(8S-cis)-	20830-81-3	U059
DDD	Benzene, 1,1'-(2,2-dichloroethylidene bis[4-chloro-	72-54-8	U060
DDE	Benzene, 1,1'-(dichloroethenylindene bis[4-chloro-	72-55-9	.....
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-chloro-	50-29-3	U061
Dazomet	2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl	533-74-4	.....
Diallate	Carbamothioic acid, bis(1-methylethyl) -S-(2,3-dichloro-2-propenyl) ester	2303-16-4	U062
Dibenz[a,h]acridine	Same	226-36-8	.....
Dibenz[a,j]acridine	Same	224-42-0	.....
Dibenz[a,h]anthracene	Same	53-70-3	U063
7H-Dibenzo[c.g]carbazole	Same	194-59-2	.....
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4	.....

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0	.....
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9	U064
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro	96-12-8	U066
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	U069
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	U070
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1	U071
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	U072
Dichlorobenzene, N.O.S[1]	Benzene, dichloro-	25321-22-6	.....
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1	U073
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0	U074
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8	U075
Dichloroethylene, N.O.S[1]	Dichloroethylene	25323-30-2	.....
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4	U078
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5	U079
Dichloroethyl ether	Ethane, 1,1'oxybis[2-chloro-	111-44-4	U025
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1	U027
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro	111-91-1	U024
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1	P016
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2	U081
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0	U082
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6	P036
Dichloropropane, N.O.S.[1]	Propane, dichloro-	26638-19-7	.....
Dichloropropanol,N.O.S.[1]	Propanol, dichloro-	26545-73-3	.....
Dichloropropene, N.O.S.[1]	1-Propene, dichloro-	26952-23-8	.....
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6	U084
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro -1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta, 6 beta,6 aalpha,7beta,7aalpha	60-57-1	P037
1,2:3,4-Diepoxybutane	2,2'Bioxirane	1464-53-5	U085
Diethylarsine	Arsine, diethyl-	692-42-2	P038
Diethylene glycol, dicarbamate	Ethanol, 2,2'-oxybis-, dicarbamate	5952-26-1	U395
1,4 Diethyleneoxide	1,4 Dioxane	123-91-1	U108
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexy) ester	117-81-7	U028
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl	1615-80-1	U086
O,O-Diethyl S-methyl dithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2	U087
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl-4-nitrophenyl ester	311-45-5	P041
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	U088
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2	P040
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl) bis,(E)	56-53-1	U089
Dihydrosafrole	1,3 Benzodioxole, 5-propyl-	94-58-6	U090
Diisopropylfluorophos-phate (DFP)	Phosphorofluoridic acid, bis(1-methylethyl) phate ester	55-91-4	P043
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5	P044
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4	U091
p-Dimethylaminoazo-benzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7	U093
7,12-Dimethylbenz[a] anthracene	Benz[a]anthracene, 7,12-dimethyl	57-97-6	U094

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'diamine, 3,3'-dimethyl-	119-93-7	U095
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7	U097
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7	U098
1,2-Dimethylthydrazine	Hydrazine, 1,2-dimethyl-	540-73-8	U099
alpha, alpha-Dimethyl phenethylamine	Benzene ethanamine, alpha,alpha-dimethyl-	122-09-8	P046
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9	U101
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3	U102
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1	U103
Dimetilan	Carbamic acid, dimethyl-, 1- [(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester	644-64-4	P191
Dinitrobenzene, N.O.S[1]	Benzene, dinitro	25154-54-5	.....
4,6-Dinitro-o- cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1	P047
4,6-Dinitro-o-cresol salts	.....	.....	P047
2,4-Dinitrophenol	Phenol, 2,4-dinitro	51-28-5	P048
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro	121-14-2	U105
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2	U106
Dinoseb	Phenol, 2-(l-methylpropyl)-4,6-dinitro	88-85-7	P020
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0	U017
Diphenylamine	Benzenamine, N-phenyl-	122-39-4	.....
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7	U109
Di-n-propynitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7	U111
Disulfiram	Thioperoxydicarbonic diamide, tetraethyl	97-77-8	.....
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4	P039
Dithiobiuret	Thiomidodicarbonic diamide.$[(H_2N)C(S)]_2NH$	541-53-7	P049
EPTC	Carbamothioic acid, dipropyl-, S-ethyl ester	759-94-4	.....
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10, 10-hexachloro-1,5,5a,6,9,9a- hexahydro,3-oxide	115-29-7	P050
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3	P088
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5, 6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(aalpha,2beta,2abeta,3alpha,6alpha, 6abeta,7beta,7aalpha)-	72-20-8	P051
Endrin metabolites	.....	.....	P051
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8	U041
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4	P042
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-79-6	U238
Ethyl cyanide	Propanenitrile	107-12-0	P101
Ethyl Ziram	Zinc, bis-diethylcarbamodithioato-S,S')-	14324-55-1	.....
Ethylenebisdithio-carbamic acid,	Carbamodithioic acid, 1,2-ethanediylbis-	111-54-6	U114
Ethylenebisdithio-carbamic acid, salts and esters	.....	.....	U114
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4	U067
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2	U077
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy	110-80-5	U359
Ethyleneimine	Aziridine	151-56-4	P054
Ethylene oxide	Oxirane	75-21-8	U115
Ethylenethiourea	2-Imidazolidinethione	96-45-7	U116
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3	U076
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2	U118
Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	62-50-0	U119
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl] phenyl] O,O-dimethyl ester	52-85-7	P097

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Common name	Chemical abstracts name	Chemical abstracts No.	Hazardous waste No.
Ferbam	Iron, tris(dimethylcarbamodithioat-S,S)-,	14484-64-1	.....
Fluoranthene	Same	206-44-0	U120
Fluorine	Same	7782-41-4	P056
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7	P057
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8	P058
Formaldehyde	Same	50-00-0	U122
Formetanate hydrochloride	Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride	23422-53-9	P198
Formic Acid	Same	64-18-6	U123
Formparanate	Methanimidamide, N,N-dimethyl-N'-[2-methyl-.4-[[(methylamino) carbonyl]oxy]phenyl]-	17702-57-7	P197
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4	U126
Halomethanes, N.O.S.[1]	.....	.....	.....
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8	P059
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6, 7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, 1aalpha,1bbeta 2alpha, 5alpha 5abeta, 6aalpha)-	1024-57-3	.....
Heptachlor epoxide (alpha,beta and gamma isomers)	.....	.....	.....
Heptachlorodibenzofurans	.....	.....	.....
Heptachlorodibenzo-p-dioxins	.....	.....	.....
Hexachlorobenzene	Benzene, hexachloro-	118-74-1	U127
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	U128
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro	77-47-4	U130
Hexachlorodibenzo-p-dioxins	.....	.....	
Hexachlorodibenzofurans	.....	.....	
Hexachloroethane	Ethane, hexachloro-	67-72-1	U131
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4	U132
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	U243
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4	P062
Hydrazine	Same	302-01-2	U133
Hydrogen cyanide	Hydrocyanic acid	74-90-8	P063
Hydrogen fluoride	Hydrofluoric acid	7664-39-3	U134
Hydrogen sulfide	Hydrogen sulfide H_2S	7783-06-4	U135
Indeno[1,2,3cd]pyrene	Same	193-39-5	U137
3-Iodo-2-propynyl n-butylcarbamate	Carbamic acid, butyl-, 3-iodo-2-propynyl ester	55406-53-6	.....
Isobutyl alcohol	1-Propanol, 2-methyl	78-83-1	U140
Isodrin	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1alpha, 4alpha,4abeta,5beta,8beta,8abeta)-	465-73-6	P060
Isolan	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester	119-38-0	P192
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	U141
Kepone	1,3,4-Metheno-2H-cyclobuta[cd]-pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	143-50-0	U142
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl] -2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]	303-34-4	4143
Lead	Same	7439-92-1	.....
Lead compounds, N.O.S.[1]	.....	.....	.....
Lead acetate	Acetic acid, lead(2+) salt	301-04-2	U144
Lead phosphate	Phosphoric acid, lead(2+) salt(2:3)	7446-27-7	U145
Lead subacetate	Lead, bis(acetato-O)tetrahydroxtri-	1335-32-6	U146

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Lindane	Cyclohexane, 1,2,3,4,5,6-Hexachloro (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9	U129
MMNG	Guanidine, N-methyl-N'-nitro-N-nitroso	70-25-7	U163
Maleic anhydride	2,5-Furandione	108-31-6	U147
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro	123-33-1	U148
Malononitrile	Propanedinitrile	109-77-3	U149
Manganese dimethyldithio-carbamate	Manganese, bis(dimethylcarbamodithioato-S,S')-	15339-36-3	P196
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	148-82-3	U150
Mercury	Same	7439-97-6	U151
Mercury compounds, N.O.S.[1]			
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4	P065
Metam Sodium	Carbamodithioic acid, methyl-, monosodium salt	137-42-8	*
Methacrylonitrile	2-Propanenitrile, 2-methyl-	126-98-7	U152
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl N'-(2-thienylmethyl)	91-80-5	U155
Methiocarb	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032-65-7	P199
Methomyl	Ethanimidothioic acid, N-[[(methylamino), carbonyl]oxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy-	72-43-5	U247
Methyl bromide	Methane, bromo-	74-83-9	U029
Methyl chloride	Methane, chloro-	74-87-3	U045
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1	U156
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6	U226
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5	U157
4,4'-Methylenebis(2-chloro-aniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4	U158
Methylene bromide	Methane, dibromo-	74-95-3	U068
Methylene chloride	Methane, dichloro-	75-09-2	U080
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3	U159
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4	U160
Methyl hydrazine	Hydrazine, methyl	60-34-4	P068
Methyl iodide	Methane, iodo-	74-88-4	U138
Methyl isocyanate	Methane, isocyanato-	624-83-9	P064
2-Methyllactonitrile	Propanenitrile, 2-hydroxy-2-methyl	75-86-5	P069
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	U162
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3	
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester	298-00-0	P071
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo	56-04-2	U164
Metolcarb	Carbamic acid, methyl-, 3-methylphenyl ester	1129-41-5	P190
Mexacarbate	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	315-18-4	P128
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4, 7-dione,6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-[1aS-(1aalpha,8beta,8aalpha8balpha)]-	50-07-7	U010
Molinate	1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212-67-1	
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2	
Naphthalene	Same	91-20-3	U165
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4	U166
alpha-Naphthylamine	1-Naphthalenamine	134-32-7	U167

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
beta-Naphthylamine	2-Naphthalenamine	91-59-8	U168
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4	P072
Nickel	Same	7440-02-0	.....
Nickel compounds,N.O.S.[1]	.....	.....	.....
Nickel carbonyl	Nickel carbonyl, $Ni(CN)_4$,(T-4)-	13463-39-3	P073
Nickel cyanide	Nickel cyanide $Ni(CN)_2$	557-19-7	P074
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-	54-11-5	P075
Nicotine salts	.....	.....	P075
Nitric oxide	Nitrogen oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 4-nitro	100-01-6	P077
Nitrobenzene	Benzene, nitro-	98-95-3	U169
Nitrogen dioxide	Nitrogen oxide NO_2	10102-44-0	P078
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2	.....
Nitrogen mustard hydro-chloride salt	.....	.....	.....
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-Methyl, N-oxide	126-85-2	.....
Nitrogen mustard, N-oxide, hydrochloride salt	.....	.....	.....
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0	P081
p-Nitrophenol	Phenol, 4-nitro	100-02-7	U170
2-Nitropropane	Propane, 2-nitro-	79-46-9	U171
Nitrosamines, N.O.S[1]	.....	35576-91-1D	.....
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3	U172
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7	U173
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5	U174
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9	P082
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9	U176
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso	10595-95-6	.....
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5	U177
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2	U178
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0	P084
N-Nitrosomorpholine	Morpholine, N-nitroso-	59-89-2	.....
N-Nitrosonornicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8	.....
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4	U179
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2	U180
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9	.....
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro	99-55-8	U181
Octamethylpyrophosphoramide	Diphosphoramide, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide (OsO_4) (T-4)-	.20616-12-0	P087
Oxamyl	Ethanimidothioc acid, 2-(dimethylamin [[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester	23135-22-0	P194
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7	U182
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2	P089
Pebulate	Carbomothioic acid, butylethyl-, S-propyl ester	1114-71-2	.....
Pentachlorobenzene	Benzene, pentachloro-	608-93-5	U183
Pentachlorodibenzo-p-dioxins	.....	.....	.....
Pentachlorodibenzofurans	.....	.....	.....
Pentachloroethane	Ethane, pentachloro	76-01-7	U184
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro	82-68-8	U185

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Common name	Chemical abstracts name	Chemical abstracts No.	Hazardous waste No.
Pentachlorophenol	Phenol, pentachloro-	87-86-5	See F027
Phenacetin	Acetamide, N-(4-ethoxyphenyl)	62-44-2	U187
Phenol	Same	108-95-3	U188
Phenylenediamine	Benzenediamine	25265-76-3	.....
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093
Phosgene	Carbonic dichloride	75-44-5	P095
Phosphine	Same	7803-51-2	P096
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylithio), methyl] ester	298-02-2	P094
Phthalic acid esters, N.O.S.[1]	.....	.....	.....
Phthalic anhydride	1,3-isobenzofurandione	85-44-9	U190
Physostigmine	Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a8-trimethyl-, methylcarbamate (ester), 3aS-cis)-	57-47-6	P204
Physostigmine Salicylate	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)--1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrol [2,3-b]indol-5-yl methylcarbamate ester (1:1)	57-47-6	P188
2-Picoline	Pyridine, 2-methyl-	109-06-8	U191
Polychlorinated biphenyls, N.O.S.[1]	.....	.....	.....
Potassium cyanide	Potassium cyanide K(CN)	151-50-8	P098
Potassium dimethyldithiocarbamate	Carbamodithioc acid, dimethyl, potassium salt	128-03-0	.....
Potassium n-hyroxymethyl-n-methyl-dithiocarbamate	Carbamodithioc acid, (hydroxymethyl) methyl-monopotassium salt..	51026-28-9	.....
Potassium n-methyl dithiocarbamate	Carbamodithioc acid, methyl-monopotassium salt	137-41-7	.....
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736	None
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6	P099
Promecarb	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631-37-0	P201
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5	U192
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4	U193
Propham	Carbamic acid, phenyl-, 1-methylethyl ester	122-42-9	U373
Propoxur	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	U411
Prosulfocarb	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester		
n-Propylamine	1-Propanamine	107-10-8	U194
Propargyl alcohol	2-Propyn-1-ol	107-19-7	P102
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5	U083
1,2-Proplenimine	Aziridine, 2-methyl-	75-55-8	P067
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5	.....
Pyridine	Same	110-86-1	U196
Reserpine	Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, smethyl ester. (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5	U200
Resorcinol	1,3-Benzenediol	108-46-3	U201
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2	U202
Saccharin salts	.....	.....	U202
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	U203
Selenium	Same	7782-49-2	.....

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Selenium compounds,N.O.S.[1]	.....	.....	
Selenium dioxide	Selenious acid	7783-00-8	U204
Selenium sulfide	Selenium sulfide SeS_2	7488-56-4	U205
Selenium, tetrakis (dimethyl-dithiocarbamate)	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid	144-34-3	.....
Selenourea	Same	630-10-4	P103
Silver	Same	7440-22-4	.....
Silver compounds, N.O.S.[1]	.....		
Silver cyanide	Silver cyanide Ag(CN)	506-64-9	P104
Silvex (2,4,5-TP)	Propanoic acid, 2-2(2,4,5-trichlorophenoxy)-	93-72-1	See F027
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9	P106
Sodium dibutyldithio-carbamate	Carbamodithioic acid, dibutyl, sodium salt	136-30-1	.....
Sodium diethyldithio-carbamate	Carbamodithioic acid, diethyl-, sodium salt	148-18-5	.....
Sodium dimethyldithio-carbamate	Carbamodithioic acid, dimethyl-, sodium salt	128-04-1	.....
Sodium penta-chlorophenate	Pentachlorophenol, sodium salt	131522	None
Streptozotocin	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino) carbonyl]amino]-	18883-66-4	U206
Strychnine	Strychnidin-10-one	57-24-9	P108
Strychnine salts	.....		P108
Sulfallate	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester	95-06-7	.....
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6	.....
Tetrabutyltyhiuram disulfide	Thioperoxydicarbonic diamide, tetrabutyl	1634-02-2	.....
Tetramethylthiuram monosulfide	Bis (dimethylthiocarbamoyl) sulfide	97-74-5	.....
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3	U207
Tetrachlorodibenzo-p-dioxins	.....	.....	.....
Tetrachlorodibenzofurans	.....	.....	.....
Tetrachloroethane, N.O.S.[1]	Ethane, tetrachloro-, N.O.S.	25322-20-7	.....
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6	U208
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-Tetrachloro	79-34-5	U209
Tetrachloroethylene	Ethene, Tetrachloro-	127-18-4	U210
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2	See F027
2,3,4,6-Tetrachlorophenol, potassium salt	same	53535276	None
2,3,4,6-Tetrachlorophenol, sodium salt	same	25567559	None
Tetraethyl-dithiopyrophosphate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5	P109
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2	P110
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3	P111
Tetranitromethane	Methane, tetranitro-	509-14-8	P112
Thallium	Same	7440-28-0	.....
Thallium compounds,N.O.S.[1]	.....	.....	.....
Thallic oxide	Thallium oxide Tl_2O_3	1314-32-5	P113
Thallium (I) acetate	Acetic acid, thallium(1+) salt	563-68-8	U214
Thallium (I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9	U215
Thallium (I) chloride	Thallium chloride.TlCl	7791-12-0	U216

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Thallium (I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1	U217
Thallium selenite	Selenious acid, dithallium(1+)salt	12039-52-0	P114
Thallium (I) sulfate	Sulfuric acid, dithallium(1+)salt	7446-18-6	P115
Thioacetamide	Ethanethioamide	62-55-5	U218
Thiodicarb	Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester	59669-26-0	U410
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl]oxime	39196-18-4	P045
Thiomethanol	Methanethiol	74-93-1	U153
Thiophanate-methyl	Carbamic acid, [1,2-phyenylenebis (iminocarbonothioyl)] bis-, dimethyl ester	23564-05-8	U409
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonic diamide, $[(H_2N)C(S)]_2S_2$ tetramethyl-	137-26-8	U244
Tirpate	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl]	26419-73-8	P185
Toluene	Benzene, methyl-	108-88-3	U220
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8	U221
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7	.....
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5	.....
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0	.....
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-62-5	U223
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	U328
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5	U222
p-Toluidine	Benzenamine, 4-methyl	106-49-0	U353
Toxaphene	Same	8001-35-2	P123
Triallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	2303-17-5	U389
		.....	.....
2,4,6-Tribromophenol	Tribromophenol, 2,4,6-	118-79-6	U408
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1	.....
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5	U227
Trichloroethylene	Ethene, trichloro-	79-01-6	U228
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7	P118
Trichloro-monofluoromethan	Methane, trichlorofluoro-	75-69-4	U121
2,4,5-Trichlorophenol	Phenol, 2,4, 5-trichloro-	95-95-4	See F027
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2	See F027
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5	See F027
Trichloropropane, N.O.S[1]	.....	25735-29-9	.....
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro	96-18-4	.....
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1	.....
Triethylamine	Ethanamine, N,N-diethyl-	121-44-8	U404
1,3,5-Trinitrobenzene	enzene, 1,3,5-trinitro-	99-35-4	U234
Tris(1-aziridinyl)- Aziridine, . phosphine.sulfide	1,1',1"-phosphinothioylidynetris	52-24-4	.....
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2, 3-dibromo-, phosphate (3:1)	126-72-7	U235
Trypan blue	2,7-Naphthalenedisulfonic acid, 3, 3'[(3,3'- dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]- bis[5-amino-4-hydroxy-,tetrasodium salt.	72-57-1	U236
Uracil mustard	2,4(1H,3H)-Pyrimidinedione, 5-[bis (2-chloroethyl)amino]-	66-75-1	U237
Vanadium pentoxide	Vanadium oxide V_2O_5	1314-62-1	P120
Vinyl chloride	Ethene, chloro-	75-01-4	U043
Vernolate	Carbamothioc acid, dipropyl-, S-propyl ester	1929-77-7	.....

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APPENDIX VIII TO PART 261 HAZARDOUS CONSTITUENTS

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Warfarin.....	2 H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo..... phenylbutyl)-when present at concentrations less than 0.3%.	81-81-2	U248
Warfarin.....	2 H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-..... phenylbutyl)-when present at concentrations greater than 0.3%.	81-81-2	P001
Warfarin salts, when..... present at concentrations less than 0.3%	.....	.....	U248
Warfarin salts, when ..... present at concentrations greater than 0.3%	.....	.....	P001
Zinc cyanide.....	Zinc cyanide Zn $(CN)_2$.....	557-21-1	P121
Zinc phosphide.....	Zinc phosphide Zn_3P_2, when present at..... concentrations greater than 10%.	1314-84-7	P122
Zinc phosphide.....	Zinc phosphide Zn_3P_2, when present at concentrations of 10% or less.....	1314-84-7	U249
Ziram.....Zinc, bis(dimethylcarbamodithioato-S,S')-, (T-4)-	.....	137-30-4	P205

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APPENDIX IX TO PART 261--WASTES EXCLUDED FROM NON-SPECIFIC SOURCES

TABLE 1--WASTES EXCLUDED FROM NON-SPECIFIC SOURCES

Facility	Address	Waste Description
Goodyear Tire and Rubber Co.	Randleman N.C.	Dewatered wastewater treatment sludges (EPA Hazardous Waste No. F006) generated from electroplating operations.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. June 1, 1988; February 1, 1988; December 1, 1987;
August 1, 1987; May 1, 1987; February 1, 1987; October 1, 1986; July 1, 1986;
May 1, 1986; January 1, 1986; October 1, 1985; July 1, 1985; October 1, 1984;
October 1, 1983; October 1, 1982; September 25, 1981.
Transferred and Recodified from 10 NCAC 10F .0029 Eff. April 4, 1990;
Amended Eff. January 1, 1996; April 1, 1993; February 1, 1992;
December 1, 1990; October 1, 1990.
Recodified from 15A NCAC 13A .0006 Eff. December 20, 1996.

.0107 STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE - PART 262

(a) 40 CFR 262.10 through 262.12 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

262.10 Purpose, scope, and applicability.

(a) These regulations establish standards for generators of hazardous waste.
(b) 40 CFR 261.5(c) and (d) must be used to determine the applicability of provisions of this part that are dependent on calculations of the quantity of hazardous waste generated per month.
(c) A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following sections of this part with respect to that waste: Section 262.11 for determining whether or not he has a hazardous waste. Section 262.12 for obtaining an EPA identification number, Section 262.34 for accumulation of hazardous waste, Section 262.40(c) and (d) for recordkeeping, Section 262.43 for additional reporting, and if applicable, Section 262.70 for farmers.
(d) Any person who exports or imports hazardous waste subject to the Federal manifesting requirements of part 262, or subject to the universal waste management standards of 40 CFR Part 273, or subject to State requirements analogous to 40 CFR Part 273, to or from the countries listed in §262.58(a)(1) for recovery must comply with subpart H of this part.
(e) Any person who imports hazardous waste into the United States must comply with the standards applicable to generators established in this part.
(f) A farmer who generates waste pesticides which are hazardous waste and who complies with all of the requirements of Section 262.70 is not required to comply with other standards in this Part or 40 CFR Parts 270, 264, 265, or 268 with respect to such pesticides.
(g) A person who generates a hazardous waste as defined by 40 CFR Part 261 is subject to the compliance requirements and penalties prescribed in Section 3008 of the Act if he does not comply with the requirements of this part.
(h) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this part.
(i) Persons responding to an explosives or munitions emergency in accordance with 40 CFR 264.1(g)(8)(i)(D) or (iv) or 265.1(c)(11)(i)(D) or (iv), and 270.1(c)(3)(i)(D) or (iii) are not required to comply with the standards of this part.

[Note 1: The provisions of Section 262.34 are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of Section 262.34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.]

[Note 2: A generator who treats, stores, or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in 40 CFR parts 264, 265, 266, 268, and 270.]

262.11 Hazardous waste determination.

A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:
(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
(b) He must then determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR Part 261.

[Note: Even if the waste is listed, the generator still has an opportunity under 40 CFR 260.22 to demonstrate to the Administrator that the waste from his particular facility or operation is not a hazardous waste].

(c) For purposes of compliance with 40 CFR part 268, or if the waste is not listed in subpart D of 40 CFR part 261, the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either:
  (1) Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or
  (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.
(d) If the waste is determined to be hazardous, the generator must refer to Parts 261, 264, 265, 266, 268, and 273 of this chapter for possible exclusions or restrictions pertaining to management of the specific waste.

262.12 EPA identification numbers.

(a) A generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Administrator.

(b) A generator who has not received an EPA identification number may obtain one by applying to the Administrator using EPA form 8700-12. Upon receiving the request the Administrator will assign an EPA identification number to the generator.

(c) A generator must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

(b) 40 CFR 262.20 through 262.23 (Subpart B), "The Manifest", are incorporated by reference including subsequent amendments and editions.

SUBPART B - THE MANIFEST

262.20 General requirements.

(a) A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest OMB control number 2050-0039 on EPA form 8700-22, and, if necessary, EPA form 8700-22A, according to the instructions included in the appendix to part 262.
(b) A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.
(c) A generator may also designate on the manifest one alternate facility which is permitted to handle his waste in the event an emergency prevents delivery of the waste to the primary designated facility.
(d) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must either designate another facility or instruct the transporter to return the waste.
(e) The requirements of this subpart do not apply to hazardous waste produced by generators of greater than 100 kg but less than 1000 kg in a calendar month where:
    (1) The waste is reclaimed under a contractual agreement pursuant to which:
        (i) The type of waste and frequency of shipments are specified in the agreement.
        (ii) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and
    (2) The generator maintains a copy of the reclamation agreement in his files for a period of at least three years after termination or expiration of the agreement.
(f) The requirements of this subpart and §262.32(b) do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding 40 CFR 263.10(a), the generator or transporter must comply with the requirements for transporters set forth in 40 CFR 263.30 and 263.31 in the event of a discharge of hazardous waste on a public or private right-of-way.

262.21 Acquisition of manifests.

(a) If the State to which the shipment is manifested (consignment State) supplies the manifest and requires its use, then the generator must use that manifest.
(b) If the consignment State does not supply the manifest, but the State in which the generator is located (generator State) supplies the manifest and requires its use, then the generator must use that State's manifest.
(c) If neither the generator State nor the consignment State supplies the manifest, then the generator may obtain the manifest from any source.

262.22 Number of copies.

The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

262.23 Use of the manifest.

(a) The generator must:
    (1) Sign the manifest certification by hand; and
    (2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
    (3) Retain one copy, in accordance with Section 262.40(a).
(b) The generator must give the transporter the remaining copies of the manifest.
(c) For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this section to:
   (1) The next non-rail transporter, if any; or
   (2) The designated facility if transported solely by rail; or
   (3) The last rail transporter to handle the waste in the United States if exported by rail.

(e) For shipments of hazardous waste to a designated facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, the generator must assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.

[Note: - See Section 263.20(e) and (f) for special provisions for rail or water (bulk shipment) transporters].

(c) 40 CFR 262.30 through 262.34 (Subpart C), "Pre-Transport Requirements", are incorporated by reference including subsequent amendments and editions.

SUBPART C - PRE-TRANSPORT REQUIREMENTS

262.30 Packaging.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR Parts 173, 178, and 179.

262.31 Labeling.

Before transporting or offering hazardous waste for transportation off-site, a generator must label each package in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172.

262.32 Marking.

(a) Before transporting or offering hazardous waste for transportation off-site, a generator must mark each package of hazardous waste in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172;

(b) Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 110 gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

> HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.
>
> Generator's Name and Address _____
> Manifest Document Number _____

262.33 Placarding.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must placard or offer the initial transporter the appropriate placards according to Department of Transportation regulations for hazardous materials under 49 CFR Part 172, Subpart F.

262.34 Accumulation time.

(a) Except as provided in paragraphs (d), (e), and (f) of this section, a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that:
  (1) The waste is placed in:
    (i) In containers and the generator complies with subparts I of 40 CFR part 265; and/or
    (ii) In tanks and the generator complies with subpart J of 40 CFR part 265, except §§265.197(c) and 265.200; and/or
    (iii) on drip pads and the generator complies with subpart W of 40 CFR part 265 and maintains the following records at the facility:
      (A) A description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days; and
      (B) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; and/or
    (iv) The waste is placed in containment buildings and the generator complies with subpart DD of 40 CFR part 265, has placed its professional engineer certification that the building complies with the design standards specified in 40 CFR 265.1101 in the facility's operating record no later than 60 days after the date of initial

operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(A) A written description of procedures to ensure that each waste volume remains in the unit for no more than 90 days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the 90 day limit, and documentation that the procedures are complied with; or

(B) Documentation that the unit is emptied at least once every 90 days. In addition, such a generator is exempt from all the requirements in subparts G and H of 40 CFR part 265, except for Sectiona 265.111 and 265.114.

(2) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.

(3) While being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste"; and

(4) The generator complies with the requirements for owners or operators in Subparts C and D in 40 CFR Part 265, with Section 265.16, and with 40 CFR 268.7(a)(4).

(b) A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270 unless he has been granted an extension to the 90-day period. Such extension may be granted by EPA if hazardous wastes must remain on-site for longer than 90 days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis.

(c) (1) A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in 261.33(e) in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with paragraph (a) of this section provided he:

(i) Complies with Sections 265.171, 265.172, and 265.173(a) of this chapter; and

(ii) Marks his containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

(2) A generator who accumulates either hazardous waste or acutely hazardous waste listed in Section 261.33(e) in excess of the amounts listed in paragraph (c)(1) of this section at or near any point of generation must, with respect to that amount of excess waste, comply within three days with paragraph (a) of this section or other applicable provisions of this chapter. During the three day period the generator must continue to comply with paragraphs (c)(1)(i)-(ii) of this section. The generator must mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(d) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status, provided that:

(1) The quantity of waste accumulated on-site never exceeds 6000 kilograms:

(2) The generator complies with the requirements of Subpart I of part 265 of this chapter, except for Sections 265.176 and 265.178;

(3) The generator complies with the requirements of Section 265.201 in Subpart J of Part 265; and

(4) The generator complies with the requirements of paragraphs (a)(2) and (a)(3) of this section, the requirements of subpart C of part 265, the requirements of 40 CFR 268.7(a)(4); and

(5) The generator complies with the following requirements:

(i) 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 paragraph (d)(5)(iv) of this section. This employee is the emergency coordinator.

(ii) The generator must post the following information next to the telephone:

(A) The names and telephone number of the emergency coordinator.

(B) Location of fire extinguishers and spill control material and, if present, fire alarm; and

(C) The telephone number of the fire department unless the facility has a direct alarm.

(iii) The generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies:

(iv) The emergency coordinator or his designee must respond to any emergencies that arise. The applicable responses are as follows:

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

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

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

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

(e) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who must transport his waste, or offer his waste for transportation, over a distance of 200 miles or more for off-site treatment, storage or disposal may accumulate hazardous waste on-site for 270 days or less without a permit or without having interim status provided that he complies with the requirements of paragraph (d) of this section.

(f) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding 6000 kg or accumulates hazardous waste for more than 180 days (or for more than 270 days if he must transport his waste, or offer his waste for transportation, over a distance of 200 miles or more) is an operator of a storage facility and is subject to the requirements of 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270 unless he has been granted an extension to the 180-day (or 270-day if applicable) period. Such extension may be granted by EPA if hazardous wastes must remain on-site for longer than 180 days (or 270 days as applicable) due to unforseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis.

(d) 40 CFR 262.40 through 262.44 (Subpart D), "Recordkeeping and Reporting", are incorporated by reference including subsequent amendments and editions. In addition, a generator shall keep records of inspections and results of inspections required by Section 262.34 for at least three years from the date of the inspection.

SUBPART D - RECORDKEEPING AND REPORTING

262.40 Recordkeeping.

(a) A generator must keep a copy of each manifest signed in accordance with Section 262.23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.

(c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with Section 262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(d) The periods or retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

262.41 Biennial Report.

(a) A generator who ships any hazardous waste off-site to a treatment, storage or disposal facility within the United States must prepare and submit a single copy of a Biennial Report to the Regional Administrator by March 1 of each even numbered year. The Biennial Report must be submitted on EPA Form 8700-13A, must cover generator activities during the previous year, and must include the following information:

(1) The EPA identification number, name, and address of the generator;

(2) The calendar year covered by the report;

(3) The EPA identification number, name, and address for each off-site treatment, storage, or disposal facility in the United States to which waste was shipped during the year;

(4) The name and EPA identification number of each transporter used during the reporting year for shipments to a treatment, storage or disposal facility within the United States;

(5) A description, EPA hazardous waste number (from 40 CFR Part 261, Subpart C or D), DOT hazard class, and quantity of each hazardous waste shipped off-site for shipments to a treatment, storage or disposal facility within the United States. This information must be listed by EPA identification number of each such off-site facility to which waste was shipped.

(6) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.

(7) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.

(8) The certification signed by the generator or authorized representative.

(b) Any generator who treats, stores or disposes of hazardous on-site must submit a biennial report covering those waste in accordance with the provisions of 40 CFR parts 270, 264, 265, and 266. Reporting for exports of hazardous waste is not required on the Biennial Report form. A separate annual report requirement is set forth at 40 CFR 262.56.

262.42 Exception reporting.

(a) (1) A generator of greater than 1000 kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.

(2) A generator of greater than 1000 kilograms of hazardous waste in a calendar month must submit an Exception Report to the EPA Regional Administrator for the Region in which the generator is located if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter.

The Exception Report must include:

(i) A legible copy of the manifest for which the generator does not have confirmation of delivery;

(ii) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(b) A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month who does 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 must submit a legible copy of the manifest, with some indication the generator has not received confirmation of delivery, to the EPA Regional Administrator for the Region in which the generator is located.

[**Note:** The submission to EPA need only be a handwritten or typed note on the manifest itself, or on an attached sheet of paper, stating that the return copy was not received.]

262.43 Additional reporting.

The Administrator, as he deems necessary under Section 2002(a) and Section 3002(6) of the Act, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in 40 CFR Part 261.

262.44 Special requirements for generators of between 100 and 1000 kg/mo.

A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month is subject only to the following requirements in this subpart:

(a) Section 262.40(a), (c), and (d), recordkeeping;
(b) Section 262.42(b), exception reporting; and
(c) Section 262.43, additional reporting.

(e) 40 CFR 262.50 through 262.58 (Subpart E), "Exports of Hazardous Waste", are incorporated by reference including subsequent amendments and editions.

SUBPART E - EXPORTS OF HAZARDOUS WASTE

262.50 Applicability.

This subpart establishes requirements applicable to exports of hazardous waste. Except to the extent 262.58 provides otherwise, a primary exporter of hazardous waste must comply with the special requirements of this subpart and a transporter transporting hazardous waste for export must comply with applicable requirements of Part 263. Section 262.58 sets forth the requirements of international agreements between the United States and receiving countries which establish different notice, export, and enforcement procedures for the transportation, treatment, storage and disposal of hazardous waste for shipments between the United States and those countries.

262.51 Definitions.

In addition to the definitions set forth at 40 CFR 260.10, the following definitions apply to this subpart:

"Consignee" means the ultimate treatment, storage or disposal facili n a receiving country to which the hazardous waste will be sent.

"EPA Acknowledgment of Consent" means the cable sent to EPA from the U.S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

"Primary Exporter" means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with 40 CFR Part 262, Subpart B, or equivalent State provision, which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

"Receiving country" means a foreign country to which a hazardous waste is sent for the purpose of treatment, storage or disposal (except short-term storage incidental to transportation).

"Transit country" means any foreign country, other than a receiving country, through which a hazardous waste is transported.

262.52 General requirements.

Exports of hazardous waste are prohibited except in compliance with the applicable requirements of this subpart and Part 263. Exports of hazardous waste are prohibited unless:

(a) Notification in accordance with 262.53 has been provided;
(b) The receiving country has consented to accept the hazardous waste;
(c) A copy of the EPA Acknowledgment of Consent to the shipment accompanies the hazardous waste shipment and, unless exported by rail, is attached to the manifest [or shipping paper for exports by water (bulk shipment)].
(d) The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgment of Consent.

262.53 Notification of intent to export.

(a) A primary exporter of hazardous waste must notify EPA of an intended export before such waste is scheduled to leave the United States. A complete notification should be submitted sixty (60) days before the initial shipment is intended to be shipped off site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the primary exporter, and include the following information:
    (1) Name, mailing address, telephone number and EPA ID number of the primary exporter;

(2) By consignee, for each hazardous waste type:

(i) A description of the hazardous waste and the EPA hazardous waste number [from 40 CFR Part 261, Subparts C and D], U.S. DOT proper shipping name hazard class and ID number [UN/NA] for each hazardous waste as identified in 49 CFR Part 171-177;

(ii) The estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;

(iii) The estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest Form (8700-22);

(iv) All points of entry to and departure from each foreign country through which the hazardous waste will pass;

(v) A description of the means by which each shipment of the hazardous waste will be transported [e.g., mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.)];

(vi) A description of the manner in which the hazardous waste will be treated, stored or disposed of in the receiving country [e.g., land or ocean incineration, other land disposal, ocean dumping, recycling];

(vii) The name and site address of the consignee and any alternate consignee; and

(viii) The name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there;

(b) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, Ariel Rios Bldg., 12th St. and Pennsylvania Ave., NW., Washington, DC. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export."

(c) Except for changes to the telephone number in paragraph (a)(1) of this section, changes to paragraph (a)(2)(v) of this section and decreases in the quantity indicated pursuant to paragraph (a)(2)(iii) of this section when the conditions specified on the original notification change [including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification], the primary exporter must provide EPA with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes [except for changes to paragraph (a)(2)(viii) of this section and in the ports of entry to and departure from transit countries pursuant to paragraph (a)(2)(iv) of this section] has been obtained and the primary exporter receives an EPA Acknowledgment of Consent reflecting the receiving country's consent to the changes.

(d) Upon request by EPA, a primary exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

(e) In conjunction with the Department of State, EPA will provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of paragraph (a) of this section. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph (a) of this section, EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(f) Where the receiving country consents to the receipt of the hazardous waste, EPA will forward an EPA Acknowledgment of Consent to the primary exporter for purposes of 262.54(h). Where the receiving country objects to receipt of the hazardous waste or withdraws a prior consent, EPA will notify the primary exporter in writing. EPA will also notify the primary exporter of any responses from transit countries.

262.54 Special manifest requirements.

A primary exporter must comply with the manifest requirements of 40 CFR 262.20-262.23 except that:

(a) In lieu of the name, site address and EPA ID number of the designated permitted facility, the primary exporter must enter the name and site address of the consignee;

(b) In lieu of the name, site address and EPA ID number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee;

(c) In Special handling Instructions and Additional Information, the primary exporter must identify the point of departure from the United States;

(d) The following statement must be added to the end of the first sentence of the certification set forth in Item 16 of the Uniform Hazardous Waste Manifest Form: "and conforms to the terms of the attached EPA Acknowledgment of Consent;"

(e) In lieu of the requirements of 262.21, the primary exporter must obtain the manifest form from the primary exporter's State if that State supplies the manifest form and requires its use. If the primary export's State does not supply the manifest form, the primary exporter may obtain a manifest form any source.

(f) The primary exporter must require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies [as defined in 40 CFR 264.72(a)] between the manifest and the shipment. A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste.

(g) In lieu of the requirements of 262.20(d), where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter must:
  (1) Re-notify EPA of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with 262.53(c) and obtain an EPA Acknowledgment of Consent prior to delivery; or
  (2) Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and
  (3) Instruct the transporter to revise the manifest in accordance with the primary exporter's instructions.

(h) The primary exporter must attach a copy of the EPA Acknowledgment of Consent to the shipment to the manifest which must accompany the hazardous waste shipment. For exports by rail or water [bulk shipment], the primary exporter must provide the transporter with an EPA Acknowledgment of Consent which must accompany the hazardous waste but which need not be attached to the manifest except that for exports by water [bulk shipment] the primary exporter must attach the copy of the EPA Acknowledgment of Consent to the shipping paper.

(i) The primary exporter shall provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States in accordance with 263.20(g)(4).

262.55 Exception reports.

In lieu of the requirements of 262.42, a primary exporter must file an exception report with the Administrator if:

(a) He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within forty-five (45) days from the date it was accepted by the initial transporter:

(b) Within ninety (90) days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received;

(c) The waste is returned to the United States.

262.56 Annual reports.

(a) Primary exporters of hazardous waste shall file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous calendar year. Such reports shall include the following:
  (1) The EPA identification number, name, and mailing and site address of the exporter;
  (2) The calendar year covered by the report;
  (3) The name and site address of each consignee;
  (4) By consignee, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number [from 40 CFR Part 261, Subpart C or D], DOT hazard class, the name and US EPA ID number [where applicable] for each transporter used, the total amount of waste shipped and number of shipments pursuant to each notification;
  (5) Except for hazardous waste produced by exporters of greater than 100 kg but less than 1000 kg in a calendar month, unless provided pursuant to 262.41, in even numbered years.
    (i) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and
    (ii) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.
  (6) A certification signed by the primary exporter which states:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

(b) Annual reports submitted by mail should be sent to the following mailing address: Office of Enforcement and compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Hand-delivered reports should be sent to Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, Ariel Rios Bldg., 12th St. and Pennsylvania Ave., NW., Washington, DC.

262.57 Recording.

(a) For all exports a primary exporter must:
  (1) Keep a copy of each notification of intent to export for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
  (2) Keep a copy of each EPA Acknowledgment of Consent for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
  (3) Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three years from the date the hazardous waste was accepted by the initial transporter; and
  (4) Keep a copy of each annual report for a period of at least three years from the due date of the report.

(b) The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

262.58 International agreements.

(a) Any person who exports or imports hazardous waste subject to Federal manifest requirements of Part 262, or subject to the universal waste management standards of 40 CFR Part 273, or subject to State requirements analogous to 40 CFR Part 273, to or from designated member countries of the Organization for Economic Cooperation and Development (OECD) as defined in paragraph (a)(1) of this section for purposes of recovery is subject to Subpart H of this part. The requirements of Subparts E and F do not apply.
  (1) For the purposes of this Subpart, the designated OECD countries consist of Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdon, and the United States.
  (2) For the purposes of this Subpart, Canada and Mexico are considered OECD member countries only for the purpose of transit.

(b) Any person who exports hazardous waste to or imports hazardous waste from: a designated OECD member country for purposes other than recovery (e.g., incineration, disposal). Mexico (for any purpose), or Canada (for any purpose) remains subject to the requirements of subparts E and F of this part.

(f) 40 CFR 262.60 (Subpart F), "Imports of Hazardous Waste", are incorporated by reference including subsequent amendments and editions.

SUBPART F - IMPORTS OF HAZARDOUS WASTE

262.60 Imports of hazardous waste.

(a) Any person who imports hazardous waste from a foreign country into the United States must comply with the requirements of this part and the special requirements of this subpart.

(b) When importing hazardous waste, a person must meet all the requirements of 262.20(a) for the manifest except that:

(1) In place of the generator's name, address and EPA identification number, the name and address of the foreign generator and the importer's name, address and EPA identification number must be used.

(2) In place of the generator's signature on the certification statement, the U.S. importer or his agent must sign and date the certification and obtain the signature of the initial transporter.

(c) A person who imports hazardous waste must obtain the manifest form from the consignment State if the State supplies the manifest and requires its use. If the consignment State does not supply the manifest form, then the manifest form may be obtained from any source.

(g) 40 CFR 262.70 (Subpart G), "Farmers" is incorporated by reference including subsequent amendments and editions.

SUBPART G - FARMERS

262.70 Farmers.

A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards in this part or other standards in 40 CFR Parts 264, 265, 268, or 270 for those wastes provided he triple rinses each emptied pesticide container in accordance with 261.7(b)(3) and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label.

(h) 40 CFR 262.80 through 262.89 (Subpart H), "Transfrontier Shipments of Hazardous Waste for Recovery within the OECD" are incorporated by reference including subsequent amendments and editions, except that 40 CFR 262.89(e) is not incorporated by reference.

SUBPART H - TRANSFRONTIER SHIPMENTS OF HAZARDOUS WASTE FOR RECOVERY WITHIN THE OECD

262.80 Applicability.

(a) The requirements of this subpart apply to imports and exports of wastes that are considered hazardous under U.S. national procedures and are destined for recovery operations in the countries listed in § 262.58(a)(1). A waste is considered hazardous under U.S. national procedures if it meets the Federal definition of hazardous waste in 40 CFR 261.3 and it is subject to either the Federal manifesting requirements at 40 CFR Part 262, Subpart B, to the universal waste management standards of 40 CFR Part 273, or to State requirements analogous to 40 CFR Part 273.

(b) Any person (notifier, consignee, or recovery facility operator) who mixes two or more wastes (including hazardous and non-hazardous wastes) or otherwise subjects two or more wastes (including hazardous and non-hazardous wastes) to physical or chemical transformation operations, and thereby creates a new hazardous waste, becomes a generator and assumes all subsequent generator duties under RCRA and any notifier duties, if applicable, under this subpart.

262.81 Definitions.

The following definitions apply to this subpart.

(a) Competent authorities means the regulatory authorities of concerned countries having jurisdiction over transfrontier movements of wastes destined for recovery operations.

(b) Concerned countries means the exporting and importing OECD member countries and any OECD member countries of transit.

(c) Consignee means the person to whom possession or other form of legal control of the waste is assigned at the time the waste is received in the importing country.

(d) Country of transit means any designated OECD country in § 262.58(a)(1) and (a)(2) other than the exporting or importing country across which a transfrontier movement of wastes is planned or takes place.

(e) Exporting country means any designated OECD member country in § 262.58(a)(1) from which a transfrontier movement of wastes is planned or has commenced.

(f) Importing country means any designated OECD country in § 262.58(a)(1) to which a transfrontier movement of wastes is planned or takes place for the purpose of submitting the wastes to recovery operations therein.

(g) Notifier means the person under the jurisdiction of the exporting country who has, or will have at the time the planned transfrontier movement commences, possession or other forms of legal control of the wastes and who proposes their transfrontier movement for the ultimate purpose of submitting them to recovery operations. When the United States (U.S.) is the exporting country, notifier is interpreted to mean a person domiciled in the U.S.

(h) OECD area means all land or marine areas under the national jurisdiction of any designated OECD member country in § 262.58. When the regulations refer to shipments to or from an OECD country, this means OECD area.

(i) Recognized trader means a person who, with appropriate authorization of concerned countries, acts in the role of principal to purchase and subsequently sell wastes; this person has legal control of such wastes from time of purchase to time of sale; such a person may act to arrange and facilitate transfrontier movements of wastes destined for recovery operations.

(j) Recovery facility means an entity which, under applicable domestic law, is operating or is authorized to operate in the importing country to receive wastes and to perform recovery operations on them.

(k) Recovery operations means activities leading to resource recovery, recycling, reclamation, direct re-use or alternative uses as listed in Table 2.B of the Annex of OECD Council Decision C(88)90(Final) of 27 May 1988, (available from the Environmental Protection Agency, RCRA Information Center (RIC), 1235 Jefferson-Davis Highway, first floor, Arlington, VA 22203 (Docket # F-94-IEHF-FFFFF) and the Organisation for Economic Co-operation and Development, Environment Direcorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France) which include:

R1 Use as a fuel (other than in direct incineration) or other means to generate energy

R2 Solvent reclamation/regeneration

R3 Recycling/reclamation of organic substances which are not used as solvents
R4 Recycling/reclamation of metals and metal compounds
R5 Recycling/reclamation of other inorganic materials
R6 Regeneration of acids or bases
R7 Recovery of components used for pollution control
R8 Recovery of components from catalysts
R9 Used oil re-refining or other reuses of previously used oil
R10 Land treatment resulting in benefit to agriculture or ecological improvement
R11 Uses of residual materials obtained from any of the operations numbered R1-R10
R12 Exchange of wastes for submission to any of the operations numbered R1-R11
R13 Accumulation of material intended for any operation in Table 2.B

(l) *Transfrontier movement* means any shipment of wastes destined for recovery operations from an area under the national jurisdiction of one OECD member country to an area under the national jurisdiction of another OECD member country.

262.82 General conditions.

(a) Scope. The level of control for exports and imports of waste is indicated by assignment of the waste to a green, amber, or red list and by U.S. national procedures as defined in § 262.80(a). The green, amber, and red lists are incorporated by reference in § 262.89 (e).

(1) Wastes on the green list are subject to existing controls normally applied to commercial transactions, except as provided below:
(i) Green-list wastes that are considered hazardous under U.S. national procedures are subject to amber-list controls.
(ii) Green-list waste that are sufficiently contaminated or mixed with amber-list wastes, such that the waste or waste mixture is considered hazardous under U.S. national procedures, are subject to amber-list controls.
(iii) Green-list wastes that are sufficiently contaminated or mixed with other wastes subject to red-list controls such that the waste or waste mixture is considered hazardous under U.S. national procedures must be handled in accordance with the red-list controls.

(2) Wastes on the amber list that are considered hazardous under U.S. national procedures as defined in § 262.80(a) are subject to the amber-list controls of this Subpart.
(i) If amber-list wastes are sufficiently contaminated or mixed with other wastes subject to red-list controls such that the waste or waste mixture is considered hazardous under U.S. national procedures, the wastes must be handled in accordance with the red-list controls.
(ii) [Reserved].

(3) Wastes on the red list that are considered hazardous under U.S. national procedures as defined in § 262.80(a) are subject to the red-list controls of this subpart.

Note to paragraph (a)(3): Some wastes on the amber or red lists are not listed or otherwise identified as hazardous under RCRA (e.g., polychlorinated biphenyls) and therefore are not subject to the amber- or red-list controls of this subpart. Regardless of the status of the waste under RCRA, however, other Federal environmental statutes (e.g., the Toxic Substances Control Act) may restrict certain waste imports or exports. Such restrictions continue to apply without regard to this Subpart.

(4) Wastes not yet assigned to a list are eligible for transfrontier movements, as follows:
(i) If such wastes are considered hazardous under U.S. national procedures as defined in § 262.80(a), these wastes are subject to the red-list controls; or
(ii) If such wastes are not considered hazardous under U.S. national procedures as defined in § 262.80(a), such wastes may move as though they appeared on the green list.

(b) General conditions applicable to transfrontier movements of hazardous waste.
(1) The waste must be destined for recovery operations at a facility that, under applicable domestic law, is operating or is authorized to operate in the importing country;
(2) The transfrontier movement must be in compliance with applicable international transport agreements; and

Note to paragraph (b)(2): These international agreements include, but are not limited to, the Chicago Convention (1944), ADR (1957), ADNR (1970), MARPOL Convention (1973/1978), SOLAS Convention (1974), IMDG Code (1985), COTIF (1985), and RID (1985).

(3) Any transit of waste through a non-OECD member country must be conducted in compliance with all applicable international and national laws and regulations.

(c) Provisions relating to re-export for recovery to a third country.

(1) Re-export of wastes subject to the amber-list control system from the U.S., as the importing country, to a third country listed in § 262.58(a)(1) may occur only after a notifier in the U.S. provides notification to and obtains consent of the competent authorities in the third country, the original exporting country, and new transit countries. The notification must comply with the notice and consent procedures in § 262.83 for all concerned countries and the original exporting country. The competent authorities of the original exporting country as well as the competent authorities of all other concerned countries have 30 days to object to the proposed movement.

(i) The 30-day period begins once the competent authorities of both the initial exporting country and new importing country issue Acknowledgements of Receipt of the notification.

(ii) The transfrontier movement may commence if no objection has been lodged after the 30-day period has passed or immediately after written consent is received from all relevant OECD importing and transit countries.

(2) Re-export of waste subject to the red-list control system from the original importing country to a third country listed in § 262.58(a)(1) may occur only following notification of the competent authorities of the third country, the original exporting country, and new transit countries by a notifier in the original importing country in accordance with § 262.83. The transfrontier movement may not proceed until receipt by the original importing country of written consent from the competent authorities of the third country, the original exporting country, and new transit countries.

(3) In the case of re-export of amber or red-list wastes to a country other than those in § 262.58(a)(1), notification to and consent of the competent authorities of the original OECD member country of export and any OECD member countries of transit is required as specified in paragraphs (c)(1) and (c)(2) of this section in addition to compliance with all international agreements and arrangements to which the first importing OECD member country is a party and all applicable regulatory requirements for exports from the first importing country.

262.83 Notification and consent.

(a) Applicability. Consent must be obtained from the competent authorities of the relevant OECD importing and transit countries prior to exporting hazardous waste destined for recovery operations subject to this Subpart. Hazardous wastes subject to amber-list controls are subject to the requirements of paragraph (b) of this section; hazardous wastes subject to red-list controls are subject to the requirements of paragraph (c) of this section; and wastes not identified on any list are subject to the requirements of paragraph (d) of this section.

(b) Amber-list wastes. The export from the U.S. of hazardous wastes as described in § 262.80(a) that appear on the amber list is prohibited unless the notification and consent requirements of paragraph (b)(1) or paragraph (b)(2) of this section are met.

(1) Transactions requiring specific consent:

(i) Notification. At least 45 days prior to commencement of the transfrontier movement, the notifier must provide written notification in English of the proposed transfrontier movement to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, with the words "Attention: OECD Export Notification" prominently displayed on the envelope. This notification must include all of the information identified in paragraph (e) of this section. In cases where wastes having similar physical and chemical characteristics, the same United Nations classification, and the same RCRA waste codes are to be sent periodically to the same recovery facility by the same notifier, the notifier may submit one notification of intent to export these wastes in multiple shipments during a period of up to one year.

(ii) Tacit consent. If no objection has been lodged by any concerned country (i.e., exporting, importing, or transit countries) to a notification provided pursuant to paragraph (b)(1)(i) of this section within 30 days after the date of issuance of the Acknowledgment of Receipt of notification by the competent authority of the importing country, the transfrontier movement may commence. Tacit consent expires one calendar year after the close of the 30 day period; renotification and renewal of all consents is required for exports after that date.

(iii) Written consent. If the competent authorities of all the relevant OECD importing and transit countries provide written consent in a period less than 30 days, the transfrontier movement may commence immediately after all necessary consents are received. Written consent expires for each relevant OECD importing and transit country one calendar year after the date of that country's consent unless otherwise specified; renotification and renewal of each expired consent is required for exports after that date.

(2) Shipments to facilities pre-approved by the competent authorities of the importing countries to accept specific wastes for recovery:

(i) The notifier must provide EPA the information identified in paragraph (e) of this section in English, at least 10 days in advance of commencing shipment to a pre-approved facility. The notification should

indicate that the recovery facility is pre-approved, and may apply to a single specific shipment or to multiple shipments as described in paragraph (b)(1)(i) of this section. This information must be sent to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, with the words "OECD Export Notification--Pre-approved Facility" prominently displayed on the envelope.

(ii) Shipments may commence after the notification required in paragraph (b)(1)(i) of this section has been received by the competent authorities of all concerned countries, unless the notifier has received information indicating that the competent authorities of one or more concerned countries objects to the shipment.

(c) Red-list wastes. The export from the U.S. of hazardous wastes as described in § 262.80(a) that appear on the red list is prohibited unless notice is given pursuant to paragraph (b)(1)(i) of this section and the notifier receives written consent from the importing country and any transit countries prior to commencement of the transfrontier movement.

(d) Unlisted wastes. Wastes not assigned to the green, amber, or red list that are considered hazardous under U.S. national procedures as defined in § 262.80(a) are subject to the notification and consent requirements established for red-list wastes in accordance with paragraph (c) of this section. Unlisted wastes that are not considered hazardous under U.S. national procedures as defined in § 262.80(a) are not subject to amber or red controls when exported or imported.

(e) Notification information. Notifications submitted under this section must include:

(1) Serial number or other accepted identifier of the notification form;

(2) Notifier name and EPA identification number (if applicable), address, and telephone and telefax numbers;

(3) Importing recovery facility name, address, telephone and telefax numbers, and technologies employed;

(4) Consignee name (if not the owner or operator of the recovery facility) address, and telephone and telefax numbers; whether the consignee will engage in waste exchange or storage prior to delivering the waste to the final recovery facility and identification of recovery operations to be employed at the final recovery facility;

(5) Intended transporters and/or their agents;

(6) Country of export and relevant competent authority, and point of departure;

(7) Countries of transit and relevant competent authorities and points of entry and departure;

(8) Country of import and relevant competent authority, and point of entry;

(9) Statement of whether the notification is a single notification or a general notification. If general, include period of validity requested;

(10) Date foreseen for commencement of transfrontier movement;

(11) Designation of waste type(s) from the appropriate list (amber or red and waste list code), descriptions of each waste type, estimated total quantity of each, RCRA waste code, and United Nations number for each waste type; and

(12) Certification/Declaration signed by the notifier that states:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, and that any applicable insurance or other financial guarantees are or shall be in force covering the transfrontier movement.

Name:_____

Signature:_____

Date:_____

Note to paragraph (e)(12): The U.S. does not currently require financial assurance; however, U.S. exporters may be asked by other governments to provide and certify to such assurance as a condition of obtaining consent to a proposed movement.

262.84 Tracking document.

(a) All U.S. parties subject to the contract provisions of § 262.85 must ensure that a tracking document meeting the conditions of § 262.84(b) accompanies each transfrontier shipment of wastes subject to amber-list or red-list controls from the initiation of the shipment until it reaches the final recovery facility, including cases in which the waste is stored and/or exchanged by the consignee prior to shipment to the final recovery facility, except as provided in Secs. 262.84(a)(1) and (2).

(1) For shipments of hazardous waste within the U.S. solely by water (bulk shipments only) the generator must forward the tracking document with the manifest to the last water (bulk shipment) transporter to handle the waste in the U.S. if exported by water, (in accordance with the manifest routing procedures at § 262.23(c)).

(2) For rail shipments of hazardous waste within the U.S. which originate at the site of generation, the generator must forward the tracking document with the manifest (in accordance with the routing procedures for the manifest in § 262.23(d)) to the next non-rail transporter, if any, or the last rail transporter to handle the waste in the U.S. if exported by rail.

(b) The tracking document must include all information required under § 262.83 (for notification), and the following:
(1) Date shipment commenced.
(2) Name (if not notifier), address, and telephone and telefax numbers of primary exporter.
(3) Company name and EPA ID number of all transporters.
(4) Identification (license, registered name or registration number) of means of transport, including types of packaging.
(5) Any special precautions to be taken by transporters.
(6) Certification/declaration signed by notifier that no objection to the shipment has been lodged as follows:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, that any applicable insurance or other financial guarantees are or shall be in force covering the transfrontier movement, and that:
1. All necessary consents have been received; OR
2. The shipment is directed at a recovery facility within the OECD area and no objection has been received from any of the concerned countries within the 30 day tacit consent period; OR
3. The shipment is directed at a recovery facility pre-authorized for that type of waste within the OECD area; such an authorization has not been revoked, and no objection has been received from any of the concerned countries.

(delete sentences that are not applicable)

Name:_____
Signature:_____
Date:_____

(7) Appropriate signatures for each custody transfer (e.g. transporter, consignee, and owner or operator of the recovery facility).

(c) Notifiers also must comply with the special manifest requirements of 40 CFR 262.54(a), (b), (c), (e), and (i) and consignees must comply with the import requirements of 40 CFR part 262, subpart F.

(d) Each U.S. person that has physical custody of the waste from the time the movement commences until it arrives at the recovery facility must sign the tracking document (e.g. transporter, consignee, and owner or operator of the recovery facility).

(e) Within 3 working days of the receipt of imports subject to this Subpart, the owner or operator of the U.S. recovery facility must send signed copies of the tracking document to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, and to the competent authorities of the exporting and transit countries.

262.85 Contracts.

(a) Transfrontier movements of hazardous wastes subject to amber or red control procedures are prohibited unless they occur under the terms of a valid written contract, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Such contracts or equivalent arrangements must be executed by the notifier and the owner or operator of the recovery facility, and must specify responsibilities for each. Contracts or equivalent arrangements are valid for the purposes of this section only if persons assuming obligations under the contracts or equivalent arrangements have appropriate legal status to conduct the operations specified in the contract or equivalent arrangement.

(b) Contracts or equivalent arrangements must specify the name and EPA ID number, where available, of:
(1) The generator of each type of waste;
(2) Each person who will have physical custody of the wastes;
(3) Each person who will have legal control of the wastes; and
(4) The recovery facility.

(c) Contracts or equivalent arrangements must specify which party to the contract will assume responsibility for alternate management of the wastes if its disposition cannot be carried out as described in the notification of intent to export. In such cases, contracts must specify that:
(1) The person having actual possession or physical control over the wastes will immediately inform the notifier and the competent authorities of the exporting and importing countries and, if the wastes are located in a country of transit, the competent authorities of that country; and

(2) The person specified in the contract will assume responsibility for the adequate management of the wastes in compliance with applicable laws and regulations including, if necessary, arranging their return to the original country of export.(d) Contracts must specify that the consignee will provide the notification required in § 262.82(c) prior to re-export of controlled wastes to a third country.

(e) Contracts or equivalent arrangements must include provisions for financial guarantees, if required by the competent authorities of any concerned country, in accordance with applicable national or international law requirements.

Note to paragraph (e): Financial guarantees so required are intended to provide for alternate recycling, disposal or other means of sound management of the wastes in cases where arrangements for the shipment and the recovery operations cannot be carried out as foreseen. The U.S. does not require such financial guarantees at this time; however, some OECD countries do. It is the responsibility of the notifier to ascertain and comply with such requirements; in some cases, transporters or consignees may refuse to enter into the necessary contracts absent specific references or certifications to financial guarantees.

(f) Contracts or equivalent arrangements must contain provisions requiring each contracting party to comply with all applicable requirements of this subpart.

(g) Upon request by EPA, U.S. notifiers, consignees, or recovery facilities must submit to EPA copies of contracts, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Information contained in the contracts or equivalent arrangements for which a claim of confidentiality is asserted accordance with 40 CFR 2.203(b) will be treated as confidential and will be disclosed by EPA only as provided in 40 CFR 260.2.

Note to paragraph (g): Although the U.S. does not require routine submission of contracts at this time, OECD Council Decision C(92)39/FINAL allows members to impose such requirements. When other OECD countries require submission of partial or complete copies of the contract as a condition to granting consent to proposed movements, EPA will request the required information; absent submission of such information, some OECD countries may deny consent for the proposed movement.

262.86 Provisions relating to recognized traders.

(a) A recognized trader who takes physical custody of a waste and conducts recovery operations (including storage prior to recovery) is acting as the owner or operator of a recovery facility and must be so authorized in accordance with all applicable Federal laws.

(b) A recognized trader acting as a notifier or consignee for transfrontier shipments of waste must comply with all the requirements of this Subpart associated with being a notifier or consignee.

262.87 Reporting and recordkeeping.

(a) Annual reports. For all waste movements subject to this Subpart, persons (e.g., notifiers, recognized traders) who meet the definition of primary exporter in § 262.51 shall file an annual report with the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, no later than March 1 of each year summarizing the types, quantities, frequency, and ultimate destination of all such hazardous waste exported during the previous calendar year. (If the primary exporter is required to file an annual report for waste exports that are not covered under this Subpart, he may include all export information in one report provided the following information on exports of waste destined for recovery within the designated OECD member countries is contained in a separate section). Such reports shall include the following:

(1) The EPA identification number, name, and mailing and site address of the notifier filing the report;

(2) The calendar year covered by the report;

(3) The name and site address of each final recovery facility;

(4) By final recovery facility, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number (from 40 CFR part 261, subpart C or D), designation of waste type(s) from OECD waste list and applicable waste code from the OECD lists, DOT hazard class, the name and U.S. EPA identification number (where applicable) for each transporter used, the total amount of hazardous waste shipped pursuant to this Subpart, and number of shipments pursuant to each notification;

(5) In even numbered years, for each hazardous waste exported, except for hazardous waste produced by exporters of greater than 100kg but less than 1000kg in a calendar month, and except for hazardous waste for which information was already provided pursuant to § 262.41:

(i) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

(ii) A description of the changes in volume and toxicity of the waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984; and

(6) A certification signed by the person acting as primary exporter that states:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

(b) Exception reports. Any person who meets the definition of primary exporter in § 262.51 must file an exception report in lieu of the requirements of § 262.42 with the Administrator if any of the following occurs:
  (1) He has not received a copy of the tracking documentation signed by the transporter stating point of departure of the waste from the United States, within forty-five (45) days from the date it was accepted by the initial transporter;
  (2) Within ninety (90) days from the date the waste was accepted by the initial transporter, the notifier has not received written confirmation from the recovery facility that the hazardous waste was received;
  (3) The waste is returned to the United States.

(c) Recordkeeping.
  (1) Persons who meet the definition of primary exporter in § 262.51 shall keep the following records:
    (i) A copy of each notification of intent to export and all written consents obtained from the competent authorities of concerned countries for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
    (ii) A copy of each annual report for a period of at least three years from the due date of the report; and
    (iii) A copy of any exception reports and a copy of each confirmation of delivery (i.e., tracking documentation) sent by the recovery facility to the notifier for at least three years from the date the hazardous waste was accepted by the initial transporter or received by the recovery facility, whichever is applicable.
  (2) The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

§ 262.88 Pre-approval for U.S. Recovery Facilities (Reserved).

262.89 OECD Waste Lists.

(a) General. For the purposes of this Subpart, a waste is considered hazardous under U.S. national procedures, and hence subject to this Subpart, if the waste:
  (1) Meets the Federal definition of hazardous waste in 40 CFR 261.3; and
  (2) Is subject to either the Federal RCRA manifesting requirements at 40 CFR part 262, subpart B, to the universal waste management standards of 40 CFR part 273, or to State requirements analogous to 40 CFR part 273.

(b) If a waste is hazardous under paragraph (a) of this section and it appears on the amber or red list, it is subject to amber- or red-list requirements respectively;

(c) If a waste is hazardous under paragraph (a) of this section and it does not appear on either amber or red lists, it is subject to red-list requirements.

(d) The appropriate control procedures for hazardous wastes and hazardous waste mixtures are addressed in § 262.82.

[Note: The OECD Green List of Wastes, Amber List of Wastes and Red List of Wastes are available for inspection at the Office of the Federal Register, 800 North Capitol Street NW, Washington, DC; the US EPA, RCRA Information Center, 1235 Jefferson-Davis Highway, Arlington, VA; and may be obtained from the Organization for Economic Cooperation and Development, Environment Direcorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France.]

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

TRANSPORTERS

Item 17. TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Item 18. TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

NOTE: International Shipments-Transporter Responsibilities. Exports --Transporters must sign and enter the date the waste left the United States in item 15 of Form 8700-22. Imports --Shipments of hazardous waste regulated by RCRA and transported into the United States from another country must upon entry be accompanied by the U.S. EPA Uniform Hazardous Waste Manifest. Transporters who transport hazardous waste into the United States from another country are responsible for completing the Manifest (40 CFR 263.10(c)(1).

OWNERS, AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES

Item 19. DISCREPANCY INDICATION SPACE

The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any significant discrepancy between the waste described on the Manifest and the waste actually received at the facility.

Owners and operators of facilities located in North Carolina should contact the Hazardous Waste Section of DEHNR for information on State Discrepancy Reports requirements.

Item 20. FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF HAZARDOUS MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 19.

Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Items A-K are not required by Federal Regulations for intra- or interstate transportation. However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items A-K as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage, or disposal facilities are advised to contact State officials for guidance on completing shaded areas of the Manifest.

The North Carolina Commission for Health Services has adopted rules requiring the completion of item D., F., H., and I.

Item D., F., and H. are self explanatory.

Item I. WASTE NUMBER: See Federal Register 40 CFR part 261, Subpart D. For unlisted hazardous waste, enter the description which you believe best describes the waste. A waste may include more than one code number.

EMERGENCY NUMBER'S

National Response Center: 1-800-424-8802

N.C. Highway Patrol Center: 1-800-662-7956

EXAMPLE:

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS AND ID NO.)	12. CONTAINERS		13. TOTAL QUANTITY	14. UNIT EIGHT/VOLUME	WASTE NUMBER
	NUMBER	TYPE			
Waste Acetone, Flammable Liquid (UN 1090)	10	DM	4500	P	U002

For Additional Information:
CONTACT MANIFEST SYSTEMS
HAZARDOUS WASTE SECTION
WASTE MANAGEMENT DIVISION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
P.O. BOX 29603, RALEIGH, N.C. 27611-9603
(919) 733-2178

INSTRUCTIONS--CONTINUATION SHEET, U.S. EPA FORM 8700-22A

Read all instructions before completing this form. This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used--press down hard.

This form must be used as a continuation sheet to U.S. EPA Form 8700-22 if:

- More than two transporters are to be used to transport the waste;
- More space is required for the U.S. DOT description and the related information in Item 11 of U.S. EPA Form 8700-22.

Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use the Uniform Hazardous Waste Manifest (EPA-Form 8700-22) and, if necessary, this Continuation Sheet (EPA Form 8700-22A) for both inter- and intrastate transportation.

GENERATORS

Item 21. GENERATOR'S U.S. EPA ID NUMBER-MANIFEST DOCUMENT NUMBER

Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this Manifest (e.g. .00001) as it appears in item 1 on the first page of the Manifest.

Item 22. PAGE_____

Enter the page number of this Continuation Sheet.

Item 23. GENERATOR'S NAME

Enter the generator's name as it appears on item 3 on the first page of the Manifest.

Item 24. TRANSPORTER____COMPANY NAME

If additional transporters are used to transport the waste described on this Manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 3 Company Name. Each Continuation Sheet will record the names of two additional transporters.

Item 25. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the transporter described in item 24.

Item 26. TRANSPORTER_____COMPANY NAME

If additional transporters are used to transport the waste described on this Manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 4 Company Name. Each Continuation Sheet will record the names of two additional transporters.

Item 27. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the transporter described in item 26.

Item 28. U.S. DOT DESCRIPTION INCLUDING PROPER SHIPPING NAME, HAZARDOUS CLASS, AND ID NUMBER (UN/NA) Refer to Item 11.

Item 29. CONTAINERS (NUMBER AND TYPE) Refer to Item 12.

Item 30. TOTAL QUANTITY Refer to Item 13.

Item 31. UNIT (WEIGHT/VOLUME) Refer to Item 14.

Item 32. SPECIAL HANDLING INSTRUCTIONS

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or Bill of Lading information. States are authorized to require additional, new, or different information in this space.

* * * * * * * * * * * * * * * * * *

TRANSPORTERS

Item 33. TRANSPORTER _____ ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the same number of the Transporter as identified in Item 24. Enter also the name of the person accepting the waste described on behalf of the Transporter (Company Name) identified in item 24. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

* * * * * * * * * * * * * * * * * *

Item 34. TRANSPORTER _____ ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the same number as identified in item 26. Enter also the name of the person accepting the waste on behalf of the Transporter (Company Name) identified in item 26. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

* * * * * * * * * * * * * * * * * *

OWNERS AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES.

Item 35. DISCREPANCY INDICATION SPACE Refer to Item 19.

Items L-R are not required by Federal Regulations for intra- or interstate transportation. .However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items L-R as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage or disposal facilities are advised to contact State officials for guidance on completing the shaded areas of the Manifest. The North Carolina Commission for Health Services has adopted rules requiring the completing of item O., Q., and R. Item O. and Q. are self explanatory. Item R. WASTE NUMBER: See Federal Register 40 CFR Part 261, Subpart D. For uplisted hazardous waste, enter the description which you believe best describes the waste. A waste may include more than one code number.

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS AND ID NO.)	29. CONTAINERS NUMBER	TYPE	30. TOTAL QUANTITY	31. UNIT WEIGHT/VOLUME	R WASTE NUMBER
Waste Acetone, Flammable Liquid (UN 1090)	20	DM	9000	P	0002

FOR ADDITIONAL INFORMATION: - (919) 733-2178
CONTACT MANIFEST SYSTEMS
HAZARDOUS WASTE SECTION
WASTE MANAGEMENT DIVISION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
P.O. BOX 29603, RALEIGH, N.C. 27611-9603

NORTH CAROLINA HAZARDOUS WASTE MANIFEST

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST *(Continuation Sheet)*	21. Generator's US EPA ID No.	Manifest Document No.	22. Page	Information in the shaded areas is not required by Federal law.

23. Generator's Name

24. Transporter ____ Company Name | 25. US EPA ID Number

26. Transporter ____ Company Name | 27. US EPA ID Number

GENERATOR

28. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	29. Containers No.	Type	30 Total Quantity	31 Unit Wt./Vol.
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter ____ Acknowledgement of Receipt of Materials | Date

Printed/Typed Name | Signature | Month Day Year

34. Transporter ____ Acknowledgement of Receipt of Materials | Date

Printed/Typed Name | Signature | Month Day Year

FACILITY

35. Discrepancy Indication Space

265.174, 265.193, 265.195, 265.226, 265.260, 265.278, 265.304, 265.347, 265.377, 265.403, 265.1033, 265.1052, 265.1053, 265.1058, and 265.1084 through 265.1090 of this part, where applicable.

(c) The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

265.16 Personnel training.

(a) (1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section.

(2) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

(i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(ii) Key parameters for automatic waste feed cut-off systems;

(iii) Communications or alarm systems;

(iv) Response to fires or explosions;

(v) Response to groundwater contamination incidents; and

(vi) Shutdown of operations.

(b) Facility personnel must successfully complete the program required in paragraph (a) of this section within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of paragraph (a) of this section.

(c) Facility personnel must take part in an annual review of the initial training required in paragraph (a) of this section.

(d) The owner or operator must maintain the following documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) A written job description for each position listed under paragraph (d)(1) of this section. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (d)(1) of this section;

(4) Records that document that the training or job experience required under paragraphs (a), (b), and (c) of this section has been given to, and completed by, facility personnel.

(e) Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

265.17 General requirements for ignitable, reactive, or incompatible wastes.

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to

(c) 40 CFR 265.30 through 265.37 (Subpart C), "Preparedness and Prevention", are incorporated by reference including subsequent amendments and editions.

SUBPART C - PREPAREDNESS AND PREVENTION

265.30 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as Section 265.1 provides otherwise.

265.31 Maintenance and operation of facility.

Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

265.32 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 that 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.

265.33 Testing and maintenance of equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

265.34 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 Section 265.32.
(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 Section 265.32.

265.35 Required aisle space.

The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

265.36 [Reserved]

265.37 Arrangements with local authorities.

(a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:
   (1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, 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, and possible evacuation routes;
   (2) Where more than one police and fire department might respond to an emergency, 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;
   (3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and
   (4) Arrangements to familiarize local hospitals with 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.

(b) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

(d) 40 CFR 265.50 through 265.56 (Subpart D), "Contingency Plan and Emergency Procedures", are incorporated by reference including subsequent amendments and editions.

SUBPART D - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

265.50 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as Section 265.1 provides otherwise.

265.51 Purpose and implementation of contingency plan.

(a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
(b) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

265.52 Content of contingency plan.

(a) The contingency plan must describe the actions facility personnel must take to comply with Sections 265.51 and 265.56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
(b) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with Part 112 of this chapter, or Part 1510 of Chapter V, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part.
(c) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to Section 265.37.
(d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see Section 265.55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
(f) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

265.53 Copies of contingency plan.

A copy of the contingency plan and all revisions to the plan must be:
(a) Maintained at the facility; and
(b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

265.54 Amendment of contingency plan.

The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(a) Applicable regulations are revised;

(b) The plan fails in an emergency;
(c) The facility changes – in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
(d) The list of emergency coordinators changes; or
(e) The list of emergency equipment changes.

265.55 Emergency coordinator.

At all times, there must be at least one employee either on the facility 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. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

[Comment: The emergency coordinator's responsibilities are more fully spelled out in Section 265.56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.]

265.56 Emergency procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:
  (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
  (2) Notify appropriate State or local agencies with designated response roles if their help is needed.
(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).
(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:
  (1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and
  (2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under Part 1510 of this Title), or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:
    (i) Name and telephone number of reporter;
    (ii) Name and address of facility;
    (iii) Time and type of incident (e.g., release, fire);
    (iv) Name and quantity of material(s) involved, to the extent known;
    (v) The extent of injuries, if any; and
    (vi) The possible hazards to human health, or the environment, outside the facility.
(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
(f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

[Comment: Unless the owner or operator can demonstrate, in accordance with Section 261.3(c) or (d) of this chapter, that the recovered material 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 Parts 262, 263, and 265 of this chapter.]

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:
  (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
  (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:
  (1) Name, address, and telephone number of the owner or operator;
  (2) Name, address, and telephone number of the facility;
  (3) Date, time, and type of incident (e.g., fire, explosion);
  (4) Name and quantity of material(s) involved;
  (5) The extent of injuries, if any;
  (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
  (7) Estimated quantity and disposition of recovered material that resulted from the incident.

(i) 40 CFR 265.170 through 265.178 (Subpart I), "Use and Management of Containers", are incorporated by reference including subsequent amendments and editions. Additionally, the owner or operator shall keep records and results of required inspections for at least three years from the date of the inspection.

SUBPART I - USE AND MANAGEMENT OF CONTAINERS

265.170 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as Section 265.1 provides otherwise.

265.171 Condition of containers.

If a container holding hazardous waste is not in good condition or if it begins to leak, the owner or operator 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 this part.

265.172 Compatibility of waste with containers.

The owner or operator 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.

265.173 Management of containers.

(a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
(b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

[Comment: Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.]

265.174 Inspections.

The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

265.175 [Reserved]

265.176 Special requirements for ignitable or reactive waste.

Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.

[Comment: See Section 265.17(a) for additional requirements.]

265.177 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same container, unless Section 265.17(b) is complied with.
(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material (see Appendix V for examples), unless Section 265.17(b) is complied with.

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

[Comment: The purpose of this Section is to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.]

265.178 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(j) 40 CFR 265.190 through 265.202 (Subpart J), "Tank Systems", are incorporated by reference including subsequent amendments and editions.

SUBPART J - TANKS

265.190 Applicability.

The requirements of this subpart apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in paragraphs (a), (b), and (c) of this section or in 265.1 of this part.

(a) Tank systems that are used to store or treat hazardous waste which contains no free liquids and that are situated inside a building with an impermeable floor are exempted from the requirements of 265.193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" EPA Publication SW-846), as incorporated by reference in Section 260.11 of this chapter.

(b) Tank systems, including sumps, as defined in Section 260.10, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in Section 265.193(a).

(c) Tanks, sumps, and other collection devices used in conjunction with drip pads, as defined in Section 260.10 of this chapter and regulated under 40 CFR part 265 subpart W, must meet the requirements of this subpart.

265.191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of 265.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) that attests to the tank system's integrity by January 12, 1988.

(b) This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:
   (1) Design standard(s) if available, according to which the tank and ancillary equipment were constructed;
   (2) Hazardous characteristics of the waste(s) that have been or will be handled;
   (3) Existing corrosion protection measures;
   (4) Documented age of the tank system, if available, (otherwise, an estimate of the age); and
   (5) Results of a leak test, internal inspection, or other tank integrity examination such that:
      (i) For non-enterable underground tanks, this assessment must consist of a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects.
      (ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must be either a leak test, as described above, or an internal inspection and/or other tank integrity examination certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) that addresses cracks, leaks, corrosion, and erosion.

[Note: The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting the integrity examination of an other than non-enterable underground tank system.]

(c) Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986 must conduct this assessment within 12 months after the date that the waste becomes a hazardous waste.

(d) If, as a result of the assessment conducted in accordance with paragraph (a) of this section, a tank system is found to be leaking or unfit for use, the owner or operator must comply with requirements of 265.196.

265.192 Design and installation of new tank systems or components.

(a) Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls [if applicable] are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:
  (1) Design standard(s) according to which the tank(s) and ancillary equipment is or will be constructed.
  (2) Hazardous characteristics of the waste(s) to be handled.
  (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or or will be in contact with the soil or with water, a determination by a corrosion expert of:
    (i) Factors affecting the potential for corrosion, including but not limited to:
      (A) Soil moisture content;
      (B) Soil pH;
      (C) Soil sulfides level;
      (D) Soil resistivity;
      (E) Structure to soil potential;
      (F) Influence of nearby underground metal structures (e.g., piping);
      (G) Stray electric current;
      (H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and
    (ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
      (A) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic, etc:
      (B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
      (C) Electrical isolation devices such as insulating joints, flanges, etc.

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)–Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

  (4) For underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and
  (5) Design considerations to ensure that:
    (i) Tank foundations will maintain the load of a full tank;
    (ii) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and
    (iii) Tank systems will withstand the effects of frost heave.

(b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems, must inspect the system or component for the presence of any of the following items:
  (1) Weld breaks;
  (2) Punctures;
  (3) Scrapes of protective coatings;
  (4) Cracks;
  (5) Corrosion;
  (6) Other structural damage or inadequate construction or installation.

  All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

(c) New tank systems or components and piping that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

(d) All new tanks and ancillary equipment must be tested equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed in use.

(e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

[Note: The piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), Installation of Underground Petroleum Storage Systems," or ANSI Standard B31.3, "Petroleum Refinery System," may be used, where applicable, as guidelines for proper installation of piping systems.]

(f) The owner or operator must provide the type and degree of corrosion protection necessary, based on the information provided under paragraph (a)(3) of this section, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

(g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (b) through (f) of this section to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section were performed. These written statements must also include the certification statement as required in 270.11(d) of this chapter.

265.193 Containment and detection of releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided [except as provided in paragraphs (f) and (g) of this section]:
  (1) For all new tank systems or components, prior to their being put into service;
  (2) For all existing tanks used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;
  (3) For those existing tank systems of known and documentable age, within two years after January 12, 1987, or when the tank systems have reached 15 years of age, whichever comes later;
  (4) For those existing tank system for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12, 1987, whichever comes later; and
  (5) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.

(b) Secondary containment systems must be:
  (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
  (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum:
  (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure due to pressure gradients [including static head and external hydrological forces], physical contact with the waste to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation [including stresses from nearby vehicular traffic]:
  (2) Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift:
  (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within 24 hours:
  (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human

health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

[Note: If the collected material is a hazardous waste under Part 261 of this chapter, it is subject to management as a hazardous waste in accordance with all applicable requirements of Parts 262 through 265 of this chapter. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304 and 402 of the Clean Water Act, as amended. If discharged to Publicly Owned Treatment works (POTW's), it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR, Part 302.]

(d) Secondary containment for tanks must include one or more of the following devices:
  (1) A liner (external to the tank):
  (2) A vault:
  (3) A double-walled tank; or
  (4) An equivalent device as approved by the Regional Administrator.

(e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements:
  (1) External liner systems must be:
    (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
    (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event:
    (iii) Free of cracks or gaps; and
    (iv) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tank(s) [i.e., capable of preventing lateral as well as vertical migration of the waste].
  (2) Vault systems must be:
    (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary:
    (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event:
    (iii) Constructed with chemical-resistant water stops in place at all joints [if any]:
    (iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete:
    (v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:
      (A) Meets the definition of ignitable waste under 262.21 of this chapter, or
      (B) Meets the definition of reactive waste under 262.21 of this chapter and may form an ignitable or explosive vapor; and
    (vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.
  (3) Double-walled tanks must be:
    (i) Designed as an integral structure [i.e., an inner tank within an outer shell] so that any release from the inner tank is contained by the outer shell;
    (ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and the external surface of the outer shell; and
    (iii) Provided with a built-in, continuous leak detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the Regional Administrator, and the Regional Administrator concurs, that the existing leak detection technology or site conditions will not allow detection of a release within 24 hours.

[Note: The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tank" may be used as guidelines for aspects of the design of underground steel double-walled tanks.]

(f) Ancillary equipment must be provided with full secondary containment [e.g., trench, jacketing, double-walled piping] that meets the requirements of paragraphs (b) and (c) of this section except for:
  (1) Aboveground piping [exclusive of flanges, joints, valves, and connections] that are visually inspected for leaks on a daily basis:

(2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis:

(3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and

(4) Pressurized aboveground piping systems with automatic shut-off devices [e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices] that are visually inspected for leaks on a daily basis.

(g) The owner or operator may obtain a variance from the requirements of this section if the Regional Administrator finds, as a result of a demonstration by the owner or operator, either: that alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous waste or hazardous constituents into the ground water or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2) of this section, be exempted from the secondary containment requirements of this section. Application for a variance as allowed in paragraph (g) of this section does not waive compliance with the requirements of this Subpart for new tank systems.

(1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the Regional Administrator will consider:

(i) The nature and quantity of the waste:

(ii) The proposed alternate design and operation:

(iii) The hydrogeologic setting of the facility, including the thickness of soils between the tank system and ground water; and

(iv) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

(2) In deciding whether to grant a variance, based on a demonstration of no substantial present or potential hazard, the Regional Administrator will consider:

(i) The potential adverse effects on ground water, surface water, and land quality taking account:

(A) The physical and chemical characteristics of the waste in the tank system, including its potential for migration,

(B) The hydrogeological characteristics of the facility and surrounding land,

(C) The potential for health risks caused by human exposure to waste constituents,

(D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents, and

(E) The persistence and permanence of the potential adverse effects;

(ii) The potential adverse effects of a release on ground-water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow.

(B) The proximity and withdrawal rates of water in the area,

(C) The current and future uses of ground water in the area, and

(D) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(iii) The potential adverse effects of a release on surface water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow.

(B) The patterns of rainfall in the region.

(C) The proximity of the tank system to surface waters.

(D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters, and

(E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; and

(iv) The potential adverse effects of a release on the land surrounding the tank system, taking into account.

(A) The patterns of rainfall in the region, and

(B) The current and future uses of the surrounding land.

(3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of this section, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control [as established in the variance], must:

(i) Comply with the requirements of 265.196, except paragraph (d); and

(ii) Decontaminate or remove contaminated soil to the extent necessary to:

(A) Enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release, and

(B) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

(iii) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (g)(3)(ii) of this section, comply with the requirements of 265.197(b):

(4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of this section, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control [as established in the variance], must:

(i) Comply with the requirements of 265.196(a), (b), (c), and (d); and

(ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if ground water has been contaminated, the owner or operator must comply with the requirements of 265.197(b):

(iii) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of paragraphs (a) through (f) of this section or reapply for a variance from secondary containment and meet the requirements for new tank systems in 265.192 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed, and ground water or surface water has not been contaminated.

(h) The following procedures must be followed in order to request a variance from secondary containment:

(1) The Regional Administrator must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (g) of this section according to the following schedule.

(i) For existing tank systems, at least 24 months prior to the date that secondary containment must be provided in accordance with paragraph (a) of this section; and

(ii) For new tank systems, at least 30 days prior to entering into a contract for installation of the tank system.

(2) As part of the notification, the owner or operator must also submit to the Regional Administrator a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in paragraph (g)(1) or paragraph (g)(2) of this section.

(3) The demonstration for a variance must be completed and submitted to the Regional Administrator within 180 days after notifying the Regional Administrator of intent to conduct the demonstration.

(4) The Regional Administrator will inform the public, through a newspaper notice of the availability of the demonstration for a variance. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least 30 days from the date of the notice for the public to review and comment on the demonstration for a variance. The Regional Administrator also will hold a public hearing, in response to a request or at his own discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least 30 days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.

(5) The Regional Administrator will approve or disapprove the request for a variance within 90 days of receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the 90-day time period will begin when the Regional Administrator receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in paragraph (h)(4) of this section is extended, the 90-day time period will be similarly extended.

(i) All tank systems, until such time as secondary containment meeting the requirements of this section is provided, must comply with the following:

(A) For non-enterable underground tanks, a leak test that meets the requirements of 265.191(b)(5) must be conducted at least annually;

(B) or other than non-enterable underground tanks and for all ancillary equipment, an annual leak test, as described in paragraph (i)(1) of this section, or an internal inspection or other tank integrity examination by an independent, qualified, registered professional engineer that addresses cracks, leaks, corrosion, and erosion must be conducted at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

[Note: The practices described in the American Petroleum Institute (API) Publication Guide for Inspection of Refining Equipment, Chapter XIII, "Atmospheric and Low Pressure Storage Tanks," 4th edition, 1981, may be used, when applicable, as guidelines for assessing the overall condition of the tank system.]

(C) The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraph (i)-(1) through (i)(3) of this section.

(D) If a tank system or component is found to be leaking or unfit-for-use as a result of the leak test or assessment in paragraphs (i)(1) through (i)(3) of this section, the owner or operator must comply with the requirements of 265.196.

265.194 General Operating Requirements.

(a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail.

(b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:
  (1) Spill prevention controls (e.g., check valves, dry discount couplings);
  (2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The owner or operator must comply with the requirements of Section 265.196 if a leak or spill occurs in the tank system.

265.195 Inspections.

(a) The owner or operator must inspect, where present, at least once each operating day:
  (1) Overfill/spill control equipment [e.g., waste-feed cutoff systems, bypass systems, and drainage systems] to ensure that it is in good working order:
  (2) The aboveground portions of the tank system, if any, to detect corrosion or releases of waste:
  (3) Data gathered from monitoring equipment and leak-detection equipment, [e.g., pressure and temperature gauges, monitoring wells] to ensure that the tank system is being operated according to its design; and
  (4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures [e.g., dikes] to detect erosion or signs of releases of hazardous waste [e. g., wet spots, dead vegetation]:

[Note: 265.15(c) requires the owner or operator to remedy any deterioration or malfunction he finds. 265.196 requires the owner or operator to notify the Regional Administrator within 24 hours of confirming a release. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of a release.]

(b) The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:
  (1) The proper operation of the cathodic protection system must be confirmed within six months after initial installation, and annually thereafter; and
  (2) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly [i.e., every other month].

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)–Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in maintaining and inspecting cathodic protection systems.]

(c) The owner or operator must document in the operating record of the facility an inspection of those items in paragraphs (a) and (b) of this section.

265.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of waste from tank system or secondary containment system.
  (1) If the release was from the tank system, the owner or operator must, within 24 hours after detection of the leak or, if the owner or operator demonstrates that that is not possible, at the earliest practicable time remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
  (2) If the release was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The owner or operator must immediately conduct a visual inspection of the release and, based upon that inspection:
  (1) Prevent further migration of the leak or spill to soils or surface water; and
  (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.
  (1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Regional Administrator within 24 hours of detection. If the release has been reported pursuant to 40 CFR Par 302, that report will satisfy this requirement.
  (2) A leak or spill of hazardous waste that is:
    (i) Less than or equal to a quantity of one (1) pound, and
    (ii) Immediately contained and cleaned-up is exempted from the requirements of this paragraph.
  (3) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the Regional Administrator:
    (i) Likely route of migration of the release:
    (ii) Characteristics of the surrounding soil [soil composition, geology, hydrogeology, climate]:
    (iii) Results of any monitoring or sampling conducted in connection with the release, [if available[. If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Regional Administrator as soon as they become available:
    (iv) Proximity to downgradient drinking water, surface water, and population areas; and
    (v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.
  (1) Unless the owner or operator satisfies the requirements of paragraphs (e)(2) through (4) of this section, the tank system must be closed in accordance with 265.197.
  (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
  (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
  (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of 265.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirements of this subparagraph, that component must satisfy the requirements for new tank systems or components in 265.192 and 265.193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection [e.g., the bottom of an inground or onground tank], the entire component must be provided with secondary containment in accordance with 265.193 prior to being returned to use.

(f) Certification of major repairs. If the owner or operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive [e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel], the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered professional engineer in accordance with 270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Regional Administrator within seven days after returning the tank system to use.

Note: The Regional Administrator may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order under RCRA section 3004(v), 3008(h), or 7003(a) requiring corrective action or such other response as deemed necessary to protect human health or the environment.

[Note: See 265.15(c) for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 requires the owner or operator to notify the National Response Center of a release of any "reportable quantity."]

265.197 Closure and post-closure care.

(a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components [liners, etc.,] contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless 261.3(d) of this Chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in Subparts G and H of this Part.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then the owner or operator must close the tank systems and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills [265.310] in addition, for the purposes of closures, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in Subparts G and H of this Part.

(c) If an owner or operator has a tank system which does not have secondary containment that meets the requirements of 265.193(b) through (f) and which is not exempt from the secondary containment requirements in accordance with 265.193(g), then,
  (1) The closure plan for the tank system must include both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section.
  (2) A contingent post-closure plan for complying with paragraph (b) of this section must be prepared and submitted as part of the permit application.
  (3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if these costs are greater than the costs of complying with the closure plan prepared for the expected closure under paragraph (a) of this section.
  (4) Financial assurance must be based on the cost estimates in paragraph (c)(3) of this section.
  (5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under Subparts G and H of this Part.

265.198 Special requirements for ignitable or reactive wastes.

(a) Ignitable or reactive waste must not be placed in a tank system, unless:
  (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:
    (i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under 261.21 or 261.23 of this Chapter; and
    (ii) 265.17(b) is complied with; or
  (2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
  (3) The tank system is used solely for emergencies.

(b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in tanks must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), (incorporated by reference, see 260.11).

265.199 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible waste and materials, must not be placed in the same tank system, unless 265.17(b) is complied with.

(b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless 265.17(b) is complied with.

265.200 Waste analysis and trial tests.

In addition to performing the waste analysis required by 265.13, the owner of operator must, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system; or treat chemically a hazardous waste with a substantially different process than any previously used in that tank system.

(a) Conduct waste analyses and trial treatment or storage tests [e.g., bench-scale or pilot-plant scale tests]; or
(b) Obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of 265.194(a).

[Note: 265.13 requires the waste analysis plan to include analyses needed to comply with 265.198 and 265.199. 265.73 requires the owner or operator to place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.]

265.201 Special requirements for generators of between 100 and 1,000 kg/mo that accumulate hazardous waste in tanks.

(a) The requirements of this section apply to small quantity generators of more than 100 kg but less than 1,000 kg of hazardous waste in a calendar month, 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.
(b) Generators of between 100 and 1,000 kg/mo hazardous waste must comply with the following general operating requirements:
    (1) Treatment or storage of hazardous waste in tanks must comply with 265.17(b).
    (2) Hazardous wastes or treatment reagents 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.
    (3) 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 [2 feet] of the tank.
    (4) 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 stand-by tank].

[Note: These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure (e.g., a malfunction in the treatment process, a crack in the tank, etc.,).]

(c) Generators of between 100 and 1,000 kg/mo accumulating hazardous waste in tanks must inspect, where present:
    (1) Discharge control equipment [e.g., waste feed cutoff systems, by-pass systems, and drainage systems] at least once each operating day, to ensure that it is in good working order:
    (2) Data gathered from monitoring equipment [e.g., pressure and temperature gauges] at least once each operating day to ensure that the tank is being operated according to its design:
    (3) The level of waste in the tank at least once each operating day to ensure compliance with 265.201(b)(3):
    (4) The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and
    (5) 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].

[Note: As required by 265.15(c), the owner or operator must remedy any deterioration or malfunction he finds.]

(d) Generators of between 100 and 1,000 kg/mo accumulating hazardous waste in tanks must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

[Note: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with 261.3(c) or (d) of this chapter, 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 Parts 262, 263, and 265 of this chapter.]

(e) Generators of between 100 and 1,000 kg/mo must comply with the following special requirements for ignitable or reactive waste:
  (1) Ignitable or reactive waste must not be placed in a tank, unless:
    (i) The waste is treated, rendered, or mixed before or immediately after placement in a tank so that (A) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 261.21 or 261.23 of this Chapter, and (b) 265.17(b) is complied with; or
    (ii) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
    (iii) The tank is used solely for emergencies.
  (2) The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks 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] [incorporated by reference, see 260.11].

(f) Generators of between 100 and 1,000 kg/mo must comply with the following special requirements for incompatible wastes:
  (1) Incompatible wastes, or incompatible wastes and materials, [see Appendix V for examples] must not be placed in the same tank, unless 265.17(b) is complied with
  (2) Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material, unless Section 265.17(b) is complied with.

265.202 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(v) 40 CFR 265.1100 through 265.1102 (Subpart DD), "Containment Buildings", are incorporated by reference including subsequent amendments and editions.

SUBPART DD - CONTAINMENT BUILDINGS

265.1100 Applicability

The requirements of this subpart apply to owners or operators who store or treat hazardous waste in units designed and operated under Section 265.1101 of this subpart. These provisions will become effective on February 18, 1993, although owner or operator may notify the Regional Administrator of his intent to be bound by this subpart at an earlier time. The owner or operator is not subject to the definition of land disposal in RCRA section 3004(K) proviced that the unit:

(a) Is a completely enclosed, self-supporting structure that is designed and constructed of man-made materials of sufficient strength and thickness to support themselves, the waste contents, and any personal and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

(b) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel and handling equipment within the unit;

(c) If the unit is used to manage liquids, has:

(1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

(2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

(3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest possible time, unless the unit has been granted a variance from the secondary containment system requirements under Section 265.1101(b)(4);

(d) Has controls as needed to permit fugitive dust emissions; and

(e) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

265.1101 Design and Operating Standards

(a) All containment buildings must comply with the following design standards:

(1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), and to assure containment of managed wastes.

(2) The floor and containment walls of the unit, including the secondary containment system if required under paragraph (b) of this section, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. EPA will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this paragraph. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria;

(i) They provide an effective barrier against fugitive dust emissions under paragraph (c)(1)(iv); and

(ii) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).

(2) A liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:

(i) The primary barrier must be sloped to drain liquids to the associated collection system; and

(ii) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(i) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(A) Constructed with a bottom slope of 1 percent or more; and

(B) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{2} cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m^2/sec or more.

(ii) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(iii) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Section 265.193(d)(1). In addition, the containment building must meet the requirements of Section 265.193(b) and (c) to be considered an acceptable secondary containment system for a tank.)

(4) For existing units other than 90-day generator units, the Regional Administrator may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subpart. In making this demonstration, the owner or operator must:

(i) Provide written notice to the Regional Administrator of their request request by February 18, 1993. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

(ii) Respond to any comments from the Regional Administrator on these plans within 30 days; and

(iii) Fulfill the terms of the revised plans, if such plans are approved by the Regional Administrator.

(c) Owners or operators of all containment buildings must:

(1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

(i) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

(ii) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

(iii) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and

(iv) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions. In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control

practices. This state of no visible emissions must be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit.

(2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit.

(3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, must repair the condition promptly, in accordance with the following procedures.

(i) Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator must:

(A) Enter a record of the discovery in the facility operating record;

(B) Immediately remove the portion of the containment building affected by the condition from service;

(C) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

(D) Within 7 days after the discovery of the condition, notify the Regional Administrator of the condition, and within 14 working days, provide a written notice to the Regional Administrator with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

(ii) The Regional Administrator will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(iii) Upon completing all repairs and cleanup the owner or operator must notify the Regional Administrator in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with paragraph (c)(3)(i)(D) of this section.

(4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

(d) For containment buildings that contains both areas with and without secondary containment, the owner or operator must:

(1) Design and operate each area in accordance with the requirements enumerated in paragraphs (a) through (c) of this section;

(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(e) Notwithstanding any other provision of this subpart the Regional Administrator may waive requirements for secondary containment for a permitted containment building where the owner operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

265.1102 Closure and Post-closure Care

(a) At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.,) contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in subparts G and H of this part.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (Section 265.310). In addition, for the purposes of closure, post-

closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

.0111 STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTE AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES - PART 266

(a) 40 CFR 266.20 through 266.23 (Subpart C), "Recyclable Materials Used in a Manner Constituting Disposal", are incorporated by reference including subsequent amendments and editions.

SUBPART C – RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

266.20 Applicability.

(a) The regulations of this subpart apply to recyclable materials that are applied to or placed on the land:
  (1) Without mixing with any other substance(s); or
  (2) After mixing or combination with any other substance(s). These materials will be referred to throughout this subpart as "materials used in a manner that constitutes disposal."

(b) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in Subpart D of Part 268 (or applicable prohibition levels in Section 268.32 or RCRA section 3004(d), where no treatment standards have been established) for each recyclable material (i.e., hazardous waste) that they contain. Commercial fertilizers that are produced for the general public's use that contain recyclable materials also are not presently subject to regulation provided they meet these same treatment standards or prohibition levels for each recyclable material that they contain. However, zinc-containing fertilizers using hazardous waste K061 that are produced for the general public's use are not presently subject to regulation.

(c) Anti-skid/deicing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in paragraph (b) of this section and remain subject to regulation.

266.21 Standards applicable to generators and transporters of materials used in a manner that constitutes disposal.

Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of Parts 262 and 263 of this chapter, and the notification requirement under Section 3010 of RCRA.

266.22 Standards applicable to storers of materials that are to be used in a manner that constitutes disposal who are not the ultimate users.

Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of Subparts A through L of Parts 264 and 265 and Parts 270 and 124 of this chapter and the notification requirement under Section 3010 of RCRA.

266.23 Standards applicable to users of materials that are used in a manner that constitutes disposal.

(a) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of Subparts A through N of parts 124, 264, 265, 268, and 270 of this chapter and the notification requirement under section 3010 of RCRA. (These requirements do not apply to products which contain these recyclable materials under the provisions of section 266.20(b) of this chapter.)

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

(b) 40 CFR 266.70 (Subpart F), "Recyclable Materials Utilized for Precious Metal Recovery", is incorporated by reference including subsequent amendments and editions.

SUBPART F - RECYCLABLE MATERIALS UTILIZED FOR PRECIOUS METAL RECOVERY

266.70 Applicability and requirements.

(a) The regulations of this subpart apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, paladium, irridium, osmium, rhodium, ruthenium, or any combination of these.

(b) Persons who generate, transport, or store recyclable materials that are regulated under this subpart are subject to the following requirements:
   (1) Notification requirements under Section 3010 of RCRA;
   (2) Subpart B of Part 262 (for generators), Sections 263.20 and 263.21 (for transporters), and Sections 265.71 and 265.72 (for persons who store) of this chapter, and.
   (3) For precious metals exported to or imported from designated OECD member countries for recovery, subpart H of part 262 and Section 265.12(a)(2) of this chapter. For precious metals exported to or imported from non-OECD countries for recovery, subparts E and F of 40 CFR part 262.

(c) Persons who store recycled materials that are regulated under this subpart must keep the following records to document that they are not accumulating these materials speculatively (as defined in Section 261.1(c) of this chapter):
   (1) Records showing the volume of these materials stored at the beginning of the calendar year;
   (2) The amount of these materials generated or received during the calendar year; and
   (3) The amount of materials remaining at the end of the calendar year.

(d) Recyclable materials that are regulated under this subpart that are accumulated speculatively (as defined in Section 261(c) of this chapter) are subject to all applicable provisions of Parts 262 through 265, 270, and 124 of this chapter.

(c) 40 CFR 266.80 (Subpart G), "Spent Lead-Acid Batteries Being Reclaimed", is incorporated by reference including subsequent amendments and editions.

SUBPART G – SPENT LEAD-ACID BATTERIES BEING RECLAIMED

266.80 Applicability and requirements.

(a) The regulations of this subpart apply to persons who reclaim (including regeneration) spent lead-acid batteries that are recyclable materials ("spent batteries"). Persons who generate, transport, or collect spent batteries, who regenerate spent batteries, or who store spent batteries but do not reclaim them (other than spent batteries that are to be regenerated) are not subject to regulation under Parts 262 through 266 or Parts 270 or 124 of this chapter, and also are not subject to the requirements of Section 3010 of RCRA.

(b) Owners or operators of facilities that store spent acid batteries before reclaiming (other than spent batteries that are to be regenerated) them are subject to the following requirements:

(1) Notification requirements under Section 3010 of RCRA;

(2) All applicable provisions in Subparts A, B. (but not Section 264.13 (waste analysis)), C, D, E (but not Section 264.71 or Section 264.72 (dealing with the use of the manifest and manifest discrepancies)), and F through L of Part 264 of this chapter.

15A NCAC 13A .0118 STANDARDS FOR THE MANAGEMENT OF USED OIL

(a) 40 CFR 279.1 (Subpart A), "Definitions", has been incorporated by reference including subsequent amendments and editions, except that the Definition for "Used Oil" is defined by G.S. 130A-290(b) and is not incorporated by reference.

SUBPART A – DEFINITIONS

279.1 Definitions.

Terms that are defined in Sections 260.10, 261.1, and 280.12 of this chapter have the same meanings when used in this part.

Aboveground tank means a tank used to store or process used oil that is not an underground storage tank as defined in Section 280.12 of this chapter.

Container means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Do-it-yourselfer used oil collection center means any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

Existing tank means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or prior to the effective date of the authorized used oil program for the State in which the tank is located. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either (1) A continuous on-site installation program has begun, or (2) The owner or operator has entered into contractual obligations-which cannot be canceled or modified without substantial loss-for installation of the tank to be completed within a reasonable time.

Household "do-it-yourselfer" used oil means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.

Household "do-it-yourselfer" used oil generator means an individual who generates household "do-it-yourselfer" used oil.

New tank means a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program for the State in which the tank is located.

Petroleum refining facility means an establishment primarily engaged in producing gasoline, kerosine, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes (i.e., facilities classified as SIC 2911).

Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining.

Re-refining distillation bottoms means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

Tank means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of non-earthen materials, (e.g., wood, concrete, steel, plastic) which provides structural support.

"Used oil" - See G.S. 130A-290(b)

Used oil aggregation point means any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

Used oil burner means a facility where used oil not meeting the specification requirements in Section 279.11 is burned for energy recovery in devices identified in Section 279.61(a).

Used oil collection center means any site or facility that is registered/ licensed/permitted/recognized by a state/county/municipal government to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under subpart C of this part who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of Section 279.24. Used oil collection centers may also accept used oil from household do-it-yourselfers.

Used oil fuel marketer means any person who conducts either of the following activities:

(1) Directs a shipment of off-specification used oil from their facility to a used oil burner; or
(2) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 of this part.

Used oil generator means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

Used oil pocessor/re-refiner means a facility that processes used oil.

Used oil transfer facility means any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 24 hours and not more than 35 days during the normal course of transportation or prior to an activity performed pursuant to §279.20(b)(2). Transfer facilities that store used oil for more than 35 days are subject to regulation under subpart F of this part.

Used oil transporter means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

(b) 40 CFR 279.10 through 279.12 (Subpart B), "Applicability", have been incorporated by reference including subsequent amendments and editions.

SUBPART B – APPLICABILITY

279.10 Applicabiliy.

This section identifies those materials which are subject to regulation as used oil under this part. This section also identifies some materials that are not subject to regulation as used oil under this part, and indicates whether these materials may be subject to regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter.

(a) *Used oil.* EPA presumes that used oil is to be recycled unless a used oil handler disposes of used oil, or sends used oil for disposal. Except as provided in Section 279.11, the regulations of this part apply to used oil, and to materials identified in this section as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in subpart C of part 261 of this chapter.

(b) *Mixtures of used oil and hazardous waste-*

(1) *Listed hazardous waste.*

(i) Mixtures of used oil and hazardous waste that is listed in subpart D of part 261 of this chapter are subject to regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter, rather than as used oil under this part.

(ii) *Rebuttable presumption for used oil.* Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed In subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed In appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents. P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 783-3238 (document number 955-001-00000-1).

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(2) *Characteristic hazardous waste.* Mixtures of used oil and hazardous waste that solely exhibits one or more of the hazardous waste characteristic identified in subpart C of part 261 of this chapter and mixtures of used oil and hazardous waste that is listed in subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in subpart C are subject to:

(i) Except as provided in paragraph (b)(2)(iii) of this section, regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter rather than as used oil under this part, if the resultant mixture exhibits any characteristics of hazardous waste identified in subpart C of part 261 of this chapter; or

(ii) Except as specified in Section 279.10(b)(2)(iii), regulation as used oil under this part, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under subpart C of part 261 of this chapter.

(iii) Regulation as used oil under this part, if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability (e.g., ignitable only mineral spirits), provided that the resultant mixture does not exhibit the characteristic of ignitability under Section 261.21 of this chapter.

(3) *Conditionally exempt small quantity generator hazardous waste.* Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under Section 261.5 of this chapter are subject to regulation as used oil under this part.

(c) *Materials containing or otherwise contaminated with used oil.*

(1) Except as provided in paragraph (c)(2) of this section, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

(i) Are not used oil and thus not subject to this part, and

(ii) If applicable are subject to the hazardous waste regulations of parts 124, 260 through 266, 268, and 270 of this chapter.

(2) Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this part.

(3) Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under this part.

(d) *Mixtures of used oil with products.*

(1) Except as provided in paragraph (d)(2) of this section, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this part.

(2) Mixtures of used oil and diesel fuel mixed on-site by the generator of the used oil for use in the generator's own vehicles are not subject to this part once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of subpart C of this part.

(e) *Materials derived from used oil.*

(1) Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used In a manner constituting disposal (e.g., re-refined lubricants) are:

(i) Not used oil and thus are not subject to this part, and

(ii) Not solid wastes and are thus not subject to the hazardous waste regulations of parts 260 through 266, 268, 270 and 124 of this chapter as provided in 261.3(c)(2)(i) of this chapter.

(2) Materials produced from used oil that are burned for energy recovery (e.g., used oil fuels) are subject to regulation as used oil under this part.

(3) Except as provided In paragraph (e)(4) of this section, materials derived from used oil that are disposed of or used in a manner constituting disposal are:

(i) Not used oil and thus are not subject to this Part, and

(ii) Are solid wastes and thus are subject to the hazardous waste regulations of parts 260 through 266, 268, 270, and 124 of this chapter if the materials are listed or identified as hazardous wastes.

(4) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to this part:

(i) Not subject to this part at this time,

(ii) Not subject to the hazardous waste regulations of parts 260 through 266, 268, 270, and 124 of this chapter at this time.

(f) *Wastewater.* Wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to the requirements or this part. For purposes of this paragraph, "de minimas" quantities or used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills. or other releases, or to used oil recovered from wastewaters.

(g) *Used oil introduced into crude oil pipelines or a petroleum refining facility.*

(1) Used oil mixed with crude oil or natural gas liquids (e.g., in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of this part. The used oil is subject to the requirements of this part prior to the mixing of used oil with crude oil or natural gas liquids.

(2) Mixtures of used oil and crude oil or natural gas liquids containing less than 1% used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of this part.

(3) Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of this part provided that the used oil constitutes less than 1% of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this part.

(4) Except as provided in paragraph (g)(5) of this section, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of this part

only if the used oil meets the specification of §279.11. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this part.

(5) Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of this part. This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (e.g., by pouring collected used oil into the waste water treatment system).

(6) Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of this part.

(h) *Used oil on vessels.* Used oil produced on vessels from normal shipboard operations is not subject to this part until it is transported ashore.

(i) *Used Oil containing PCBs.* In addition to the requirements of this part, marketers and burners of used oil who market used oil containing any quantifiable level of PCBs are subject to the requirements found at 40 CFR 761.20(e).

279.11 Used oil specifications.

Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment is subject to regulation under this part unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in Table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any specification and the person making that showing complies with Sections 279.72, 279.73, and 279.74(b), the used oil is no longer subject to this part.

Table 1--Used Oil Not Exceeding any Specification Level is Not Subject To This Part When Burned For Energy Recovery[1]

Constituent/properly	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	100 ppm maximum.
Flash point	100°F minimum.
Total halogens	4,000 ppm maximum.[2]
[Note: Applicable standards for the burning of used oil containing PCBs are imposed by 40 CFR 761.20(e).]	

[1] The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (See Section 279.10(b)).

[2] Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under Section 279.10(b)(1). Such used oil is subject to subpart H of part 266 of this chapter rather than this part when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

279.12 Prohibitions

(a) *Surface impoundment prohibition.* Used oil shall not be managed In surface impoundments or waste piles unleas the units are subject to regulation under parts 264 or 265 of this chapter.

(b) *Use as a dust suppressant.* The use of used oil as a dust suppressant is prohibited, except when such activity takes place in one of the states listed in Section 279.82(c).

(c) *Burning in particular units.* Off-specification used oil fuel may be burned for energy recovery in only the following devices:

(1) Industrial furnaces identified In Section 260.10 of this chapter;

(2) Boilers, as defined in Section 260.10 of this chapter, that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(ii) Utility boilers used to produce electric power, steam, heated or cooled air; or other gases or fluids for sale; or

(iii) Used oil-fired space heaters provided that the burner meets the provisions of Section 279.23.

(3) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of this chapter.

(c) 40 CFR 279.20 through 279.24 (Subpart C), "Standards for Used Oil Generators", have been incorporated by reference including subsequent amendments and editions.

SUBPART C - STANDARDS FOR USED OIL GENERATORS

279.20 Applicability.

(a) *General.* Except as provided in paragraphs (a)(1) through (a)(4) of this section, this subpart applies to all used oil generators. A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

(1) *Household "do-it-yourselfer" used oil generators.* Household "do-it-yourselfer" used oil generators are not subject to regulation under this part.

(2) *Vessels.* Vessels at sea or at port are not subject to this subpart. For purposes of this subpart, used oil produced on vessels from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the person(s) removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with this subpart once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of this subpart.

(3) *Diesel fuel.* Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to this part once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of this subpart.

(4) *Farmers.* Farmers who generate an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of this part.

(b) *Other applicable provisions.* Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of this part as indicated in paragraphs (b)(1) through (5) of this section:

(1) Generators who transport used oil, except under the self-transport provisions of Section 279.24 (a) and (b), must also comply with subpart E of this part.

(2) (i) Except as provided in paragraph (b)(2)(ii) of this section, generators who process or re-refine used oil must also comply with subpart F of this part.

(ii) Generators who perform the following activities are not processors provided that the used oil is generated on-site and is not being sent off-site to a burner of on-or off-specification used oil fuel.

(A) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;

(B) Separating used oil from wastewater generated on-site to make the wastewater acceptable for discharge or reuse pursuant to section 402 or section 307(b) of the Clean Water Act or other applicable Federal or state regulations governing the management or discharge of wastewaters;

(C) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;

(D) Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible pursuant to §279.10(c); or

(E) Filtering, separating or otherwise reconditioning used oil before burning it in a space heater pursuant to §279.23.

(3) Generators who burn off-specification used oil for energy recovery, except under the on-site space heater provisions of Section 279.23, must also comply with subpart G of this part.

(4) Generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part.

(5) Generators who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with subpart I of this part.

279.21 Hazardous waste mixing.

(a) Mixtures of used oil and hazardous waste must be managed in accordance with Section 279.10(b).

(b) The rebuttable presumption for used oil of Section 279.10(b)(1)(ii) applies to used oil managed by generators. Under the rebuttable presumption for used oil of Section 279.10(b)(1)(ii), used oil containing greater than 1,000 ppm total halogens is presumed to be a hazardous waste and thus must be managed as hazardous waste and not as used oil unless the presumption is rebutted. However, the rebuttable presumption does not apply to certain metalworking oils/fluids and certain used oils removed from refrigeration units.

279.22 Used oil storage.

Used oil generators are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this Subpart. Used oil generators are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Storage units.* Used oil generators shall not store used oil in units other than tanks, containers. or units subject to regulation under parts 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store used oil at generator facilities must be:
  (1) In good condition (no severe rusting, apparent structural defects or deterioration); and
  (2) Not leaking (no visible leaks).

(c) *Labels.*
  (1) Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."
  (2) Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil."

(d) *Response to releases.* Upon detection of a release of used oil to the environment that is not subject to the requirements of part 280, subpart F of this chapter and which has occurred after the effective date of the recycled used oil management program in effect in the State in which the release is located, a generator must perform the following cleanup steps:
  (1) Stop the release;
  (2) Contain the released used oil;
  (3) Clean up and manage properly the released used oil and other materials; and
  (4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.23 On-site burning In space heaters.

Generators may burn used oil in used oil-fired space heaters provided that:

(a) The heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself used oil generators;

(b) The heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) The combustion gases from the heater are vented to the ambient air.

279.24 Off-site shipments.

Except as provided in paragraphs (a) through (c) of this section, generators must ensure that their used oil is transported only by transporters who have obtained EPA identification numbers.

(a) *Self-transportation of small amounts to approved collection centers.* Generators may transport, without an EPA identification number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:
  (1) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
  (2) The generator transports no more than 55 gallons of used oil at any time; and
  (3) The generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state/county/municipal government to manage used oil.

(b) *Self-transportation of small amounts to aggregation points owned by the generator.* Generators may transport, without an EPA Identification number, used oil that is generated at the generator's site to an aggregation point provided that:
  (1) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;

(2) The generator transports no more than 55 gallons of used oil at any time; and
(3) The generator transports the used oil to an aggregation point that is owned and/or operated by the same generator.

(c) *Tolling arrangements.* Used oil generators may arrange for used oil to be transported by a transporter without an EPA identification number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor/re-refiner to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:
(1) The type of used oil and the frequency of shipments;
(2) That the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor/re-refiner; and
(3) That reclaimed oil will be returned to the generator.

(d) 40 CFR 279.30 through 279.32 (Subpart D), "Standards for Used Oil Collection Centers and Aggregation Points", have been incorporated by reference including subsequent amendments and editions.

SUBPART D - STANDARDS FOR USED OIL COLLECTION CENTERS AND AGGREGATION POINTS

279.30 Do-it-yourselfer used oil collection centers.

(a) Applicability. This section applies to owners or operators of all do-it-yourselfer (DIY) used oil collection centers. A DIY used oil collection center is any site or facility that accepts/ aggregates and stores used oil collected only from household do-it-yourselfers.

(b) DIY used oil collection center requirements. Owners or operators of all DIY used oil collection centers must comply with the generator standards in subpart C of this part.

279.31 Used oil collection centers.

(a) *Applicability.* This section applies to owners or operators of used oil collection centers. A used oil collection center is any site or facility that accepts/aggregates and stores used oil collected from used oil generators regulated under subpart C of this part who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of Section 279.24(a). Used oil collection centers may also accept used oil from household do-it-yourselfers.

(b) *Used oil collection center requirements.* Owners or operators of all used oil collection centers must:

(1) Comply with the generator standards in subpart C of this part; and
(2) Be registered/licensed/permitted/ recognized by a state/county/municipal government to manage used oil.

279.32 Used oil aggregation points owned by the generator.

(a) *Applicability.* This section applies to owners or operators of all used oil aggregation points. A used oil aggregation point is any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons under the provisions of Section 279.24(b). Used oil aggregation points may also accept used oil from household do-it-yourselfers.

(b) *Used oil aggregation point requirements.* Owners or operators of all used oil aggregation points must comply with the generator standards in subpart C of this part.

(e) 40 CFR 279.40 through 279.47 (Subpart E), "Standards for Used Oil Transporter and Transfer Facilities", have been incorporated by reference including subsequent amendments and editions.

SUBPART E – STANDARDS FOR USED OIL TRANSPORTER AND TRANSFER FACILITIES

279.40 Applicability.

(a) **General.** Except as provided in paragraphs (a) (1) through (a)(4) of this section, this subpart applies to all used oil transporters. Used oil transporters are persons who transport used oil, persons who collect used oil from more than one generator and transport the collected oil, and owners and operators of used oil transfer facilities.
  (1) This subpart does not apply to on-site transportation.
  (2) This subpart does not apply to generators who transport shipments of used oil totalling 55 gallons or less from the generator to a used oil collection center as specified in Section 279.24(a).
  (3) This subpart does not apply to generators who transport shipments of used oil totalling 55 gallons or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in Section 279.24(b).
  (4) This subpart does not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor/re-refiner, or burner subject to the requirements of this part. Except as provided in paragraphs (a)(1) through (a)(3) of this section, this subpart does, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.

(b) *Imports and exports.* Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of this subpart from the time the used oil enters and until the time it exits the United States.

(c) *Trucks used to transport hazardous waste.* Unless trucks previously used to transport hazardous waste are emptied as described in Section 261.7 of this chapter prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of Section 279.10(b), the hazardous waste/used oil mixture is determined not to be hazardous waste.

(d) *Other applicable provisions.* Used oil transporters who conduct the following activities are also subject to other applicable provisions of this part as indicated in paragraphs (d)(1) through (5) of this section:
  (1) Transporters who generate used oil must also comply with subpart C of this part;
  (2) Transporters who process or re-refine used oil, except as provided in Section 279.41, must also comply with subpart F of this part;
  (3) Transporters who burn off-specification used oil for energy recovery must also comply with subpart G of this part;
  (4) Transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
  (5) Transporters who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with subpart I of this part.

279.41 Restrictions on transporters who are not also processors or re-refiners.

(a) Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, except as provided in paragraph (b) of this section, used oil transporters may not process used oil unless they also comply with the requirements for processors/re-refiners in subpart F of this part.

(b) Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products unless they also comply with the processor/re-refiner requirements in subpart F of this part.

(c) Transporters of used oil that is removed from oil bearing electrical transformers and turbines and filtered by the transporter or at a transfer facility prior to being returned to its original use are not subject to the processor/re-refiner requirements in subpart F of this part.

279.42 Notification.

(a) *Identification numbers.* Used oil transporters who have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil transporter who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:

(1) A completed EPA Form 8700-12 (To obtain ordering information for EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or

(2) A letter requesting an EPA identification number.
Call RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:

(i) Transporter company name;
(ii) Owner of the transporter company;
(iii) Mailing address for the transporter;
(iv) Name and telephone number for the transporter point of contact;
(v) Type of transport activity (i.e., transport only, transport and transfer facility, transfer facility only);
(vi) Location of all transfer facilities at which used oil is stored;
(vii) Name and telephone number for a contact at each transfer facility.

279.43 Used oil transportation.

(a) *Deliveries.* A used oil transporter must deliver all used oil received to:

(1) Another used oil transporter, provided that the transporter has obtained an EPA identification number;
(2) A used oil processing/re-refining facility who has obtained an EPA identification number;
(3) An off-specification used oil burner facility who has obtained an EPA identification number; or
(4) An on-specification used oil burner facility.

(b) *DOT Requirements.* Used oil transporters must comply with all applicable requirements under the U.S. Department of Transportation regulations in 49 CFR parts 171 through 180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 must comply with all applicable regulations in 49 CFR parts 171 through 180.

(c) *Used oil discharges.*

(1) In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area).

(2) If a discharge of used oil occurs during transportation and an official (State or local government or a Federal Agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have EPA identification numbers.

(3) An air, rail, highway, or water transporter who has discharged used oil must:

(i) Give notice, if required by 49 CFR 171.15 to the National Response Center (800-424-8802 or 202-426-2675); and

(ii) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.

(4) A water transporter who has discharged used oil must give notice as required by 33 CFR 153.203.

(5) A transporter must clean up any used oil discharged that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

279.44 Rebuttable presumption for used oil.

(a) To ensure that used oil is not a hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), the used oil transporter must determine whether the halogen content of used oil being transported or stored at a transfer facility is above or below 1,000 ppm.

(b) The transporter must make this determination by:

(1) Testing the used oil; or
(2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (202) 783-3238 (document number 955-001-00000-1).

(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units if the CFC are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(d) *Record retention.* Records of analyses conducted or information used to comply with paragraphs (a), (b), and (c) of this section must be maintained by the transporter for at least 3 years.

279.45 Used oil storage at transfer facilities.

Used oil transporters are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil transporters are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Applicability.* This section applies to used oil transfer facilities. Used oil transfer facilities are transportation related facilities including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under subpart F of this chapter.

(b) *Storage units.* Owners or operators of used oil transfer facilities may not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.

(c) *Condition of units.* Containers and aboveground tanks used to store used oil at transfer facilities must be:

(1) In good condition (no severe rusting, apparent structural defects or deterioration); and

(2) Not leaking (no visible leaks).

(d) *Secondary containment for containers.* Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(e) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) *Secondary containment for new aboveground tanks.* New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(g) *Labels.*

(1) Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words (Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil."

(h) *Response to releases.* Upon detection of a release of used oil to the environment not subject to the requirements of part 280, subpart F of this chapter and which has occurred after the effective date of the recycled used oil management program in effect in the State in which the release is located, the owner/operator of a transfer facility must perform the following cleanup steps:

(1) Stop the release;

(2) Contain the release used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.46 Tracking

(a) *Acceptance.* Used oil transporters must keep a record of each used oil shipment accepted for transport. Records for each shipment must include:

(1) The name and address of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(2) The EPA identification number (if applicable) of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(3) The quantity of used oil accepted;

(4) The date of acceptance; and

(5) (i) Except as provided in paragraph (a)(5)(ii) of this section, the signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor/re-refiner who provided the used oil for transport.

(ii) Intermediate rail transporters are not required to sign the record of acceptance.

(b) *Deliveries.* Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter, or to a used oil burner, processor/re-refiner, or disposal facility. Records of each delivery must include:

(1) The name and address of the receiving facility or transporter;

(2) The EPA identification number of the receiving facility or transporter;

(3) The quantity of used oil delivered;

(4) The date of delivery;

(5) (i) Except as provided in paragraph (b)(5)(ii) of this section, the signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.

(ii) Intermediate rail transporters are not required to sign the record of delivery.

(c) *Exports of used oil.* Used oil transporters must maintain the records described in paragraphs (b)(1) through (b)(4) of this section for each shipment of used oil exported to any foreign country.

(d) *Record retention.* The records described in paragraphs (a), (b), and (c) of this section must be maintained for at least three years.

279.47 Management of residues.

Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in Section 279.10(e).

(f) 40 CFR 279.50 through 279.59 (Subpart F), "Standards for Used Oil Processors and Re-Refiners", have been incorporated by reference including subsequent amendments and editions.

SUBPART F - STANDARDS FOR USED OIL PROCESSORS AND RE-REFINERS

279.50 Applicability.

(a) The requirements of this subpart apply to owners and operators of facilities that process used oil. Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived products. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining. The requirements of this subpart do not apply to:
   (1) Transporters that conduct incidental processing operations that occur during the normal course of transportation as provided in Section 279.41; or
   (2) Burners that conduct incidental processing operations that occur during the normal course of used oil management prior to burning as provided in Section 279.61(b).

(b) *Other applicable provisions.* Used oil processors/re-refiners who conduct the following activities are also subject to the requirements of other applicable provisions of this part as indicated in paragraphs (b)(1) through (b)(5) of this section.
   (1) Processors/re-refiners who generate used oil must also comply with subpart C of this part;
   (2) Processors/re-refiners who transport used oil must also comply with subpart E of this part;
   (3) Except as provided in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, processors/re-refiners who burn off-specification used oil for energy recovery must also comply with subpart G of this part. Processor/re-refiners burning used oil for energy recovery under the following conditions are not subject to subpart G of this part;
      (i) The used oil is burned in an on-site space heater that meets the requirements of Section 279.23; or
      (ii) The used oil is burned for purposes of processing used oil, which is considered burning incidentally to used oil processing;
   (4) Processors/re-refiners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
   (5) Processors/re-refiners who dispose of used oil, including the use of used oil as a dust suppressant, also must comply with subpart I of this part.

279.51 Notification.

(a) *Identification numbers.* Used oil processors and re-refiners who have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil processor or re-refiner who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:
   (1) A completed EPA Form 8700-12 (To obtain EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or
   (2) A letter requesting an EPA identification number.
   Call RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:
      (i) Processor or re-refiner company name;
      (ii) Owner of the processor or re-refiner company;
      (iii) Mailing address for the processor or re-refiner;
      (iv) Name and telephone number for the processor or re-refiner point of contact;
      (v) Type of used oil activity (i.e., process only, process and re-refine);
      (vi) Location of the processor or re-refiner facility.

279.52 General facility standards.

(a) *Preparedness and prevention.* Owners and operators of used oil processors and re-refiners facilities must comply with the following requirements:

(1) *Maintenance and operation of facility.* Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water 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 used oil handled at the facility could require a particular kind of equipment specified in paragraphs (a)(2)(i) through (iv) of this section:

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

(ii) 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;

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

(iv) 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.* All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

(4) *Access to communications or alarm system.*

(i) Whenever used oil 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 in paragraph (a)(2) of this section.

(ii) If there is ever just one employee on the premises while the facility is operating, the employee 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 in paragraph (a)(2) of this section.

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

(6) *Arrangements with local authorities.*

(i) The owner or operator must attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:

(A) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes;

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

(C) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(D) Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(ii) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

(b) *Contingency plan and emergency procedures.* Owners and operators of used oil processors and re-refiners facilities must comply with the following requirements:

(1) *Purpose and implementation of contingency plan.*

(i) Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water.

(ii) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release or used oil which could threaten human health or the environment.

(2) *Content of contingency plan.*

(i) The contingency plan must describe the actions facility personnel must take to comply with paragraphs (b)(1) and (6) of this section in response to fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water at the facility.

(ii) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with part 112 of this chapter, or part 1510 of chapter V of this title, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of this part.

(iii) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to paragraph (a)(6) of this section.

(iv) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see paragraph (b)(5) of this section), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

(v) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(vi) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).

(3) *Copies of contingency plan.* A copy of the contingency plan and all revisions to the plan must be:

(i) Maintained at the facility; and

(ii) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

(4) *Amendment of contingency plan.* The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(i) Applicable regulations are revised;

(ii) The plan fails in an emergency;

(iii) The facility changes--in its design, construction, operation, maintenance, or other circumstances--in a way that materially increases the potential for fires, explosions, or releases of used oil, or changes the response necessary in an emergency;

(iv) The list of emergency coordinators changes; or

(v) The list of emergency equipment changes.

(5) *Emergency coordinator.* At all times, there must be at least one employee either on the facility 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. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

Guidance: The emergency coordinator's responsibilities are more fully spelled out in paragraph (b)(6) of this section. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.

(6) *Emergency procedures.*

(i) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:

(A) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(B) Notify appropriate State or local agencies with designated response roles if their help is needed.

(ii) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records of manifests and, if necessary, by chemical analysts.

(iii) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water of chemical agents used to control fire and heat-induced explosions).

(iv) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(A) If his assessment indicated that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(B) He must immediately notify either the government official designated as the on-scene coordinator for the geographical area (in the applicable regional contingency plan under part 1510 of this title), or the National Response Center (using their 24 hour-toll free number 800/424-8802). The report must include:

(1) Name and telephone number of reporter;

(2) Name and address of facility;

(3) Time and type of incident (e.g., release, fire);

(4) Name and quantity of material(s) involved, to the extent known;

(5) The extent of injuries, if any; and

(6) The possible hazards to human health, or the environment, outside the facility.

(v) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.

(vi) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(vii) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(viii) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(A) No waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed; and

(B) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(C) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities that the facility is in compliance with paragraphs (b)(6)(viii) (A) and (B) of this section before operations are resumed in the affected area(s) of the facility.

(ix) The owner or operator must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

(A) Name, address, and telephone number of the owner or operator;

(B) Name, address, and telephone number of the facility;

(C) Date, time, and type of incident (e.g., fire, explosion);

(D) Name and quantity of material(s) involved;

(E) The extent of injuries, if any;

(F) An assessment of actual or potential hazards to human health or the environment, where this is applicable;

(G) Estimated quantity and disposition of recovered material that resulted from the incident.

279.53 Rebuttable presumption for used oil.

(a) To ensure that used oil managed at a processing/re-refining facility is not hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), the owner or operator of a used oil processing/re-refining facility must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

(b) The owner or operator must make this determination by:
  (1) Testing the used oil; or
  (2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constitutents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburg, PA 15250-7954, (202) 783-3238 (document number 955-001-00000-1).
  (1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
  (2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

279.54 Used oil management.

Used oil processor/re-refiners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil processors/re-refiners are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Management units.* Used oil processors/re-refiners may not store used oil in units other than tanks, containers, or units subject to regulation under part 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be:
  (1) In good condition (no severe rusting, apparent structural defects or deterioration); and
  (2) Not leaking (no visible leaks).

(c) *Secondary containment for containers.* Containers used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and
    (ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
    (iii) An equivalent secondary containment system.
  (2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(d) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and
    (ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
    (iii) An equivalent secondary containment system.
  (2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(e) *Secondary containment for new aboveground tanks.* New aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) *Labels.*

(1) Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

(g) *Response to releases.* Upon detection of a release of used oil to the environment that is not subject to the requirements of part 280, subpart F of this chapter and which has occurred after the effective date of the recycled used oil management program in effect in the State in which the release is located, an owner/operator must perform the following cleanup steps:

(1) Stop the release;
(2) Contain the released used oil
(3) Clean up and manage properly the released used oil and other materials; and
(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

(h) *Closure.*

(1) Aboveground tanks. Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:

(i) At closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under this chapter.

(ii) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (h)(1)(i) of this section, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to hazardous waste landfills (Section 265.310 of this chapter).

(2) *Containers.* Owners and operators who store used oil in containers must comply with the following requirements:

(i) At closure, containers holding used oils or residues of used oil must be removed from the site;
(ii) The owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under part 261 of this chapter.

279.55 Analysis plan.

Owners or operators of used oil processing and re-refining facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of Section 279.53 and, if applicable, Section 279.72. The owner or operator must keep the plan at the facility.

(a) *Rebuttable presumption for used oil in Section 279.53.* At a minimum, the plan must specify the following:

(1) Whether sample analyses or knowledge of the halogen content of the used oil will be used to make this determination.

(2) If sample analyses are used to make this determination:

(i) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:
(A) One of the sampling methods in appendix I of part 261 of this chapter; or
(B) A method shown to be equivalent under Sections 260.20 and 260.21 of this chapter;

(ii) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and

(iii) The methods used to analyze used oil for the parameters specified in Section 279.53; and

(3) The type of information that will be used to determine the halogen content of the used oil.

(b) *On-specification used oil fuel in Section 279.72.* At a minimum, the plan must specify the following if Section 279.72 is applicable;

(1) Whether sample analyses or other information will be used to make this determination;
(2) If sample analyses are used to make this determination:

(i) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:
(A) One of the sampling methods in appendix I of part 261 of this chapter; or
(B) A method shown to be equivalent under Section 260.20 and 260.21 of this chapter;
(ii) Whether used oil will be sampled and analyzed prior to or after any processing/re-refining:
(iii) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and
(iv) The methods used to analyze used oil for the parameters specified in Section 279.72; and
(3) The type of information that will be used to make the on-specification used oil fuel determination.

279.56 Tracking

(a) *Acceptance.* Used oil processors/re-refiners must keep a record of each used oil shipment accepted for processing/re-refining. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information:
(1) The name and address of the transporter who delivered the used oil to the processor/re-refiner;
(2) The name and address of the generator or processor/re-refining from whom the used oil was sent for processing/re-refining;
(3) The EPA identification number of the transporter who delivered the used oil to the processor/re-refiner;
(4) The EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;
(5) The quantity of used oil accepted; and
(6) The date of acceptance.
(b) *Delivery.* Used oil processor/re-refiners must keep a record of each shipment of used oil that is shipped to a used oil burner, processor/re-refiner, or disposal facility. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information:
(1) The name and address of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;
(2) The name and address of the burner, processor/re-refiner or disposal facility who will receive the used oil;
(3) The EPA identification number of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;
(4) The EPA identification number of the burner, processor/re-refiner, or disposal facility who will receive the used oil;
(5) The quantity of used oil shipped; and
(6) The date of shipment.
(c) *Record retention.* The records described in paragraphs (a) and (b) of this section must be maintained for at least three years.

279.57 Operating record and reporting.

(a) *Operating record.*
(1) The owner or operator must keep a written operating record at the facility.
(2) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility;
(i) Records and results of used oil analyses performed as described in the analysis plan required under Section 279.55; and
(ii) Summary reports and details of all incidents that require implementation of the contingency plan as specified in Section 279.52(b).
(b) *Reporting.* A used oil processor/re-refiner must report to the Regional Administrator, in the form of a letter, on a biennial basis (by March 1 of each even numbered year), the following information concerning used oil activities during the previous calendar year;

(1) The EPA identification number, name, and address of the processor/re-refiner;
(2) The calendar year covered by the report; and
(3) The quantities of used oil accepted for processing/re-refining and the manner in which the used oil is processed/re-refined, including the specific processes employed.

279.58 Off-site shipments of used oil.

Used oil processors/re-refiners who initiate shipments of used oil off-site must ship the used oil using a used oil transporter who has obtained an EPA identification number.

279.59 Management of residues.

Owners and operators who generate residues from the storage, processing, or re-refining of used oil must manage the residues as specified in Section 279.10(e).

(g) 40 CFR 279.60 through 279.67 (Subpart G), "Standards for Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery", have been incorporated by reference including subsequent amendments and editions.

SUBPART G -- STANDARDS FOR USED OIL BURNERS WHO BURN OFF-SPECIFICATION USED OIL FOR ENERGY RECOVERY

279.60 Applicability.

(a) *General.* The requirements of this subpart apply to used oil burners except as specified in paragraphs (a)(1) and (a)(2) of this section. A used oil burner is a facility where used oil not meeting the specification requirements in Section 279.11 is burned for energy recovery in devices identified in Section 279.61(a). Facilities burning used oil for energy recovery under the following conditions are not subject to this Subpart:
  (1) The used oil is burned by the generator in an on-site space heater under the provisions of Section 279.23; or
  (2) The used oil is burned by a processor/re-refiner for purposes of processing used oil, which is considered burning incidentally to used oil processing.

(b) *Other applicable provisions.* Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions of this part as indicated below.
  (1) Burners who generate used oil must also comply with subpart C of this part;
  (2) Burners who transport used oil must also comply with subpart E of this part;
  (3) Except as provided in Section 279.61(b), burners who process or re-refine used oil must also comply with subpart F of this part;
  (4) Burners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
  (5) Burners who dispose of used oil, including the use of used oil as a dust suppressant, must comply with subpart I of this part.

(c) *Specification fuel.* This subpart does not apply to persons burning used oil that meets the used oil fuel specification of Section 279.11, provided that the burner complies with the requirements of subpart H of this part.

279.61 Restrictions on burning.

(a) Off-specification used oil fuel may be burned for energy recovery in only the following devices;
  (1) Industrial furnaces identified in Section 260.10 of this chapter;
  (2) Boilers, as defined in Section 260.10 of this chapter, that are identified as follows:
    (i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;
    (ii) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or
    (iii) Used oil-fired space heaters provided that the burner meets the provisions of Section 279.23; or
  (3) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of this chapter.

(b) (1) With the following exception, used oil burners may not process used oil unless they also comply with the requirements of subpart F of this part.
  (2) Used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning, but may not aggregate for purposes of producing on-specification used oil.

279.62 Notification

(a) *Identification numbers.* Used oil burners which have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil burner who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:

(1) A completed EPA Form 8700-12 (To obtain EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or

(2) A letter requesting an EPA identification number. Call the RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:

(i) Burner company name;
(ii) Owner of the burner company;
(iii) Mailing address for the burner;
(iv) Name and telephone number for the burner point of contact;
(v) Type of used oil activity; and
(vi) Location of the burner facility.

279.63 Rebuttable presumption for used oil.

(a) To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

(b) the used oil burner must determine if the used oil contains above or below 1,000 ppm total halogens by:
(1) Testing the used oil;
(2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used; or
(3) If the used oil has been received from a processor/refiner subject to regulation under subpart F of this part, using information provided by the processor/re-refiner.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste/because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of the chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. 202-783-3238 (document number 955-001-00000-1).
(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(d) *Record retention.* Records of analyses conducted or information used to comply with paragraphs (a),(b), and (c) of this section must be maintained by the burner for at least 3 years.

279.64 Used oil storage.

Used oil burners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil burners are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Storage units.* Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store oil at burner facilities must be:
(1) In good condition (no severe rusting, apparent structural defects or deterioration); and
(2) Not leaking (no visible leaks).

(c) *Secondary containment for containers.* Containers used to store used oil at burner facilities must be equipped with a secondary containment system.
(1) The secondary containment system must consist of, at a minimum:
(i) Dikes, berms or retaining walls; and
(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall.

(2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(d) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(e) *Secondary containment for existing aboveground tanks.* New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) *Labels.*

(1) Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil."

(g) *Response to releases.* Upon detection of a release of used oil to the environment that is not subject to the requirements of part 280, subpart F of this chapter and which has occurred after the effective date of the recycled used oil management program in effect in the State in which the release is located, a burner must perform the following cleanup steps:

(1) Stop the release;

(2) Contain the released used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.65 Tracking.

(a) *Acceptance.* Used oil burners must keep a record of each used oil shipment accepted for burning. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:

(1) The name and address of the transporter who delivered the used oil to the burner;

(2) The name and address of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(3) The EPA identification number of the transporter who delivered the used oil to the burner;

(4) The EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(5) The quantity of used oil accepted; and

(6) The date of acceptance.

(b) *Record retention.* The records described in paragraph (a) of this section must be maintained for at least three years.

279.66 Notices.

(a) *Certification.* Before a burner accepts the first shipment of off-specification used oil fuel from a generator, transporter, or processor/re-refiner, the burner must provide to the generator, transporter, or processor/re-refiner a one-time written and signed notice certifying that:

(1) The burner has notified EPA stating the location and general description of his used oil management activities; and

(2) The burner will burn the used oil only in an industrial furnace or boiler identified in Section 279.61(a).

(b) *Certification retention.* The certification described in paragraph (a) of this section must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor/re-refiner.

279.67 Management of residues.

Burners who generate residues from the storage or burning of used oil must manage the residues as specified in Section 279.10(e).

(h) 40 CFR 279.70 through 279.75 (Subpart H), "Standards for Used Oil Fuel Marketers", have been incorporated by reference including subsequent amendments and editions.

SUBPART H - STANDARDS FOR USED OIL FUEL MARKETERS

279.70 Applicability.

(a) Any person who conducts either of the following activities is subject to the requirements of this subpart:
  (1) Directs a shipment of off-specification used oil from their facility to a used oil burner; or
  (2) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11.

(b) The following persons are not marketers subject to this subpart;
  (1) Used oil generators, and transporters who transport used oil received only from generators, unless the generator or transporter directs a shipment of off-specification used oil from their facility to a used oil burner. However, processors/re-refiners who burn some used oil fuel for purposes of processing are considered to be burning incidentally to processing. Thus, generators and transporters who direct shipments of off-specification used oil to processor/re-refiners who incidently burn used oil are not marketers subject to this Subpart;
  (2) Persons who direct shipments of on-specification used oil and who are not the first person to claim the oil meets the used oil fuel specifications of Section 279.11.

(c) Any person subject to the requirements of this Subpart must also comply with one of the following:
  (1) Subpart C of this part--Standards for Used Oil Generators;
  (2) Subpart E of this part--Standards for Used Oil Transporters and Transfer Facilities;
  (3) Subpart F of this part--Standards for used Oil Processors and Re-refiners; or
  (4) Subpart G of this part--Standards for Used Oil Burners who Burn Off-Specification Used Oil for Energy Recovery.

279.71 Prohibitions.

A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:
(a) Has an EPA identification number; and
(b) Burns the used oil in an industrial furnace or boiler identified in Section 279.61(a).

279.72 On-specification used oil fuel.

(a) *Analysis of used oil fuel.* A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of Section 279.11 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
(b) *Record retention.* A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil fuel under Section 279.11, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

279.73 Notification.

(a) *Identification numbers.* A used oil fuel marketer subject to the requirements of this subpart who has not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.
(b) A marketer who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either;
  (1) A completed EPA Form 8700-12; or
  (2) A letter requesting an EPA identification number. The letter should include the following information;
    (i) Marketer company name;
    (ii) Owner of the marketer;

(iii) Mailing address for the marketer;
(iv) Name and telephone number for the marketer point of contact; and
(v) Type of used oil activity (i.e., generator directing shipments of off-specification used oil to a burner).

279.74 Tracking.

(a) *Off-specification used oil delivery.* Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information;
(1) The name and address of the transporter who delivers the used oil to the burner;
(2) The name and address of the burner who will receive the used oil;
(3) The EPA identification number of the transporter who delivers the used oil to the burner;
(4) The EPA identification number of the burner;
(5) The quantity of used oil shipped; and
(6) The date of shipment.

(b) *On-specification used oil delivery.* A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the fuel specifications under Section 279.11 must keep a record of each shipment of used oil to an on-specification used oil burner. Records for each shipment must include the following information;
(1) The name and address of the facility receiving the shipment;
(2) The quantity of used oil fuel delivered;
(3) The date of shipment or delivery; and
(4) A cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specification as required under Section 279.72(a).

(c) *Record retention.* The records described in paragraphs (a) and (b) of this section must be maintained for at least three years.

279.75 Notices.

(a) *Certification.* Before a used oil generator, transporter, or processor/re-refiner directs the first shipment of off-specification used oil fuel to a burner, he must obtain a one-time written and signed notice from the burner certifying that:
(1) The burner has notified EPA stating the location and general description of used oil management activities; and
(2) The burner will burn the off-specification used oil only in an industrial furnace or boiler identified in Section 279.61(a).

(b) *Certification retention.* The certification described in paragraph (a) of this section must be maintained for three years from the date the last shipment of off-specification used oil is shipped to the burner.

(i) 40 CFR 279.80 through 279.81 (Subpart I), "Standards for Use as a Dust Suppressant and Disposal of Used Oil" have been incorporated by reference including subsequent amendments and editions.
{Note: 40 CFR 279.82, which addresses used oil as a dust suppressant, is specifically not incorporated by reference. See also G.S.130A-309.15 for prohibited acts regarding used oil}.

SUBPART I - STANDARDS FOR USE AS A DUST SUPPRESSANT AND DISPOSAL OF USED OIL

279.80 Applicability.

The requirements of this subpart apply to all used oils that cannot be recycled and are therefore being disposed.

279.81 Disposal.

(a) *Disposal of hazardous used oils.* Used oils that are identified as a hazardous waste and cannot be recycled in accordance with this part must be managed in accordance with the hazardous waste management requirements of parts 260 through 266, 268, 270 and 124 of this chapter.
(b) *Disposal of nonhazardous used oils.* Used oils that are not hazardous wastes and cannot be recycled under this part must be disposed in accordance with the requirements of parts 257 and 258 of this chapter.

(j) Additional State Requirements.

(1) By July 1 of each year the following persons shall notify the Department by submitting an annual report listing the type and quantity of used oil transported, collected, and recycled during the preceding calendar year, on Department forms:

(A) Persons transporting more than 500 gallons of used oil per week over public highways.

(B) Collection facilities that annually receive more than 6,000 gallons of used oil excluding the volume of used oil collected from individuals that change their own personal motor oil.

(C) Facilities that annually recycle more than 10,000 gallons of used oil.

(D) Public used oil collection centers.

(2) The following persons are not required to comply with 15A NCAC 13A .0018(j)(1):

(A) An electric utility that generates used oil which is reclaimed, recycled, or re-refined on-site for use in its operations.

(B) An on-site burner that burns its own on-specification used oil provided that the facility is in compliance with any Air Quality permit requirements established by the Department.

(3) An annual fee of twenty five dollars ($25.00) shall be paid by all persons identified in 15A NCAC 13A .0018(j)(1)(A)-(C) by July 1 of each year.

History Note: Statutory Authority G.S. 130A-294(b),(c);
150B-21.6;
Eff. October 1, 1993;
Recodified from 15A NCAC 13A .0018 Eff. December 20, 1996.

.0119 STANDARDS FOR UNIVERSAL WASTE MANAGEMENT - PART 273

(a) 40 CFR 273.1 through 273.6 (Subpart A), "General" are incorporated by reference including subsequent amendments and editions.

SUBPART A – GENERAL

273.1 Scope.

(a) This part establishes requirements for managing the following:
  (1) Batteries as described in 40 CFR 273.2;
  (2) Pesticides as described in 40 CFR 273.3; and
  (3) Thermostats as described in 40 CFR 273.4.

(b) This part provides an alternative set of management standards in lieu of regulation under 40 CFR parts 260 through 272.

273.2 Applicability – batteries.

(a) *Batteries covered under 40 CFR part 273.*
  (1) The requirements of this part apply to persons managing batteries, as described in section 273.6, except those listed in paragraph (b) of this section.
  (2) Spent lead-acid batteries which are not managed under 40 CFR part 266, subpart G, are subject to management under this part.

(b) *Batteries not covered under 40 CFR part 273.*
The requirements of this part do not apply to persons managing the following batteries:
  (1) Spent lead-acid batteries that are managed under 40 CFR part 266, subpart G.
  (2) Batteries, as described in section 273.6, that are not yet wastes under part 261 of this chapter, including those that do not meet the criteria for waste generation in paragraph (c) of this section.
  (3) Batteries, as described in section 273.6 of this part, that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.

(c) *Generation of waste batteries.*
  (1) A used battery becomes a waste on the date it is discarded (e.g., when sent for reclamation).
  (2) An unused battery becomes a waste on the date the handler decides to discard it.

273.3 Applicability - pesticides.

(a) *Pesticides covered under 40 CFR part 273.* The requirements of this part apply to persons managing pesticides, as described in section 273.6, meeting the following conditions, except those listed in paragraph (b) of this section:
  (1) Recalled pesticides that are:
    (i) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or
    (ii) Stocks of a suspended or cancelled pesticide, or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant.
  (2) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

(b) *Pesticides not covered under 40 CFR part 273.*
The requirements of this part do not apply to persons managing the following pesticides:
  (1) Recalled pesticides described in paragraph (a)(1) of this section, and unused pesticide products described in paragraph (a)(2) of this section, that are managed by farmers in compliance with 40 CFR 262.70. (40 CFR 262.70 addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with 40 CFR 261.7(b)(3));

(2) Pesticides not meeting the conditions set forth in paragraph (a) of this section. These pesticides must be managed in compliance with the hazardous waste regulations in 40 CFR parts 260 through 272;

(3) Pesticides that are not wastes under part 261 of this chapter, including those that do not meet the criteria for waste generation in paragraph (c) of this section or those that are not wastes as described in paragraph (d) of this section; and

(4) Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in 40 CFR part 261, subpart D or if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.

(c) *When a pesticide becomes a waste.*

(1) A recalled pesticide described in paragraph (a)(1) of this section becomes a waste on the first date on which both of the following conditions apply:

(i) The generator of the recalled pesticide agrees to participate in the recall; and

(ii) The person conducting the recall decides to discard (e.g., burn the pesticide for energy recovery).

(2) An unused pesticide product described in paragraph (a)(2) of this section becomes a waste on the date the generator decides to discard it.

(d) *Pesticides that are not wastes.* The following pesticides are not wastes:

(1) Recalled pesticides described in paragraph (a)(1) of this section, provided that the person conducting the recall:

(i) has not made a decision to discard (e.g., burn for energy recovery) the pesticide. Until such a decision is made, the pesticide does not meet the definition of "solid waste" under 40 CFR 261.2; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including part 273 of this chapter. This pesticide remains subject to the requirements of FIFRA; or

(ii) has made a decision to use a management option that, under 40 CFR 261.2, does not cause the pesticide to be a solid waste (i.e., the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery), or reclamation). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements including part 273 of this chapter. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.

(2) Unused pesticide products described in paragraph (a)(2) of this section, if the generator of the unused pesticide product has not decided to discard (e.g., burn for energy recovery) them. These pesticides remain subject to the requirements of FIFRA.

273.4 Applicability – mercury thermostats.

(a) *Thermostats covered under 40 CFR part 273.* The requirements of this part apply to persons managing thermostats, as described in section 273.6, except those listed in paragraph (b) of this section.

(b) *Thermostats not covered under 40 CFR part 273.* The requirements of this part do not apply to persons managing the following thermostats:

(1) Thermostats that are not yet wastes under part 261 of this chapter. Paragraph (c) of this section describes when thermostats become wastes.

(2) Thermostats that are not hazardous waste. A thermostat is a hazardous waste if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.

(c) *Generation of waste thermostats.*

(1) A used thermostat becomes a waste on the date it is discarded (e.g., sent for reclamation).

(2) An unused thermostat becomes a waste on the date the handler decides to discard it.

273.5 Applicability – household and conditionally exempt small quantity generator waste.

(a) Persons managing the wastes listed below may, at their option, manage them under the requirements of this part:

(1) Household wastes that are exempt under 40 CFR 261.4(b)(1) and are also of the same type as the universal wastes defined at 40 CFR 273.6; and/or

(2) Conditionally exempt small quantity generator wastes that are exempt under 40 CFR 261.5 and are also of the same type as the universal wastes defined at 40 CFR 273.6.

(b) Persons who commingle the wastes described in paragraphs (a)(1) and (a)(2) above together with universal waste regulated under this part must manage the commingled waste under the requirements of this part.

273.6 Definitions.

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

Destination facility means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in Sec. 273.13 (a) and (c) and Sec. 273.33 (a) and (c). A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

FIFRA means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

Generator means any person, by site, whose act or process produces hazardous waste identified or listed in part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.

Large Quantity Handler of Universal Waste means a universal waste handler (as defined in this section) who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, or thermostats, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated.

On-site means the same or geographically contiguous property which may be divided by public or private right-of-way, provided that the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right of way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, are also considered on-site property.

Pesticide means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:
(a) Is a new animal drug under FFDCA section 201(w), or
(b) Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug, or (c) Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by paragraph (a) or (b) of this section.

Small Quantity Handler of Universal Waste means a universal waste handler (as defined in this section) who does not accumulate more than 5,000 kilograms total of universal waste (batteries, pesticides, or thermostats, calculated collectively) at any time.

Thermostat means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).

Universal Waste means any of the following hazardous wastes that are subject to the universal waste requirements of 40 CFR part 273:
(a) Batteries as described in 40 CFR 273.2;
(b) Pesticides as described in 40 CFR 273.3; and
(c) Thermostats as described in 40 CFR 273.4.

Universal Waste Handler:
(a) Means:
  (1) A generator (as defined in this section) of universal waste; or
  (2) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
(b) Does not mean:
  (1) A person who treats (except under the provisions of 40 CFR 273.13 (a) or (c), or 273.33 (a) or (c)), disposes of, or recycles universal waste; or

(2) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Universal Waste Transfer Facility means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

Universal Waste Transporter means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

(b) 40 CFR 273.10 through 273.20 (Subpart B), "Standards for Small Quantity Handlers of Universal Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART B – STANDARDS FOR SMALL QUANTITY HANDLERS OF UNIVERSAL WASTE

273.10 Applicability.

This subpart applies to small quantity handlers of universal waste (as defined in 40 CFR 273.6).

273.11 Prohibitions.

A small quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.17; or by managing specific wastes as provided in 40 CFR 273.13.

273.12 Notification.

A small quantity handler of universal waste is not required to notify EPA of universal waste handling activities.

273.13 Waste management.

(a) *Universal waste batteries:* A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
  (1) A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
  (2) A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
    (i) Sorting batteries by type;
    (ii) Mixing battery types in one container;
    (iii) Discharging batteries so as to remove the electric charge;
    (iv) Regenerating used batteries;
    (v) Disassembling batteries or battery packs into individual batteries or cells;
    (vi) Removing batteries from consumer products; or
    (vii) Removing electrolyte from batteries.
  (3) A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.
    (i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to 40 CFR part 262.
    (ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(b) *Universal waste pesticides.* A small quantity handler of universal waste must manage universal waste pesticides in a way that prevent releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of paragraph (b)(1) of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of paragraph (b)(1) of this Section; or

(3) A tank that meets the requirements of 40 CFR part 265 subpart J, except for 40 CFR 265.197(c), 265.200, and 265.201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) *Universal waste thermostats:* A small quantity handler of universal waste must manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A small quantity handler of universal waste must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A small quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler:

(i) Removes the ampules in a manner designed to prevent breakage of the ampules;

(ii) Removes ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);

(iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34;

(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;

(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(vi) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

(vii) Stores removed ampules in closed, non-leaking containers that are in good condition;

(viii) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and

(3) (i) A small quantity handler of universal waste who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:

(A) Mercury or clean-up residues resulting from spills or leaks; and/or

(B) Other solid waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).

(ii) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the mercury, residues, and/or other waste and must manage it is subject to 40 CFR part 262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

273.14 Labeling/marking.

A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

(a) Universal waste batteries (i.e., each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies), or "Waste Battery(ies)," or "Used Battery(ies);"

(b) A container, (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) are contained must be labeled or marked clearly with:

(1) The label that was on or accompanied the product as sold or distributed; and

(2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s);"

(c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in 40 CFR 273.3(a)(2) are contained must be labeled or marked clearly with:

(1) (i) The label that was on the product when purchased, if still legible;

(ii) If using the labels described in paragraph (1)(I) of this section is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;

(iii) If using the labels described in paragraphs (1)(i) and (ii) of this section is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state; and

(2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)."

(d) Universal waste thermostats (i.e., each thermostat), or a container in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)".

273.15 Accumulation time limits.

(a) A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.

(b) A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

(c) A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

(1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

(2) Marking or labeling each individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;

(3) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;

(4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

(5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

(6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

273.16 Employee training.

A small quantity handler of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

273.17 Response to releases.

(a) A small quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

(b) A small quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with 40 CFR part 262.

273.18 Off-site shipments.

(a) A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

(b) If a small quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of subpart D of this part while transporting the universal waste.

(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a small quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180;

(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.

(e) If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
(1) Receive the waste back when notified that the shipment has been rejected, or
(2) Agree with the receiving handler on a destination facility to which the shipment will be sent.

(f) A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:
(1) Send the shipment back to the originating handler, or
(2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(g) If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The EPA regional office will provide instructions for managing the hazardous waste.

(h) If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

273.19 Tracking universal waste shipments.

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

273.20 Exports.

A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the handler is subject to the requirements of 40 CFR part 262, subpart H) must:

(a) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a)(1) through (4), (6), and (b) and 262.57;

(b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of part 262 of this chapter; and

(c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.

(c) 40 CFR 273.30 through 273.40 (Subpart C), "Standards for Large Quantity Handlers of Universal Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART C – STANDARDS FOR LARGE QUANTITY HANDLERS OF UNIVERSAL WASTE

273.30 Applicability.

This subpart applies to large quantity handlers of universal waste (as defined in 40 CFR 273.6).

273.31 Prohibitions.

A large quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.37; or by managing specific wastes as provided in 40 CFR 273.33.

273.32 Notification.

(a) (1) Except as provided in paragraphs (a)(2) and (3) of this section, a large quantity handler of universal waste must have sent written notification of universal waste management to the Regional Administrator, and received an EPA Identification Number, before meeting or exceeding the 5,000 kilogram storage limit.
(2) A large quantity handler of universal waste who has already notified EPA of his hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this section.
(3) A large quantity handler of universal waste who manages recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) and who has sent notification to EPA as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides under this section.

(b) This notification must include:
(1) The universal waste handler's name and mailing address;
(2) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;
(3) The address or physical location of the universal waste management activities;
(4) A list of all of the types of universal waste managed by the handler (e.g, batteries, pesticides, thermostats);
(5) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste (e.g, batteries, pesticides, thermostats) the handler is accumulating above this quantity.

273.33 Waste management.

(a) *Universal waste batteries:* A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
(1) A large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
(2) A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
(i) Sorting batteries by type;
(ii) Mixing battery types in one container;
(iii) Discharging batteries so as to remove the electric charge;

(iv) Degenerating used batteries;
(v) Disassembling batteries or battery packs into individual batteries or cells;
(vi) Removing batteries from consumer products; or
(vii) Removing electrolyte from batteries.

(3) A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.
(i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to 40 CFR part 262.
(ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(b) *Universal waste pesticides*: A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:
(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or
(2) A container that does not meet the requirements of paragraph (1), provided that the unacceptable container is overpacked in a container that does meet the requirements of paragraph (1); or
(3) A tank that meets the requirements of 40 CFR part 265 subpart J, except for 40 CFR 265.197(c), 265.200, and 265.201; or
(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) *Universal waste thermostats:* A large quantity handler of universal waste must manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
(1) A large quantity handler of universal waste must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
(2) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler:
(i) removes the ampules in a manner designed to prevent breakage of the ampules;
(ii) removes ampules only over or in a containment device (e.g., tray or pan sufficient to contain any mercury released from an ampule in case of breakage);
(iii) ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34;
(iv) immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;
(v) ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
(vi) ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
(vii) stores removed ampules in closed, non-leaking containers that are in good condition;
(viii) packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and
(3) (i) A large quantity handler of universal waste who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:
(A) Mercury or clean-up residues resulting from spills or leaks; and/or
(B) Other solid waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).
(ii) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The

handler is considered the generator of the mercury, residues, and/or other waste and is subject to 40 CFR part 262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

273.34 Labeling/marking.

A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

(a) Universal waste batteries (i.e., each battery), or a container or tank in which the batteries are contained, must be labeled or marked clearly with the any one of the following phrases: "Universal Waste - Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"

(b) A container (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) are contained must be labeled or marked clearly with:
  (1) The label that was on or accompanied the product as sold or distributed; and
  (2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s);"

(c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in 40 CFR 273.3(a)(2) are contained must be labeled or marked clearly with:
  (1) (i) The label that was on the product when purchased, if still legible;
    (ii) If using the labels described in paragraph (c)(1)(i) of this section is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;
    (iii) If using the labels described in paragraphs (c)(1)(i) and (1)(ii) of this section is not feasible, another label prescribed or designated by the pesticide collection program; and
  (2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)."

(d) Universal waste thermostats (i.e., each thermostat), or a container or tank in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s).

273.35 Accumulation time limits.

(a) A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.

(b) A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

(c) A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
  (1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
  (2) Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
  (3) Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;
  (4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
  (5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
  (6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

273.36 Employee training.

A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

273.37 Response to releases.

(a) A large quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.
(b) A large quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the material resulting from the release, and is subject to 40 CFR part 262.

273.38 Off-site shipments.

(a) A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
(b) If a large quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of subpart D of this part while transporting the universal waste.
(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a large quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 though 180;
(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.
(e) If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
    (1) Receive the waste back when notified that the shipment has been rejected, or
    (2) Agree with the receiving handler on a destination facility to which the shipment will be sent.
(f) A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:
    (1) Send the shipment back to the originating handler, or
    (2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
(g) If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The EPA regional office will provide instructions for managing the hazardous waste.
(h) If a large quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

273.39 Tracking universal waste shipments.

(a) *Receipt of shipments.* A large quantity handler of universal waste must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
    (1) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
    (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats);
    (3) The date of receipt of the shipment of universal waste.

(b) *Shipments off-site.* A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:
  (1) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
  (2) The quantity of each type of universal waste sent (e.g., batteries, pesticides, thermostats);
  (3) The date the shipment of universal waste left the facility.

(c) *Record retention.* (1) A large quantity handler of universal waste must retain the records described in paragraph (a) of this section for at least three years from the date of receipt of a shipment of universal waste.
  (2) A large quantity handler of universal waste must retain the records described in paragraph (b) of this section for at least three years from the date a shipment of universal waste left the facility.

273.40 Exports.

A large quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the handler is subject to the requirements of 40 CFR part 262, subpart H) must:

(a) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a)(1) through (4), (6), and (b) and 262.57;

(b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of part 262 of this chapter; and

(c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.

(d) 40 CFR 273.50 through 273.56 (Subpart D), "Standards for Universal Waste Transporters" are incorporated by reference including subsequent amendments and editions.

SUBPART D -- STANDARDS FOR UNIVERSAL WASTE TRANSPORTERS.

273.50 Applicability.

This subpart applies to universal waste transporters (as defined in 40 CFR 273.6).

273.51 Prohibitions.

A universal waste transporter is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.54.

273.52 Waste management.

(a) A universal waste transporter must comply with all applicable U.S. Department of Transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR part 262. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.
(b) Some universal waste materials are regulated by the Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under 40 CFR 262, they may not be described by the DOT proper shipping name "hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

273.53 Storage time limits.

(a) A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
(b) If a universal waste transporter stores universal waste for more than ten days, the transporter becomes a universal waste handler and must comply with the applicable requirements of subparts B or C of this part while storing the universal waste.

273.54 Response to releases.

(a) A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.
(b) A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of 40 CFR parts 260 through 272. If the waste is determined to be a hazardous waste, the transporter is subject to 40 CFR part 262.

273.55 Off-site shipments.

(a) A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.

(b) If the universal waste being shipped off-site meets the Department of Transportation's definition of hazardous materials under 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable Department of Transportation regulations under 49 CFR part 172.

273.56 Exports.

A universal waste transporter transporting a shipment of universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the transporter is subject to the requirements of 40 CFR part 262, subpart H) may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter must ensure that:

(a) A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
(b) The shipment is delivered to the facility designated by the person initiating the shipment.

(e) 40 CFR 273.60 through 273.62 (Subpart E), "Standards for Destination Facilities" are incorporated by reference including subsequent amendments and editions.

SUBPART E – STANDARDS FOR DESTINATION FACILITIES

273.60 Applicability.

(a) The owner or operator of a destination facility (as defined in 40 CFR 273.6) is subject to all applicable requirements of parts 264, 265, 266, 268, 270, and 124 of this chapter, and the notification requirement under Section 3010 of RCRA:
(b) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with 40 CFR 261.6(c)(2).

273.61 Off-site shipments.

(a) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or foreign destination.
(b) The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, he must contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility must:
    (1) Send the shipment back to the original shipper, or
    (2) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.
(c) If the a owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the shipper. The EPA regional office will provide instructions for managing the hazardous waste.
(d) If the owner or operator of a destination facility receives a shipment of non-hazardous, non-universal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

273.62 Tracking universal waste shipments.

(a) The owner or operator of a destination facility must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
    (1) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
    (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats);
    (3) The date of receipt of the shipment of universal waste.
(b) The owner or operator of a destination facility must retain the records described in paragraph (a) of this section for at least three years from the date of receipt of a shipment of universal waste.

(g) 40 CFR 273.80 through 273.81 (Subpart G), "Petitions to include Other Wastes Under 40 CFR Part 273" are incorporated by reference including subsequent amendments and editions, except that 40 CFR 273.80(a) and (b), are not incorporated by reference.

(1) The following shall be substituted for the provisions of 40 CFR 273.80(a) which were not incorporated by reference:
Any person seeking to add a hazardous waste or a category of hazardous waste to this Part may petition for a regulatory amendment under this Subpart and 15A NCAC 24B .0001 and 40 CFR 260.23.

(2) The following shall be substituted for the provisions of 40 CFR 273.80(b) which were not incorporated by reference:
To be successful, the petitioner must demonstrate to the satisfaction of the Administrator that regulation under the universal waste regulations of 40 CFR Part 273 is:
   (A) appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program;
   (B) The petition must include the information required by 15A NCAC 24B .0001; and
   (C) The petition shall also address as many of the factors listed in 40 CFR 273.81 as are appropriate for the waste or waste category addressed in the petition.

SUBPART G – PETITIONS TO INCLUDE OTHER WASTES UNDER 40 CFR PART 273

273.80 General.

(a) **See 15A NCAC 13A .0119(g)(1).**
(b) **See 15A NCAC 13A .0119(g)(2).**
(c) The Administrator will evaluate petitions using the factors listed in 40 CFR 273.81. The Administrator will grant or deny a petition using the factors listed in 40 CFR 273.81. The decision will be based on the weight of evidence showing that regulation under 40 CFR part 273 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

273.81 Factors for Petitions to Include Other Wastes under 40 CFR Part 273.

(a) The waste or category of waste, as generated by a wide variety of generators, is listed in subpart D of part 261 of this chapter, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in subpart C of part 261 of this chapter. (When a characteristic waste is added to the universal waste regulations of 40 CFR part 273 by using a generic name to identify the waste category (e.g., batteries), the definition of universal waste in 40 CFR 260.10 and 273.6 will be amended to include only the hazardous waste portion of the waste category (e.g., hazardous waste batteries). Thus, only the portion of the waste stream that does exhibit one or more characteristics (i.e., is hazardous waste) is subject to the universal waste regulations of 40 CFR part 273;
(b) The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities);
(c) The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;
(d) Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;
(e) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to 40 CFR 273.13, 273.33, and 273.52; and/or applicable

Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport;

(f) Regulation of the waste or category of waste under 40 CFR part 273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g, the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with Subtitle C of RCRA.

(g) Regulation of the waste or category of waste under 40 CFR part 273 will improve implementation of and compliance with the hazardous waste regulatory program; and/or

(h) Such other factors as may be appropriate.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. January 1, 1996;
Recodified from 15A NCAC 13A .0019 Eff. December 20, 1996.
Amended Eff. August 1, 1998.

(f) 40 CFR 273.70 (Subpart F), "Import Requirements" is incorporated by reference including subsequent amendments and editions.

SUBPART F – IMPORT REQUIREMENTS

273.70 Imports.

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this part, immediately after the waste enters the United States, as indicated in paragraphs (a) through (c) of this section:

(a) A universal waste transporter is subject to the universal waste transporter requirements of subpart D of this part.

(b) A universal waste handler is subject to the small or large quantity handler of universal waste requirements of subparts B or C, as applicable.

(c) An owner or operator of a destination facility is subject to the destination facility requirements of subpart E of this part.

(d) Persons managing universal waste that is imported from an OECD country as specified in 40 CFR 262.58(a)(1) are subject to paragraphs (a) through (c) of this section, in addition to the requirements of 40 CFR part 262, subpart H.

A G E N D A

HAZARDOUS WASTE COMPLIANCE
FOR GENERATORS
MAY 1999
(Day One)

8:00	**REGISTRATION**✓	
8:30	**WELCOME AND INTRODUCTION**✓	MCIC
8:45	**REGULATIONS** ✓	Mike Williford
9:45	Break (10 min)	
9:55	**WASTE MINIMIZATION**	Steve Phibbs
Break (10 min)		
10:50	**INSPECTION**	Dick Denton
Lunch 12:00 to 1:00		
1:00	**INSPECTION** (continued)	Roberta Proctor
Break (10 min)		
2:40	**ENFORCEMENT**	Joe Parker
3:20	**A LOOK AHEAD**	Doug Holyfield Bill Meyer Jill Burton
Break (10 min)		
4:00	**QUESTION AND ANSWERS**	Everybody