A Road Map to RCRA: Small Quantity Generator (SQG) Requirements

Connecticut Department of Environmental Protection

www.ct.gov/dep

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This handbook is intended as an educational tool for Small Quantity Generators. It does not constitute a complete reference to state, federal or local laws. In the event of inconsistency between this document and the regulatory language, the language in the hazardous waste management regulations controls. It is your responsibility to comply with all applicable laws. Relying on the information in this handbook will not protect you legally and may not be relied upon to create a right or benefit substantive or procedural, enforceable at law or in equity by any person. Final determination of the proper handling and disposal of waste is the sole responsibility of the generator.

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These requests may be made directly to Marcia Z. Bonitto, ADA Coordinator, via e-mail: Marcia.Bonitto@ct.gov.

Table of Contents

Table of Contents (cont'd)

APPENDICES

Preface

DOES YOUR BUSINESS GENERATE HAZARDOUS WASTE?

Many of us think of individual chemicals when we hear the phrase "hazardous waste." In reality, this phrase can include many commonly used items such as waste adhesives, unwanted or discarded oil-based paints, and spent solvents. Most businesses generate small quantities of hazardous waste. Businesses that generate between 100 and 1,000 kg (220 and 2,200 pounds or approximately 26 to 260 gallons) of hazardous waste per calendar month are Small Quantity Generators (SQGs).

Listed below are examples of businesses that may generate hazardous wastes:

- Lawn and Garden Care Centers
- Laundries and Dry Cleaners
- Furniture and Wood Refinishers
- Chemical Laboratories
- Vehicle Maintenance and Dismantling Shops
- Hardware Stores
- Health Care Providers
- Metal Working Shops
- Printers

Introduction

HOW TO USE THIS GUIDE

This guide has been developed by the Connecticut Department of Environmental Protection (CTDEP) to assist Small Quantity Generators of hazardous waste navigate the detailed "road" of waste regulations in Connecticut. Throughout this guide you will see "road signs" to help you along your trip. These signs aid in your understanding by focusing on key topics and providing references and sources of further assistance.

Here are the road signs that you will see:

Additional Clues & Hints

Hot Topics

STOP! This topic could spell trouble if not understood! Read in-depth and understand thoroughly before reading further!

Look to the compass for definitions, acronyms and clarification. Items in the guide that have further clarification available are in ***italics***.

You will see throughout this text terms in ***italics*** and hyperlinks. Click on these terms for more information when viewing this document electronically.

The road may get bumpy along the way and the CTDEP will always be there to assist you with questions and concerns that you may have. CTDEP encourages generators to contact the Bureau of Materials Management and Compliance Assurance with any questions regarding this manual, small quantity generator requirements, or other regulatory requirements. If you would like a copy of the Hazardous Waste Management Regulations or copies of other publications, please do not hesitate to contact the CTDEP at the telephone numbers provided below or visit the CTDEP's website at http://www.ct.gov/dep/.

Contact Information

Emergency Response and Spill Prevention Division	
Emergency Spill Reporting	(860) 424-3338 or
	(866) 337-7745
Information	(860) 424-3377
National Response Center	(800) 424-8802
Bureau of Air Management	(860) 424-3436
Bureau of Materials Management & Compliance Assurance	
Hazardous Waste Compliance Assistance	(888) 424-4193
Solid Waste and Recycling Program	(860) 424-3366/3365
Stormwater and Wastewater Discharge Programs	(860) 424-3018
Underground Storage Tank Program	(860) 424-3374
Office of Pollution Prevention	(860) 424-3297
Bureau of Water Protection and Land Reuse	
Remediation Division	(860) 424-3705

Section 1

AN INTRODUCTION TO RCRA

What is RCRA?

RCRA stands for the federal Resource Conservation and Recovery Act (RCRA). This law addresses the problem of managing and disposing of industrial and municipal ***solid wastes*** generated nationwide.

RCRA established rules for facilities that ***generate***, ship and dispose of ***hazardous waste.*** These regulations require detailed tracking of the waste from its point of generation to its point of final disposal and, thus the term ***cradle to grave*** was coined. RCRA also requires facilities to manage their operations to minimize or eliminate potential releases of hazardous waste to the environment.

The goals of RCRA are threefold:

1. To protect human health and the environment;
2. To reduce waste and conserve energy and national resources; and
3. To reduce or eliminate the generation of hazardous waste to the maximum extent possible.

How Does RCRA Affect Connecticut Hazardous Waste Generators?

The CTDEP adopted the federal hazardous waste management regulations by incorporating the federal regulations into the Regulations of Connecticut State Agencies (RCSA) with some changes. These changes made Connecticut's hazardous waste program broader in scope than the federal program. Since then, the CTDEP has updated these regulations several times. Connecticut's Hazardous Waste Regulations are codified in sections 22a-449 (c)-100 through 119 and 22a-449(c)-11 of RCSA. RCRA is therefore enforced in Connecticut by the CTDEP.

The CTDEP has published many documents that Small Quantity Generators (SQGs) of hazardous waste might find useful in day-to-day operations associated with waste management. For additional guidance, see the clues at the end of this section.

Subsequent chapters of this document provide additional details and guidance in complying with Connecticut's waste laws and regulations.

For additional information, visit the CTDEP's Homepage: www.ct.gov/dep/ and click on Materials & Waste Management

The EPA's Waste Management Homepage: http://www.epa.gov/osw/index.htm

Abandoned – A material that is disposed of, burned or incinerated or accumulated, stored or treated (but not recycled before or in lieu of being abandoned by being disposed of, burned or incinerated).

Cradle to Grave – A term used to describe RCRA's goal to manage waste from the point of generation to the point at which it is permanently disposed.

Generate – This term refers to the act or process of creating hazardous waste as identified or listed in Title 40 of the Code of Federal Regulations Part 261. If you generate, you are now considered a generator of hazardous waste.

Generator – Any person, by site, whose act or process produces hazardous waste.

Hazardous waste – A waste may be hazardous either because it is specifically listed in the regulations or because it exhibits characteristics such as ignitability, toxicity, corrosivity and reactivity that would render it subject to RCRA (more information on this later!)

RCRA – Resource Conservation and Recovery Act.

RCRA waste – A waste that is subject to the RCRA regulations.

Solid waste – Any discarded material that is ***abandoned,*** recycled, a military munition or inherently waste-like. There are currently only two materials identified as being inherently waste-like, dioxin waste and halogen-containing materials that are burned in halogen-acid furnaces. Only a material that is a solid waste can be classified as a hazardous waste. A solid waste can be solid, liquid, semi-solid or containerized gaseous material.

Waste – A material that can no longer be used for its intended purpose.

Section 2

HAZARDOUS OR NON-HAZARDOUS: THAT IS THE QUESTION!

Before determining whether a waste is hazardous or non-hazardous, the concept of hazardous waste must first be understood. In order to do this, the generator must ask the question: What does it mean to be hazardous?

Remember that a waste is a material that can no longer be used for its intended purpose!

A waste is hazardous if it exhibits a characteristic which would require the generator to assign a RCRA waste code. ***Waste codes*** were developed by EPA as a standard naming convention to allow those working with hazardous wastes to quickly and clearly determine the nature of the material to be handled, shipped or disposed.

Some wastes are ***listed***. In other words, that particular waste is specifically referenced by chemical name or constituents in the regulations. Here are the possible listed wastes:

The 'Official' Definition of Hazardous Waste*

"A solid waste, or combination of solid waste, 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."

****It is important to note that some wastes are specifically excluded from RCRA.***

Listed Waste

These wastes are divided into four specific lists as described below:

- "F" List – Waste from Non-Specific Sources **Appendix A** provides a description of common F Listed waste codes.
- "K" List – Waste from Specific Sources (Not Common for SQGs)
- "U" List – Non-acute Commercial Chemical Products
- "P" List – Acute Commercial Chemical Products

Chemicals listed on the "P" List and those on the "U" List noted with hazard code H are regulated as Acute Hazardous Waste. SQGs are only allowed to generate up to 1 kg (2.2 pounds) on site in one calendar month and/or accumulate up to 1 kg on site for up to 180 days.

Characteristic Hazardous Waste

Not all hazardous wastes are listed. A waste is considered hazardous and is regulated under RCRA if it exhibits one or more of the following characteristics: Ignitability, Corrosivity, Reactivity, and Toxicity. To accurately make this determination, a representative sample of the waste should be collected and tested by a state certified laboratory. The regulations assign specific "D" codes to each of these characteristics.

Each characteristic is further defined below.

Ignitable Hazardous Waste (D001)

Ignitable wastes are defined under RCRA as materials which fit into one or more of the following definitions:

- A flammable liquid with a flash point less than 60°C (140°F)
- A flammable solid – (it is not a liquid and is capable of causing fire through friction, absorption, moisture or spontaneous chemical changes; and, when ignited, burns so vigorously and persistently that it creates a hazard)
- An ignitable compressed gas
- An oxidizer

Note: Aqueous solutions containing less than 24% alcohol by volume are excluded from the characteristic of ignitability. However, if the alcohol has been used for solvent properties, the waste must be evaluated to determine if it should be classified as an F-listed waste.

D001 Waste

Example:
A half empty container of waste alcohol-based hand sanitizer gel that is being disposed of is an example of an **Ignitable Waste (D001)**. In this case, testing a representative sample of the alcohol at a state certified laboratory or a review of the Material Safety Data Sheet (MSDS) may be used to confirm that the alcohol has a flash point of less than 60^0 C (140^0 F).

D001 Waste

Certain waste adhesives can also be considered Ignitable Waste (D001). A common example of an ignitable adhesive is waste rubber cement. Similar to the hand sanitizer, testing a representative sample of the rubber cement at a state certified laboratory or a review of the MSDS may be used to confirm that the rubber cement has a flash point of less than 60^0 C (140^0 F).

Corrosive Hazardous Waste (D002)

Corrosive hazardous wastes are liquids that have a pH less than or equal to 2 or greater than or equal to 12.5.

Waste acids from a laboratory are examples of **Corrosive Wastes (D002)**.

D002 Waste

Reactive Hazardous Waste (D003)

Reactive hazardous wastes are defined under RCRA as:

- Chemicals which react with water or air and then ignite and/or explode;
- Chemicals which react with water or air and then give off a toxic gas;
- Chemicals containing cyanides and/or sulfides;
- Chemicals that are stored under pressure and when exposed to heat could explode; and
- Some Department of Transportation regulated explosives.

A non-empty aerosol can is an example of a **Reactive Waste (D003).**

An aerosol can that is completely empty and contains no propellant must be recycled as scrap metal.

D003 Waste

Toxic Hazardous Waste (D004-D043)

Toxic hazardous wastes are materials, which if disposed of on land, may leach constituents into the ground and/or water and are toxic to the environment. See the summary table for examples of toxic characteristic codes.

Summary of Common Toxic Characteristic Waste Codes

EPA HW No.	Contaminant	Regulatory Level (mg/L)
	Metals	
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0
	Volatile Organics	
D018	Benzene	0.5
D019	Carbon tetrachloride	0.5
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D028	1,2-Dichloroethane	0.5
D029	1,1-Dichloroethylene	0.7
D035	Methyl Ethyl Ketone	200.0
D039	Tetrachloroethylene	0.7
D040	Trichloroethylene	0.5
D043	Vinyl chloride	0.2

Saturated rollers, brushes, rags and wipes from a painting project using various solvent-based paints, thinners and lacquers containing Methyl Ethyl Ketone are examples of **Toxic Waste (D035)**. (Note: this waste may also be considered an **F005 waste for spent non-halogenated solvents**).

D035 Waste

Other Considerations

Wastes can also become hazardous if the following conditions are met:

- It is a mixture of solid waste (i.e., non-hazardous) and one or more listed hazardous waste (this is known as the ***Mixture Rule***).
- It is used oil containing more than 1,000 parts per million (ppm) of total ***halogenated compounds***. See **Section 11** for more on Used Oil.
- It is a waste derived from the treatment of a listed waste (this is known as the ***Derived from Rule***).

Are we there yet? (CT Regulated Wastes)

Not quite... There are several types of industrial wastes that are not considered to be hazardous waste, but are still regulated by the CTDEP. These are commonly referred to as ***Connecticut regulated wastes***. Connecticut regulated wastes should be evaluated for suspected RCRA hazardous constituents prior to treatment or disposal. A description of the types of waste and waste codes assigned to non-RCRA hazardous waste follows:

Code*	Description	Examples
CR01	Waste PCB's	PCB Oils, PCB Ballasts, PCB Transformers
CR02	Waste Oil	Fuel Oil, Lubricating Oil, Hydraulic Oil
CR03	Waste Water Soluble Oil	Cutting Oil, Cooling Oil
CR04	Waste Chemical Liquids	Latex Paint, Sludges, Glycol/Glycol Substitutes
CR05	Waste Chemical Solids	Grinding Dust, Oily Rags, Corrosive Solids, Contaminated Soil

** These are wastes which are neither characteristic nor listed RCRA Hazardous Wastes per 40 CFR 261, but a facility permit is required by Connecticut General Statutes (CGS) Section 22a-454 for a person engaged in the business of storing, treating, disposing or transporting them. However, CGS do not require the transporter to be licensed to transport CR05 (Waste Chemical Solid).*

Note that the 180-day hazardous waste storage limit does not apply to non-hazardous Connecticut Regulated Waste. Even though these materials are non-RCRA hazardous waste, they are still regulated to ensure proper treatment or disposal.

Certain solid waste may be suitable for disposal in a municipal landfill provided it has been approved for land filling in accordance with the CTDEP Special Waste Authorization process. Special wastes may include the following as long as they are not hazardous waste:

(1) Water treatment, sewage treatment or industrial sludges, liquid, solids and contained gases; fly-ash and casting sands or slag; and contaminated dredge spoils; (2) scrap tires; (3) bulky waste; (4) asbestos; (5) residue; and (6) biomedical waste.

So what do I need to do?

Now that you know what a hazardous waste is, you need to apply this knowledge to the materials that need to be disposed of by the generator. Prior to disposing of a waste, the generator must determine if the waste should be assigned with one or more of the codes listed in the previous pages.

To help make sense of what is, and is not, a hazardous waste (and hence regulated by RCRA), you should be prepared to tell a complete story about the waste that you are preparing for disposal. This story should include information on how the material was used, how it was managed as part of a process and/or how the material was managed after it was used. This story is required to be documented in what is called a ***waste determination***.

Hazardous Waste Determination

Any person who generates a solid waste must determine if that waste is a hazardous waste.

Your National Trade Association or its local chapter may be able to assist you with Hazardous Waste Determinations.

All businesses are required to perform a Hazardous Waste Determination on the waste they generate to identify whether or not that waste is hazardous. In Connecticut, hazardous waste determinations must be reviewed and recertified at least once during each 12-month period, or whenever a process generating a waste changes. A hazardous waste determination may be conducted either by having a representative sample of the waste tested by a state certified laboratory, by applying knowledge of the waste and its hazardous characteristics, or by a combination of both methods.

Laboratory Testing

Laboratory analyses should be conducted for flash point, corrosivity, reactivity, toxicity, volatile organic compounds (VOCs), and semi-volatile organic compounds (semi-VOCs). Some waste streams should also be tested for PCBs and/or specific listed wastes that may have been present in the waste stream. Test for toxicity using the Toxicity Characteristic Leaching Procedure, Test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11. Such laboratory analyses must be performed by a Connecticut Department of Public Health (DPH) certified laboratory. Laboratories can provide

guidance regarding correct procedures and equipment for collecting a representative sample.

Knowledge of Process

A knowledge-based hazardous waste determination involves a well thought out process in which the materials used, and the waste generating processes, are considered. More often than not, it is easier to use knowledge to characterize the waste as hazardous, than to characterize it as non-hazardous. In a knowledge-based determination, you must be able to document clearly that the information used is valid, verifiable, and correctly applied. You may assume a waste is hazardous based on its characteristics or on past laboratory analysis, provided there is no change in how the waste was generated.

To assist you in making a Hazardous Waste Determination, check the Material Safety Data Sheets (MSDS) that accompany your hazardous materials. If an MSDS was not made available to you, the web link below may be of assistance.
http://www.msdssearch.com

Required Recordkeeping

As a generator, you must keep records of any test results, waste analysis, or other determinations made for at least three (3) years from the date that the waste was last sent off-site for treatment, storage, or disposal. Re-characterization of the waste must be done whenever there is a process change. In Connecticut, hazardous waste determinations must be reviewed and recertified at least once during each 12-month period, or whenever a process generating a waste changes.

SUMMARY

How do I conduct a hazardous waste determination?

A hazardous waste determination may be conducted either by having the waste tested by a state certified laboratory or by applying knowledge of the waste and its hazard characteristics. If applying knowledge, you must be able to clearly demonstrate how the knowledge was applied in making the determination and maintain documentation supporting this determination. You may assume a waste is hazardous based on its characteristics or on past laboratory analysis provided there is no change in how the waste was generated.

The exercise on the next page provides an example of a written waste determination that can be used to document your hazardous waste. By using a quick and easy checklist, you can verify that each of the potential hazards and waste classification/codes are referenced and confirmed. The form can also be helpful to identify additional information on your waste determination such as transportation information, management methods, and disposal methods. A blank waste determination form has been provided in **Appendix B**.

EXERCISE 2-1:

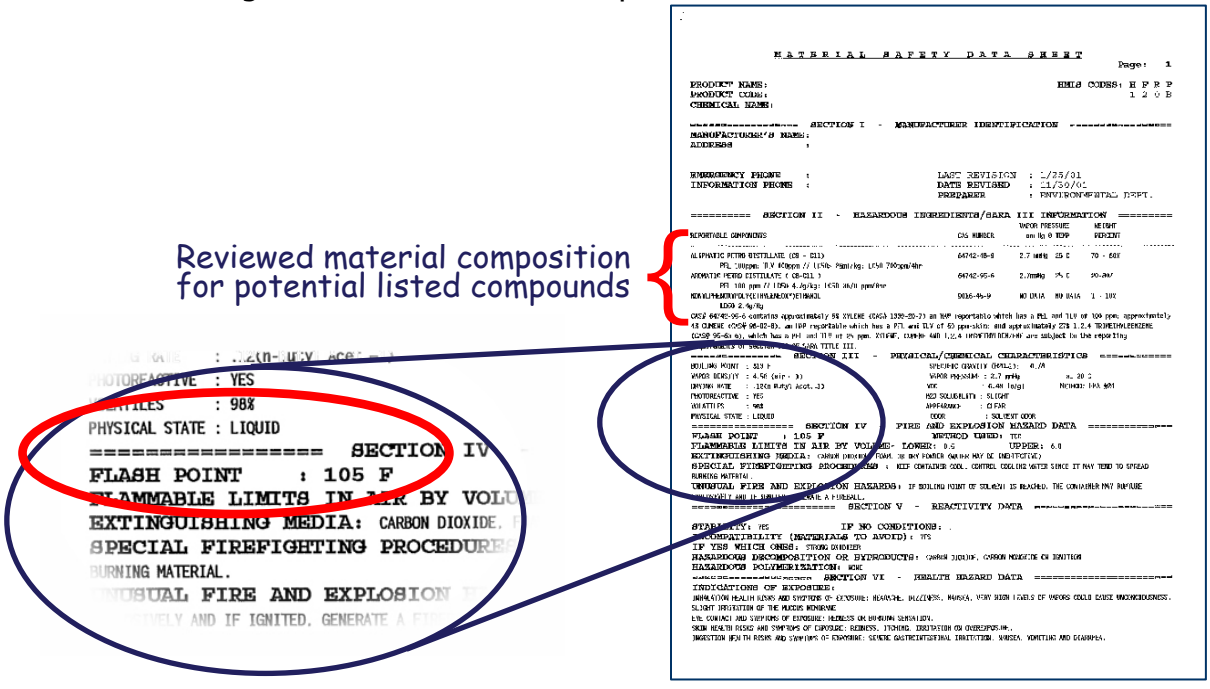
Business A generates a waste solution from its cleaning of printer rollers using Presswash X. The printer roller uses soy-based ink with non-hazardous constituents. The majority of the waste is Presswash X.

To determine if the material used and the process generating the waste solution is hazardous or non-hazardous, Business A is using a knowledge-based determination and relying on process knowledge and information provided in the Material Safety Data Sheets (MSDS).

In order to complete the determination, Business A followed the steps below:

1. The generator reviewed the process generating the waste.
2. The generator itemized the raw materials used in the process.
3. The generator obtained the most current Material Safety Data Sheets (MSDS) of raw materials used in the process from the supplier or the manufacturer.
4. The generator used the MSDS to complete the Waste Characterization profile forms.
5. The generator signs and dates the profile and reviews and updates it on an annual basis. The date of review will be placed on the profile or other tracking log.

The waste from this process is concluded to be D001 hazardous (i.e., ignitable) because the flashpoint is below 140° F and there were no other constituents of concern that the generator identified in the process and literature review.



EXERCISE 2-1 (CONT):

Written Waste Determination Forms

WASTE CHARACTERIZATION

Waste Description/Name: Presswash X & Ink

Hazardous: X **Non-Hazardous:** _____ **Universal Waste:** _____ **Used Oil:** _____

DOT Shipping Name: RQ, UN1993, Waste Flammable Liquid, N.O.S. (Petroleum distillate) PG II, (D001)

Instructions:
Check all boxes that apply

Characteristics:

			Laboratory Results on File	or	Process Knowledge Documented
Ignitability *(Choose one)*					
☐	*Not ignitable*				
X	Liquid and flashpoint < 140° F	D001			X
☐	Non-liquid and when ignited burns vigorously	D001			
☐	Ignitable compressed gas	D001			
☐	DOT oxidizer	D001			
Corrosivity *(Choose one)*					
X	*Not corrosive*				X
☐	pH < or = 2	D002			
☐	pH > or = 12.5	D002			
Reactivity *(Choose one)*					
X	*Not reactive*				X
☐	HCN > or = 250 mg/kg	D003			
☐	H_2S > of = 500 mg/kg	D003			
☐	Explosive	D003			
☐	Water reactive	D003			

			Absent or Below Regulatory Limit (Analytical or Process Knowledge)		Present or Exceeds Regulatory Limit (Analytical or Process Knowledge)	
Toxicity – Metals (mg/L):						
Arsenic	5	D004		ND		
Barium	100	D005		ND		
Cadmium	1.0	D006		ND		
Chromium	5.0	D007		ND		
Lead	5.0	D008		ND		
Mercury	0.2	D009		ND		
Selenium	1.0	D010		ND		
Silver	5.0	D011		ND		

			Absent or Below Regulatory Limit (Analytical or Process Knowledge)		Present or Exceeds Regulatory Limit (Analytical or Process Knowledge)	
Toxicity - Solvents, Volatiles (mg/L):						
Benzene	0.5	D018		ND		
Carbon tetrachloride	0.5	D019		ND		
Chlorobenzene	100	D021		ND		
Chloroform	6.0	D022		ND		
1,2 - Dichloroethane	0.5	D028		ND		
1,1 - Dichloroethylene	0.7	D029		ND		
Methyl ethyl ketone	200.0	D035		ND		
Tetrachloro-ethylene	0.7	D039		ND		
Trichloroethylene	0.5	D040		ND		
Vinyl chloride	0.2	D043		ND		
Toxicity - Solvents, Semi-volatiles (mg/L):						
Cresol (total)	200.0	D026		ND		
Cresol (ortho)	200.0	D023		ND		
Cresol (m)	200.0	D024		ND		
Cresol (p)	200.0	D025		ND		
1,4 - Dichlorobenzene	7.5	D027		ND		
2,4 - Dinitrotoluene	0.13	D030		ND		
Hexachlorobenzene	0.13	D032		ND		
Hexachlorobutadiene	0.5	D033		ND		
Hexachloroethane	3.0	D034		ND		
Nitrobenzene	2.0	D036		ND		
Pentachlorophenol	100.0	D037		ND		
Pyridine	5.0	D038		ND		
2,4,5 - Trichlorophenol	400.0	D041		ND		
2,4,6 - Trichlorophenol	2.0	D042		ND		
Toxicity - Pesticides/Herbicides (mg/L):						
Chlordane	0.03	D020		ND		
Endrin	0.02	D012		ND		
Heptachlor (+epoxide)	0.008	D031		ND		
Lindane	0.4	D013		ND		
Methoxychlor	10.0	D014		ND		
Toxaphene	0.5	D015		ND		
2,4 - D	10.0	D016		ND		
2,4,5 - TP Silvex	1.0	D017		ND		

	Absent or Below Regulatory Limit (Analytical or Process Knowledge)		Present or Exceeds Regulatory Limit (Analytical or Process Knowledge)	
"Listed Waste" Parameters: code _____ _____		ND ND		

	Absent or Below Regulatory Limit (Analytical or Process Knowledge)		Present or Exceeds Regulatory Limit (Analytical or Process Knowledge)	
Other Parameters:				
Halogens, Total		ND		
Heat Content (BTU Value)		ND		
PCBs		ND		
Petroleum Hydrocarbons, Total		ND		
Suspended Solids, Total		ND		

Analytical Information (specify laboratory/sample number(s) and attach analytical results):

Not Applicable – See Below

Process knowledge information (Materials used, process description): The waste stream is generated when the press rollers are washed with the Presswash X. The only two raw materials used in the process are the soy based inks which are non-hazardous and the press wash. Based on the material safety data sheets (MSDSs), the press wash has a flashpoint less than 140 degrees Fahrenheit making this combination ignitable (DOO1) and reactive (DOO3). Since the press wash constitutes the bulk of the mixture, laboratory sampling will not be conducted.

Additional comments: _____

Waste Characterization reviewed by:

Name: _____ **Title:** _____

Signature: _____

EXERCISE 2-2:

Business B generates a wastewater from the cooling of stainless steel turnings from a machining process. The wastewater contains stainless steel turnings. To determine if this wastewater is hazardous or non-hazardous, Business B is using laboratory results for Toxicity Characteristic Leaching Procedure (TCLP) chromium analysis.

In order to complete the determination, Business B followed the steps below:

1. The generator reviewed the process generating the waste.
2. The generator collected a sample of the waste using EPA approved methodology and sampling bottles provided by the laboratory.
3. The generator sent the sample to a state certified laboratory.
4. The generator used the laboratory analytical results to complete the waste characterization profile form.
5. The generator signs and dates the profile and reviews the profile annually. The generator will use the laboratory results and waste characterization profile form as documentation of the review. The generator will update the profile as needed.

The waste from this process is concluded to be non-hazardous because no hazardous characteristics applied. The stainless steel turnings are settled out from the wastewater and sent offsite as scrap metal. Only the wastewater is managed as non-hazardous waste. However, the generator still had to identify chromium as a constituent of concern in the process and collect a sample of the waste for analysis. The results demonstrated that the stainless steel turnings wastewater will not leach chromium at a concentration greater than the regulatory limit of 5 mg/L.

Written Waste Determination Form

Analysis Report FOR:
March 27, 2008

Sample Information		Custody Information		Date	Time
Matrix:	Wastewater	Collected by:		03/20/08	13:00
Location Code:		Received by:	LB	03/20/08	15:37
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	20040058				

Laboratory Data

SDG I.D.: GAQ09244
I.D.: AQ09244

Client ID: Stainless Steel Turnings

Parameter	Result	RL	Units	Date	Time	By	Reference
TCLP Chromium	0.02	0.01	mg/L	03/21/08		EK	E1311/SW6010
TCLP Extraction for Metals	Completed			03/20/08		D	EPA 1311
TCLP Metals Digestion	Completed			03/21/08		D	SW846 - 3005

Comments:

If there are any questions regarding this data, please call
ND=Not detected BDL=Below Detection Limit RL=Reporting Limit

EXERCISE 2-2 (cont):

Site 3/25/2009

EPA ID #

WCFORM.DOC

WASTE CHARACTERIZATION

Waste Description: Wastewater Containing Stainless Steel Turnings

Waste Category: Wastewater

Waste ID#: J-09

Hazardous _____ **Non-Hazardous** X

DOT Shipping Name: Non-DOT Regulated

Instructions: *Check all boxes that apply*			Absent or Below Regulatory Limit		Present or Exceeds Regulatory Limit	
			Analytical	Process Knowledge	Analytical	Process Knowledge
			⇓	⇓	⇓	⇓
Toxicity – Metals (mg/L):						
Arsenic	5	D004		X		
Barium	100	D005		X		
Cadmium	1.0	D006		X		
Chromium	5.0	D007	X			
Lead	5.0	D008		X		
Mercury	0.2	D009		X		
Selenium	1.0	D010		X		
Silver	5.0	D011		X		
Toxicity - Solvents, Volatiles (mg/L):						
Benzene	0.5	D018		X		
Carbon tetrachloride	0.5	D019		X		
Chlorobenzene	100	D021		X		
Chloroform	6.0	D022		X		
1,2 - Dichloroethane	0.5	D028		X		
1,1 - Dichloroethylene	0.7	D029		X		
Methyl ethyl ketone	200.0	D035		X		
Tetrachloro-ethylene	0.7	D039		X		
Trichloroethylene	0.5	D040		X		
Vinyl chloride	0.2	D043		X		

Connecticut regulated waste – A waste that is not considered RCRA hazardous but is still regulated as a non-hazardous waste in Connecticut.

Halogenated compounds – Volatile compounds containing elements from the halogens family (group 17) on the periodic table of elements. The most common halogens include chlorine and bromine which can be associated with degreasers such as trichloroethylene (TCE) and tetrachloroethylene (PCE or perc).

Remember:
Waste determinations must be reviewed and updated annually, if required. This must be a documented review where, if changes to the determination are made, those changes and the reasons for making the changes are provided.

Listed – Term used to describe a particular waste that is specifically referenced by chemical name or genre in the regulations.

Waste codes – The standard naming convention used by EPA to allow those working with hazardous wastes to quickly and clearly determine the nature of the material to be handled, shipped or disposed.

Waste determination – The process used to categorize a waste as hazardous or non-hazardous. The term "waste profile" can be used synonymously especially by waste disposal vendors. This analysis can be based on either knowledge or analytical data but must be documented. Each determination must be reviewed and updated (if needed) annually.

Visit the CT DEP website (http://www.ct.gov/dep) for more information on making a hazardous waste determination.

A list of DPH certified laboratories can be found at the DPH website by searching for "certified laboratories" at www.ct.gov/dph.

Section 3

WHAT IS MY STATUS?

By this point, you have completed your waste determinations and know if you ***generate*** hazardous waste. A generator is anyone who generates hazardous waste. Once you have identified your hazardous waste streams, you must now determine your generator classification or status. This classification is based on the amount of hazardous waste generated in a calendar month.

In Connecticut, generators fall into one of three classifications. These classifications include large quantity generators (LQGs), small quantity generators (SQGs), and conditionally exempt small quantity generators (CESQGs).

Generator classification is not based on how much you ship offsite for disposal per month! Although this is an indication of how much waste you produce, your classification is based on generation and NOT disposal volume!

To keep it simple, LQGs generate the largest amount of waste while CESQGs generate the least amount of waste. As your generator classifications increases from a CESQG to SQG to LQG, so do your compliance obligations.

Conditionally Exempt Small Quantity Generator (CESQG)

You are a CESQG if you generate 220 lbs (100 kg) or less of hazardous waste and less than 2.2 lbs (1 kg) of acute hazardous waste per calendar month (waste codes denoted with the hazard code "H" and all P-listed wastes). CESQGs are exempt from many state requirements if they comply with the following requirements:

- You must perform and maintain waste determinations.
- You can accumulate less than 2,200 lbs (1,000 kg) of waste, or 220 lbs (100 kg) residue or contaminated soil from cleanup of an acute waste spill on-site at any one time.
- You must comply with Department of Transportation (DOT) regulations.
- You must either comply with Universal Waste rules or manage the waste as hazardous.
- You must comply with Used Oil requirements.

CESQGs may either treat or store their waste in an on-site facility, or ensure delivery to an appropriate off-site treatment, storage, or disposal facility.

Small Quantity Generator (SQG)

You are a SQG if you generate between 220 and 2,200 pounds or approximately 26 to 260 gallons (100 and 1,000 kg) of hazardous waste and less than 2.2 lbs (1 kg) of acute hazardous waste per calendar month. The following list summarizes the specific requirements applicable to SQGs:

- You must perform and maintain waste determinations.
- You can only store waste on-site for less than 180 days.
- You can only accumulate less than 2,200 lbs (1,000) kg of waste on-site at any one time.
- Waste can be accumulated in containers or tanks.
- You must comply with preparedness and prevention procedures.
- Emergency response procedures must be in place.
- You must post emergency contact information next to the telephone.
- You must develop and maintain a written inspection program.
- You must obtain an EPA Identification Number.
- You must train your personnel.
- You must ***manifest*** your waste using the uniform hazardous waste manifest.
- You must comply with Department of Transportation rules.
- You must "close" your hazardous waste storage area in accordance with the regulations if you discontinue its use.
- You must certify on manifests that a good faith effort has been made to minimize hazardous waste generation.
- You must either comply with Universal Waste rules or manage the waste as hazardous.
- You must comply with Used Oil requirements.

Source reduction works!
Less waste means fewer regulatory requirements!

Large Quantity Generator (LQG)

You are a LQG if you generate 2,200 pounds or approximately 260 gallons (1,000 kg) or more of hazardous waste per calendar month, or more than 2.2 lbs (1 kg) of acute hazardous waste. The following list summarizes the specific requirements applicable to LQGs:

- You must perform and maintain waste determinations.
- You can only store waste on-site for less than 90 days.
- There is no quantity limit to on-site accumulation.
- Waste can accumulate in containers, tanks, or containment buildings.
- You must comply with preparedness and prevention procedures.

- You must develop and maintain a written contingency plan.
- You must develop and maintain a written inspection program.
- You must maintain an annual personnel training program and written job descriptions.
- You must obtain an EPA Identification Number.
- You must manifest your waste using the uniform hazardous waste manifest.
- You must comply with Department of Transportation rules.
- A biennial report must be completed and submitted to CTDEP.
- You must "close" your hazardous waste storage area in accordance with the regulations if you discontinue its use.
- You must prepare a written waste minimization program.
- You must comply with applicable air emission standards.
- You must comply with Universal Waste rules or manage the waste as hazardous.
- You must comply with Used Oil requirements.

Note:
Since this guide is geared towards SQGs, we will not spend more time on this topic. Requirements such as the contingency plan, waste minimization plan and biennial report (at its full extent) are not required for SQGs and therefore will not be covered. See the additional clues and hints at the end of this section if you suspect that you may be an LQG.

What do I do if I exceed my allowable generation rates in a calendar month? If this was a unique occurrence due to an unforeseeable/infrequent event, you may be an **episodic generator**. *If this becomes a common occurrence, you may be required to change your generator status. The following table provides additional guidance.*

Episodic Generator	*Change Generator Status*
If Monthly Generation Rate Exceedance is an Unforeseeable/Infrequent Event	*If Monthly Generation Rate Exceedance is a Common Occurrence*
1. Manage generated waste in compliance with applicable generator classification (see above) *2. Document monthly generation rates* *3. Document accumulation rates* *4. Minimize potential for reoccurrence of episodic generation*	*1. Notify CTDEP in writing* *2. Complete Form 8700-12 which can be found at www.epa.gov and submit to CTDEP.* *3. Comply with new generator classification requirements (see above)*

When applying for an EPA Identification Number, a generator should register with CTDEP for their "worst case" generator category. For example, if a generator operates as an SQG during some months and as an LQG during other months, the generator should notify as an LQG and comply with all applicable requirements. If your generator status permanently changes from your original notification, contact CTDEP at 888-424-4193 to obtain the necessary forms to properly change your status.

The conversion chart below provides general guidance to help visualize the specific generation quantities for each generator classification.

Conversion Chart

Kilograms	Pounds	Gallons*	55 Gal Drums
100 kg	220 lbs	26 gal	½ drum
1,000 kg	2,200 lbs	260 gal	3 to 5 drums

***Assumes waste is same approximate density as water.**

EXERCISE 3-1

Company G generates wastes that have been characterized as hazardous. To determine if the company is a Small Quantity Generator (SQG) or Large Quantity Generator (LQG), the generator performed a review of inventory and shipping documents involving waste generation rate and quantity.

1. The generator reviewed its generation rate inventory for a period of six months.

Total Hazardous Waste Generated				
Month	**Quantity (gal)**	**Number of drums**	**Total (gal)**	**Total (lb/kg)***
January	55	6	330	2,640/1,200
February	0	0	0	0/0
March	55	5	275	2,200/1,000
April	55	3	165	1,320/600
May	55	3	165	1,320/600
June	55	6	330	2,640/1,200

***Assumes a density of 8 pounds per gallon**
*** Approximately 2.2 pounds per kilogram**

EXERCISE 3-1 (cont)

2. The generator reviewed its manifests for a period of six months.

Total Hazardous Waste Manifested					
Month	**Quantity (gal)**	**Number of drums**	**Total (gal)**	**Total (lb/kg)***	**Waste Remaining in Storage* (lb/kg)**
January	55	3	165	1,320/600	1,320/600
February	0	0	0	0/0	1,320/600
March	0	0	0	0/0	3,520/1,600
April	55	5	275	2,200/1,000	2,640/1,200
May	55	2	110	880/400	3,080/1,400
June	55	4	220	1,760/800	3,960/1,800

***Assumes a density of 8 pounds per gallon**
*** Approximately 2.2 pounds per kilogram**

It has been concluded that the generator is a (LQG) because its total hazardous waste generated is greater than 1,000 kg (2,200 lbs or 260 gal) per calendar month. (It also appears that the generator may be storing waste for more than 180 days.) The generator will need to comply with the regulatory requirements that apply to an (LQG).

Minimize Your Size!

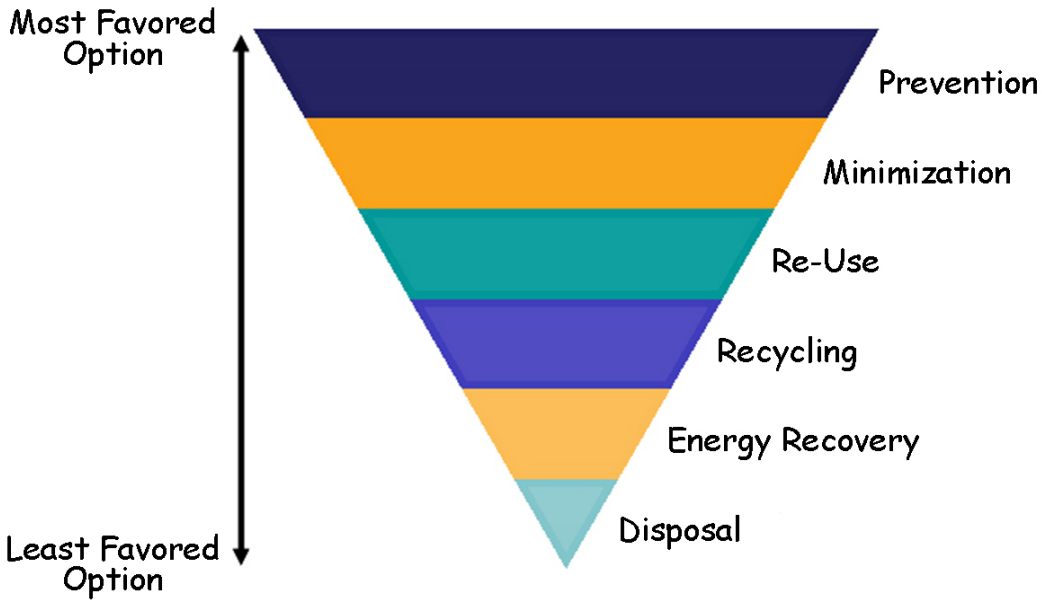
If you minimize the amount of waste you generate, you will minimize your compliance obligations! Waste minimization may also help by reducing:

- The quantity and toxicity of hazardous and solid waste generation
- Waste management costs
- Raw material and product losses
- Raw material purchase costs
- Waste management recordkeeping and paperwork burden
- Workplace accidents and worker exposure
- Compliance violations
- Environmental liability

At the same time, waste minimization can improve:

- Production efficiency
- Profits
- Community relations
- Employee participation and morale
- Product quality
- Overall environmental performance

Two common approaches are ***source reduction*** and recycling. Both of these methods are useful to prevent waste from even being generated and if generated, the waste can be reused and not disposed. The inverted waste pyramid diagram below shows the common approaches to deal with waste. The tip of this inverted pyramid represents the least favorable approach whereas the top of the pyramid is where you would like to take your waste disposal practices.



Presented below is a summary of requirements for each waste generator classification discussed in this chapter. It is important to determine the type of generator that you are so that you comply with each requirement.

Table 3-1 – General Summary Chart			
	CESQGs	SQGs	LQGs
Quantity Limits	≤100 kg/month ≤1 kg/month of acute hazardous waste ≤100 kg/month of acute spill residue or soil	Between 100 - 1,000 kg/month ≤1 kg/month of acute hazardous waste ≤100 kg/month of acute spill residue or soil	≥1,000 kg/month >1 kg/month of acute hazardous waste >100 kg/month of acute spill residue or soil
EPA ID Number	Not required	Required	Required
On-Site Accumulation Quantity	≤1,000 kg ≤1 kg acute ≤100 kg of acute spill residue or soil	≤1,000 kg ≤1 kg acute ≤100 kg of acute spill residue or soil	No limit
Accumulation Time Limits	None	≤180 days	≤90 days
Storage Requirements	None	Containment and management requirements for tanks or containers (see text)	Full compliance for management of tanks, containers, drip pads, or containment buildings
Sent To:	State approved or RCRA permitted/interim status facility	RCRA permitted/interim status facility	RCRA permitted/interim status facility
Manifest	Not required	Required	Required
Biennial Report	Not required	Not required	Required
Personnel Training	Not required	Basic training required	Required
Contingency Plan	Not required	Basic procedures	Full plan required
Emergency Procedures	Not required	Required	Full plan required
Inspection Program	Not required	Required	Required
DOT Transport Requirements	If required by DOT	Yes	Yes

Episodic Generator – A generator of hazardous waste who infrequently exceeds their allowable generation rate.

Generate – This term refers to the act or process of creating hazardous waste as identified or listed in Part 261 of the EPA regulations. If you generate, you are now considered a generator of hazardous waste.

Manifest – This term refers to the shipment of hazardous waste from a facility for disposal using the Uniform Hazardous Waste Manifest (more on this later!).

Source Reduction – Any action that reduces the amount of waste exiting from a process (waste avoidance). These actions can include:

- Process modification
- Chemical substitution
- Improvements in chemical purity
- Improvements in housekeeping
- Improvements in management practices
- Increase in machine efficiency
- Recycling within process
- Inventory management

Treatment, Storage and Disposal Facility (TSDF) – A facility that has received interim status or a permit for the treatment, storage or disposal of hazardous waste.

A CESQG guidance manual is available from CTDEP and is entitled "Conditionally Exempt Small Quantity Generator Handbook – Guidance for Hazardous Waste Handlers":
http://www.ct.gov/dep/lib/dep/waste_management_and_disposal/hazardous_waste/cesqghandbook.pdf

LQG guidance and other waste guidance are available from EPA at the following website: http://www.epa.gov/epawaste/hazard/index.htm

Guidance and information regarding DOT rules and regulations for the shipment of wastes is available at the following website published by DOT: http://www.phmsa.dot.gov/hazmat/guidance

Section 4

WE HAVE HAZARDOUS WASTE….SO NOW WHAT?

So, now that you have identified that you are a SQG, what do you need to do? You need to manage your waste in compliance with Connecticut hazardous waste regulations. SQGs are allowed to store/accumulate waste in containers in designated Hazardous Waste Storage Areas (HWSA) and ***satellite accumulation areas***.

Container Specifics

What is a ***container***? A container is a portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

In addition to the requirements listed to the left, use DOT-approved containers to store your waste. If this is not done, the waste you manage on-site will need to be transferred to or over-packed into approved containers prior to transport.

The following rules apply to you when waste is stored in containers:

- Containers must be free of cracks, rust, holes, and dents.
- Containers or container liners must be compatible with the materials being stored.
- Containers must be closed unless you are physically adding or removing waste.
- Containers must be clearly marked with the words "Hazardous Waste" and other words to describe the waste, such as the chemical name.

What are the marking and labeling requirements?

Hazardous waste containers must be marked with the following information when they are offered for transport:

- "Hazardous Waste" and other words to describe the waste, such as the chemical name and a warning statement
- Generator's name and address
- Generator's EPA identification number
- Manifest document number
- Accumulation start date
- DOT shipping name and ID number

Employees responsible for offering waste for transport (i.e., drumming, labeling, signing manifests and loading) must receive initial DOT training within 90 days of hire. Refresher training is required every three years!

All waste generated by an SQG with listed and/or characteristic waste codes are regulated by the DOT when offered for transportation.

In addition, DOT pre-transport requirements do apply before you ship hazardous waste. In general, you must affix applicable DOT primary and secondary labels to the container when they are offered for transport and ship wastes in DOT approved containers. Additional labels may be required depending on the specific shipment and/or container.

When are my containers "empty"?

DOT, OSHA and EPA all have different definitions of "empty". For the purposes of this guide, only the RCRA requirements will be discussed. The following is a summary of the standards for rendering a container or ***inner liner*** RCRA empty.

Non-Acutely Hazardous Waste

A container or an inner liner from a container holding non-acute hazardous waste (i.e. D, F, K, and U-listed wastes not designated with hazard Code H) is empty when:

- Wastes have been removed using practices commonly employed to remove wastes from containers or liners, such as pouring, pumping, aspirating, and draining, and
- No more than 2.5 centimeters (1 inch) of material remains in the container or liner, or

- No more than 3 percent by weight of the container remains for containers with a capacity of 110 gallons or less, and no more than 0.3 percent by weight remains for containers with a capacity greater than 110 gallons.

Acutely Hazardous Waste

A container or ***inner liner*** of a container holding acutely hazardous waste (i.e. P-listed wastes and other hazardous wastes with the designated hazard code H) is empty when one of the following conditions is met:

- The container has an inner liner that prevents contact with the container and the liner is removed, or
- The container has been triple rinsed with the solvent appropriate for removing the acutely hazardous waste, or
- When triple rinsing is not appropriate, an equivalent method is used.

The rinsate is considered acutely hazardous waste according to the mixture rule; however, the act of triple rinsing is not considered treatment.

Gases

Containers holding compressed gases that are hazardous wastes are considered empty when the pressure in the container approaches atmospheric pressure.

What additional requirements apply to *Hazardous Waste Storage Areas* (HWSA)?

The HWSA, which is also referred to as the less-than-180 day storage area or LT-180-area, is where the majority of wastes are stored on-site prior to shipment. In addition to the container rules discussed above, the following additional requirements apply to your main accumulation area(s):

- Containers must be stored on a sufficiently impervious surface so that if released, waste cannot penetrate into the floor or soils below the floor. For example, spill pallets and/or an epoxy-coated concrete floor may be used to address this requirement.
- Container storage areas must have adequate aisle spacing between the drums (CTDEP recommends a minimum of 36 inches for aisle space).
- Containers must have secondary containment of either 10% of the total volume of waste in the area or the volume of the largest storage container in the area, whichever value is greater.
- Containers of incompatible waste must be segregated in a fashion that would prevent mixing of waste in the event of a container release or spill.
- Each container marking should include an accumulation start date.

- The area should be secure from unauthorized entry/access.
- Documented weekly inspections must be performed. See **Section 9** of this guidance document for additional information regarding inspections.

*Maintain as few Hazardous Waste Storage Areas as possible! Remember that each HWSA must be closed in accordance with regulation if they are no longer used. (See **Section 12** for more details.) This involves wipe sampling and/or soil and concrete sampling that may lead to remediation if a historical release is detected. Additionally, if you maintain fewer Hazardous Waste Storage Areas, fewer inspections are required and fewer opportunities for non-compliance exist.*

What is a Satellite Accumulation Area?

To provide for the day-to-day management of hazardous waste, you may manage your waste containers in a satellite accumulation area, also commonly referred to as a point of generation (POG).

*What do the regulations mean when they say **"at or near the point of generation"**? A simple way to understand this concept is by asking "is the container close enough to verify that:*

- *the appropriate marking is affixed to the container;*
- *the proper wastes are being added;*
- *the container is sealed and leak proof; and*
- *a release or spill has not occurred?"*

Where can I use satellite accumulation?

- Each container must be located in an area at or near the point of generation.
- Each container must be under the control of the operator of the process generating the waste.

What are the quantity limitations for satellite accumulation?

- ≤ 55 gallons of non-acute waste per area per waste stream
- ≤ 1-quart of acute waste per area per waste stream

If different waste streams are generated from a single point of generation, multiple containers can be used to accumulate these waste streams at one satellite accumulation area. For example, you can operate a satellite accumulation area with up to 55 gallons of paint waste and up to 55 gallons of waste acid as long as the area is at or near the point of generation and under the control of the operator generating the waste.

Once the quantity limit has been met, you must write the accumulation start date on the container label. Once the container is full and dated, the 180-day

storage time limit begins. You then have three days to move the container to your HWSA.

Note: Waste accumulated in satellite accumulation areas must be counted towards your monthly generation rate.

EXERCISE 4-1

Company E operates a painting operation. Hazardous wastes are stored in a 55-gallon drum in another section of the factory away from the painting room as a satellite accumulation area with a label that reads "hazardous waste – paint and thinner waste". An open funnel continuously remains in the bung hole since the operation is performed three times per week.

Is this container in compliance with satellite accumulation requirements?

This satellite container is not in compliance because the operator is not in control of the container, it is not near the point of generation and the container is not sealed while not in use.

EXERCISE 4-2

After realizing their errors, Company E relocates the drum to the painting room and closes the top when the container is not being filled. The drum became full on Monday. Remembering his hazardous waste training, the painter places a start date on the full drum.

It is now Friday, and the technician responsible for moving wastes to the hazardous waste storage area has been out sick all week. The painter starts using a new drum and places it with the full drum while he awaits removal.

Is this satellite accumulation area in compliance?

Unfortunately, this satellite accumulation area is not in compliance since the full drum was not moved to the hazardous waste storage area within three days and there is now greater than 55 gallons of hazardous waste at one accumulation area. The painter would have to move the full drum himself to the hazardous waste storage area or now manage his satellite accumulation area as a main hazardous waste storage area (not a good idea!).

The list below provides some common violations found with hazardous waste containers and provides recommendations for corrective actions.

Violation		*Corrective Action*
Funnels left in open satellite containers	→	*Remove funnel and seal container*
Missing "Hazardous Waste" marking	→	*Affix "Hazardous Waste" label and complete with appropriate information*
Spill/splash residue on outside of container	→	*Clean or replace container*
Container without an accumulation start date	→	*Add date from previous weekly inspection*
Raw material comingled with waste containers	→	*Clearly separate waste and raw material containers*

Guidance and information regarding DOT rules and regulations for the shipment of wastes is available at the following website published by DOT http://www.phmsa.dot.gov/hazmat/guidance.

Hazardous Waste Storage Area – The Hazardous Waste Storage Area (HWSA) is also referred to as the less-than-180-day storage area (or LT-180 area) where wastes are accumulated prior to disposal. Among other requirements as discussed above, wastes can only be on-site for 180 days. The clock begins when the first drop of waste is put into the container in this area.

Inner Liner – A continuous layer of material placed inside a tank or container that protects the construction materials of the container from contact with the contained waste or reagents used to treat waste.

Satellite Accumulation Area – A satellite accumulation area is a temporary waste storage area that can store up to 55 gallons of a particular hazardous waste and 1 quart of acutely hazardous waste in a closed, approved container as long as it is labeled and is under the control of the operator. These areas are also referred to in industry as point of generation containers or POGs.

Section 5

TANK TALK

SQGs are allowed to store or accumulate waste in ***tanks***. Waste can be stored in a tank provided that the waste placed in the tank does not:

- Generate extreme heat or pressure, fire or explosion, or violent reaction.
- Produce uncontrolled toxic mists, fumes, dusts, or gasses that are dangerous to human health.
- Produce uncontrolled flammable fumes or gases.
- Cause the tank to leak, rupture, corrode, or otherwise fail.
- Threaten human health or the environment.

Tank System Specifics

Tank systems consist of three parts: the tank itself, the ancillary equipment (i.e., equipment that conveys waste to and from the tank such as piping), and the containment system.

The following rules apply to you when waste is stored in tanks:

- Tank systems must be clearly marked with the words "Hazardous Waste" and other words to describe the waste.
- Tank systems require daily and/or weekly inspection. See **Section 9** of this guidance document for additional information.
- Tank systems must be covered.
- The 180-day storage limit begins when the first drop of waste is added to the tank.

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 cut-off system or by-pass system to a stand-by tank).

SQGs are only allowed to accumulate and store roughly up to 260 gallons of hazardous waste on site. If you have a waste tank with a capacity of 250 gallons which is full and one additional 55 gallon drum of waste on-site, you are no longer an SQG. If you have the storage space, it may be easier to manage your waste in containers.

Special Requirements for Ignitable or Reactive Waste

If you store waste that is either ignitable and/or reactive, the tank must comply with the buffer zone requirements for tanks in the National Fire Protection Association's Code for Flammable and Combustible Liquids (NFPA 30).

Tank – A stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials like wood, concrete, steel and plastic which provide structural support.

Tank system – A hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Section 6

THE MANIFEST

As an SQG, you need to use a hazardous waste ***manifest*** to ship all of your hazardous waste off-site. The Uniform Hazardous Waste Manifest is a shipping document that satisfies both EPA and DOT regulations. The manifest is used to track the waste from the generator site to the disposal facility and provides the basis for CTDEP's recordkeeping and reporting requirements. In effect, the manifest provides a record of the waste from "cradle to grave."

How do I complete a manifest?

When completing the manifest, you should:

- Verify that all six copies of the manifest are intact before starting.
- Print or type so all copies are legible. You can find instructions on how to complete the manifest on the back of each page.
- Verify that if a field is left blank, it is supposed to be left blank.
- Address each waste stream individually on the manifest.
- Verify that the waste being shipped matches the manifest description.

Appendix C of this guidance document provides an example of a completed copy of the Uniform Hazardous Waste Manifest and instruction for completing the form. Each manifest allows you to offer four separate line items for transport to a ***Treatment, Storage and Disposal Facility (TSDF)***.

Once completed, the six copies of the manifest are distributed as follows:

Page 1: Destination facility to destination state
Page 2: Destination facility to generator state
Page 3: Destination facility to generator
Page 4: Destination facility copy
Page 5: Transporter copy
Page 6: Generator's initial copy

Please send a photocopy of the manifest to:
Hazardous Waste Management Program
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

In summary, the transporter takes copies 1-5 with them and leaves you with copy 6. *You are then required to make a photocopy of your copy and send it to the CTDEP within 7-days of the date of shipment.*

I found something wrong on the manifest and the waste has already been shipped off-site - what do I do now?

If an error is detected on a manifest after the manifest (and waste) has left the facility, a ***discrepancy*** has occurred. If the manifest reaches the disposal facility, they must inform you of the discrepancy. They may choose to either send the waste back to you or to an alternate disposal facility. The four categories of significant discrepancies are:

1. Quantity discrepancy (specific to bulk vs. non-bulk containers).
2. Waste type discrepancy.
3. Waste that the disposal facility is not permitted to accept.
4. Container residues that exceed the quantity for "empty" containers.

Most hazardous waste vendors provide their clients with a completed manifest. You must be aware that this does not alleviate any of your liability associated with the shipment and disposal of the waste. Once you sign the document as the generator, you are certifying that the information provided is accurate and in compliance with applicable EPA and DOT regulations. It is for this reason that you should be familiar with the uniform hazardous waste manifest requirements.

The following should occur when a discrepancy is discovered:

1. If you find the discrepancy first, contact the transporter. The transporter may be able to return to your facility before they reach the disposal facility to correct the manifest error. If this is not possible, you should then contact the disposal facility.
2. If the disposal facility discovers the discrepancy first, they must notify you. The disposal facility has the authority to reject the waste, partially reject the waste or resolve the manifest discrepancy with you.
3. You must then make the decision, with the concurrence of the disposal facility, to do one of three things.
    - Have the waste returned.
    - Ship some or all of the waste to another disposal facility.
    - Resolve the manifest discrepancy with the disposal facility and complete the transaction.
4. If waste is returned to you, the disposal facility will complete sections 18a and 18b on the manifest. A new Uniform Waste Manifest will be created and the number will be referenced in section 18a of the original manifest. Upon receipt, you must complete 18c on original manifest and sign for the receipt of the shipment on the new manifest. You must then complete the manifest copy submission to CTDEP as discussed in this section. If

the agreement to return the waste is made verbally, you must submit a written letter to CTDEP and the transporter within 3 days giving the same instruction. You then have 180 days to dispose of this waste.

5. If some or all of the waste is redirected to an alternate disposal facility, you must designate the alternate facility for disposal. In this case, the primary facility must complete sections 18a and 18b on the manifest. A new Uniform Waste Manifest will be created and the number will be referenced in section 18a of the original manifest. Upon receipt, the alternate facility must complete 18c on the original manifest and sign for the receipt of the shipment on the new manifest. The manifest copies are then submitted to you and CTDEP as discussed in this section. If this agreement is made verbally, the generator must submit a written letter to CTDEP and the transporter within 3 days giving the same instruction.
6. If the manifest discrepancy is resolved and the transaction is completed, make sure the changes are made on the manifest with an explanation in section 18a.

Make sure you receive a completed copy of the new Uniform Waste Manifest if waste is re-directed to an alternate disposal facility (scenario 5 above)!

Remember! It is your responsibility as the generator for identification of the complete chain of transportation and must, therefore, be apprised of and approve of all deviations from that plan. Do not let the disposal facility call the shots! Always know where your waste is going and what the ultimate disposal location is. This requires a good relationship with both your transporter and disposal facility.

Recordkeeping and Reporting

Generators are required to retain a copy of each signed manifest (Page 3 and 6) for at least three years from the date the waste was accepted for transportation. Page 3 of the manifest will be sent back to you from the disposal facility. This serves as your documentation that the waste was delivered to the facility. You are responsible for tracking this progress. What do you do if you do not receive a manifest copy back in a timely fashion? This process is called ***exception reporting*** and works like this:

1. Contact the transporter and/or disposal facility and determine the location and status of your manifest. Be sure to document the manifest document number, date of notification, and who you spoke with and what their reply was.

2. **Day 60 from the date of shipment:** Submit an Exception Report to the CTDEP which includes a copy of the original manifest and cover letter describing the efforts you took to find the manifest and the results of this effort.
3. Exception reports are also required to be kept on file for a minimum of three years.

It is a good practice to maintain a manifest and exception report file for the life of the business.

Discrepancy – An error that has occurred on a waste manifest.

Exception reporting – The actions required by the generator when a completed manifest copy is not returned from the disposal facility to the generator.

EXERCISE 6-1

Company Q generates two waste streams – hazardous paint waste and non-hazardous paint filters. On the day of waste pickup, the driver of the hauling company decides that a previously profiled non-hazardous waste is now hazardous. Since the trained environmental manager is late coming to work, the receptionist signs the manifest and the hauler leaves the site. When the manager arrives at the site, she realizes there is a problem. What should she do?

The environmental manager should first contact the transporter and see if the driver can return to the site. The manifest could then be amended to reflect the actual contents and re-signed by the environmental manager. If the waste already made it to the disposal facility, the hauling company and/or environmental manager can request the manifest be edited as a "waste type" discrepancy. This discrepancy addendum must then accompany the manifest through the remaining paperwork pathways. If this error was not caught until the generator received the return copy in the mail and a copy was previously submitted to the CTDEP, the generator would then file the discrepancy with the CTDEP and alert the waste hauler and disposal facility.

Section 7

LAND DISPOSAL RESTRICTION

Wastes are prohibited from land disposal unless they meet certain limits or treatment technologies. As an SQG, you are required to disclose information as it relates to your waste streams on a ***Land Disposal Restriction*** (LDR) form. To do so, you need to prepare a written notice for each waste stream. There is no required format for this notification. Since the LDR regulations are very complicated, contact your disposal facility to see if they can provide a form for you to use and assist you with completing the form. Disposal facilities are also required to comply with the LDR regulatory requirements for your waste. The notice must include the following information:

- EPA hazardous waste codes and manifest document number of first shipment;
- Each chemical which is assigned listed waste codes F001-F005 and F039;
- The ***underlying hazardous constituents*** for each waste assigned a characteristic waste code;
- Identify the waste as meeting the definition of ***wastewater*** or ***non-wastewater;***
- Subdivisions made within a waste code based on waste specific criteria; and
- Waste determination when available.

For hazardous debris, you must prepare a list of constituents and identify if the listed constituents are being treated to meet the assigned treatment standards.

For contaminated soil, you must prepare a list of constituents and include the following statement: "This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards or the universal treatment standards."

You must provide an LDR to each disposal facility for each waste stream you send to the facility. This is a one-time notification per facility. You also need to submit an updated notice if/when the waste changes.

Attach a copy of the LDR for each shipment to the appropriate manifest and keep on file for the life of your business.

You are required to maintain a copy of this notification for a minimum of three years from the date that the waste that is the subject of the LDR was last sent to the treatment, storage or disposal facility.

Land Disposal Restriction – Regulations that establish qualitative and quantitative criteria for waste disposal in or on the land and includes locations such as landfills, surface impoundments, waste piles, injection wells, land treatment facilities, salt dome formations, salt bed formations, underground mines or caves, or placement in a concrete vault or bunker intended for disposal purposes.

Non-wastewater – Wastes that contain greater than 1% by weight total organic carbon (TOC) and greater than 1% by weight total suspended solids (TSS) as determined by laboratory analysis.

Underlying Hazardous Constituent – Any constituent listed in the ***Universal Treatment Standard*** table (40 CFR 268.40) except fluoride, selenium, sulfides, vanadium and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent - specific ***Universal Treatment Standard***.

Universal Treatment Standard – The concentrations that wastewater and non-wastewaters must achieve before disposal can occur. These limits are used to regulate most prohibited hazardous wastes.

Wastewater – Wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS) as determined by laboratory analysis.

Section 8

ALWAYS BE PREPARED!

No business ever intends to release hazardous materials or waste, but spills happen. For this reason, the development and implementation of emergency plans and procedures and maintenance of the proper emergency response equipment are necessary to minimize both the potential for a hazardous waste release and the impact of such a release on human health and the environment.

To conduct the emergency response procedures listed below, additional training may be required. This training is regulated by the Occupational Safety and Health Administration (OSHA). The type, quantity and duration of the training programs are specific to the response operations which you wish to conduct.

What is an Emergency Coordinator?

At all times, you need to have at least one employee either on the premises or on call with the responsibility for coordinating emergency response activities. It is a good practice to identify and provide this authority to more than one person. This will provide coverage during multiple shifts, scheduled holidays and vacations.

The emergency coordinator must be capable of responding to emergency situations and notifying response agencies and clean-up contractors.

How do I prepare for an emergency?

You need to know who to call. You are required to develop an emergency contact phone tree for your facility which includes the following phone numbers: Emergency Coordinator(s), local police, fire and emergency medical service (EMS), and spill contactor(s). At a minimum, this list must be posted in areas where you store hazardous waste and near all telephones within the facility or at reception/guard post phones.

Phone List Example

Jane G. Doe (Primary Emergency Coordinator)
Office.....(xxx) xxx-xxxx
Home.....(xxx) xxx-xxxx
Cell.....(xxx) xxx-xxxx

John H. Smith (Backup Emergency Coordinator)
Office.....(xxx) xxx-xxxx
Home.....(xxx) xxx-xxxx
Cell.....(xxx) xxx-xxxx

Police.....(xxx) xxx-xxxx
Fire.....(xxx) xxx-xxxx
EMS.....(xxx) xxx-xxxx

Spill Contractor
Acme Spill Response
100 Response Drive
Clean, CT 06XXX
24-Hr Number.....(xxx) xxx-xxxx

In addition to calling for help, you are required to have emergency equipment on-site. Specifically you are required to be equipped with, to test, and maintain the following equipment:

In today's world, most employees have access to cell phones. They are more likely to make a call using this than their office phone. Make sure emergency numbers are complete and include area codes.

- Emergency alarms to warn employees of an emergency
- Communication equipment capable of notifying off-site emergency assistance
- Emergency response equipment
- Adequate source of fire suppression (e.g., water)

Further, you must maintain adequate aisle spacing around your containers of hazardous waste to allow for the unobstructed movement of staff and emergency response personnel. The CTDEP recommends a minimum of 36 inches for aisle space.

For additional information on the inspection and maintenance of emergency equipment, see **Section 9** of this guidance document.

SQGs must also attempt to provide the local police and fire departments as well as emergency response teams with the following information:

- Layout of the facility including the location of spill response equipment, fire extinguishers, hazardous waste storage areas, emergency eye washes and showers, etc.
- Properties of hazardous waste handled at the facility and associated hazards
- Places where facility personnel would normally be working
- Entrances to roads inside the facility
- Possible evacuation routes and assembly areas

Emergency Response Procedures

In the event of an emergency, the emergency coordinator must be capable of responding to emergency situations. Recommended responses are as follows:

- In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher if properly trained.

- In the event of a spill, contain, control and clean up the release and contaminated debris if properly trained to do so. Otherwise, contact a response contractor.

In the event of a release of hazardous waste or other material, you should notify the CTDEP by telephone at (866) 337-7745 (24-hour) and be prepared to provide the following information:

- Name, address and EPA identification number of your facility
- Date, time, and type of hazardous waste involved in the incident
- Extent of injuries, if any
- Estimated quantity and disposition of recovered materials

While on the phone with the CTDEP, ask if follow up notification is required. The CTDEP may require a written follow up report. If the release could threaten human health or the environment 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 at (800) 424-8802 (24-hour) and report the information listed above.

Prepare a template of a spill response report which includes the required information listed above. Your Emergency Coordinator can use this to document necessary information in the event of a release. This will help to prepare all the necessary information required by the CTDEP.

Section 9

LOOKING FOR TROUBLE

What are my Inspection Requirements?

This is one form of inspection – but not the one that the regulations require!

Spill kits can traditionally be problematic to keep fully stocked. To minimize the time necessary to inspect spill kits, seal each kit with a tamper proof seal. That way if the seal is not broken, the kit is fully intact. If the seal is broken, there is a good chance that something is missing.

As a SQG, you are required to inspect your facility for any deficiencies that may cause or lead to a release of hazardous waste or that may pose a threat to human health or the environment.

Your inspection schedule and program should be developed specific to your facility and operational requirements. **Appendix D** includes a list of items that should be considered when performing inspections. This list may help you to incorporate the necessary items into your inspection and maintenance program. This list is not all-inclusive and should be used only as guidance.

The written inspection schedule must be kept at the facility, identify items to be inspected, and specify the frequency of inspection for all items on the schedule. In addition, you must remedy any deteriorating/malfunctioning equipment or structures revealed during the inspection and document the remedies.

How often do I need to inspect?

Guidance indicating what should be reviewed while performing an inspection is found in **Appendix D**. At a minimum, the following schedule must be implemented.

Can you complete a hazardous waste inspection without having to move your hazardous waste containers? If not, you might not have adequate aisle spacing.

- Containers, container storage areas, and containment systems must be inspected weekly (i.e., at a minimum, once every seven days).
- Tanks and tank systems must be inspected at least once each operating day.
- Loading/unloading areas subject to spills must be inspected each day these areas are used to transfer waste.
- Safety and emergency equipment must be inspected at least monthly.

In developing an inspection log format, you should be aware that the inspection summary should include the date and time of the inspection, the **full** name of the inspector, a notation of observations made, and the date and nature of any repairs or other remedial actions. Examples of Container/Container Storage Area, Tank, and Emergency Equipment inspection logs are provided in **Appendix E**, and additional guidance indicative of what should be reviewed while performing an inspection is provided in **Appendix D**.

Remember – if you find a deficiency while performing an inspection, you must follow up and correct the problem. The correction must then be noted on the inspection log.

EXERCISE 9-1

An environmental technician from Company X is tasked with performing the weekly hazardous waste inspections. The technician faithfully performs the inspections every week as required. On one particular week, she notes that one of the hazardous waste storage drums was not closed and notes this on the inspection form. She then closes the container and files the inspection form with the facility RCRA paperwork.

Although diligent in her efforts, the technician made one error. The corrective action of closing the drum should have been noted in the log. Since the open drum was noted in the log and did not have a follow-up comment, anyone reviewing the log would interpret the drum as still being open which would constitute an additional violation of RCRA regulations.

Spill kit – This term refers to a collection of equipment used to mitigate a spill of waste or virgin product. Kits are usually used to mitigate small releases and are not designed to respond to large releases (typically greater than 55 gallons in volume).

Section 10

UNIVERSAL WASTE

In addition to Hazardous Waste, SQGs commonly generate materials which are regulated as ***universal waste***. There are six waste streams that can be managed as universal waste in Connecticut. These universal wastes are:

- Batteries
- Mercury-containing thermostats
- Mercury-containing equipment
- Lamps (including but not limited to fluorescent, neon and mercury vapor lamps) **Note:** Low mercury containing lamps (with green tips) are also regulated as Universal Waste in Connecticut due to mercury content
- Used electronics
- Certain pesticides (contact the CTDEP for additional information)

You can store universal waste on-site for up to one year from the date the universal waste is generated. As with hazardous waste, there are two generator classes of universal waste. A ***small quantity handler*** of universal waste accumulates no more than 5,000 kilograms at any one time and a ***large quantity handler*** accumulates more than 5,000 kilograms at any one time.

How do I store my universal waste?

Universal waste must be managed in a way that prevents the release of any universal waste component or constituent to the environment. The best way you can accomplish this is to store your universal waste in accordance with the descriptions listed below.

Used electronics must be stored in a building with a roof and four walls or in a cargo-carrying portion of a truck. Damaged batteries, pesticides, mercury-containing thermostats and equipment, lamps and cathode ray tubes (CRTs) must be stored in a container that is:

- Closed
- Structurally sound
- Compatible with contents
- Capable of preventing leakage, spillage, or damage

You can stack undamaged batteries and electronic equipment onto a pallet with shrink wrap or in a cubic yard box to keep secure. Be sure to protect battery terminals by either capping or taping. Do not use conductive materials.

A minimum of 36-inch aisle spacing is recommended between universal waste containers.

How do I mark universal containers?

Example Label

You must mark each universal waste container and/or item with an accumulation start date, or maintain an inventory system on-site that identifies the date each universal waste became a waste. You have one year to dispose of universal wastes from the start date listed on the container and/or item or in your inventory. Additional marking requirements are specific to the type of universal waste and are listed below:

- The words "Universal Waste", "Waste" or "Used" must precede the descriptor "batteries", "mercury-containing thermostats and equipment", "lamps", and "electronics" when labeling their respective containers.

- Recalled pesticides should be marked with the manufacturers label and one of the markings from above. Unused pesticides should be marked with the manufacturer's label, DOT label, or other approved label and one of the markings from above.

EXERCISE 10-1:

Universal Waste Management

Company Z generates two sizes of waste fluorescent bulbs - a 36-inch and 48-inch model. Each bulb is the "eco-friendly, green tip bulb". On a particularly bad day, four, 36-inch bulbs and four, 48-inch bulbs become spent. The electrician removes them and deposits them in the only storage container they have which is for 36-inch bulbs. The top is placed over the 48-inch bulbs which are now sticking out of the container by 12 inches. "This should not be a problem," says the electrician – "After all, they are eco-friendly bulbs so they are technically covered."

Unfortunately, even "eco-friendly bulbs" must follow universal waste management rules. The facility should immediately order 48-inch bulb containers and transfer the longer bulbs to the new containers so that the tops can be correctly applied. Each container should be labeled as "universal waste - lamps" with a start date.

EXERCISE 10-2:

Universal Waste Management

Company Z is also changing out their old cathode ray tube (CRT) computer monitors for the new flat screens. The old monitors are placed on the loading dock for pick up by the recycler.

Company Z is now out of compliance with universal waste management rules. As discussed in this section, Connecticut regulates used electronics as universal waste. The monitors (which contain lead) should be placed in a container that is labeled with a start date.

Off-Site Shipments

Universal waste must be shipped to a facility authorized to accept universal waste in accordance with applicable DOT regulations. In addition, if you are a large quantity handler of universal waste, you must track your shipments with the use of a log, invoice, or shipping document. This tracking document must include the following information:

- Your company name and address
- Quantity of each type of universal waste
- Date of shipment

You need to keep these records on file for three years from the date of shipment.

Is Universal Waste training required?

Affected employees must be trained in the proper handling and emergency procedures for the universal waste they manage as part of their job.

What if there is a spill or release involving universal waste?

In the event of a release of universal waste and if safe to do so, you should:

1. Immediately contain the release
2. Determine whether any material resulting from the release is a hazardous waste
3. Manage material as hazardous/universal waste

Large Quantity Handler – A facility that accumulates 5,000 kilograms or more of universal waste at any time.

Small Quantity Handler – A facility that accumulates no more than 5,000 kilograms (11,000 pounds) of combined universal waste at any time. (This is equivalent to approximately 17,600, 48-inch lamps or approximately 450 computers.)

Universal wastes – Wastes that could be hazardous if not managed in accordance with specific regulations established by CTDEP and EPA. These wastes represent common wastes generated by most facilities. EPA and CTDEP established the universal waste regulations to reduce the cost of disposal and the generator's burden that could be incurred if these common wastes were disposed of as hazardous.

Section 11

USED OIL

One common waste stream generated by SQGs is ***used oil***. Used oil must be managed in accordance with Connecticut used oil regulations.

Examples of used oil may include:

- Used liquid and semi-solid gear, chain, and ball-bearing lubricants
- Used hydraulic and compressor oils
- Used metalworking fluids and oils
- Used heat transfer oils
- Used crankcase oil and other motor vehicle oils
- Used dielectric fluid

You need to take certain steps to ensure that your used oil does not become a hazardous waste. These steps are outlined below and must be completed fully and in the order listed.

What should you do if test results for oil indicate it contains more than 1,000 ppm Total Halogens?

You may attempt to prove that your waste oil has not been mixed with listed hazardous waste (halogens). Take a sample of your waste oil and have it tested by a licensed laboratory for the presence of listed halogenated solvent waste (F001, F002). If this test proves that none of the solvent waste is present at a concentration over 100 ppm (not 1,000 ppm), the used oil is not hazardous waste.

1. Do not mix your used oil with any listed hazardous waste.
2. Confirm through laboratory analysis that your used oil has not been mixed with any characteristic hazardous waste.

As a used oil generator, you need to verify that your used oil is not a hazardous waste. You should verify this by sending a sample of the used oil to a state-certified laboratory for analysis. In addition, you should check your used oil for total ***halogenated compounds***. Used oil should be sampled and tested with an EPA approved test kit for total halogens to ensure the concentration is less than 1,000 parts per million (ppm).

In addition to verifying that your used oil is not regulated as a hazardous waste, you also need to verify that the used oil does not contain ***polychlorinated biphenyls*** (PCBs) above certain regulatory thresholds. The Toxic Substance Control Act (TSCA) has very specific requirements for managing used oil when it contains 50 parts per million (ppm) or more of PCBs. This can be determined either by using an EPA approved test kit or by taking a sample and having it analyzed by a state-certified laboratory.

Used Oil Management

You can manage your used oil in either tanks or portable containers. Each tank and/or container must be:

- Clearly marked with the words "Used Oil"
- Maintained in good condition
- Sealed unless physically adding or removing oil
- Located indoors
- Stored on an impervious surface

If you cannot store your used oil indoors, the following additional protective measures must be taken:

- Store in a covered location
- Provide secondary containment of adequate capacity to contain 100% of the stored used oil such as a spill pallet

You need to prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan if you store more than 1,320 gallons of used (or new) oil aboveground or 42,000 gallons below ground in tanks that are not fully regulated (i.e. heating oil). Containers with a storage capacity of less than 55 gallons are exempt from the SPCC plan requirement.

EXERCISE 11-1

Company Y has scheduled a used oil pickup by a used oil recycler. The used oil is coming from a tank that stores spent motor oil from servicing their delivery truck fleet. Before the pickup, the site environmental manager samples the oil and has it analyzed for total halogenated compounds. The results are less than 1,000 ppm of total halogenated compounds. The used oil hauler picks up the waste oil and brings it to their recovery facility. Upon delivery, the facility tests the oil and determines the halogen content is greater than 1,000 ppm. The recovery facility calls Company Y and demands that they pay for their truck to be decontaminated and for the transportation of this hazardous waste to a new facility.

In this case, Company Y should provide the disposal facility a copy of their halogens testing results showing that the oil was non-hazardous after leaving their facility. This emphasizes the fact that accurate records retention and vigilance is necessary when dealing with waste! Keeping a level head, the environmental manager provides the results to the disposal facility and suggests that this could have been a mixed load. It turns out that this was the case and the driver accidently combined the previous pickup with Company Y's pickup into one compartment of a multi-compartment tanker.

How do I ship my used oil?

One option is to transport your used oil off-site using a licensed used oil transporter. The used oil should be shipped to a licensed used oil facility. There are other options for your used oil. Please see the additional clues and hints section at the end of this section.

May I burn the used oil on-site?

Used oil rules allow a generator to burn used oil in an on-site oil-fired space heater as long as the following requirements are met:

- The space heater burns only used oil that the owner or operator of the facility generates, or used oil received from household "do-it-yourselfer" used oil generators;
- The space heater is designed to have a maximum capacity of not more than 0.5 million BTU per hour;
- The combustion gases from the space heater are vented outside the building; and
- The used oil has a heating value of more than 5,000 BtU/lb.

Please note that only used oil may be burned in these types of space heaters. Space heaters may not be used to burn hazardous waste, or used oil that has been mixed with hazardous waste. In addition, used oil may only be burned in a space heater located in your workplace. It may not be burned in a residential space heater.

Halogenated compounds – Volatile compounds containing elements from the halogens family (group 17) on the periodic table of elements. The most common halogens include chlorine and bromine which can be associated with degreasers such as trichloroethylene (TCE) and tetrachloroethylene (PCE or perc).

Polychlorinated biphenyls – A class of organic compounds containing 1 to 10 chlorine atoms attached to a benzene ring each containing 6 carbon atoms. These compounds are very persistent in the environment and were originally used as coolants in transformer oils and capacitors and in cutting oils and hydraulic fluids.

Used oil – 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. The total halogens content must be less than 1,000 parts per million and the total PCB content must be less than 50 parts per million – if not, the oil becomes hazardous waste.

The following resources are available for additional guidance on used oil:

The CTDEP webpage: http://www.ct.gov/dep and search for "Pit Stops Fact Sheets".

The CTDEP Pit Stops Fact Sheets can also be obtained in hard copy from the Office of Pollution Prevention at (860) 424-3297.

Section 12

GETTING OUT OF THE WASTE GENERATION BUSINESS

What if I discontinue storing waste?

If you discontinue storing hazardous waste, change your generator status to a CESQG, or relocate a waste storage area within your facility, you must "close" the storage area following CTDEP closure guidance.

The following steps should be taken when closing a hazardous waste storage area or tank.

Make sure that you document your closure activities! Maintain your analytical results and copies of disposal documents such as manifests for the off site shipment of contaminated media. Having records of this information can help make property transfer easier if your facility was ever sold.

1. **Characterize potential *contamination*** – Develop a complete list of historical hazardous waste stored in the area or tank. From this list, develop a list of chemicals associated with these wastes which are referred to as ***constituents of concern (COCs)***. The following sources of information may be used to develop your COCs:

    - Material Safety Data Sheets (MSDS)
    - Hazardous Waste Inspection Reports
    - Waste Determinations
    - Uniform Hazardous Waste Manifests

Make sure you collect background sample away from the Hazardous Waste Storage Area when sampling. Background samples may be used to determine whether the source of COCs is from the storage unit, inherent to the conditions of the area, or naturally occurring.

2. **Test for contamination** - Once you have a complete list of COCs, you will determine if the structures and/or soils in the area have been contaminated by collecting samples and analyzing for the COCs. It is then important to determine the extent of contamination, if present. This will help you to identify the extent of clean up operations.

3. **Clean up the contamination that is found** – Decontaminate or remove and dispose of all equipment, structures and soils impacted by hazardous waste releases.

4. **Verify that cleanup is complete** – Sample all structures and soils which were decontaminated or remediated to verify that they meet the ***Media Closure Criteria*** or background conditions.

5. **Records/Documentation** – Maintain records of your closure activities. You do not need to submit documentation to the CTDEP unless requested to do so.

EXERCISE 12-1

Company Z has determined that only one of their two HWSAs is required now that they have implemented waste reduction strategies. The storage area that is slated for closure was used to store spent chromium plating bath solutions and halogenated solvents. As required by regulation, the containers were stored on pallets. Inspections were performed in accordance with regulations with only a few "missed" inspections due to holidays and vacations. Company Z decides to have their waste hauler remove all of the waste as well as the waste pallets and deem this area closed.

Unfortunately, this is not the correct practice. Company Z must confirm whether a release to the environment occurred. Company Z must develop a constituent of concern (COCs) list by reviewing previous waste shipments and material safety data sheets (MSDSs). Samples of the concrete must be collected. If concrete sampling results exceed background conditions, soils must then be analyzed to determine the extent of release.

EXERCISE 12-2

Company Z develops their COC list and proceeds to sample the concrete in accordance with the CTDEP HWSA closure guidance document. Concrete samples are collected from the HWSA and analyzed for the COCs. Results show elevated concentrations of the COCs. "This is a factory and we are sure that it's typical to have these results," claims management.

Unfortunately, this is not correct. Company Z never sampled for background conditions so that they cannot say that this is "normal". At this point, the company should collect a background concrete sample. If the results from the HWSA are above background, they should now consider sampling the soil or scarifying the concrete and then re-sampling. Further investigation and/or remediation may be warranted. If concentrations are below background, the HWSA may be considered closed – however, the detections of halogenated VOCs and other COCs may indicate a bigger problem at other locations in the facility.

Additional guidance can be found in the Draft Closure Guidance (DEP, 2004) which can be found on the CTDEP web site. (Note that the document references less-than-90-day storage areas (i.e., LQGs) but still applies for SQGs)

Background Concentration – The concentration of a COC in the media of interest (i.e., concrete, soil) at the background location.

Background Location – The location nearest to, but not likely impacted, by a potential release from a hazardous waste storage area.

Constituents of Concern (COC) – Chemicals that could be present in wastes stored on-site that require analysis as part of closure activities. The purpose of analysis is to determine if a release to the environment from the hazardous waste storage area has occurred.

Contamination – Any COC which is found on/in structures or soil which is above the media closure criteria as measured by both TCLP and mass analysis of a representative sample.

Media Closure Criteria – Risk-based standards for each media; they must be developed for each COC. Many media closure criteria can be based on the Connecticut Remediation Standard Regulations (RSR).

Section 13

GO GREEN!

Am I required to recycle?

Yes, the State of Connecticut has established requirements for recycling. Simply stated, in Connecticut, recycling is state law and **everyone must recycle!** Therefore, to ensure compliance with this law, you should:

1. Conduct a ***solid waste*** audit and determine what can be recycled. Items that are <u>required</u> to be recycled include:

    - Glass and metal food and beverage containers
    - Corrugated cardboard
    - Newspaper
    - White office paper
    - Scrap metal
    - Nickel cadmium rechargeable batteries
    - Used oil
    - Lead acid batteries
    - Leaves

    Items that <u>should</u> be recycled include:

    - Plastic containers type 1 and 2 (see images to the right)
    - Magazines
    - Drink boxes and juice cartons
    - Discarded mail
    - Used electronics (manage as universal waste)

Grass is banned from disposal at landfills and resource recovery facilities (incinerators). Grass clippings should be left on the lawn or collected for composting.

2. Maintain proof of recycling compliance with all mandatory items. This may be in the form of contract(s) with the hauler(s), market(s), etc.

3. Designate a Recycling Contact for your company.

4. Develop and maintain a Business Recycling Profile. Make this profile a part of your companies Environmental, Health and Safety program. This profile should be updated every 2 to 3 years and should include provisions for collecting, storing and disposing of recyclables. The Business Recycling Profile is guidance to help businesses better manage their recycling program and increase recovery efforts. This form does not need to be submitted to CTDEP unless it is requested, in response to an inspection and/or an enforcement action. For more recycling resources please visit our Business Recycling Resources webpage.

Waste tires are defined as a "special waste" in Connecticut rather than municipal solid waste because they require special storage, handling and disposal. Connecticut does not permit the landfilling of waste tires either whole or in pieces. Most waste tires in Connecticut are burned to create energy at a tire-to-energy facility or processed at volume reduction facilities. If you need to dispose of waste tires, you should contact a tire recycling facility or the CTDEP Recycling Program at 860-424-3365.

For further information concerning recycling requirements, visit the website www.ct.gov/dep/recycle.

Solid waste – Any discarded material that is abandoned, recycled, a military munition or inherently waste-like. There are currently only two materials identified as being inherently waste-like – dioxin waste and halogen-containing materials that are burned in halogen-acid furnaces.

GLOSSARY OF TERMS

Abandoned – A material that is disposed of, burned or incinerated or accumulated, stored or treated (but not recycled before or in lieu of being abandoned by being disposed of, burned or incinerated).

Background Concentration – The concentration of a COC in the media of interest (i.e., concrete, soil) at the background location.

Background Location – The location nearest to, but not likely impacted by, a potential release from a hazardous waste storage area.

Connecticut regulated waste – A waste that is not considered RCRA hazardous but is still regulated as a non-hazardous waste in Connecticut.

Constituents of Concern (COC) – Chemicals that could be present in wastes stored on-site that require analysis as part of closure activities. The purpose of analysis is to determine if a release to the environment from the hazardous waste storage area has occurred.

Container – A container is a portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Contamination – Any COC which is found on/in structures or soil which is above the media closure criteria as measured by both TCLP and mass analysis of a representative sample.

Cradle to Grave – A term used to describe RCRA's goal to manage waste from the point of generation to the point at which it is permanently disposed.

Discrepancy – An error that has occurred on a waste manifest.

Episodic Generator – *A* generator of hazardous waste who infrequently exceeds their allowable generation rate.

Exception reporting – The actions required by the generator when a completed manifest copy is not returned from the disposal facility to the generator.

Generate – This term refers to the act or process of creating hazardous waste as identified or listed in Title 40 of the Code of Federal Regulations Part 261. If you generate, you are now considered a ***generator*** of hazardous waste.

Generator – Any person, by site, whose act or process produces hazardous waste.

Halogenated compounds – Volatile compounds containing elements from the halogens family (group 17) on the periodic table of elements. The most common halogens include chlorine and bromine which can be associated with degreasers such as trichloroethylene (TCE) and tetrachloroethylene (PCE or perc).

Hazardous waste – A waste may be hazardous either because it is specifically listed in the regulations or because it exhibits characteristics such as ignitability, toxicity, corrosivity and reactivity that would render it subject to RCRA.

Hazardous Waste Storage Area – The Hazardous Waste Storage Area (HWSA) is also referred to as the less-than-180-day storage area (or LT-180 area) where wastes are accumulated prior to disposal. Among other requirements as discussed above, wastes can only be on-site for 180 days. The clock begins when the first drop of waste is put into the container in this area.

Inner Liner – A continuous layer of material placed inside a tank or container that protects the construction materials of the container from contact with the contained waste or reagents used to treat waste.

Land Disposal Restriction – Regulations that establish qualitative and quantitative criteria for waste disposal in or on the land and includes locations such as landfills, surface impoundments, waste piles, injection wells, land treatment facilities, salt dome formations, salt bed formations, underground mines or caves, or placement in a concrete vault or bunker intended for disposal purposes.

Large Quantity Handler – A facility that accumulates 5,000 kilograms or more of universal waste at any time.

Listed – Term used to describe a particular waste that is specifically referenced by chemical name or genre in the regulations.

Manifest – This term refers to the shipment of hazardous waste from a facility for disposal using the Uniform Hazardous Waste Manifest.

Media Closure Criteria – Risk-based standards for each media; they must be developed for each COC. Many media closure criteria can be based on the Connecticut Remediation Standard Regulations (RSR).

Non-wastewater – Wastes that contain greater than 1% by weight total organic carbon (TOC) and greater than 1% by weight total suspended solids (TSS) as determined by laboratory analysis.

Polychlorinated biphenyls – A class of organic compounds containing 1 to 10 chlorine atoms attached to a benzene ring each containing 6 carbon atoms. These compounds are very persistent in the environment and were originally used as coolants in transformer oils and capacitors and in cutting oils and hydraulic fluids.

RCRA – Resource Conservation and Recovery Act.

RCRA waste – A waste that is subject to the RCRA regulations.

Satellite Accumulation Area – A satellite accumulation area is a temporary waste storage area that can store up to 55 gallons of a particular hazardous waste and 1 quart of acutely hazardous waste in a closed, approved container as long as it is labeled and is under the control of the operator. These areas are also referred to in industry as point of generation containers or POGs.

Small Quantity Handler – A facility that accumulates no more than 5,000 kilograms (11,000 pounds) of combined universal waste at any time. (This is equivalent to approximately 17,600, 48-inch lamps or approximately 450 computers.)

GLOSSARY OF TERMS (CONT'D)

Solid waste – Any discarded material that is ***abandoned***, recycled, a military munition or inherently waste-like. There are currently only two materials identified as being inherently waste-like, dioxin waste and halogen-containing materials that are burned in halogen-acid furnaces. A solid waste can be solid, liquid, semi-solid or containerized gaseous material.

Source Reduction – Any action that reduces the amount of waste exiting from a process (waste avoidance). These actions can include:

- Process modification
- Chemical substitution
- Improvements in chemical purity
- Improvements in housekeeping
- Improvements in management practices
- Increase in machine efficiency
- Recycling within process
- Inventory management

Spill kit – This term refers to a collection of equipment used to mitigate a spill of waste or virgin product. Kits are usually used to mitigate small releases and are not designed to respond to large releases typically greater than 55 gallons in volume.

Tank – A stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials like wood, concrete, steel and plastic which provide structural support.

Tank system – A hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Treatment, Storage and Disposal Facility (TSDF) – A facility that has received interim status or a permit for the treatment, storage or disposal of hazardous waste.

GLOSSARY OF TERMS (CONT'D)

Underlying Hazardous Constituent – Any constituent listed in the ***Universal Treatment Standard*** table (40 CFR 268.40) except fluoride, selenium, sulfides, vanadium and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent – specific ***Universal Treatment Standard***.

Universal Treatment Standard – The concentrations that wastewater and non-wastewaters must achieve before disposal can occur. These limits are used to regulate most prohibited hazardous wastes.

Universal wastes – Wastes that could be hazardous if not managed in accordance with specific regulations established by CTDEP and EPA. These wastes represent common wastes generated by most facilities. EPA and CTDEP established the universal waste regulations to reduce the cost of disposal and the generator's burden that could be incurred if these common wastes were disposed of as hazardous.

Used oil – 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. The total halogens content must be less than 1,000 parts per million and the total PCB content must be less than 50 parts per million – if not, the oil becomes hazardous waste.

Waste – A material that can no longer be used for its intended purpose.

Waste codes – The standard naming convention used by EPA to allow those working with hazardous wastes to quickly and clearly determine the nature of the material to be handled, shipped or disposed.

Waste determination – The process used to categorize a waste as hazardous or non-hazardous. The term "waste profile" can be used synonymously especially by waste disposal vendors. This analysis can be based on either knowledge or analytical data but must be documented. Each determination must be reviewed and updated (if needed) annually.

Wastewater – Wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS) as determined by laboratory analysis.

APPENDIX A – COMMON F-LISTED WASTES

APPENDIX A

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under §§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 spent solvent mixtures	(T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, 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 or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
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; and all spent solvent mixtures/blends containing, before use, one	(I)*

	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	
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 still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, 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, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(I,T)
F006	Wastewater treatment sludges from electroplating operations 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 or zinc-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)

APPENDIX B – WASTE DETERMINATION FORM EXAMPLE

WASTE CHARACTERIZATION

Waste Description/Name: _____

Hazardous: _____ **Non-Hazardous:** _____ **Universal Waste:** __ **Used Oil:** _____

DOT Shipping Name: _____

_____

Instructions:
Check all boxes that apply

Characteristics:

		Laboratory Results on File	*or*	Process Knowledge Documented
		⇓		⇓
Ignitability *(choose one)*				
☐ *Not ignitable*		☐		☐
☐ Liquid and flashpoint < 140° F	D001	☐		☐
☐ Non-liquid and when ignited burns vigorously	D001	☐		☐
☐ Ignitable compressed gas	D001	☐		☐
☐ DOT oxidizer	D001	☐		☐
Corrosivity *(choose one)*				
☐ *Not corrosive*		☐		☐
☐ pH < or = 2	D002	☐		☐
☐ pH > or = 12.5	D002	☐		☐
Reactivity *(choose one)*				
☐ *Not reactive*		☐		☐
☐ HCN > or = 250 mg/kg	D003	☐		☐
☐ H_2S > of = 500 mg/kg	D003	☐		☐
☐ Explosive	D003	☐		☐
☐ Water reactive	D003	☐		☐

			Absent or Below Regulatory Limit		Present or Exceeds Regulatory Limit	
			Analytical	Process Knowledge	Analytical	Process Knowledge
			⇓	⇓	⇓	⇓
Toxicity – Metals (mg/L):						
Arsenic	5	D004	☐	☐	☐	☐
Barium	100	D005	☐	☐	☐	☐
Cadmium	1.0	D006	☐	☐	☐	☐
Chromium	5.0	D007	☐	☐	☐	☐
Lead	5.0	D008	☐	☐	☐	☐
Mercury	0.2	D009	☐	☐	☐	☐
Selenium	1.0	D010	☐	☐	☐	☐
Silver	5.0	D011	☐	☐	☐	☐

			Absent or Below Regulatory Limit		Present or Exceeds Regulatory Limit	
			Analytical	or Process Knowledge	Analytical	or Process Knowledge
			⇓	⇓	⇓	⇓
Toxicity - Solvents, Volatiles (mg/L):						
Benzene	0.5	D018				
Carbon tetrachloride	0.5	D019				
Chlorobenzene	100	D021				
Chloroform	6.0	D022				
1,2 - Dichloroethane	0.5	D028				
1,1 - Dichloroethylene	0.7	D029				
Methyl ethyl ketone	200.0	D035				
Tetrachloro-ethylene	0.7	D039				
Trichloroethylene	0.5	D040				
Vinyl chloride	0.2	D043				
Toxicity - Solvents, Semi-volatiles (mg/L):						
Cresol (total)	200.0	D026				
Cresol (ortho)	200.0	D023				
Cresol (m)	200.0	D024				
Cresol (p)	200.0	D025				
1,4 - Dichlorobenzene	7.5	D027				
2,4 - Dinitrotoluene	0.13	D030				
Hexachlorobenzene	0.13	D032				
Hexachlorobutadiene	0.5	D033				
Hexachloroethane	3.0	D034				
Nitrobenzene	2.0	D036				
Pentachlorophenol	100.0	D037				
Pyridine	5.0	D038				
2,4,5 - Trichlorophenol	400.0	D041				
2,4,6 - Trichlorophenol	2.0	D042				
Toxicity - Pesticides/Herbicides (mg/L):						
Chlordane	0.03	D020				
Endrin	0.02	D012				
Heptachlor (+epoxide)	0.008	D031				
Lindane	0.4	D013				
Methoxychlor	10.0	D014				
Toxaphene	0.5	D015				
2,4 - D	10.0	D016				
2,4,5 - TP Silvex	1.0	D017				

	Absent or Below Regulatory Limit		Present or Exceeds Regulatory Limit	
	Analytical	or Process Knowledge	Analytical	or Process Knowledge
	⇓	⇓	⇓	⇓
"Listed Waste" Parameters: code				
_____				
_____				

	Absent or Below Regulatory Limit		Present or Exceeds Regulatory Limit	
	Analytical	or Process Knowledge	Analytical	or Process Knowledge
	⇓	⇓	⇓	⇓
Other Parameters:				
Halogens, Total	☐	☐	☐	☐
Heat Content (BTU Value)	☐	☐	☐	☐
PCBs	☐	☐	☐	☐
Petroleum Hydrocarbons, Total	☐	☐	☐	☐
Suspended Solids, Total	☐	☐	☐	☐

Analytical Information (specify laboratory/sample number(s) and attach analytical results):

_____

_____

Process knowledge information (Materials used, process description): _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Additional comments: _____

_____

_____

_____

Waste Characterization reviewed by:

Name: _____ **Title:** _____

Signature: _____

APPENDIX C – MANIFEST INSTRUCTIONS

Completing the Uniform Hazardous Waste Manifest

Instructions for Generators

Item 1: Generators U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve digit identification number, or the State generator identification number if the generator site does not have an EPA identification number. The U.S. EPA Identification Number is a permanent number assigned by the EPA or its state agency designee to a generator's site address under the Resource Conservation Recovery Act (RCRA) or Toxic Substance Control Act (TSCA) regulations. This twelve digit identifier generally has three capital letters designating the site's state followed by nine numerals. If temporary state-assigned identification numbers are used, they must not have expired or been superseded by a final number. To find a US EPA ID number check with the state first, then the US EPA or the generator's Acknowledgment of Hazardous Waste Activity Form.

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 Forms 8700-22A), if any). The total number of pages is to be placed in this blank, including the first page and all continuation sheets. That total must be entered on each of the continuation sheets as well, as in "**2 of X**", "**3 of X**", etc.

Item 3: Emergency Response Phone Number

Enter a phone number for which emergency response can be obtained in the event of an incident during transportation. The number must:

1. Be the number of the generator or an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation; and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about that shipment.

If more that one emergency response number applies to the various wastes listed on the manifest, Item 3 is left blank and phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4: Manifest Tracking Number

An EPA registered printer preprints this unique tracking number on the manifest. The number is comprised of 12 alphanumeric characters – 9 numeric characters followed by a unique 3-letter suffix.

Item 5: Generator's Mailing Address, Phone Number, and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the destination facility should be mailed, and the generator's telephone number. The telephone number should be a number where the generator may be reached to provide instructions in the event of an emergency or if the designated facility rejects some or all of the shipment. Also, enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6: Transporter 1 Company Name & U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7: Transporter 2 Company Name & U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here. If more than two transporters are needed, use a Continuation Sheet(s) (EPA Form 8700-22A).

Item 8: Designated Facility Name, Site Address, Phone Number, & U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on the manifest. Also enter the facility's phone number and the U.S. EPA twelve digit identification number of the facility.

Item 9: U.S. DOT Shipping Description/Waste Description

Item 9a – If the wastes identified in 9b consist of hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in the Item next to the corresponding hazardous material identified in Item 9b. If the

material is classified as a hazardous substance, "RQ" may be used in pace of an "X".

Item 9b – Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group (if any) for each waste identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.

Item 10: Containers Number & Type)

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

Table I - Types of Containers

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

Item 11: Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12: Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

Table II – Units of Measure

G	Gallons (liquids only).
K	Kilograms.
L	Liters (liquids only).
M	Metric Tons (1000 kilograms).
N	Cubic Meters.
P	Pounds.
T	Tons (2000 pounds).
Y	Cubic Yards.

Note: *Tons, Metric Tons, Cubic Meters and Cubic Yards should only be reported in connection with very large bulk shipments, such as rail cars, tank trucks or barges.*

Item 13: Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes that are most representative of the properties of the waste.

Item 14: Special handling Instructions & Additional Information

Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as:

- Waste profile numbers,
- DOT special permit numbers,
- Container codes,
- Bar codes or
- Response guide numbers.

Generators may also use this space to enter additional descriptive information about their shipped materials, such as:

- Chemical names,
- Constituent percentages,
- Physical state, or
- Specific gravity of wastes identified with volume units in Item 12.

This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including:

- Alternate destination facility
- Manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest
- The specification of PCB waste descriptions and out-of-service dates required under 40 CFR 761.207.

Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15: Generator's/Offeror's Certification

The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute 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.

The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation.

When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment. This is seen when rejected loads or container residues are re-shipped to alternative facilities or rejected back to the generator from the destination facility.

Generator or Offeror personnel may preprint the words "On behalf of" in the signature block to indicate that the individual signs as the employee or agent of the named principal.

Instructions for International Shipments

Item 16: International Shipments

For Export Shipments - The primary exporter must check the export box and enter the point of exit (city and state) from the United States. The transporter must sign and date the manifest to indicate the day the shipment left the United States. Also, transporters of hazardous waste shipments must deliver a copy of the manifest to the U.S. Customs when exporting the waste across U.S. borders.

For Import Shipments - The importer must check the import box and enter the point of entry (city and state) into the United States. The receiving facility is required to mail a final, signed copy of the manifest to EPA.

Instructions for Transporters

Item 17: Transporter's Acknowledgements of Receipt

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. Only one signature per transportation company is required. Signatures are not required to track the movement of wastes in and out of transfer facilities, unless there is a change of custody between transporters.

If applicable, enter 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: *Transporters who are acting as importers or exporters of hazardous waste may have responsibilities to enter information in the International Shipment Block. See above instructions for Item 16.*

Instructions for Owners & Operators of Treatment, Storage & Disposal Facilities

Item 18: Discrepancy

All discrepancies require generator consultation; however, the TSDF does not need permission to return the shipment to the generator.

Item 18a – Discrepancy Indication

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

1. Significant differences between the quantity of hazardous waste designated on the manifest, and the quantity of hazardous waste a facility actually receives (see Appendix A),
2. Significant differences between the type of hazardous waste designated on the manifest, and the type of hazardous waste a facility actually receives (see Appendix A),

3. Rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF can not accept, or
4. Container residues, which are residues that exceed the quantity limits for "empty" containers (see Appendix B).

For rejected loads and residues, check the appropriate box if the shipment is a rejected load or a regulated residue that cannot be removed from a container. Enter the reason for the rejection or the inability to remove the residue and a description of the waste. Also, reference the manifest tracking number for any additional manifests being used to track the rejected waste or residue shipment from the original manifest.

Owners and operators of facilities located in unauthorized states who cannot resolve significant differences in quantity or type within 15 days of receiving the waste must submit to the Regional Administrator a letter with a copy of the Manifest at issue describing the discrepancy and attempts to reconcile it.

Owners and operators of facilities located in authorized states should contact their State agency for information on where to report discrepancies involving "significant differences" to state officials.

Item 18b – Alternative Facility or Generator

Enter the name, address, phone number and EPA Identification Number of the Alternative Facility which the rejecting TSDF has designated, after consulting with the generator, to receive a fully rejected waste shipment. In the event that a fully rejected shipment is being returned to the generator, the rejecting TSFD may enter the generator's site information in this space. This field is not to be used to forward partially rejected loads or residue waste shipments.

Item 18c – Alternative Facility or Generator Signature

The authorized representative of the alternate facility (or the generator in the event of a returned shipment) must sign and date this field to acknowledge receipt of the fully rejected wastes or residues identified by the original TSDF.

Item 19: Hazardous Waste Report Management Method

Enter the most appropriate Hazardous Waste Report Management Method Code for each waste listed in Item 9. The Hazardous Waste Report Management Method Code is to be entered by the first TSDF that receives the waste and is the code that best describes the way in which the waste is to be managed when received by the TSDF.

These codes are updated routinely and published in the instructions accompanying the current edition of the Hazardous Waste Report Forms. An updated list of these codes can be found at http://www.epa.gov/waste/hazard/transportation/manifest/pdf/codes.pdf.

Note: *These codes do not necessarily reference ultimate disposal of the hazardous waste. Rather, they identify how the waste will be handled by the receiving TSDF.*

Item 20: Designated Facility Owner/Operator Certification of Receipt

Enter the name of the person receiving the waste on behalf of the owner or operator of the facility. That person must acknowledge receipt or rejection of the waste described on the Manifest by signing and entering the date of receipt or rejection where indicated. Since the Facility Certification acknowledges receipt of waste except as noted in the Discrepancy Space in Item 18a, the certification should be signed for both waste receipt and waste rejection, with the rejection being noted and described in the space provided in Item 18a.

Instructions for Generators

Item 21: Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve digit identification number, or the State generator identification number if the generator site does not have an EPA identification number. This is the same number identified in Item 1 on the Manifest (EPA Form 8700-22)

Item 22: Page ____

Enter the page number of this Continuation sheet.

Item 23: Manifest Tracking Number

Enter the manifest tracking number from Item 4 of the Manifest form to which this continuation sheet is attached.

Item 24: Generator's Name

Enter the generator's name as it appears in Item 5 on the first page of the Manifest.

Item 25: 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 numerical order of the transporter. For example, Transporter 3 Company Name. Also, enter the U.S. EPA twelve-digit identification number of the transporter described in Item 25.

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 numerical order of the transporter. For example, Transporter 4 Company Name. Also, enter the U.S. EPA twelve-digit identification number of the transporter described in Item 25.

Item 27: U.S. DOT Shipping Description/Waste Description

Item 27a – If the wastes identified in 27b consist of hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in the Item next to the corresponding hazardous material identified in Item 9b. If the material is classified as a hazardous substance, "RQ" may be used in pace of an "X".

Item 27 b – For each row enter a sequential number under Item 27b that corresponds to the order of waste codes from one continuation sheet to the next to reflect the total number of wastes being shipped. For example, the first line item from the first continuation sheet would be identified as "Line 27b5". The first line item from the second continuation sheet would be identified as "Line 27b15". Items 1-4 were identified on the first Manifest (EPA Form 8700-22).

Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group (if any) for each waste identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.

Item 28: Containers Number & Type

Refer to the instructions for Item 10 of the manifest for information to be entered.

Item 29: Total Quantity

Refer to the instructions for Item 11 of the manifest for information to be entered.

Item 30: Units of Measure

Refer to the instructions for Item 12 of the manifest for information to be entered.

Item 31: Waste Codes

Refer to the instructions for Item 13 of the manifest for information to be entered.

Item 32: Special Handling Instructions & Additional Information

Refer to the instructions for Item 13 of the manifest for information to be entered.

Instructions for Transporters

Item 33: Transporter ____ Acknowledgement of Receipt

Enter the same number of the Transporter as identified in Item 25. Enter also the name of the person accepting the waste on behalf of the Transporter identified in Item 25. 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

Enter the same number of the Transporter as identified in Item 26. Enter also the name of the person accepting the waste on behalf of the Transporter identified in Item 26. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Instructions for Owners & Operators of Treatment, Storage & Disposal Facilities

Item 35: Discrepancy Indication Space

Refer to Item 18. This space may be used to more fully describe information on discrepancies identified in Item 18a of the manifest form.

Item 36: Hazardous Waste Report Management Method

For each field here, enter the sequential number that corresponds to the waste materials described under Item 27 (such as 5 for the first line of the first continuation sheet), and enter the appropriate process code that describes how the materials will be processed when received.

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 ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CTD000000111	2		110410781WVX

GENERATOR

5. Generator's Name and Mailing Address
Company C Co., Inc.
117 Smith Lane
W. Town, CT 06000
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: John T. Smith Trucking Company
U.S. EPA ID Number: CTD016100010

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Bill's Waste Services
71 Roger Road
E. Town, CT 06002
Facility's Phone:
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1. UN1993, Waste Flammable liquids N.O.S. (Acetone, Methanol), 3, II (D001)	1	DM	650	P	D001	F003	
X	2. UN2031, Waste, Nitric Acid, 8, II	2	DF	100	P	D002		
RQ	3. UN2809, Mercury, 1, III	1	DF	50	P			
	4. UN1950, Waste, Aerosols, Flammable, N.O.S., 2.1	1	DF	20	P	D001		

14. Special Handling Instructions and Additional Information
9b.1 1x55 gallon, ERG #128
9b.2 2x5 gallon, ERG #157
9b.3 1x5 gallon, ERG #172
9b.4 1x5 gallon, ERG #126

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: John Doe
Signature
Month | Day | Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bill Johnson
Signature
Month | Day | Year

Transporter 2 Printed/Typed Name
Signature
Month: 8 | Day: 3 | Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month | Day | Year

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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 ID Number: CTD000000111

22. Page 2 of 2

23. Manifest Tracking Number: 110410781WVX

24. Generator's Name: Company C Co., Inc.

25. Transporter _____ Company Name — U.S. EPA ID Number

26. Transporter _____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
	Non-DOT/RCRA Regulated Used Oil	1	DM	450	P	CR02
	Non-DOT/RCRA Regulated Ethylene Glycol	1	DM	475	P	CR04

32. Special Handling Instructions and Additional Information

27b.1 1x55 gallon
27b.2 2x55 gallon

GENERATOR

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

APPENDIX D – INSPECTION GUIDANCE

APPENDIX D

Here are some things to look for while performing inspections:

1. Monitoring Equipment a. Liquid level alarms/meters b. Leak detection systems c. Fire detection systems d. Ground water monitoring system	2. Safety Equipment a. Emergency shower b. Face shields c. Protective gloves d. Disposable respirators e. First aid equipment/supplies f. Protective clothing g. Air purifying respirators h. Signs/placards
3. Emergency Equipment a. Fire blankets b. Fire extinguishers c. Fire alarm systems d. Generators e. Emergency lights f. Portable pumps/hoses g. Self-contained breathing apparatus h. Absorbents i. Containment boom j. Spill response carts/kits	4. Security Devices a. Fences b. Warning signs c. Gates d. Lighting e. Locks f. Telephones g. Pagers h. Two-way radios i. Intercoms j. Public address system k. TV monitoring system
5. Operating and Structural Equipment a. Dikes/berms b. Troughs/sumps c. Ramps d. Elevators/lifts e. Tank supports f. Containment vault g. Bases/foundation h. Roofs i. Walls	6. Containers a. LT-180 container storage areas i. labels ii. dates iii. condition iv. closed b. Containment systems i. spill pallets ii. berms iii. overpacks iv. liners
7. Tanks and ancillary equipment a. Waste feed cut-off/bypass b. Discharge control equipment c. Drainage systems d. Monitoring equipment data e. Waste level f. Tank material/seams g. Plumbing/sumps h. Labeled/Marked	8. Areas a. Loading areas b. Unloading areas c. Storage areas d. Main roadway e. Gate area f. Periphery

APPENDIX E – INSPECTION FORM EXAMPLES

Inspection Log for Hazardous Waste Containers and Container Storage Area(s)

Instructions: Please use ink. Results of weekly inspections of hazardous waste containers and container storage areas must be recorded in this log. If any deficiencies are found, a description of the deficiencies must be recorded in the "Observation" column. Prompt and immediate action must be taken to correct any deficiencies observed. The date and nature of all corrective actions must be recorded in the "Corrective Actions Column". Once this log is completed, it should be maintained in a binder and must be kept on file for at least three years from the date of inspection. These inspection logs must be made available for inspection by State DEP inspectors.

Date of Inspection: _____Time of Inspection: _____ a.m./p.m.

Full Name of Inspector: _____

Item/Condition to be checked	Yes	No	Observation/Deficiency	Corrective Actions and Date
Are all containers closed?				
Are all containers in GOOD condition (NOT leaking, rusted, bulging or otherwise in poor condition)?				
Are all containers marked?				
Does the marking include the words "Hazardous Waste" and other words to describe the waste?				
Are all markings legible and visible for inspection?				
Are all containers marked with accumulation start dates?				
Are dates less than 180 days?				
Is the amount of waste on site less than 1,000 kg (2,200 lbs)?				
Is there adequate aisle spacing?				
Are the containers stored on an impermeable base that is bermed?				
Are the base and berm free of gaps, cracks, and damage?				
Is the base free of spills, leaks, or other accumulation?				
Are incompatible materials separated by a wall or a berm?				

Note: If the "NO" column is checked, corrective action must be taken and the "Observation" and "Corrective Action" columns must be completed.

Additional Comments:

_____

_____

_____

Monthly Safety and Emergency Equipment Inspection Log

Instructions: Please use ink. Results of monthly inspections of safety and emergency equipment must be recorded in this log. If any deficiencies are found, a description of the deficiencies must be recorded in the "Observation" column. Prompt and immediate action must be taken to correct any deficiencies observed. The date and the nature of all corrective actions must be recorded in the "Corrective Actions" column. Once this log is completed, it should be maintained in binder and must be kept for at least three years from the date of the inspection. These inspection logs must be made available for inspection by State DEP inspectors.

Date of Inspection: _____ Time of Inspection: _____a.m./p.m. Name of Inspector (Full Name): _____

Item/Condition to be checked	**Required Quantity**	Yes	No	Observation/Deficiency	Corrective Actions and Date
Personal Protective Equipment					
Safety Glasses?	**5**				
Face Shields?	**2**				
Rubber Gloves (Nitrile)?	**50 pairs**				
Leather Gloves?	**4 pairs**				
Cotton Gloves?	**40 pairs**				
Dust Masks?	**24**				
Rubber boots?	**5 pairs**				
Disposable coveralls?	**5**				
Safety Equipment					
Emergency showers in good operating condition, and marked?	**Ink Room R&D Area**				
All fire extinguishers fully charged, clear, expiration date marked?	**38**				
Emergency lights in good working order?	**8**				
Emergency Equipment					
Sealed 20 Gallon Spill Kit Contents: 20 pads, Heavy Wt; 4 Socks, 3"x48"; 1 Sock, 3"x8'; 2 Pillows, 18"x18"; 1 Bag Ultrasorb, Granular 5#; 3 Temporary Disposal Bags; 3 Plastic Zip Ties, 12"; 1 Pair, Nitrile Gloves; 1 Pair Safety Goggles; 1 Instruction Sheet.	**3 spill kits with seals intact**				
Mix Room					
3" X 10' sock	**4**				
Pillows	**4**				
Mats	**60**				
Disposable Bags/Ties	**8/8**				
Loading Dock					
3" X 10' sock	**6**				
Pillows	**4**				
Mats	**30**				
Disposable Bags/Ties	**8/8**				
Are the salvage drums empty, clear, and marked?	**2**				

Note: If the "NO" column is checked, corrective action must be taken and the "Observation" and "Corrective Action" columns must be completed.

Additional Comments: _____

_____

Inspection Log for Hazardous Waste Storage Tank Systems

Instructions: Please use ink. Results of daily inspections of Hazardous Waste Storage Tank Systems must be recorded in this log. If any deficiencies are found, a description of the deficiencies must be recorded in the "Observation" column. Prompt and immediate action must be taken to correct any deficiencies observed. The date and the nature of all corrective actions must be recorded in the "Corrective Actions" column. Once this log is completed, it should be maintained in a binder and must be kept for at least three years from the date of the inspection. These logs must be made available for inspection by State DEP Inspectors.

Date of Inspection:_____ Time of Inspection: _____ a.m./p.m. Name of Inspector (Full Name): _____

Item/Condition Checked	Yes	No	Observation/Deficiency	Corrective Action Taken
TANK #_____				
1. Manual operating valves				
2. High level alarms • power source • operating mechanisms • protective overlays • sounding mechanism				
3. Check valve, piping, and pumps. Are all valves and shut offs free of leaks and rusting?				
4. Discharge controls				
5. Check liquid level log for entry. _____ Current Level: _____				
6. Check for evidence of corrosion, deterioration, or leaking (ancillary equipment)				
7. Is the tank marked?				
8. Does the marker include the words "Hazardous waste" and the chemical name?				
9. Are all the markers legible and visible for inspections?				
10. Is the tank stored on an impermeable base?				
11. Secondary Containment • Are the bases, free of gaps, cracks and damage? • Are the bases free of spills, leaks or other accumulations (discoloration)?				

Note: If the "NO" column is checked, corrective action must be taken and the "Observation" and "Corrective Action" Columns must be completed.

Comments or Discrepancies: _____