HAZARDOUS WASTE GENERATOR COMPLIANCE MANUAL

2020

North Carolina Department of Environmental Quality
Division of Waste Management
Hazardous Waste Section
Compliance Branch

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INTRODUCTION

The purpose of this manual is to provide an overview of the North Carolina hazardous waste rules that affect you and your business. This manual covers the basic identification of solid and hazardous wastes and the regulations with which hazardous waste generators must comply. Each section begins with the citation for the particular regulation discussed. The procedures to comply with these regulations and a summary of what the inspector is looking for at your facility are outlined in the Inspection section of this manual.

This document is for guidance purposes only and does not contain all the North Carolina Hazardous Waste Management Rules. Many of the rules described are paraphrased. For complete requirements, refer to 15A NCAC 13A for specific state hazardous waste rules, the federal regulations (40 CFR) that are incorporated by reference in the state rules, and N.C.G.S. 130A, Article 9 for state law. Links to the North Carolina Hazardous Waste Management Rules can be found at this website link:

https://deq.nc.gov/about/divisions/waste-management/hw/rules

This manual was developed by the Hazardous Waste Section (HWS) inspection staff to further understanding and compliance of the North Carolina Hazardous Waste Management Rules. The manual is directed toward the on-site activities that generators may take to ensure continued compliance. The manual includes the official interpretations of the regulations and guidance/policy as viewed by both the North Carolina HWS and the EPA. The manual is updated at least annually and as regulations change.

Throughout this manual you will find references to contacting the person who inspects your facility – your Environmental Specialist. To find the Environmental Specialist for your area, refer to the listing and organization chart on the next pages or look on the web at:

https://files.nc.gov/ncdeq/Waste%20Management/DWM/HW/Compliance/Compliance_Map_by_Inspector.pdf

If you have any questions about this manual or managing hazardous waste in general, please do not hesitate to contact your Environmental Specialist.

Organizational Charts

State of North Carolina

Governor
Roy Cooper

Department of Environmental Quality

Department Secretary
Michael Reagan

Division of Waste Management

Division Director
Michael Scott

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Section Chief
Julie Woosley

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North Carolina Hazardous Waste Management Rules Overview

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

In 1984, the EPA authorized North Carolina to operate the State Hazardous Waste Program in lieu of the federal program under RCRA. North Carolina General Statute (N.C.G.S.) 130A-294(c) provides the statutory authority for the Division of Waste Management, Hazardous Waste Section to implement the Hazardous Waste Rules in North Carolina.

The Hazardous Waste Management Rules are codified in the North Carolina Administrative Code (NCAC) at 15A NCAC 13A. Federal regulations are incorporated by reference in the NCAC and additional state requirements (more stringent than the federal regulations) are described in the NCAC. Most of the state law mandated in the N.C.G.S. is codified in the NCAC; however, there are requirements relevant to the North Carolina Hazardous Waste Management Program that have not been codified in 15A NCAC 13A. For this reason, the N.C.G.S. and the NCAC should both be reviewed to ensure compliance with the hazardous waste management requirements.

Throughout this manual, there are references to the federal regulation citations (e.g., 40 CFR 262). The federal regulation citation is often used when discussing the hazardous waste requirements for ease of explanation and for brevity. The alternative would be to use the full citation in the manual as follows: "40 CFR 262, adopted by reference at 15A NCAC 13A .0107."

To review the complete rules, refer to 15A NCAC 13A for specific state requirements and federal rules incorporated by reference and N.C.G.S. 130A, Article 9 for state law. Links to the North Carolina Hazardous Waste Management Rules can be found at this website link: https://deq.nc.gov/about/divisions/waste-management/hw/rules.

REGULATION SUMMARY

The purpose of this section is to review the hazardous waste rules that will affect you and your business. The following sections are to provide an overview of the hazardous waste rules that may apply to your facility.

Identification of Hazardous Wastes

40 CFR 261

A hazardous waste, as defined under RCRA, is a solid waste that may: cause or significantly contribute to an increase in mortality or an increase in serious, irreversible or incapacitating illness, reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.

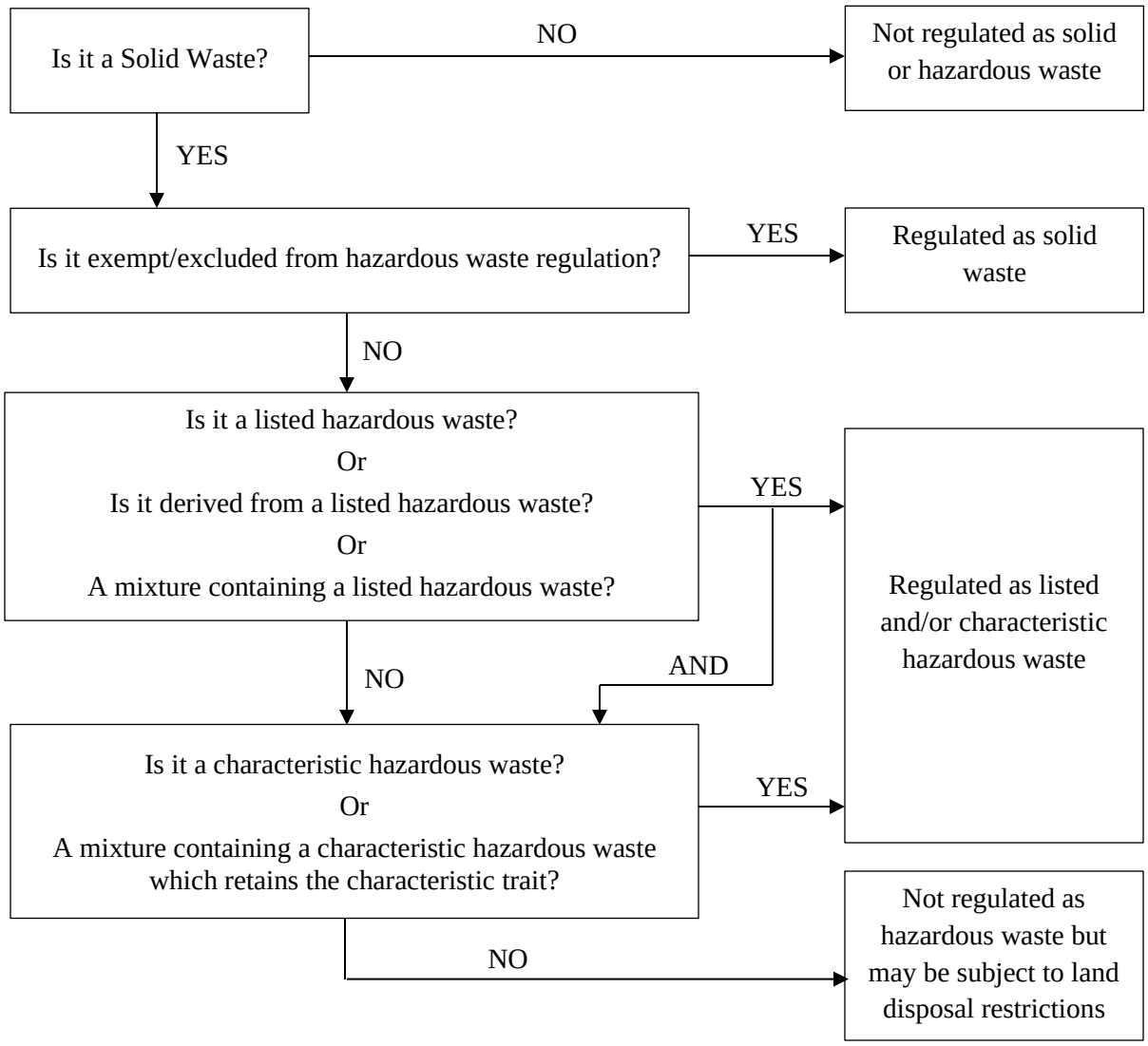
The term "solid waste" means any waste, whether it is a solid, semisolid, liquid or contained gaseous material that can no longer be used for its intended purpose and is recycled, accumulated, treated and/or disposed. A solid waste is hazardous if it is not excluded from regulation and it meets any of the following conditions:

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

The exclusions for certain materials from being solid wastes are located at 40 CFR 261.4(a) and the exclusions for certain materials from being hazardous wastes are found at 40 CFR 261.4(b). See Decision Diagram A - Determining if Your Waste Is Regulated and Decision Diagram B - Hazardous Waste Recycling in Appendix J for help in making a hazardous waste determination.

The flow chart on page 12 provides an overview of the steps in the waste determination process.

Waste Determination Flow Chart



There may be other factors to consider when determining if the solid waste is a hazardous waste:

- **Dilution** of hazardous waste to remove hazardous characteristics is not allowed.
- **Treatment or mixing** of hazardous waste requires a high level of understanding of the hazardous waste rules and is only allowed without a permit in very limited circumstances. Prior to treating or mixing hazardous waste at a facility, the HWS strongly encourages you to contact your Inspector to determine what rules apply and whether a hazardous waste permit is required.
- **Waste derived or generated** from treatment, storage or disposal of a listed hazardous waste, including sludge, spill residues, air emission control dust or leachate, is a listed hazardous waste.
- **Land Disposal Restrictions (LDRs)** requirements in 40 CFR 268 apply to small quantity and large quantity generators. The LDR requirements for hazardous wastes begin at the point of generation and identify hazardous wastes that are restricted from land disposal. Additionally, the LDR defines the limited circumstances in which prohibited wastes may be land disposed.

Characteristics of Hazardous Wastes
40 CFR 261 Subpart C

The four characteristics of hazardous wastes are:

Ignitability (D001) – These are wastes that can readily catch fire and sustain combustion. An ignitable liquid has a flashpoint less than 140 degrees F. Examples include acetone, gasoline and industrial alcohols. A non-liquid waste is only hazardous due to ignitability if it can spontaneously catch fire under normal handling conditions and can burn so vigorously that it creates a hazard. Certain compressed gases and chemicals called oxidizers can also be ignitable. Ignitable wastes carry the waste code D001 and are among the most common hazardous wastes. The regulations describing the characteristic of ignitability are found at 40 CFR 261.21.

Corrosivity (D002) - These wastes are acidic or alkaline (basic) wastes which can readily corrode or dissolve flesh, metal, or other materials. Examples include alkaline cleaners, some chlorides, fluorides and acids. Aqueous wastes with a pH greater than or equal to 12.5, or less than or equal to 2 are considered corrosive. A waste may also be corrosive if it has the ability to corrode steel in a specific EPA-approved test protocol. Corrosive wastes carry the waste code D002. The regulations describing the corrosivity characteristic are found at 40 CFR 261.22.

Reactivity (D003) - A reactive waste is one that readily explodes or undergoes violent reactions. The material is capable of reacting with air or water, causing an explosion or a release of poisonous fumes. Examples include peroxides, isocyanates, cyanides and chlorine. Wastes exhibiting the characteristic of reactivity are assigned the waste code D003. The regulations describing the reactivity characteristic are found at 40 CFR 261.23.

Toxicity Characteristic (TC) (D004 - D043) - This waste contains compounds that can poison humans. Examples include heavy metals and pesticide wastes. Wastes are determined to be TC wastes if they fail the Toxic Characteristic Leaching Procedure (TCLP) test, which is an analytical method designed to determine how much of a particular contaminant leaches from a material. Forty compounds are included; and they are listed in the following table (Table 1). If a material leaches a compound on this list in amounts greater than the regulatory limit, it is a TC hazardous waste. The regulations describing the toxicity characteristic are found at 40 CFR 261.24.

Table 1: Toxicity Characteristic Constituents and Their Regulatory Levels

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

Listing of Hazardous Wastes
40 CFR 261 Subpart D

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

- **Non-specific Source Wastes** (40 CFR 261.31 - "F" wastes): These are wastes commonly produced by manufacturing and industrial processes. Because the processes generating these wastes can occur in different sectors of industry, the F list wastes are known as wastes from non-specific sources. They can be divided into seven groups depending on the type of manufacturing or industrial operation that creates them: spent solvent wastes, electroplating and other metal finishing wastes, dioxin-bearing wastes, chlorinated aliphatic hydrocarbons production, wood preserving wastes, petroleum refinery wastewater treatment sludge, and multisource leachate. Examples from this list include spent halogenated solvents used in cleaning and degreasing (F001 or F002) or wastewater treatment sludge from electroplating processes (F006).

  Table 2 on page 18 is a copy of the first page of the lists of non-specific source waste (The F-listed Wastes) from 40 CFR 261.31. This table shows the F001 through F005 listed wastes. Page 19 shows a flow chart outlining the decision process for determining if a solvent waste meets the F001 through F005 listing criteria. These are the most commonly generated listed wastes and therefore, the ones that most generators have problems identifying correctly.

- **Specific Source Wastes** (40 CFR 261.32 - "K" wastes): The K-list identifies hazardous wastes from specific sectors of industry and manufacturing and are considered source-specific wastes. To qualify as a K-listed hazardous waste, a waste must fit into one of the 13 categories on the list and the waste must match one of the detailed K list waste descriptions in 40 CFR 261.32. The 13 industries that generate K list wastes are: wood preservation, organic chemicals manufacturing, pesticides manufacturing, petroleum refining, veterinary pharmaceuticals manufacturing, inorganic pigment manufacturing, inorganic chemicals manufacturing, explosives manufacturing, iron and steel production, primary aluminum production, secondary lead processing, ink formulation, and coking (processing of coal to produce coke). An example is wastewater treatment sludge from the production of chrome green pigment (K005). These wastes typically include sludge, still bottoms, waste waters and spent catalysts.

- **Commercial Chemical Products** (40 CFR 261.33(e): "P" wastes and 40 CFR 261.33(f) "U" wastes)- The P and U lists designate hazardous waste that is pure and commercial grade formulations of certain unused chemicals, off-specification products, container residues, and spill residues that are being disposed. For a waste to be considered a P- or U-listed waste it

must meeting the following three criteria:

- The waste must contain one of the chemicals listed on the P or U list;
- The chemical in the waste must be unused; and
- The chemical in the waste must be in the form of a commercial chemical product. EPA defines a commercial chemical product for P and U list purposes as a chemical that is either 100 percent pure, technical (e.g., commercial) grade or the sole active ingredient in a chemical formulation.

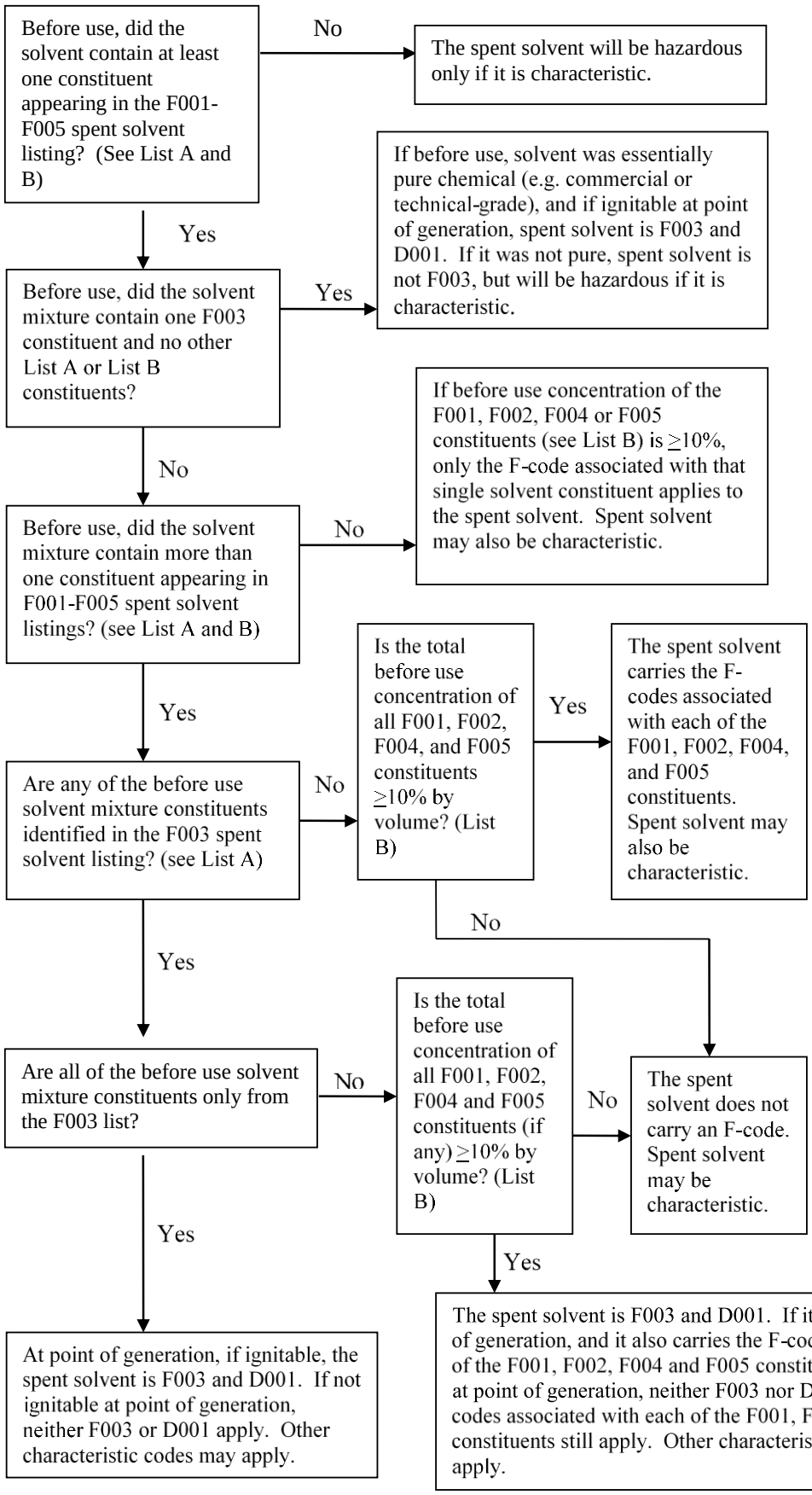
This list includes chemicals such as chloroform and creosote, acids such hydrofluoric acid and pesticides such as DDT and kepone. The P-list identifies **acute hazardous wastes** and are subject to the reduced quantity limitations of 2.2 pounds per month.

Table 2: F001 through F005 Listed Hazardous Waste

Industry and EPA hazardous waste No.	**Hazardous Waste**	**Hazard code**
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 or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(I)*
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and 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)

*(I, T) should be used to specify mixtures that are ignitable and contain toxic constituents.

Flowchart for F-listed (F001-F005) Spent Solvent Waste



List A – F003 Solvent Constituents

Acetone
n-Butyl alcohol
Cyclohexanone
Ethyl acetate
Ethyl benzene
Ethyl ether
Methanol
Methyl isobutyl ketone
Xylene

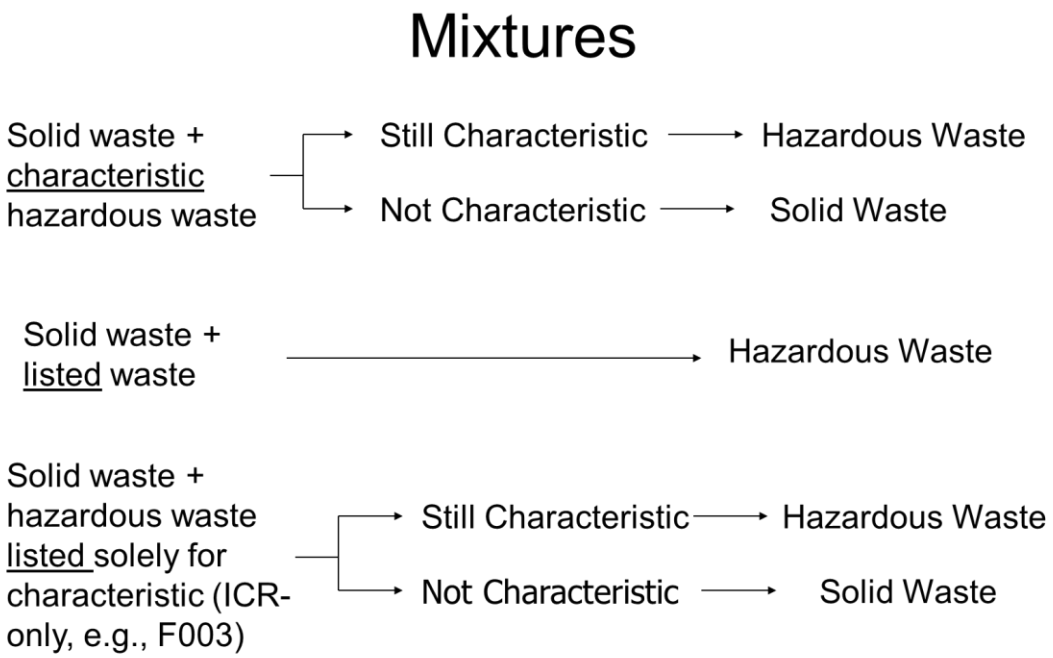
List B – F001, F002, F004 and F005 Solvent Constituents

Constituent	Waste Code(s)
Benzene	F005
Carbon disulfide	F005
Carbon tetrachloride	F001
Chlorobenzene	F002
Cresols	F004
Cresylic acid	F004
o-Dichlorobenzene	F002
2-Ethoxyethanol	F005
Isobutyl alcohol	F005
Methyl ethyl ketone	F005
Methylene chloride	F001, F002
Nitrobenzene	F004
2-Nitropropane	F005
Pyridine	F005
Tetrachloroethylene	F001, F002
Toluene	F005
1,1,1–Trichloroethane	F001, F002
1,1,2–Trichloroethane	F002
1,1,2-Trichloro-1,2,2-trifluorothane	F001, F002
Trichloroethylene	F001, F002
Trichlorofluoromethane	F001, F002

<u>Hazardous Waste Mixtures</u>

40 CFR 261.3(a), (b) and (g)

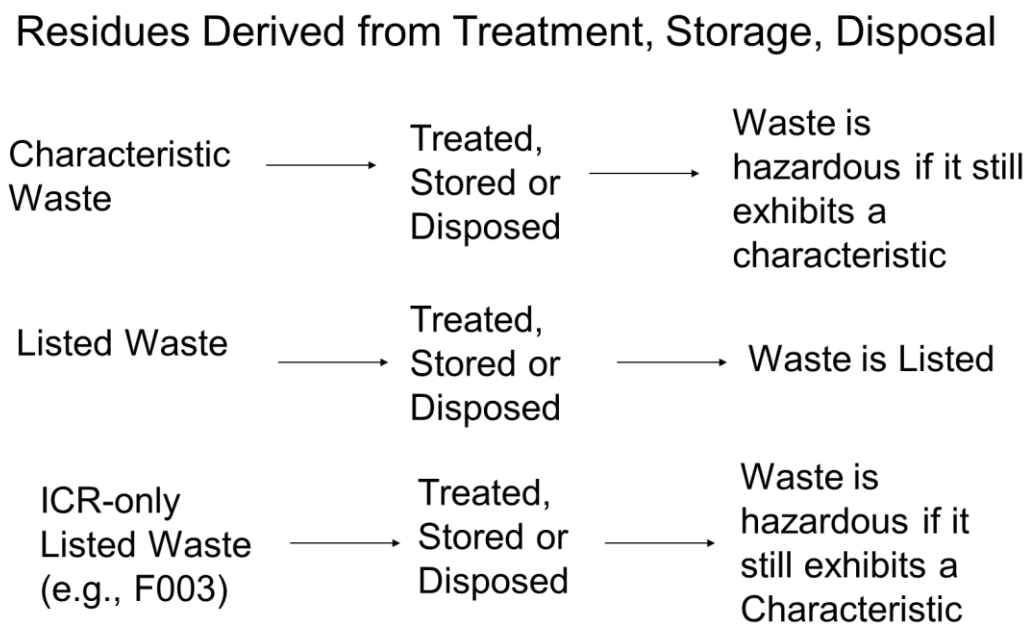
A solid waste mixed with a characteristic hazardous waste is a hazardous waste if it still exhibits the characteristic. If it is a mixture of a waste that is listed, but only for a characteristic and the mixture does not exhibit the characteristic, it is not a hazardous waste. If it is a mixture of any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



Wastes Derived from Hazardous Wastes

40 CFR 261.3(c) and (d)

Residues derived from the treatment, storage, or disposal of a characteristic hazardous waste is a hazardous waste if it still exhibits the characteristic. Residue derived from the treatment, storage or disposal of listed wastes which are listed for a characteristic only, are listed hazardous wastes if the residue still exhibits the characteristic. Residue derived from the treatment, storage or disposal of all other listed waste is a listed hazardous waste. (See the Residue from Treatment, Storage, or Disposal diagram, below)



Listed Hazardous Waste in Soil

"Contained-in" Policy for Soil Contaminated with Listed Hazardous Waste

When soil has been contaminated from the release of a listed hazardous waste, the hazardous waste is considered to be "contained-in" the soil. While the soil itself is not a hazardous waste, when the waste is "generated" (i.e. removed from place or excavated), it must be managed as a hazardous waste.

HWS policy, effective date December 21, 2000 and updated most recently in 2016, designates levels at which soil contaminated with a listed hazardous waste no longer must be handled as if it were hazardous. The policy includes levels for 218 constituents below which the soil may be disposed in a Subtitle D municipal solid waste landfill (MSWLF). There are lower levels designated at which the soil has no restrictions for its use. Soil must be analyzed according to the procedures outlined in the policy to determine the proper disposal method. This policy only applies to soil that has been contaminated with listed hazardous waste from a spill or release and will be excavated. It does not apply to soil contaminated with characteristic hazardous wastes. The policy is available on the web at:
https://deq.nc.gov/about/divisions/waste-management/hw/technical-assistance-education-guidance/documents

Exclusions

40 CFR 261.4

Several materials are excluded from the definition of solid waste. These materials are excluded for a variety of reasons, including public policy, economic impacts, regulation by other laws, lack of data, or impracticability of regulating the waste. The decision to exclude the following materials from the solid waste definition is a result of either Congressional action (embodied in the statute) or an EPA federal rulemaking.

A material cannot be a hazardous waste if it does not meet the definition of solid waste. Thus, wastes that are excluded from the definition of solid waste are not subject to RCRA subtitle C hazardous waste regulation. The exclusions for certain materials from being solid wastes are located at 40 CFR 261.4(a), adopted by reference at 15A NCAC 13A .0106.

The federal regulations also exclude certain solid wastes from the definition of hazardous waste. If a material meets an exclusion from the definition of hazardous waste, it is not regulated as a hazardous waste, even if the material technically meets a listing or exhibits a characteristic that would normally meet this definition. The exclusions for certain materials from being hazardous

wastes are found at 40 CFR 261.4(b), adopted by reference at 15A NCAC 13A .0106.

Additionally, certain hazardous wastes are exempted from certain RCRA subtitle C hazardous waste regulation. The exemptions for these certain materials are located at 40 CFR 261.4(c)-(j), adopted by reference at 15A NCAC 13A .0106.

Table 3 contains a brief description of wastes that are excluded from the definition of solid waste, solid wastes excluded from the definition of hazardous waste, and other hazardous waste exclusions. The information provided in Table 3 is not all inclusive of the regulatory conditions that may exist for the exclusion. Table 3 should be used only as guidance. Exclusions that are most commonly used have key words in bold font.

Table 3: Brief Summary of Exclusions

Materials that are not Solid Wastes - 40 CFR 261.4(a)	
Brief Summary of Exclusion	**Regulation Citation (incorporated by reference at 15A NCAC 13A .0106)**
Domestic sewage (untreated sanitary wastes that pass through a sewer system).	40 CFR 261.4(a)(1)
Any **mixture of domestic sewage** and other wastes that passes through a sewer system to a POTW.	40 CFR 261.4(a)(1)(i)
Industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the Clean Water Act.	40 CFR 261.4(a)(2)
Irrigation return flows.	40 CFR 261.4(a)(3)
Source, special nuclear or by-product material as defined by the Atomic Energy Act.	40 CFR 261.4(a)(4)
Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.	40 CFR 261.4(a)(5)
Pulping liquors that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively.	40 CFR 261.4(a)(6)
Spent sulfuric acid used to produce virgin sulfuric acid provided it is not accumulated speculatively.	40 CFR 261.4(a)(7)
Closed Loop with Reclamation Exclusion: Secondary materials that are reclaimed and returned to the original process in which they were generated where they are reused in the production process provided i) only tank storage is involved, and the process through completion of reclamation is closed by being entirely connected with pipes or other comparable mean of conveyance, ii) reclamation does not involve controlled flame combustion, iii) the secondary materials are never accumulated in the tanks for more than 12 months, iv) the reclaimed material is not used to produce a fuel or used to produce products that are used in a manner constituting disposal.	40 CFR 261.4(a)(8)
Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose, provided specific conditions are met (see regulation for conditions)	40 CFR 261.4(a)(9)
EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the Toxicity Characteristic (TC) specified in section 261.24 when specific conditions are exist and are met.	40 CFR 261.4(a)(10)
Non-wastewater splash condenser dross residue from the treatment of K061 in high temperature metal recovery units provided specific conditions are met.	40 CFR 261.4(a)(11)
Oil-bearing hazardous secondary materials generated at a petroleum refinery and inserted into the petroleum refining process.	40 CFR 261.4(a)(12)
Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.	40 CFR 261.4(a)(13)
Shredded circuit boards being recycled provided specific conditions are met.	40 CFR 261.4(a)(14)
Condensates derived from the overhead gases from kraft mill steam strippers that are used in a specific manner.	40 CFR 261.4(a)(15)
Specific spent material generated within the primary mineral processing industry from minerals, acids, cyanide, water or other values are recovered by mineral processing or by beneficiation, provided specific conditions are met.	40 CFR 261.4(a)(17)

Table 3: Brief Summary of Exclusions (continued)

Materials That Are not solid wastes - 40 CFR 261.4(a) (continued)	
Brief Summary of Exclusion	**Regulation Citation (incorporated by reference at 15A NCAC 13A .0106)**
Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process along with normal petroleum refinery process streams provided specific conditions are met.	40 CFR 261.4(a)(18)
Spent caustic solutions form petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land or accumulated speculatively.	40 CFR 261.4(a)(19)
Hazardous secondary materials used to make zinc fertilizer, provided specific conditions are met.	40 CFR 261.4(a)(20)
Zinc fertilizers made from hazardous waste, or hazardous secondary materials that are excluded under 40 CFR 261.4(a)(20) provided specific conditions are met.	40 CFR 261.4(a)(21)
Used, intact CRTs as defined in §260.10 of this chapter are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated as defined in §261.1(c)(8) by CRT collectors or glass processors.	40 CFR 261.4(a)(22)(i)
Used, intact CRTs as defined in §260.10 of this chapter are not solid wastes when exported for recycling provided that they meet the requirements of §261.40.	40 CFR 261.4(a)(22)(ii)
Used, broken CRTs as defined in §260.10 of this chapter are not solid wastes provided that they meet the requirements of §261.39.	40 CFR 261.4(a)(22)(iii)
Glass removed from CRTs is not a solid waste provided that it meets the requirements of §261.39(c).	40 CFR 261.4(a)(22)(iv)
Generator Controlled Exclusion: Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator, provided specific conditions are met.	40 CFR 261.4(a)(23)
Transfer Based Exclusion: Hazardous secondary material that is generated and then transferred to another person for the purpose of reclamation is not a solid waste, provided that specific conditions are met.	40 CFR 261.4(a)(24)
Hazardous secondary material that is exported from the United States and reclaimed at a reclamation facility located in a foreign country is not a solid waste, provided specific conditions are met.	40 CFR 261.4(a)(25)
Reusable Solvent-contaminated wipes that are sent for cleaning and reused are not solid wastes from the point of generation, provided specific conditions are met.	40 CFR 261.4(a)(26)
Remanufacturing Exclusion: Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste, provided that specific conditions are met.	40 CFR 261.4(a)(27)

Table 3: Brief Summary of Exclusions (continued)

Solid Wastes which are not Hazardous Waste – 40 CFR 261.4(b)	
Brief Summary of Exclusion	**Regulation Citation (incorporated by reference at 15A NCAC 13A .0106)**
Household Hazardous Waste Exclusion: Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas).	40 CFR 261.4(b)(1)
Agricultural Waste: Solid wastes generated by i) growing and harvesting of agricultural crops or ii) raising of animals, including animal manures which are returned to the soils as fertilizers.	40 CFR 261.4(b)(2)
Mining overburden returned to the mine site.	40 CFR 261.4(b)(3)
Fossil Fuel Combustion Waste: Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except for facilities that burn or process hazardous waste.	40 CFR 261.4(b)(4)(i)
Specific wastes generated primarily from processes that support the combustion of coal or other fossil fuels that are co-disposed with the coal combustion residuals, except for facilities that burn or process hazardous waste.	40 CFR 261.4(b)(4)(ii)
Oil, Gas, and Geothermal Wastes: Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.	40 CFR 261.4(b)(5)
Trivalent Chromium Wastes: Specific wastes (mostly from the leather tanning industry) which fail the test for the Toxicity Characteristic because chromium is present or are listed in subpart D due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, and specific conditions exist.	40 CFR 261.4(b)(6)
Mining and Mineral Processing Wastes: Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock, and overburden from the mining of uranium ore), except for facilities that burn or process hazardous waste.	40 CFR 261.4(b)(7)
Cement kiln dust waste, except for facilities that burn/process hazardous waste.	40 CFR 261.4(b)(8)
Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.	40 CFR 261.4(b)(9)
Petroleum-contaminated media and debris from Underground Storage Tank corrective action that fail the test for the Toxicity Characteristic of 40 CFR 261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action regulations under 40 CFR 280.	40 CFR 261.4(b)(10)
Injected groundwater (associated with the petroleum industry) that is hazardous only because it exhibits the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only) that is reinjected through an underground injection well provided specific conditions are met.	40 CFR 261.4(b)(11)

Table 3: Brief Summary of Exclusions (continued)

Solid Wastes which are not Hazardous Waste – 40 CFR 261.4(b) (continued)	
Brief Summary of Exclusion	**Regulation Citation (incorporated by reference at 15A NCAC 13A .0106)**
Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems provided the refrigerant is reclaimed for further use.	40 CFR 261.4(b)(12)
Non-terne plated used oil filters that are not mixed with wastes listed in subpart D of this part if these oil filters have been gravity hot-drained using one of the specific methods described in the regulation.	40 CFR 261.4(b)(13)
Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.	40 CFR 261.4(b)(14)
Leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that specific conditions are met.	40 CFR 261.4(b)(15)
Solid waste that would otherwise meet the definition of low-level mixed wastes (LLMW) pursuant to 40 CFR 266.210 that is generated at the Ortho-McNeil Pharmaceutical, Inc. in Spring House, Pennsylvania.	40 CFR 261.4(b)(17)
Disposable solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation provided that specific conditions are met.	40 CFR 261.4(b)(18)

Table 3: Brief Summary of Exclusions (continued)

Other Exclusions – 40 CFR 261.4(c)-(j) Hazardous Wastes that are Exempted from Certain Regulations	
Brief Summary of Exclusion	**Regulation Citation (incorporated by reference at 15A NCAC 13A .0106)**
Manufacturing Process Unit Exclusion: A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to hazardous waste requirements until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.	40 CFR 261.4(c)
Sample Exclusion: A sample of solid waste or a sample of water, soil or air, collected for the sole purpose of testing to decide its characteristic or composition, is not subject to the hazardous waste requirements when: • The sample is being transported to a laboratory for testing; • The sample is being transported back to the sample collector after testing; • The sample is being stored by the sample collector before transport to a laboratory for testing; • The sample is being stored in a laboratory before testing; • The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or • The sample is being temporarily stored in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary). If any of these conditions is not met, the sample is a hazardous waste if it is either from a listed hazardous waste or displays a characteristic of hazardous waste.	40 CFR 261.4(d)
Treatability Study Samples: Persons who generate or collect samples for the purpose of conducting treatability studies are not subject to hazardous waste requirements provided specific conditions are met.	40 CFR 261.4(e)
Samples Undergoing Treatability Studies at Laboratories and Testing Facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to hazardous waste requirements provided specific conditions are met.	40 CFR 261.4(f)
Dredged material that is not a hazardous waste. Dredged material that is subject to the requirements of a permit that has been issued under 404 of the Federal Water Pollution Control Act (33 U.S.C.1344) or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. Specific definitions apply.	40 CFR 261.4(g)
Carbon dioxide stream injected for geologic sequestration. Specific conditions apply.	40 CFR 261.4(h)
Airbag waste: Airbag waste at the airbag waste handler or during transport to an airbag waste collection facility or designated facility is not subject to hazardous waste requirements provided specific conditions are met.	40 CFR 261.4(j)

Residues of Hazardous Waste in Empty Containers

40 CFR 261.7

Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container is not subject to hazardous waste requirements.

A container is empty if:

- All wastes have been removed that can be removed using practices commonly employed to remove materials from the container (e.g., pouring, pumping, and aspirating), **and**
- No more than one inch of residue remains in the bottom of the container; or
- No more than 3 percent (by weight) of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons; or
- No more than 0.3 percent (by weight) of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons.

Rule of Thumb: If the container is turned over and any material can still come out, it is NOT empty. Note the word "and" between the first two requirements.

For acute hazardous wastes:

- A container or inner liner removed from a container that has held an acute hazardous waste [listed in 40 CFR 261.31, 261.32, or 261.33(e)] is empty if the container or inner liner has been triple rinsed using a solvent capable of removing the chemical product. (However, all the rinsate used to triple rinse the container is a listed hazardous waste).

Categories of Hazardous Waste Generators

40 CFR 260.10

- **<u>Very Small Quantity Generators</u> (VSQG) -** Hazardous wastes generated are:
  - Less than or equal to than 220 pounds non-acute hazardous waste in any calendar month; and/or
  - Less than or equal to 2.2 pounds of acute hazardous waste[1]; and/or
  - Less than or equal to 220 pounds of any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste.
- **<u>Small Quantity Generators</u> (SQG) -** Hazardous wastes generated are:
  - Between 220 pounds and 2,200 pounds of non-acute hazardous waste in any calendar month; and/or
  - Less than or equal to 2.2 pounds of acute hazardous waste[1]; and/or
  - Less than or equal to 220 pounds of any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste.
- **<u>Large Quantity Generators</u> (LQG) -** Hazardous wastes generated are:
  - Greater than 2,200 pounds of non-acute hazardous waste in any calendar month; and/or
  - Greater than 2.2 pounds of acute hazardous waste; and/or
  - Greater than 220 pounds of any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste.

Generator category also depends on the maximum amount of hazardous waste that is accumulated on site at any time. A VSQG that accumulates at any time 2,200 pounds or more of non-acute hazardous waste becomes subject to the requirements of the higher generation category (40 CFR 262.14(a)(3) and (4)). A SQG that accumulates at any time 13,200 pounds of non-acute hazardous waste becomes subject to the requirements for a LQG (40 CFR 262.16(b)(1). Table 4, on the following page, summarizes the generation and accumulation limits for each generator category.

[1] *Any facility generating greater than 2.2 pounds of acute hazardous waste in a calendar month is a LQG.*

Table 2: Hazardous Waste Generator Category Guidance

Hazardous Waste Generator Category Guidance					
Category of Generator	Quantity of non-acute HW generated in a calendar month	Quantity of acute HW generated in a calendar month	Quantity of residues from a clean-up of acute HW generated in a calendar month	Maximum Accumulation Time	Maximum On-Site Waste Accumulation Amount
Very Small Quantity Generator (VSQG)	≤ 220 lbs. (100 kg)	≤ 2.2 lbs. (1 kg)	≤ 220 lbs. (100 kg)	No time limit	• 2,200 lbs. (1000 kg) non-acute HW at any time (approximately equal to five 55-gallon containers) • ≤ 2.2 lbs. (1 kg) acute HW at any time • ≤ 220 lbs. (100 kg) acute HW from a clean-up at any time
Small Quantity Generator (SQG)	> 220 lbs. (100 kg) but < 2200 lbs. (1000 kg)	≤ 2.2 lbs. (1 kg)	≤ 220 lbs. (100 kg)	180 days; 270 days if TSDF is 200 miles or more from the facility	• 13,200 lbs. (6000 kg) non-acute HW at any time (approximately equal to thirty 55-gallon containers)
Large Quantity Generator (LQG)	≥ 2,200 lbs. (1000 kg)	> 2.2 lbs. (1 kg)	> 220 lbs. (100 kg)	90 days	No quantity limit

Generator Category Determination

40 CFR 262.13

A hazardous waste generator must determine its generator category. A generator's category is based on the amount of hazardous waste generated in each calendar month and may change from month to month. Regulations found at 40 CFR 262.13(a) and (b) describe the procedures to determine whether a generator is a very small quantity generator, a small quantity generator, or a large quantity generator for a particular month, as defined in 40 CFR 260.10. Regulations found at 40 CFR 262.13(c) and (d) describe the hazardous waste that must be counted or not counted when making the monthly quantity-based determination. Regulations found at 40 CFR 262.13(f) describe requirements that apply to mixtures of hazardous wastes and solid waste.

If you need to change from one generator category to another, use the RCRAInfo Industry User Application myRCRAid to update your hazardous waste generator category:

https://rcrainfo.epa.gov/rcrainfoprod/action/secured/login

Or contact your Environmental Specialist for assistance.

Determining Your Generator Category

To determine which hazardous waste generator category your business falls into, and therefore what requirements you must comply with, you must measure or "count" the hazardous wastes your business generates. Add up the weight of all the hazardous wastes your facility generates in a calendar month; the total monthly weight will determine your generator category. Include all hazardous waste generated at the site. Any month that exceeds the cut-off level causes you to move up to that category. Remember each separate site that you operate must be treated individually. The following summarizes the kinds of wastes you must count and wastes you do not need to count when you determine your generator category. See DECISION DIAGRAM B in Appendix J for help in determining your generator category.

DO COUNT:

In determining hazardous waste generator category, do count the following:

All the quantities of "listed" and "characteristic" hazardous wastes that are:

- Generated and accumulate on-site for the calendar month;
- Package and transport off-site;

Examples of waste to be counted include hazardous wastes:

- Generated on-site from a production process, service activity, or routine cleanup.
- Generated from equipment decommissioning, spill cleanup, or remedial cleanup activity.
- Removed from on-site storage.
- Derived from the management of solid waste.
- Derived from the on-site treatment (including reclamation), disposal, or recycling of previously existing hazardous waste (as a residual).
- Radioactive wastes mixed with RCRA hazardous wastes.

DO NOT COUNT:

In determining hazardous waste generator category, do not count the following:

- Wastes that are specifically exempt from regulations under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8:
  - 40 CFR 261.4(c): Hazardous waste generated from a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline or a manufacturing process unit or associated non-waste-treatment-manufacturing unit, until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.
  - 40 CFR 261.4(d): A sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, as long as the conditions of 40 CFR 261.4(d) are met.
  - 40 CFR 261.4(e) and (f): Treatability study samples that meet the requirements of 40 CFR 261.4(e) and samples undergoing treatability studies at laboratories or testing facilities that meet the requirements of 40 CFR 261.4(f).
  - 40 CFR 261.6(a)(3)(i): Reclaimed industrial ethyl alcohol that meets the requirements of 40 CFR 261.6(a)(3)(i).
  - 40 CFR 261.6(a)(3)(ii): Scrap metal that is not excluded under 40 CFR 261.4(a)(13).
  - 40 CFR 261.6(a)(3)(iii): Fuels produced from the refining of oil-bearing hazardous waste.
  - 40 CFR 261.7(a)(1): A residue of hazardous waste in an empty container or in an inner liner removed from an empty container, as specified in 261.7(a)(1).

- 40 CFR 261.8: PCB wastes regulated under the Toxic Substance Control Act (TSCA), as specified in 261.8, unless mixed with a hazardous waste.

- Waste that is managed immediately upon generation only in onsite elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10. Any hazardous waste residues generated from these units, however, must be counted. [*40 CFR 262.13(c)(2)*]
- Waste that is recycled, without prior storage or accumulation only in on-site process 40 CFR 261.6(c)(2). [*40 CFR 262.13(c)(3)*]
- Used oil that is recycled and used oil that is also a hazardous waste solely because it exhibits a hazardous waste characteristic and is managed under 40 CFR Part 279. [*40 CFR 262.13(c)(4)*]
- Waste that is Spent Lead-Acid Batteries managed under 40 CFR 266 Subpart G which includes persons who:
  - Reclaim spent lead-acid batteries that are recyclable materials;
  - Generate, transport, or collect spent batteries;
  - Regenerate spent batteries; or
  - Store them (other than spent batteries that are to be regenerated).

  However, any hazardous wastes generated during battery reclamation must be counted. [*40 CFR 262.13(c)(5)*]
- Waste that is universal waste managed under the requirements of 40 CFR 261.9 and 40 CFR Part 273. However, any hazardous waste residues generated from management of universal waste must be counted. [*40 CFR 262.13(c)(6)*]
- Waste that is a hazardous waste that is an unused commercial chemical product generated from in lab clean out associated with entity subject to Subpart K. [*40 CFR 262.13(c)(7)*]
- Is managed as part of an episodic event in compliance with the conditions of 40 CFR 262 subpart L. [*40 CFR 262.13(c)(8)*]
- Hazardous waste when it is removed from on-site accumulation, so long as the hazardous waste was previously counted once. [*40 CFR 262.13(d)(1)*]
- Hazardous waste generated by on-site treatment (including reclamation) of the generator's hazardous waste, so long as the hazardous waste that is treated was previously counted once. [*40 CFR 262.13(d)(2)*]
- Hazardous waste spent materials that are generated, reclaimed, and subsequently reused on site, so long as such spent materials have been previously counted once. [*40 CFR 262.13(d)(3)*]

Examples of waste not to be counted:

- Materials excluded from being Solid Waste (mixture of domestic sewage and other wastes that pass through a sewer system to publicly owned treatment works (unless stored/treated in regulated units prior to being discharged). (40 CFR 261.4(a))
- Solid wastes excluded from being hazardous waste, e.g., petroleum-contaminated media/debris that fail TCLP (waste codes D018 through D043 only) and are subject to corrective action regulations under 40 CFR Part 280. (40 CFR 261.4(b))
- Samples undergoing treatability studies, as specified in 261.4(e)&(f).
- If the hazardous waste is a specified recyclable material such as ethyl alcohol or scrap metal, as specified in 261.6(a)(3).
- A residue of hazardous waste in an empty container or in an inner liner removed from an empty container, as specified in 261.7(a)(1).
- PCB wastes regulated under the Toxic Substance Control Act, as specified in 261.8, unless mixed with a hazardous waste.
- Wastes managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10.
- Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous waste characteristic and is managed under 40 CFR Part 279.
- Universal wastes managed under 40 CFR 261.9 and 40 CFR Part 273.

Tips on Counting Hazardous Waste:

- AVOID Double Counting Hazardous Wastes (40 CFR 262.13(d))
  - If already counted when initially generated
  - When it is removed from on-site storage
  - If produced by onsite treatment (including reclamation)
  - If spent materials that are generated, reclaimed and subsequently reused onsite (so long as already counted once)

- Groundwater Contaminated by Hazardous Wastes
  - The key is to identify if the contaminated groundwater has been generated and/or actively managed as a hazardous waste

Notification of Hazardous Waste Activity

40 CFR 262.18

A SQG and LQG must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification (ID) number. This EPA ID number will remain with the property. Facility information (e.g., generator category, facility contact, etc.) may be updated electronically by the facility using the EPA's RCRAInfo database, Industry Application named myRCRAid. MyRCRAid may be accessed via this website link for registration (for new users) or for log-in (for users already registered):
https://rcrainfo.epa.gov/rcrainfoprod/action/secured/login
Or contact your Environmental Specialist for assistance.

Re-notification
40 CFR 262.18(d)

A SQG is required to renotify (electronically using myRCRAid) every four years starting in 2021. The re-notification for SQGs must be submitted by September 1st of each year the re-notification is required. A LQG is required to renotify by March 1 of each even numbered year electronically using myRCRAid (this notification can be fulfilled through submittal of the biennial report).

Regulations Applicable to Hazardous Waste Generators

40 CFR 262

The regulations applicable to VSQG, SQG, and LQG are found in 40 CFR part 262, adopted by reference at 15A NCAC 13A .0107. Each of the generator requirements are discussed in this section. Since category determination (40 CFR 262.13) and waste determination (40 CFR 262.11) apply to all categories of hazardous waste generator, these requirements are summarized previously and then the requirements for each hazardous waste generator category (VSQG, SQG, and LQG) are summarized.

Hazardous Waste Determination

40 CFR 262.11

All generators are responsible for determining whether or not the waste generated at their site is hazardous. Hazardous waste determinations must be accurate and made at the point of generation before dilution, mixing or other alteration occurs; and at any time in the course of management that the waste has, or may have, changed its properties as a result of exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change.

For each solid waste generated, a person generating the waste must determine whether the waste is: excluded from regulation under 40 CFR 261.4. If it is not excluded, the generator must next look in Subpart D of 40 CFR part 261 to see if it is a listed waste. To make an accurate determination that the waste is a listed hazardous waste, acceptable knowledge that can be used includes:

- waste origin,
- composition,
- the process producing the waste,
- feedstock and other reliable and relevant information.

Next, the generator must check to see if the waste is characteristic as defined in Subpart C of 40 CFR part 261. To make an accurate determination that the waste is a characteristic hazardous waste, the generator must apply knowledge of the hazard characteristic of the waste in relation to the materials or the processes used to generate the waste. Acceptable knowledge includes:

- process knowledge (e.g., information about chemical feedstocks and other inputs to the production process);
- knowledge of products, by-products, and intermediates produced by the manufacturing

process;

- chemical or physical characterization of wastes;
- information on the chemical and physical properties of the chemicals used or produced by the process or otherwise contained in the waste;
- testing that illustrates the properties of the waste; or other reliable and relevant information about the properties of the waste or its constituents.

When available knowledge is inadequate to make an accurate determination, the person must test the waste according to the applicable methods set forth in subpart C of 40 CFR part 261 (or according to an equivalent method approved by the Administrator under 40 CFR 260.21). If the generator uses a specified test method, the results of the regulatory test, when properly performed, are considered definitive for making the hazardous waste determination. Samples must be representative.

Any generator managing a potentially hazardous waste should manage it in accordance with the generator regulations until such time that the generator is sure that the waste is not hazardous.

If the waste is determined to be hazardous, SQGs and LQGs must identify all applicable EPA hazardous waste numbers (EPA hazardous waste codes) in subparts C and D of part 261. Prior to shipping the waste off site, the generator also must mark its containers with all applicable EPA hazardous waste numbers (EPA hazardous waste codes) according to 40 CFR 262.32.

SQGs and LQGs must maintain records supporting its hazardous waste determinations, including records that identify whether a solid waste is a hazardous waste, as defined by 40 CFR 261.3. Records must be maintained for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal. The records must comprise the generator's knowledge of the waste and support the generator's determination, as described at paragraphs (c) and (d) of 40 CFR 262.11. The records must include, but are not limited to, the following types of information:

- the results of any tests, sampling, waste analyses, or other determinations made in accordance with this section;
- records documenting the tests, sampling, and analytical methods used to demonstrate the validity and relevance of such tests;
- records consulted to determine the process by which the waste was generated, the composition of the waste, and the properties of the waste; and
- records which explain the knowledge basis for the generator's determination, as described at 40 CFR 262.11(d)(1).

Table 3: Summary of Generator Requirements

Regulatory Provision	Very Small Quantity Generator (VSQG)	Small Quantity Generator (SQG)	Large Quantity Generator (LQG)
Hazardous waste generation rate (per calendar month) 40 CFR 260.10 & 262.13	≤ 100 kg (220 lbs.) non-acute HW; ≤ 1 kg (2.2 lbs.) acute HW; ≤ 100 kg (220 lbs.) residues from cleanup of acute HW	> 100 kg (220 lbs.) but <1,000 kg (2,200 lbs.) non-acute HW; ≤ 1 kg (2.2 lbs.) acute HW; ≤ 100 kg (220 lbs.) residues from cleanup of acute HW	≥ 1,000 kg (2,200 lbs.) non-acute HW; > 1 kg (2.2 lbs.) acute HW; > 100 kg (220 lbs.) residues from cleanup of acute HW
Notify of HW activity and obtain EPA ID number	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	Required 40 CFR 262.18(a-b)	Required 40 CFR 262.18 (a-b)
Re-notification of HW activity	Not required	Every 4 years starting in 2021, due by Sept. 1 of each year re- notification is required (using 8700- 12 form) 40 CFR 262.18(d)(1)	By March 1 of every even numbered year (using 8700-12 form). Biennial report submittal meets this requirement 40 CFR 262.18(d)(2)
Maximum accumulation time limits (in central accumulation area)	No time limit	180 days (270 days if waste is shipped 200 miles or more) 40 CFR 262.16(b)-(d)	90 days 40 CFR 262.17(a)
Maximum on-site waste accumulation	– 1,000 kg (2,200 lbs.) non-acute HW at any time; – 1 kg (2.2 lbs.) acute HW at any time; – 100 kg (220 lbs.) residues from cleanup of acute HW at any time 40 CFR 262.14(a)(3) and (4)	– 6,000 kg (13,200 lbs.) at any time; 40 CFR 262.16(b)(1)	No quantity limit
Hazardous waste determination	Required 40 CFR 262.11(a)-(d)	Required 40 CFR 262.11	Required 40 CFR 262.11
Marking/labeling (Containers & Tanks)	No marking/labeling requirement Recommend identifying contents of containers	Required on each container and tank 40 CFR 262.15 & 262.16(b)(6)	Required on each container and tank 40 CFR 262.15 & 262.17(a)(5)
Accumulation start date marking/labeling	No requirement to mark/label with an accumulation start date	Date must be visible for inspection on each container; recorded in facility log for tanks 40 CFR 262.16(b)(6)	Date must be visible for inspection on each container; recorded in facility log for tanks, drip pads, and containment bldgs. 40 CFR 262.17(a)(5)
Pre-transportation requirements (Preparing to ship HW off-site)	Not Required for RCRA 40 CFR 262.10(a)(1)(i) and (a)(2)(i) May be required by DOT	Required 40 CFR 262.30-262.33	Required 40 CFR 262.30-262.33
Container location standards	None 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	None 40 CFR 262.10(a)(1)(ii) & (a)(2)(ii)	At least 50 feet from property line for ignitable and reactive wastes - 40 CFR 262.17(a)((1)(vi)

Summary of Generator Requirements (continued)			
Regulatory Provision	**Very Small Quantity Generator (VSQG)**	**Small Quantity Generator (SQG)**	**Large Quantity Generator (LQG)**
Use of manifest to ship waste off-site	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i) Recommend keeping manifest/shipping documents	Required 40 CFR 262.20 - 262.25	Required 40 CFR 262.20 – 262.25
Use transporters with EPA ID numbers	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	Required 40 CFR 262.18(c)	Required 40 CFR 262.18(c)
Prepare LDR notifications/ certifications	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	Required 40 CFR 262.16(b)(7) references 40 CFR 268	Required 40 CFR 262.17(a)(9) references 40 CFR 268
Exception reports	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	Required 40 CFR 262.42(b)	Required 40 CFR 262.42(a)
Waste minimization	Not Required 40 CFR 262.10(a)(1)(i) and (a)(2)(i)	Good faith effort required 40 CFR 262.27(b)	Program in place required 40 CFR 262.27(a)
Personnel training	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Basic training required 40 CFR 262.16(b)(9)(iii)	RCRA training with documentation 40 CFR 262.17(a)(7)
Preparedness and prevention including Emergency Arrangements	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Required 40 CFR 262.16(b)(8)-(9)	Required 40 CFR 262.17(a)(6) references 40 CFR 262 subpart M
Contingency plan and emergency procedures	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Basic planning required 40 CFR 262.16(b)(9)	Full contingency plan required 40 CFR 262.17(a)(6) references 40 CFR 262 subpart M
Weekly inspections	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Required 40 CFR 262.16(b)(2)(iv) & 15A NCAC 13A .0107(d)	Required 40 CFR 262.17(a)(1)(v) & 15A NCAC 13A .0107(d)
Maintain records, Prepare/file records	No regulatory requirements but recommend keeping hazardous waste identification records and manifests/shipping documents	Required 40 CFR 262.11(f), 262.40(a, c, d), 262.42(b), 262.43, 262.44	Required 40 CFR 262.11(f), 262.40, 262.41, 262.42(a), 262.43
Biennial Report	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Not required 40 CFR 262.10(a)(1)(ii) & (a)(2)(ii)	Required (March 1st of even numbered years) 40 CFR 262.41
Meet Subparts AA, BB, CC organic air emission standards	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	Not Required 40 CFR 262.10(a)(1)(ii) & (a)(2)(ii)	Required 40 CFR 262.17(a)(1)(i) and (a)(2) references 40 CFR 265 subpart AA, BB and CC

Summary of Generator Requirements (continued)			
Regulatory Provision	**Very Small Quantity Generator (VSQG)**	**Small Quantity Generator (SQG)**	**Large Quantity Generator (LQG)**
Allowable classes of facilities to receive off-site shipment	– Permitted or interim status HW facilities – HW recycling facilities – State-permitted, licensed, or registered municipal or industrial waste facilities 40 CFR 262.14(a)(5) – A LQG under the control of the same person as VSQG must meet conditions in 40 CFR 262.14(a)(5)(viii)	– Permitted or interim status HW facilities – HW recycling facilities – 40 CFR 260.10 "Designated Facility"	– Permitted or interim status HW facilities – HW recycling facilities – 40 CFR 260.10 "Designated facility"
Closure	Not Required 40 CFR 262.10(a)(1)(i) & (a)(2)(i)	– Required for tanks, drip pads and containment buildings – For tanks only 40 CFR 262.16(b)(3)(vi) – Unit specific Part 265, subpart W & DD for drip pads and containment buildings	– Required for hazardous waste accumulation unit(s) – General §262.17(a)(8) – Unit specific 40 CFR 265 subpart W for drip pads
Used Oil	Required 40 CFR 279 applies	Required 40 CFR 279 applies	Required 40 CFR 279 applies
Universal Waste	Required 40 CFR 273 applies	Required 40 CFR 273 applies	Required 40 CFR 273 applies
Annual Fee	No annual fee	$175 N.C.G.S. 130A-294.1(f)	$1400 and $0.70 per ton N.C.G.S. 130A-294.1(e) and (g)

Regulations Applicable to Very Small Quantity Generators
40 CFR 262.14

A very small quantity generator may accumulate hazardous waste on-site without a permit or interim status provided the following conditions are met:

- **Hazardous Waste Determination** (40 CFR 262.11(a)-(d)): Hazardous waste determinations must be accurate and made at the point of generation before dilution, mixing or other alternation occurs; and at any time in the course of management that the waste has, or may have, changed its properties due to exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change. For each solid waste generated, a person generating the waste must determine whether the waste is: excluded from regulation under 40 CFR 261.4 or characteristic and/or listed using generator knowledge or testing. Samples must be representative.
  - Claims that waste is conditionally exempt from regulation or not a solid must be documented (40 CFR 261.2(f)).

- **Generator Category Determination** (40 CFR 262.13 and 40 CFR 262.14(a)(1)): A hazardous waste generator must determine its generator category based on the amount of hazardous waste generated each calendar month and include all hazardous waste generated at the site. A site that generates, in a calendar month, less than or equal to 100 kg (220 lbs.) of non-acute hazardous waste; and less than or equal to 1 kg (2.2 pounds) of acute hazardous waste, and less than or equal to 100 kg (220 pounds) of residues from a cleanup of acute hazardous waste must notify and operate as a very small quantity generator of hazardous waste.

- **Maximum On-Site Accumulation Volume** (40 CFR 262.14(a)(3) and (4)):
  - If a VSQG, accumulates, at any time, greater than 1 kg (2.2 lbs.) of acute hazardous waste or 100 kg (220 lbs.) of any residue of contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste, all quantities of the acute hazardous waste are subject to the requirements for large quantity generators; or
  - If a VSQG, accumulates, at any time 1,000 kg (2,200 lbs.) or greater of non-acute hazardous waste all quantities of the non-acute hazardous waste are subject to the requirements for small quantity generators or large quantity generators, depending on the amount generated.

- **Recycling/Disposal Options** (40 CFR 262.14(a)(5)): A VSQG must treat or dispose of its hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility which is:

- Permitted under 40 CFR 270;
- In interim status under 40 CFR 265 and 270;
- Authorized to manage hazardous waste by a state with a hazardous waste management program approved part 271;
- Permitted, licensed, or registered by a state to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to part 258 (*Note: North Carolina Solid Waste Rules do not allow hazardous waste disposal at municipal solid waste landfills.)*
- Permitted, licensed, or registered by a state to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit, is subject to the requirements of 40 CFR 257.5 through 257.30;
  - A facility which:
    - Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or
    - Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation;
- For universal waste managed under 40 CFR 273, a universal waste handler or destination facility subject to the requirements of 40 CFR 273;
- A large quantity generator under the control of the same person (as defined in 40 CFR 260.10) as the very small quantity generator, provided the very small quantity generator complies with the requirements of 40 CFR 262.14(a)(5)(viii) and the LQG must complies with the requirements of 40 CFR 262.17(f). *See Appendix L of this manual for more information on the Consolidation Provision.*

- **Episodic Generation** (40 CFR 262.14(c)): A VSQG experiencing an episodic event may accumulate hazardous waste in accordance with 40 CFR 262 subpart L in lieu of becoming a large quantity generator (under 40 CFR 262.17) as long as all conditions of subpart L are met. *See Appendix M of this manual for more information on the Episodic Generator Provision*.

Other Specific Regulations for VSQGs

Used oil management is summarized in Appendix G of this manual. If you manage lights containing mercury or other universal wastes at your site, read about the regulations in Appendix H of this manual.

Regulations Applicable to Satellite Accumulation Areas

40 CFR 262.15

SQGs and LQGs may accumulate hazardous waste in satellite accumulation areas provided the following conditions are met:

- Hazardous waste must be ***inside*** the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.

- The satellite accumulation container must be located at or near the point where wastes are initially generated and under the control of the operator generating the waste.

- A total of 55-gallons of non-acute hazardous waste and/or either 1 quart of liquid acute hazardous waste or 1 kilogram (2.2 pounds) of solid acute hazardous waste may be accumulated at a satellite accumulation area. A generator who accumulates either acute or non-acute hazardous waste in excess of the above amounts must comply with the following:
  - Within three consecutive calendar days, comply with the applicable central accumulation area regulations in 40 CFR 262.17(b); or
  - Remove the excess from the satellite accumulation area within three consecutive calendar days and move it to an on-site central accumulation area, an on-site permitted (or interim status) storage area, or an off-site designated facility.
  - During the three-consecutive-calendar-day period the container(s) holding the excess accumulation of hazardous waste must be marked/labeled with the date the excess amount began accumulating.

- Hazardous waste containers must be closed at all times during accumulation except when:
  - Adding, removing or consolidating waste; or
  - When temporary venting of a container is necessary for the proper operation of equipment, or to prevent dangerous situations such as build-up of extreme pressure.

- Hazardous waste containers located at a satellite accumulation area must be marked with the words "Hazardous Waste" and an indication of the hazards of the contents of the containers.

- All containers must be in good condition and if it is not in good condition or begins to leak, the hazardous waste must be transferred to another container that is in good condition.

- Compatibility Requirements:
  - A container must be used that is made of or lined with materials that will not react with and are otherwise compatible with the hazardous waste to be accumulated, so the ability of the container to contain the waste is not impaired.

- Incompatible wastes must not be placed in the same container.
- Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
- Incompatible wastes must be separated from other incompatible waste or material or protected from them by any practical means.

- Emergency Preparedness, Prevention and Emergency Procedures for Satellite Accumulation Areas:
  - All satellite accumulation areas at the SQG must meet the preparedness and prevention requirements of 40 CFR 262.16(b)(8) and emergency procedures of 40 CFR 262.16(b)(9).
  - All satellite accumulation areas at the LQG must meet the requirements of Preparedness, Prevention and Emergency Procedures in 40 CFR 262 Subpart M.

Regulations Applicable to Small Quantity Generators

SQGs may accumulate hazardous waste for up to 180-days without a permit or interim status, provided the following conditions are met:

- **Hazardous Waste Determination** (40 CFR 262.11): Hazardous waste determinations must be accurate and made at the point of generation before dilution, mixing or other alternation occurs; and at any time in the course of management that the waste has, or may have, changed its properties due to exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change. For each solid waste generated, a person generating the waste must determine whether the waste is: excluded from regulation under 40 CFR 261.4; or characteristic and/or listed using generator knowledge or testing. Samples must be representative. Documentation of waste determinations must remain on-site for 3 years. Prior to shipping waste off-site, the applicable hazardous waste codes must be marked on containers. *See the Waste Determination Section of this manual for more information.*
  - Claims that waste is conditionally exempt from regulation or that the waste is not a solid must be documented (40 CFR 261.2(f)).

- **EPA Identification Number and Re-Notification** (40 CFR 262.18): A SQG must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number. This EPA ID number will remain with the property. Facility information (e.g., generator category, facility contact, etc.) may be updated electronically by the facility using the RCRAInfo database, Industry User Application, myRCRAid.
  - A SQG is required to renotify (electronically using myRCRAid) every four years starting in 2021. The re-notification must be submitted by September 1st of each year the re-notification is required.

- **Generator Category Determination** (40 CFR 262.13 and 40 CFR 262.16(a)): A hazardous waste generator must determine its generator category based on the amount of hazardous waste generated each calendar month and include all hazardous waste generated at the site. A site that generates greater than 100 kg (220 lbs.) but less than 1,000 kg (2,200 pounds) of non-acute hazardous waste; and less than or equal to 1 kg (2.2 pounds) of acute hazardous waste, and less than or equal to 100 kg (220 pounds) of residues from a cleanup of acute hazardous waste must notify and operate as a small quantity generator of hazardous waste.

- **Annual Fees** (N.C.G.S. 130A-294.1(f)): A SQG shall pay an annual fee of $175.00.

- **Maximum On-Site Accumulation Volume** (40 CFR 262.16(b)): As a SQG, the quantity of hazardous waste accumulated on-site must never exceed 6,000 kg (13,200 lbs.).

- **Maximum On-Site Accumulation Time** (40 CFR 262.16(b)(1)): A SQG may accumulate hazardous waste on site for no more than 180 days. A SQG may accumulate hazardous waste on site for 270 days or less if the hazardous waste is transported over a distance of 200 miles or more for off-site treatment, storage or disposal (40 CFR 262.16(c)).
  - A SQG who accumulates hazardous waste for more than 180 days (or for more than 270 days if hazardous waste is transported over 200 miles or more) is subject to the requirements of 40 CFR 264, 265, 267, 268, and 270 unless the SQG has been granted a 30-day extension from the Hazardous Waste Section due to unforeseen, temporary and uncontrollable circumstances (40 CFR 262.16(d)).

- **Emergency Preparedness, Prevention and Emergency Procedures** (40 CFR 262.16(b)(8)): SQGs must comply with the following requirements for emergency preparedness, prevention and emergency procedures for all areas where hazardous waste is generated or accumulated (including all satellite accumulation and central accumulation areas).
  - **Maintenance and Operation of Facility** (40 CFR 262.16(b)(8)(i)):
    Facility must be maintained and operated to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
  - **Required Equipment** (40 CFR 262.16(b)(8)(ii)):
    Facilities must have the following equipment unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified or the actual waste generation or accumulation area does not lend itself for safety reasons to have a particular kind of equipment specified. A SQG may determine the most appropriate locations to locate equipment necessary to prepare for and respond to emergencies:
    - Internal communications or alarm system that provides emergency instruction (voice or signal) to personnel.
    - A device, such as a telephone or a hand-held radio must be immediately available at the scene of operations and capable of summoning emergency assistance from external emergency assistance.
    - Fire extinguishers and fire control equipment, spill control, and decontamination equipment.
    - Adequate water volume and pressure to supply fire hoses, automatic sprinklers, or water spray systems.
  - **Testing and Maintenance of Equipment** (40 CFR 262.16(b)(8)(iii)):
    All facility communications or alarm systems, fire protection equipment, spill control equipment and decontamination equipment must be tested and maintained to assure proper operation in the event of an emergency.

- **Access to Communications or Alarm** (40 CFR 262.16(b)(8)(iv)):
  - ~ Whenever hazardous waste is being handled, all personnel involved must have immediate access (e.g., direct or unimpeded access) to an internal alarm or communication device. Visual or voice contact is allowed.
  - ~ If there is just one person at the facility, while in operation, they must have immediate access to a telephone or two-way radio capable of summoning external emergency assistance.

- **Required Aisle Space** (40 CFR 262.16(b)(8)(v) and 15A NCAC 13A .0107(a)):
  Aisle space must be maintained to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in the event of an emergency (this includes areas where hazardous waste is generated and at satellite accumulation areas).
  - ~ At least two feet of aisle space is required at central accumulation areas (15A NCAC 13A .0107(a)).

- **Arrangements with Local Authorities** (40 CFR 262.16(b)(8)(vi)):
  A SQG must attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency contractors, equipment suppliers, and local hospitals taking into account the types and quantities of hazardous waste handled at the facility. Arrangements may be made with the Local Emergency Planning Committee [LEPC] if it is determined to be the appropriate organization with which to make arrangements. The requirements apply to those areas of a SQG where hazardous waste is generated or accumulated on-site (including all satellite accumulation and central accumulation areas).
  - A SQG attempting to make arrangements with its local fire department must determine the potential need for the services of the local police department, other emergency response teams, emergency response contractors, equipment suppliers and local hospitals.
  - As part of the coordination, the SQG must attempt to familiarize local emergency authorities with the:
    - ~ Layout of the facility,
    - ~ Properties of hazardous waste handled at the facility and associated hazards,
    - ~ Description of the types and quantities of hazardous waste handled at the facility,
    - ~ Places where facility personnel would normally be working,
    - ~ Entrances to roads inside the facility,
    - ~ Possible evacuation routes,
    - ~ Possible injuries or illnesses that could result from fires, explosions, or releases at the facility.
  - Where more than one police and fire department might respond to an emergency, agreements must be made designating primary emergency authority to a specific police

department and a specific fire department, and agreements with any others to provide support to the primary emergency authority.
  - Records must be maintained documenting the arrangements with the local fire department as well as any other organization necessary to respond to an emergency. Documentation, maintained on site must include either a confirmation such arrangements actively exist or when no arrangements exist, confirms the attempts to make arrangements.
  - Alternatively, a facility possessing 24-hour response capabilities may seek a waiver from the authority having jurisdiction (AHJ) over the fire code within the facility's state or locality as far as needing to make arrangements with the local fire department as well as any other organization necessary to respond to an emergency, provided the waiver is documented in the operating record.

- **Emergency Coordinator** (40 CFR 262.16(b)(9)(i)): At all times, at a SQG, there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures.

- **Emergency Information** (40 CFR 262.16(b)(9)(ii)): A SQG must post the following information by telephones at the facility or in areas directly involved in the generation and accumulation of hazardous waste:
  - Name and phone number of emergency coordinator;
  - Location of fire extinguishers, spill control equipment, and fire alarms; and
  - Phone number to the fire department, unless the facility is a direct alarm.

- **Training** (40 CFR 262.16(b)(9)(iii)): A SQG must ensure all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.

- **Emergency Response** (40 CFR 262.16(b)(9)(iv): The emergency coordinator or his designee must respond to any emergency that may arise as follows:
  - If there is a fire, call fire department or attempt to extinguish it using a fire extinguisher;
  - If there is a spill, contain the flow of a hazardous waste spill and clean up hazardous waste and contaminated soils or materials;
  - If fire, explosion, or other release may threaten human health outside the facility, or a spill has reached surface water the generator must immediately notify the National Emergency Response Center and report the information noted in 40 CFR 262.16(b)(9)(iv)(C).

- **Waste Minimization Plan or On-site Efforts** (40 CFR 262.27): The facility must have waste minimization practices in place. By signing a hazardous waste manifest the facility is certifying they implement waste minimization techniques.

- **Inspection Records** (40 CFR 262.16(b)(2)(iv) and 15A NCAC 13A .0107(d))**:** At least weekly, a SQG must complete inspections of the central accumulation areas(s) looking for leaking containers and deterioration of containers caused by corrosion. The facility must keep records and results of required inspections for at least three years from the date of the inspection.

- **Manifests/Land Disposal Restrictions (LDRs):** The facility must comply with the following:
  - **General Manifest Requirements** (40 CFR 262.20 and 262.21):
    A generator who offers for transportation, hazardous waste for off-site treatment, storage, or disposal must properly prepare a hazardous waste manifest in accordance to the regulations.
  - **Number of Manifest Copies** (40 CFR 262.22-262.25):
    The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the designated disposal facility with one copy each for their records and another copy to be returned to the generator.
  - **Use of the Manifest** (40 CFR 262.23):
    The generator must:
    ~ Sign the manifest certification by hand; and
    ~ Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
    ~ Retain one copy, in accordance with 262.40(a).
    ~ The generator must give the transporter the remaining copies of the manifest
  - **Recordkeeping** (40 CFR 262.40(a)):
    Manifests must be kept on-site for three years. *It is recommended manifests be kept forever*.
  - **Exception Reporting** (40 CFR 262.42(b)):
    A SQG who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter must submit (to the Hazardous Waste Section) a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery.
  - **Approved Treatment, Storage and Disposal (TSD) Facilities and Transporters** (40 CFR 262.18(c)): Generators must use TSDs and Transporters with valid EPA ID numbers.
  - **Land Disposal Restriction** (40 CFR 262.11(e) and 262.16(b)(7)):
    Land Disposal Restriction certification, as required at 40 CFR Part 268, must accompany each waste streams sent to each TSD (at least once).

- **Episodic Generation** (40 CFR 262.16(f)): A SQG experiencing an episodic event may accumulate hazardous waste in accordance with 40 CFR 262 subpart L in lieu of becoming a

large quantity generator (under 40 CFR 262.17) as long as all conditions of subpart L are met. See Appendix M of this manual for more information on the Episodic Generator Provision.

- **Hazardous Waste Central Accumulation Areas**: A SQG of hazardous waste may accumulate hazardous waste, on-site, in a central accumulation area(s) for not more than 180 days (or 270 days if hazardous waste is transported 200 miles or more) provided the following requirements are met:
  - Hazardous waste must be placed ***inside*** the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.
  - Hazardous waste containers must be closed unless it is necessary to add or remove waste.
  - A container holding hazardous waste must not be opened, handled, or accumulated in a manner that may rupture the container or cause it to leak.
  - All hazardous waste containers in the central accumulation area must be marked/labeled with: the words "Hazardous Waste", an indication of the hazards of the contents of the containers, and an accumulation start date.
  - Prior to shipping the hazardous waste off site, the containers must be marked with all applicable EPA hazardous waste numbers (EPA waste codes).
  - Comply with applicable regulations for hazardous waste management units other than containers, when applicable:
    - Accumulation of hazardous waste in tanks: must comply with 40 CFR 262.16(b)(3)
    - Accumulates of hazardous waste on drip pads: must comply with 40 CFR 262.16(b)(4) and 40 CFR 265 subpart W (except § 265.445(c))
    - Accumulation of hazardous waste in containment buildings: must comply with 40 CFR 262.16(b)(5) and 40 CFR 265 subpart DD
  - All containers must be in good condition and if it is not in good condition or begins to leak, the hazardous waste must be transferred to another container that is in good condition.

    Compatibility Requirements:
    - All containers holding hazardous waste must be compatible with the material stored in the container.
    - Incompatible wastes, or incompatible wastes and materials, must not be placed in the same container.
    - Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
    - Incompatible wastes must be separated from other incompatible waste or materials accumulated or stored nearby must be separated from the other materials or protected by means of a dike, berm, wall, or other device.

Pre-transport Regulations for SQGs

40 CFR 262.30-33

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

- Proper packaging to prevent leakage of hazardous waste during transport; and
- Labeling, marking and placarding of the packaged waste to identify the characteristics and dangers with transporting wastes. (The DOT regulations only apply to generators shipping waste off-site.)

Other Specific Regulations for SQGs

Depending on how you manage waste at your site, other sections of the hazardous waste regulations may apply to your business. For example, if you accumulate or store waste in tanks, you must comply with 40 CFR 265 Subpart J- the tank regulations. If you are a wood treater, regulations in 40 CFR 265 Subpart W applies to you as a generator. These regulations, as well as the air emission requirements (Subparts AA, BB and CC), containment building requirements (Subpart DD) and used oil regulations (40 CFR 279), are outlined in the appendices to this manual.

Used oil management is summarized in Appendix G of this manual. If you manage lights containing mercury or other universal wastes at your site, read about the regulations in Appendix H of this manual. If you recycle waste at your facility, you are responsible for knowing about specific regulations and exemptions. These regulations and exemptions are discussed in the "Waste Minimization" section of the manual.

Regulations Applicable to Large Quantity Generators

40 CFR 262.17

LQGs may accumulate hazardous waste for up to 90-days without a permit or interim status, provided the following conditions are met:

- **Hazardous Waste Determination** (40 CFR 262.11): Hazardous waste determinations must be accurate and made at the point of generation before dilution, mixing or other alternation occurs; and at any time in the course of management that the waste has, or may have, changed its properties due to exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change. For each solid waste generated, a person generating the waste must determine whether the waste is: excluded from regulation under 40 CFR 261.4 or characteristic and/or listed using generator knowledge or testing. Samples must be representative. Documentation of waste determinations must remain on-site for 3 years. Prior to shipping waste off-site, the applicable hazardous waste codes must be marked on containers. *See the Waste Determination Section of this manual for more information.*
  - Claims that waste is conditionally exempt from regulation or not a solid must be documented (40 CFR 261.2(f)).

- **EPA Identification Number and Re-Notification** (40 CFR 262.18): A LQG must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number. This EPA ID number will remain with the property. Facility information (e.g., generator category, facility contact, etc.) may be updated electronically by the facility using the RCRAInfo database.
  - A LQG is required to renotify by March 1 of each even numbered year electronically using myRCRAid (this notification can be fulfilled through submittal of the biennial report).

- **Generator Category Determination** (40 CFR 262.13 and LQG definition in 40 CFR 260.10): A hazardous waste generator must determine its generator category based on the amount of hazardous waste generated each calendar month and include all hazardous waste generated at the site. A site that generates greater than or equal to 1,000 kg (2,200 pounds) of non-acute hazardous waste, or greater than 1 kg (2.2 pounds) of acute hazardous waste, or greater than 100 kg (220 pounds) of residues from a cleanup of acute hazardous waste must notify and operate as a large quantity generator of hazardous waste.

- **Annual Fees** (GS 130A-294.1(e) and (g)): A LQG shall pay an annual fee of $1400.00 and a tonnage fee of seventy cents ($0.70) per ton or any part thereof of the hazardous waste generated during that year up to a maximum of 25,000 tons.

- **Maximum On-Site Accumulation Time and Volume** (40 CFR 262.17(a)): As a LQG, there is no limit on the volume of hazardous waste that can be accumulated on site as long as the facility does not accumulate hazardous waste on-site for more than 90 days.
  - Hazardous waste accumulated for more than 90 days is subject to permit requirements (40 CFR 124, 264-268 and 270) unless it has been granted a 30-day extension from the Hazardous Waste Section due to unforeseen, temporary and uncontrollable circumstances (40 CFR 262.17(b)).
  - Conditionally extensions of the 90-day limit exist for F006 waste (40 CFR 262.17(c)-(e)).

- **Emergency Preparedness, Prevention and Emergency Procedures** (40 CFR 262.250): LQGs must comply with the following requirements for emergency preparedness, prevention and emergency procedures for all areas where hazardous waste is generated or accumulated (including all satellite accumulation and central accumulation areas).
  - **Maintenance and Operation of Facility** (40 CFR 262.251):
    Facility must be operated to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste that threatens health or environment.
  - **Required Equipment** (40 CFR 262.252):
    Facilities must have the following equipment unless not needed:
    - Internal communications or alarm system that provides emergency instruction (voice or signal) to personnel.
    - A device, such as a telephone or a hand-held radio must be immediately available at the scene of operations and capable of summoning emergency assistance from external emergency assistance.
    - Fire extinguishers and fire control equipment, spill control, and decontamination equipment.
    - Adequate water volume and pressure to supply fire hoses, automatic sprinklers, or water spray systems.
  - **Testing and Maintenance of Equipment** (40 CFR 262.253):
    All facility communications or alarm systems, fire protection equipment, spill control equipment and decontamination equipment must be tested and maintained to assure proper operation in the event of an emergency.

- **Access to Communications or Alarm** (40 CFR 262.254):
  - ~ Whenever hazardous waste is being handled, all personnel involved must have immediate access (e.g., direct or unimpeded access) to an internal alarm or communication device. Visual or voice contact is allowed.
  - ~ If there is just one person at the facility, while in operation, they must have immediate access to a telephone or two-way radio capable of summoning external emergency assistance.

- **Required Aisle Space** (40 CFR 262.255 and 15A NCAC 13A .0107(i)):
  Aisle space must be maintained to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in the event of an emergency (this includes areas where hazardous waste is generated and at satellite accumulation areas).
  - ~ At least two feet of aisle space is required at central accumulation areas (15A NCAC 13A .0107(i)).

- **Arrangements with Local Authorities** (40 CFR 262.256):
  A LQG must attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency contractors, equipment suppliers, and local hospitals taking into account the types and quantities of hazardous waste handled at the facility. Arrangements may be made with the Local Emergency Planning Committee [LEPC] if it is determined to be the appropriate organization with which to make arrangements. The requirements apply to those areas of a LQG where hazardous waste is generated or accumulated on-site (including all satellite accumulation and central accumulation areas).
  - A LQG attempting to make arrangements with its local fire department must determine the potential need for the services of the local police department, other emergency response teams, emergency response contractors, equipment suppliers and local hospitals.
  - As part of the coordination, the LQG must attempt to familiarize local emergency authorities with the:
    - ~ Layout of the facility,
    - ~ Properties of hazardous waste handled at the facility and associated hazards,
    - ~ Description of the types and quantities of hazardous waste handled at the facility,
    - ~ Places where facility personnel would normally be working,
    - ~ Entrances to roads inside the facility,
    - ~ Possible evacuation routes,
    - ~ Possible injuries or illnesses that could result from fires, explosions, or releases at the facility.

- Where more than one police and fire department might respond to an emergency, agreements must be made designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority.
- Records must be maintained documenting the arrangements with the local fire department as well as any other organization necessary to respond to an emergency. Documentation, maintained on site must include either a confirmation such arrangements actively exist or when no arrangements exist, confirms the attempts to make arrangements.
- Alternatively, a facility possessing 24-hour response capabilities may seek a waiver from the authority having jurisdiction (AHJ) over the fire code within the facility's state or locality as far as needing to make arrangements with the local fire department as well as any other organization necessary to respond to an emergency, provided the waiver is documented in the operating record.

- **Contingency Plan Applicability** (40 CFR 262.260):
  - A LQG must have a contingency plan for the facility that is designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water.
  - Provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.
  - The requirements apply to those areas of a LQG where hazardous waste is generated or accumulated on-site (including all satellite accumulation and central accumulation areas).

- **Content of Contingency Plan (**40 CFR 262.261):
  - Plan must describe the actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
  - The plan must describe arrangements agreed to by local police departments, fire departments, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals, or if applicable, the Local Emergency Planning Committee (LEPC).
  - The plan must list names and emergency phone numbers of persons qualified to act as emergency coordinator. This list must be kept up to date. The primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

    - ~ Alternatively, in situations where the LQG facility has an emergency coordinator continuously on duty because it operates 24 hours per day, every day of the year, the plan may list the staffed position (e.g., operations manager, shift coordinator, shift operations supervisor as well as an emergency telephone number that can be guaranteed to be answered at all times).
    - ~ The plan must include a list of all emergency equipment at the facility that would be used to respond to an emergency involving hazardous waste (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required.
    - ~ List of emergency equipment must be kept up to date.
    - ~ Plan must include the location of each item on the list.
    - ~ Plan must include a physical description of each item on the list.
    - ~ Plan must include a brief outline of the capabilities of the emergency equipment.
  - The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary.
    - ~ This plan must describe signal(s) to be used to begin evacuation.
    - ~ The primary and secondary evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)

- **Copies of Contingency Plan (**40 CFR 262.262(a)):
  A copy of the contingency plan and all revisions to the plan must be:
  - Maintained at the facility; and
  - Submitted to all local emergency responders (i.e., police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services). The contingency plan may also be submitted to the Local Emergency Planning Committee (LEPC) (as appropriate).

- **Quick Reference Guide** (40 CFR 262.262(b)):
  A LQG must submit a quick reference guide of the contingency plan to the local emergency responders who may be called upon to provide emergency services (as identified in 262.262(a)). The quick reference guide must include the following elements:
  - The types/names of the hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid);
  - The estimated maximum amount of each hazardous waste that may be present at any one time;
  - The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff;

- A map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes;
- A street map of the facility in relation to surrounding businesses, schools and residential areas to understand how best to get to the facility and to evacuate citizens and workers;
- The locations of water supply (e.g., fire hydrant and its flow rate);
- The identification of on-site notification systems (e.g., a fire alarm that rings off site, smoke alarms);
- The name of the emergency coordinator(s) and 7/24-hour emergency telephone number(s) or, in case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.
- The quick reference guide must be updated by the LQG, if necessary, whenever the contingency plan is amended and submit these documents to the local emergency responders as identified in 262.262(a).

- **Amendment of Contingency Plan** (40 CFR 262.263):
  The contingency plan must be reviewed, and immediately amended, if necessary, whenever:
  - Applicable regulations are revised;
  - The plan fails in an emergency;
  - The facility changes-in its design, construction, operation, maintenance, or other circumstances-in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
  - The list of emergency coordinators changes; or
  - The list of emergency equipment changes.

- **Emergency Coordinator (**40 CFR 262.264):
  At all times, there must be at least one employee either on the generator's premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures and implementing the necessary emergency procedures outlined in 262.265.

- **Emergency Procedures** (40 CFR 262.265):
  - During an emergency, the coordinator must immediately:
    - ~ Activate facility alarms or communication system to alert all personnel.
    - ~ Notify appropriate state and local agencies as needed.
  - In the event of a fire, explosion, or release, the coordinator must identify character, exact source, amount, and extent of problem. This can be done by observation, records, or chemical analysis.

- Coordinator must assess all possible direct and indirect effects of the event.
- If the coordinator determines that a fire, explosion, or release has occurred he must report his findings as follows:
  - ~ Must notify proper authorities if evacuation is needed. Must be available to help decide what areas should be evacuated.
  - ~ Must notify government on-scene coordinator or National Response Center.
- Coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste. These measures include stopping production, collecting or containing releases and isolating containers.
- If facility stops operations, the coordinator must monitor for leaks, pressure buildup, gas generation, ruptures in valves, pipes. Or other equipment.
- After an emergency, the coordinator must provide for disposal for all released waste, contaminated soil or surface water, or other material.
- Coordinator must ensure that affected part of the facility:
  - ~ No incompatible waste with release material is stored until cleanup is complete.
  - ~ All emergency equipment is cleaned and fit for use.
- The owner or operator must notify government agencies before resuming operations.
- The owner or operator must note the time, date, and details of any incident that requires the implementing of the contingency plan. The report must be submitted to EPA or State within 15 days of the incident.

- **Personnel Training** (40 CFR 262.17(a)(7)):
  - Facility personnel must successfully complete a program of classroom instruction, on-line training, or on-the-job training that teaches them to perform their duties in a way to ensure compliance with the regulations.
  - Training must be directed by a person trained in hazardous waste management procedures and training must include hazardous waste management training relevant to each employee's position (including contingency plan implementation).
  - Training must be designed to ensure that personnel can respond effectively to emergencies (including familiarization with emergency procedures, emergency equipment and emergency systems).
  - Personnel must complete the training within six months of their hire date or when they change job responsibilities.
  - Personnel must take part in an annual review of the initial training.
  - The following documents must be maintained at the facility:
    - ~ The job title for each position at the facility related to hazardous waste management and the name of the employee filling each job;

    - ~ A job description for each position listed above, including requisite skill, education, qualifications and duties of facility personnel assigned to each position.
    - ~ A written description of the type and amount of introductory and continuing training that will be given for each person filling a position.
    - ~ Records that document that the training or job experience has been given to or has been completed by personnel.
  - Training records on current personnel must be kept until closure of the facility. Training records on all former employees must be kept at least three years from date of separation.

- **Biennial Report** (40 CFR 262.41):
  - A LQG, must submit a biennial report on March 1 of each even numbered year.
  - A LQG must maintain the biennial report for three years in accordance to the recordkeeping requirements of 262.40(b).

- **Waste Minimization Plan or On-site Efforts** (40 CFR 262.27): The facility must have waste minimization practices in place. By signing a hazardous waste manifest the facility is certifying they implement waste minimization techniques.

- **Inspection Records** (40 CFR 262.17(a)(1)(v) and 15A NCAC 13A .0107(d))**:** At least weekly, a LQG must complete inspections of the central accumulation areas(s) looking for leaking containers and deterioration of containers caused by corrosion. The facility must keep records and results of required inspections for at least three years from the date of the inspection.

- **Manifests/Land Disposal Restrictions (LDRs):** The facility must comply with the following:
  - **General Manifest Requirements** (40 CFR 262.20 and 262.21):
    A generator who offers for transportation, hazardous waste for off-site treatment, storage, or disposal must properly prepare a hazardous waste manifest in accordance to the regulations.
  - **Number of Manifest Copies** (40 CFR 262.22):
    The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the designated disposal facility with one copy each for their records and another copy to be returned to the generator.
  - **Use of the Manifest** (40 CFR 262.23-262.25):
    The generator must:
    - ~ Sign the manifest certification by hand; and
    - ~ Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and

    - Retain one copy, in accordance with 262.40(a).
    - The generator must give the transporter the remaining copies of the manifest
  - **Recordkeeping** (40 CFR 262.40(a)):
    Manifests must be kept on-site for three years. *It is recommended manifests be kept forever.*
  - **Exception Reporting** (40 CFR 262.42(a)(1) and (a)(2)):
    - A LQG who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter must contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.
    - A LQG who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter must submit the following:
      - A legible copy of the manifest for which the generator does not have confirmation of delivery;
      - A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous wand the results of those efforts.
  - **Approved Treatment, Storage and Disposal (TSD) Facilities and Transporters** (40 CFR 262.18(c)): Generators must use TSDs and Transporters with valid EPA ID numbers.
  - **Land Disposal Restriction Certification** (40 CFR 262.11(e) and 262.17(a)(9)):
    Land Disposal Restriction certification, as required at 40 CFR Part 268, must accompany each waste streams sent to each TSD.

- **Closure** (40 CFR 262.17(a)(8)):
  A LQG accumulating hazardous wastes in containers, tanks, drip pads, and containment buildings, prior to closing a hazardous waste management unit at the facility, or prior to closing the facility, must meet the following conditions:
  - **Notification for Closure:** A LQG must perform the following when closing a waste accumulation unit:
    - Place a notice in the operating record within 30 days after closure identifying the location of the unit within the facility or meet the closure performance standards for generators described at 40 CFR 262.17(a)(8)(iii).

    A LQG must perform the following when the facility is closing:
    - Submit an EPA 8700-12 form (electronically using myRCRAid) no later than 30 days prior to closing the facility.

    - Submit an EPA 8700-12 form (electronically using myRCRAid) within 90 days after closing the facility that it has complied with the closure performance standards of 262.17(a)(8)(iii) or (iv). If the facility cannot meet the closure performance standards the facility must notify using the EPA 8700-12 form (electronically using myRCRAid) that it will be close as a landfill under 40 CFR 265.310.
  - **Compliance with Closure Performance Standards** (40 CFR 262.17(a)(8)(iii) and (iv))**:**
    - At closure, a LQG must meet the closure performance standards described in 40 CFR 262.17(a)(8)(iii) for containers, tank systems, and containment building waste accumulation units.
    - At closure, a LQG must meet the closure performance standards described in 40 CFR 262.17(a)(8)(iv) for drip pad waste accumulation units (if applicable).

- **Consolidation of hazardous waste from very small quantity generators** (40 CFR 262.17(f)): A LQG may accumulate on site hazardous waste received from very small quantity generators under control of the same person (as defined in 40 CFR 260.10) provides the very small quantity generator must comply with requirements of 40 CFR 262.14(a)(5)(viii) and the LQG must complies with the requirements of 40 CFR 262.17(f). *See Appendix L for more information on the Consolidation Provision.*

- **Hazardous Waste Central Accumulation Areas**: A LQG of hazardous waste may accumulate hazardous waste on-site, in a central accumulation area(s) for not more than 90 days provided the following requirements are met:
  - Hazardous waste must be placed ***inside*** the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.
  - Hazardous waste containers must be closed unless it is necessary to add or remove waste.
  - A container holding hazardous waste must not be opened, handled, or accumulated in a manner that may rupture the container or cause it to leak.
  - All hazardous waste containers in the central accumulation area must be marked/labeled with the words "Hazardous Waste", an indication of the hazards of the contents of the containers and marked with an accumulation start date.
  - Prior to shipping the hazardous waste off site, the containers must be marked with all applicable EPA hazardous waste numbers (EPA waste codes).
  - Comply with applicable regulations for hazardous waste management units other than containers, when applicable:
    - Accumulation of hazardous waste in tanks (40 CFR 262.17(a)(2)): must comply with 40 CFR 265 Subpart J except § 265.197(c) of Closure and post-closure care and § 265.200 – Waste analysis and trial tests, as well as the applicable requirements of 40 CFR 265 subparts AA, BB, and CC; and/or

  - ~ Accumulation of hazardous waste on drip pads: must comply with 40 CFR 262.17(a)(3) and 40 CFR 265 Subpart W; and/or
  - ~ Accumulation of hazardous waste in containment buildings: must comply with 40 CFR 262.17(a)(4) and 40 CFR 265 Subpart DD.
- Comply with the applicable regulations for hazardous waste air emissions, when applicable:
  - ~ 40 CFR 265 Subpart AA for air emission standards for process vents,
  - ~ 40 CFR 265 Subpart BB for air emission standards for equipment leaks, and/or
  - ~ 40 CFR 265 Subpart CC for air emission standards for containers, tanks, surface impoundments and containers.
- Ignitable and Reactive Hazardous Waste Requirements:
  - ~ Containers of ignitable or reactive waste must be located at least 50 feet from the facility’s property line unless a waiver has been received from the local authority having jurisdiction over the fire code to accumulate these wastes less than 50 feet from the facility's property line.
  - ~ Ignitable and reactive hazardous wastes must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding,
  - ~ hot surfaces, frictional heat, sparks (static electrical, or mechanical), spontaneous ignitions (e.g., from heat producing chemical reactions), and radiant heat.
  - ~ While ignitable or reactive waste is being handled, smoking and open flame must be confined to specifically designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazardous from ignitable or reactive waste.
- All containers must be in good condition and if it is not in good condition or begins to leak, the hazardous waste must be immediately transferred to another container that is in good condition.

  Compatibility Requirements:
  - ~ A LQG must use a container made of or lined with materials that will not react with and are otherwise compatible with the hazardous waste to be accumulated, so the ability of the container to contain the waste is not impaired.
  - ~ Incompatible wastes must not be placed in the same container.
  - ~ Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
  - ~ Incompatible wastes must be separated from other incompatible waste or material by means of a dike, berm, wall, or other device.

Pre-transport Regulations for LQGs

40 CFR 262.30-33

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

- Proper packaging to prevent leakage of hazardous waste during transport; and
- Labeling, marking and placarding of the packaged waste to identify the characteristics and dangers with transporting wastes. (The DOT regulations only apply to generators shipping waste off-site.)

Other Specific Regulations for LQGs

Depending on how you manage waste at your site, other sections of the hazardous waste regulations may apply to your business. For example, if you accumulate or store waste in tanks, you must comply with 40 CFR 265 Subpart J- the tank regulations. If you are a wood treater, regulations in 40 CFR 265 Subpart W applies to your facility. Both of these regulations, as well as the Air emission requirements (Subparts AA, BB and CC), containment building requirements (Subpart DD) and used oil regulations (40 CFR 279), are outlined in the appendices to this manual.

Used oil management is summarized in Appendix G of this manual. If you manage lights containing mercury or other universal wastes at your site, read about the regulations in Appendix H of this manual. If you recycle waste at your facility, you are responsible for knowing about specific regulations and exemptions. These regulations and exemptions are discussed in the "Waste Minimization" section of the manual.

WASTE MINIMIZATION, POLLUTION PREVENTION, AND RECYCLING

There are several good reasons to reduce the quantity of hazardous waste you generate. The benefits have been widely documented. The reasons range from reducing exposure to workers and the environment and enhancing the company image to reducing the cost of disposal and your on-site management costs. You can also decrease future RCRA or CERCLA liabilities, reduce your tax burden, improve energy efficiency and product yields, and possibly change your generator status.

Current Regulations Requiring Waste Minimization

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

Section 3002(b) of RCRA and 40 CFR 262.27 requires all hazardous waste generators to sign the certification that appears on the hazardous waste manifest that states:

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

LQGs must also identify in the biennial hazardous waste report: 1) the efforts undertaken during the year to reduce the volume or toxicity of the waste generated and 2) the changes in volume and toxicity achieved in comparison to previous years.

Waste Minimization Plans

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

SQGs are not subject to the same "program in place" certification requirement as LQGs. They must certify on their hazardous waste manifests that they have "made a good faith effort to minimize" their waste generation. SQGs are, however, encouraged to develop waste minimization programs to demonstrate their good faith efforts.

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

The hierarchy established by Congress is prevention or source reduction, recycling, treatment and then disposal. These options are briefly discussed below.

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

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

Treatment or Disposal is not a waste minimization technique or practice, but an activity that occurs after other opportunities for waste minimization have been pursued. Transfer of hazardous constituents from one environmental media to another also is not waste minimization. For example, use of an air stripper to evaporate volatile organic constituents from an aqueous waste stream only shifts the contaminant from water to air. (Be aware that treatment or disposal of waste may be subject to RCRA rules.)

Dilution for toxicity reduction is not waste minimization and is illegal under RCRA.

Elements of a Waste Minimization Plan

An effective waste minimization program contains the following basic elements. (This process may seem like a lot of work, but it only needs to be done once, and then only repeated as necessary when changes are made to your processes).

Top management support and a written policy in support of waste minimization.

In order to have a workable plan, you must first convince management (or the owner) of the importance of a waste minimization program. The company should become familiar with the benefits of waste minimization as previously discussed. At a minimum, the written policy should include the support of employee waste minimization training, statements of financial support for the program implementation, and a description of management's involvement in the waste minimization plan.

Selection of personnel to develop the plan

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

Identification of process information

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

Identification of waste streams

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

Identification of alternatives for minimizing wastes

Determine various alternatives that may be applicable to the processes generating waste at your business. Usually there are several different options for each waste stream. Not all of these may

be feasible or affordable and will be evaluated in the next steps of this process, so do not limit the alternatives at this point in the planning.

Determine the technical feasibility of each alternative chosen

Questions that should be asked for each alternative are:

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

Determine the cost of implementing each alternative

You should determine the capital cost needed for each alternative including equipment, engineering, construction, consulting, training, start-up and utility costs. Determine the current cost of managing the waste from each process. You should include the cost of storage, disposal, on-site handling, employee training, waste analysis, equipment, operating costs and liability insurance. Compare the two costs to determine which alternatives are feasible at your site. Note that some alternatives, such as employee training, have no capital costs.

Select the alternative then, implement the plan

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

Waste Minimization and The Compliance Inspection

The Compliance Branch of the HWS reviews facility waste minimization programs as part of the facility's hazardous waste inspection. Hazardous waste generators and permitted hazardous waste facilities have three waste minimization requirements previously described:

- LQGs must submit waste minimization information as part of their biennial report (40 CFR 262.41).
- LQGs must certify on their manifest that they have a waste minimization program in place; and SQGs must certify that they have reduced hazardous wastes to the point that is economically practicable (40 CFR 262.27).
- All TSD facilities must certify, in the biennial report, that they have a waste minimization program in place (40 CFR 264/265.75 and 264.73(b)(9)).

During an inspection, the Environmental Specialist will ask about the facility's waste minimization program or efforts. If the owner/operator cannot describe a waste minimization program/efforts or cannot show evidence of a program/efforts; it will be considered a violation for failure to comply with the certification on the manifest. The inspection will include a visual check of the waste minimization "program in place." Any contradiction between plans, reports and other waste minimization activities on-site will be noted in the inspection report as potential violations.

Sample Waste Minimization Plan

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

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

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

CORPORATE POLICY STATEMENT OF SUPPORT FOR POLLUTION PREVENTION

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

DESCRIPTION OF POLLUTION PREVENTION PLANNING TEAM

Management tasked the lead environmental engineer to coordinate all waste management and minimization efforts at the facility. This waste minimization coordinator communicates quarterly with management at Rusty's Metal Shop. The coordinator, along with management, plans the next steps for waste minimization efforts at the facility.

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

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

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

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

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

Primary Waste Minimization Activity

In 2018, Rusty's Metal Shop evaluated possible waste minimization activities, including replacement of selected solvents with aqueous cleaners. This study indicated that Rusty's Metal Shop could reduce its waste by making this replacement. The facility implemented this change on a pilot basis for two months at the close of the fiscal year. The facility saw a reduction from its average 120 tons of hazardous waste for a two-month period to 105 tons for the two-month test

period. The activity is being evaluated on other parameters such as process effectiveness, employee safety and cost. Based on the findings, it may be implemented within the first few months of the fiscal year.

Characterization of Waste

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

Periodic Waste Minimization Assessment

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

Cost Allocation

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

Encourage Technology Transfer

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

Program Evaluation

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

Tax Certification for Exemption from Ad Valorem Taxes

The HWS is promoting waste minimization and waste reduction by providing possible tax credits. Facilities may request these tax credits following the procedures described below. After review by the HWS, equipment used solely for recycling or reclaiming hazardous wastes may be given tax-exempt status as an ad valorem tax credit.

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

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

Facilities and equipment used part of the time for recycling or resource recovery do not qualify, and pro-rating of time is not allowed. Division of space is allowed, however, a small space within a larger building can qualify only if used exclusively for recycling. Incidental and supportive facilities and equipment (such as bathrooms and office areas) do not qualify. The standards for special tax treatment are found under Section .1500 of the North Carolina Solid Waste Management Rules (15A NCAC 13B).

How to Apply for Certification for Special Tax Treatment

Submit a formal letter of request for certification to the HWS. It should include the following information:

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

This request should be mailed to the HWS in Raleigh. Upon receipt, your Environmental Specialist will inspect the equipment and facilities and render a decision. If certification is denied, you may request a written description of the reasons for the denial. If you disagree with the results, you have the right to an appeal under the state Administrative Procedures Act.

For income and franchise tax purposes, send a copy of the certification with your annual income tax reporting form. For property tax purposes, obtain and fill out an application for exemption (Form AV-10) from your county tax assessor's office or the N.C. Department of Revenue (877-

252-3052) or on line at http://www.dornc.com/downloads/av10.pdf. Send this completed form and a copy of the HWS's certification to the local county property tax office with your annual reporting form.

Forms and information for Tax Certification are found on the NCDEQ web site at https://deq.nc.gov/about/divisions/waste-management/solid-waste-section/solid-waste-forms. The site has links to the application form and the regulations governing the Tax Certification Program, as well as a description of the process for applying for the credit. Applications must be received before the first of the year for the year the facility wants to receive the credit. A list of Frequently Asked Questions (FAQs) found on the web site is shown on the following pages.

Tax Certification Program FAQ's and Examples

1. When will the applicant receive the approved Tax Certification?

Unfortunately, there is no straightforward answer to this question. The process may take several weeks to several months. There are many factors involved including completeness of the application, the work-load of the Waste Management Specialist, and their supervisor and if all information needed is readily available during the inspection. It is a long process and there is no guarantee that the certification will meet the yearly deadlines set by counties. To meet deadlines set by the county, applications should be sent as early as possible.

2. Does previously certified property need to be listed on a new application?

No. The life of the Tax Certification is valid as long as it is owned by the applicant and continues to meet all the requirements of the statutes and rules. Therefore, if there is a change of ownership, the property must be re-applied for appropriately.

3. What if there is a dispute between the company and the County?

It is beyond the authority of our agency to be directly involved in any continuing dispute that might arise between the company and the County other than to assert our position relative to the standards.

4. Does Used Industrial Oil qualify?

Conceivably, the storage tanks, feed system, boilers could qualify (analogous to wood waste fired boilers), if they are exclusively used for used oil. If they are mixing waste oil in with virgin materials, then only the feed system (for the waste oil) may qualify. Incinerators do not qualify but any special equipment dedicated to energy recovery may qualify.

5. What about hazardous waste?

Hazardous waste recycling or reduction should be referred to the Hazardous Waste Section. The Hazardous Waste Section has the expertise and authority to certify hazardous waste reduction.

Examples

1. A paper recovery business owns large containers where paper is placed for recycling. The business operates a truck that picks up the paper and delivers it to its facility, where a baler, a forklift truck, other large containers, and a second truck are used to prepare and ship the paper to paper mills for recycling.
   All of the containers, the forklift truck, the other two trucks and the baler qualify for special tax treatment. The operations area of the facility also qualifies. The rest rooms and office areas of the facility do not qualify.

2. A retail store designates an area in its building for baling paper and cardboard for recycling. A forklift is used to transport the paper and cardboard to a loading dock.
   If used for no other purpose, the area of the store used for the baling and the baler would qualify for special tax treatment. The loading dock and the forklift would only qualify if they were not used for any other purpose.

3. A paper mill produces new newspaper from old newspaper. It shreds the old newspaper, makes a pulp, rolls and dries the pulp, and cuts sheets.
   The area of the mill where production takes place, plus the equipment used for these processes, would qualify for special tax treatment, provided the same equipment is not also used to manufacture product from non-recycled (virgin) materials.

Waste Minimization Priority Chemicals

EPA is focusing Waste Minimization efforts on five chemical groups. These chemicals were chosen because they are persistent in the environment, bio accumulative, or toxic to health or the environment.

Table 4: Waste Minimization Priority Chemicals

Chemical	**CAS#**
1,2,4-Trichlorobenzene	120-82-1
1,2,4,5-Tetrachlorobenzene	95-94-3
2,4,5-Trichlorophenol	95-95-4
4-Bromophenyl phenyl ether	101-55-3
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo(g,h,i)perylene	191-24-2
Dioxins/Furans	
Dibezofuran	132-64-9
Endosulfan, alpha,	959-98-8
Endosulfan, beta	33213-65-9
Fluorene	86-73-7
Heptachlor	76-44-8
Heptachlor epoxide	1024057-3
Hexachlorocyclohexane, gamma-	58-89-9
Hexachloroethane	67-72-1
Methoxychlor	72-43-5
Naphthalene	91-20-3
PAH group (as defined in TRI)	
Pendimethalin	40487-42-1
Pentachlorobenzene	608-93-5
Pentachoronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Phenanthrene	85-01-8
Pyrene	129-00-0
Triflualin	1582-09-8
Metals	
Cadmium	7440-43-9
Lead	7439-92-1
Mercury	7439-97-6

Sources of Information for Waste Minimization

Your Environmental Specialist – The names, addresses and phone numbers for the Environmental Specialist for your area can be found at the front of this manual and are available on the internet at:

https://files.nc.gov/ncdeq/Waste%20Management/DWM/HW/Compliance/Compliance_Map_by_Inspector.pdf

Tax Certification – For forms and the application for the tax certification program are located at: https://deq.nc.gov/about/divisions/waste-management/solid-waste-section/tax-certification-program

Division of Environmental Assistance and Customer Service (DEACS)- DEACS offers free technical assistance to generators and TSD facilities on recycling and waste minimization issues. DEACS is located in Raleigh. The phone number is: 1-800-623-6748. The DEACS web site is: http://deq.nc.gov/about/divisions/environmental-assistance-customer-service

Other Internet Resources

- NC Waste Trader- This is a waste exchange service is designed to divert recoverable materials from disposal while providing feedstocks and supplies to potential users.

http://www.ncwastetrader.org/home.aspx

- NC Recycling Markets Listing is a document which lists companies which recycle many types of materials. It lists facilities alphabetically as well as by the materials it recycles.

http://www.p2pays.org/dmrm/start.aspx

RCRA RECYCLING REGULATIONS

40 CFR 261.1, 261.2, 261.6, 266

After reducing waste at the source, recycling is the most preferred waste minimization method. Unfortunately, the regulations guiding the recycling of hazardous waste are not straight forward and the regulations that apply to various types of recycling or wastes to be recycled are in a variety of locations in RCRA. The following section attempts to discuss and clarify the hazardous waste recycling regulations.

Recycling is defined in RCRA at 40 CFR 261.1(c)(7). The definition is: "A material is recycled if it is used, reused, or reclaimed."

Certain materials are not subject to regulation as a hazardous waste when they are recycled. These materials are specifically excluded under 40 CFR 261.4. These materials include:

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

Other materials are not classified as solid wastes; and therefore, are not hazardous wastes when they are recycled. These exclusions are found in 40 CFR 261.2. To determine if a material meets this exclusion and is or is not a solid waste when recycled, both the type of material and the manner of recycling must be considered.

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

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

- **Sludge** is any solid, semi-solid, or liquid waste generated from a municipal, commercial, institutional or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other waste having similar characteristics and effects. (N.C.G.S. 130A-290)

- **By-products** are process residues that are not one of the primary products of a production

process. Some samples include slag, heavy ends and distillation column bottoms. By-products should not be confused with **co-products**. A co-product is intentionally produced by the manufacturing process and is ordinarily used in its existing state as a commodity. Co- products must have a recognized use and be usable without reprocessing. (Refer to 40 CFR261.1(c)(3).)

- **Commercial Chemical Products** are a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. (Refer to 40 CFR 261.33(d).) These materials are either unused, pure products (not mixtures) or a product where the compound listed is the sole active ingredient.

- **Scrap Metals** are the bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces which may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled. (Refer to 40 CFR 261.1(c)(6).)

Next, examine the manner of recycling to determine if a material is a solid waste when recycled. The five types of use that must be considered are use in a manner constituting disposal, use as a fuel or burning for energy-recovery, reclamation, speculative accumulation and use/re-use.

- **Use Constituting Disposal** means the material is placed on the land in a manner that constitutes disposal or used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to the or placed on the land (in which cases the product itself remains a solid waste). Commercial chemical products listed in 40 CFR 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use. (Refer to 40 CFR 261.2(c)(1).) An example is Lindane- containing waste which is used as a pesticide.

- **Burned for Energy Recovery or Used as a Fuel** – Materials are burned for energy recovery when they are burned to recover energy or used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste). Commercial chemical products listed in 40 CFR 261.33 are not solid wastes if they are themselves fuels. (Refer to 40 CFR 261.2(c)(2).)

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

- **Speculative Accumulation** is defined as the accumulation of waste materials prior to recycling

without sufficient amounts being recycled. A sufficient amount is defined as recycling at least 75 percent of the total quantity generated during a calendar year (40 CFR 261.1(c)(8)).

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

After you consider the type of material and the manner in which it will be recycled, you can determine whether the material is a solid waste when it is recycled. It is very important to ensure that you have defined both the type of material and the manner of recycling correctly. This is where many of the mistakes in application of the regulations occur. In the following chart, the type of the material is listed along the left side. The manner of use is listed across the top. If the box has an asterisk (*) in it, that material is a solid waste when it is recycled. If the box is blank, the material is not a solid waste, and therefore cannot be a hazardous waste. If this is the case, it is not subject to the hazardous waste rules when recycled.

Table 5: Solid Waste Determination for Recycled Materials

	Use Constituting Disposal (261.2(c)(1))	Energy Recovery/Fuel (261.2(c)(2))	Reclamation (261.2(c)(3)) except as provided in 261.4(a)(17), 261.4(a)(23), 261.4(a)(24) or 261.4(a)(27)	Speculative Accumulation (261.2(c)(4))
Spent Materials	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)
Sludges (listed in 40 CFR 261.31 or 261.32)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)
Sludges exhibiting a characteristic of HW	Solid Waste (*)	Solid Waste (*)	**Not a Solid Waste** -	Solid Waste (*)
By-products (listed in 40 CFR 261.31 or 261.32)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)
By-product exhibiting a characteristic of HW	Solid Waste (*)	Solid Waste (*)	**Not a Solid Waste** -	Solid Waste (*)
Commercial Chemical Products listed in 40 CFR 261.33	Solid Waste (*)	Solid Waste (*)	**Not a Solid Waste** -	**Not a Solid Waste** -
Scrap metal that is not excluded under 40 CFR 261.4(a)(13)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)	Solid Waste (*)

If the material being recycled is defined as a solid waste using Table 4 (on the previous page), and it also meets the definition of a hazardous waste, then it is subject to the full set of hazardous waste regulations. This includes accumulation times, labeling, dating and manifesting, etc. Before being reclaimed, materials that are hazardous wastes are also subject to the full set of hazardous waste regulations (40 CFR Parts 262 and references and Parts 268 and 270). This includes proper containerization, labeling, dating and accumulation time limits.

Certain "inherently waste-like" materials are solid wastes when they are recycled in <u>any</u> manner (261.2(d)). Table 2. Is not applicable to these wastes. These include: listed wastes F020, F021, F022, F023, F026 and F028; and secondary materials fed to a halogen acid furnace that exhibit a characteristic of, or are listed as, a hazardous waste.

Regulation of "Recyclable Materials"

40 CFR 261.6

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

- Material used in a manner constituting disposal (Subpart C),
- Hazardous waste burned for energy recovery in boilers and industrial furnaces (Subpart H),
- Materials used for precious metals recovery (Subpart F),
- Spent lead-acid batteries being reclaimed (Subpart G), and,
- Used oil management prior to recycling and energy recovery.

Note: APPENDIX J - DECISION DIAGRAMS, will help decide how your recyclable materials should be regulated. If you need further assistance, contact your Environmental Specialist.

Documentation of Legitimate Recycling of Hazardous Secondary Material

Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation are required by 40 CFR 261.2(f).

Persons performing the recycling of hazardous secondary material (HSM) under the Generator Controlled exclusion of 40 CFR 261.4(a)(23) and/or the Transfer Based exclusion of 40 CFR 261.4(a)(24) must maintain documentation of their legitimacy determination on-site. Documentation must be maintained for 3 years after the recycling operation has ceased.

Documentation must be a written description of how the recycling meets all three factors in 40 CFR 260.43(a) and how the requirements of 40 CFR 260.43(b) were considered.

The template below is a possible format for documenting legitimacy to show recycling of hazardous secondary materials (HSM) addresses the three legitimacy factors in 40 CFR 260.43(a) and describes how the requirements of 40 CFR 260.43(b) were considered. A facility may choose to create its own format for documenting legitimate recycling.

Hazardous secondary material that is not legitimately recycled (meeting the Legitimacy Criteria described in 40 CFR 260.43) is discarded material that is a solid waste.

Suggested Template for the Legitimacy Documentation

Provide a brief narrative description describing how the hazardous secondary material (HSM) is recycled.

_____

_____

_____

For example: Spent solvents are reclaimed in an on-site distillation system in order to remove the contaminant and return the solvent back to commercial-grade.

Next, check the box under each factor that most appropriately describes how the recycling meets the factor. Then add a brief narrative description explaining how the recycling meets the factor.

Factor 1:
Explain how the HSM provides a useful contribution:

__ Contributes valuable ingredients to a product or intermediate

__ Replaces a catalyst or carrier in the recycling process

__ Is the source of a valuable constituent recovered in the recycling process

__ Is recovered or regenerated by the recycling process

__ Is used as an effective substitute for a commercial product

For example: Spent solvents reclaimed on site to commercial grade are "recovered or regenerated by the recycling process." Check the fourth line.

Provide a written description of how the hazardous secondary material provides a useful contribution to the recycling process or to a product or intermediate of the recycling process:

_____

_____

_____

_____

For example, the facility could identify what spent solvents are being regenerated in the recycling process.

Factor 2:

Describe how the product or intermediate made from the HSM is valuable:

__ Sold to a 3rd party

__ Used by the recycler or generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process

For example: Spent solvents reclaimed on site and then used by the generator are "used as an effective substitute for a commercial product." Check the second line.

Provide a written description of how the product or intermediate is valuable:

_____

_____

_____

_____

For example, the facility could identify the commercial product for which their reclaimed solvents are substituting.

Factor 3:

Describe how the HSM is managed as a valuable commodity:

__ There is an analogous raw material and the HSM is managed, at a minimum, in a manner consistent with the raw material, or in an equally protective manner

__ There is no analogous raw material and the HSM is contained per 15A NCAC 13A .0102(c)

For example: There are analogous raw materials to the spent solvents. Check the first line.

Provide a written description of how the hazardous secondary material is managed prior to being recycled:

_____

_____

_____

_____

For example, the facility should include a brief description of how the spent solvents are stored and managed prior to reclamation. The facility must manage their spent solvents before they are reclaimed in the same manner (or equally protective manner) as the original commercial solvents.

<u>The requirements of 40 CFR 260.43(b) must be considered in making a determination as to the overall legitimacy of a specific recycling activity.</u>

The product of the recycling process does not:

___ Contain significant concentrations of any hazardous constituents found in appendix VIII of 40 CFR 261 that are not found in analogous products; or

___ Contain concentrations of hazardous constituents found in appendix VIII of 40 CFR 261 at levels that are significantly elevated from those found in analogous products, or

___ Exhibit a hazardous characteristic (as defined in 40 CFR 261 subpart C) that analogous products do not exhibit.

__ The product of the recycling process has levels of hazardous constituents that are not comparable to or unable to be compared to a legitimate product or intermediate as outlined above but the recycling is still legitimate[1].

Provide a written description of how the product made with HSM is comparable to a legitimate product or intermediate:

_____

_____

_____

_____

_____

[1]In making a determination that a hazardous secondary material is legitimately recycled, persons must evaluate all factors and consider legitimacy as a whole. If, after careful evaluation of these considerations, the factor in 40 CFR 260.43(b) is not met, then this fact may be an indication that the material is not legitimately recycled. However, the factor in 40 CFR 260.43(b) does not have to be met for the recycling to be considered legitimate. In evaluating the extent to which this factor is met and in determining whether a process that does not meet this factor is still legitimate, persons can consider exposure from toxics in the product, the bioavailability of the toxics in the product and other relevant considerations.

THE HAZARDOUS WASTE INSPECTION

Types of Hazardous Waste Inspections

There are many reasons why hazardous waste inspectors (Environmental Specialist) may come to your facility. The most common reason will be for some type of formal inspection. North Carolina is authorized by EPA to administer the hazardous waste management program. However, EPA staff may sometimes accompany HWS on an inspection. The EPA inspector may be conducting an oversight inspection of the North Carolina hazardous waste management program or be present in conjunction with an EPA or state initiative looking at compliance in a particular industry-type, or compliance with a particular section of the regulations.

NOTE: Typically, only one inspector will conduct an inspection at your facility. In this section, however, we refer to inspectors in the plural form.

The most common type of hazardous waste inspection is the CEI, or Compliance Evaluation Inspection. This inspection evaluates your facility for all of the hazardous waste regulations applicable to your facility. The usual frequency of a CEI is once a year for TSD facilities, once every two years for LQGs, a percentage of SQGs each year, and as needed, for example for complaint investigations.

Inspections can either be announced or unannounced, however, most inspections are unannounced. When the inspectors arrive at your facility, it is with the intention of conducting and completing an inspection. In addition to the primary contact, your facility should have at least one other person on-site who knows where records are kept and is familiar with the basics of your hazardous waste program. This person can accompany the inspectors when the primary facility contact is not available.

Entrance and Access to Your Business

When the inspectors arrive at your facility, they will identify themselves with an official NCDEQ identification card and tell you why they are there. You may want them to sign in on a log or other document. The inspectors will not sign any document or log requiring them to agree to any terms.

For personal safety reasons, inspectors can sign a visitor log only or leave a business card at the front desk so that you will know they are on-site in case of an emergency.

Normal inspection equipment includes cameras and sampling equipment. It can also include recording devices. Photographs will be taken, and samples collected to document violations. Copies of documents will be requested for the same reason. The citation from the statutes that

protects you from inspectors divulging trade secrets or proprietary information is located on the next page. Please develop an understanding with your management if your company has a policy forbidding cameras from being used at the company site. The hazardous waste inspector may elect to use a camera to document violations.

Inspectors determine the order in which the inspection is conducted. The inspectors will let you know what they will need to see and when. On the next page is the State statute citation which allows the inspectors access to all parts of your facility that need to be seen to determine regulatory compliance.

Confidential Information Protected

N.C.G.S. 130A-304

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

(1) Information which the Secretary determines is entitled to confidential treatment, the Secretary shall inform the person who provided the information that determination at the time such determination is made. The Secretary may refuse to accept or may return any information that is claimed to be confidential that the Secretary determines is not entitled to confidential treatment.

(2) Information that is confidential under any provision of federal or state law.

(3) Information compiled in anticipation of enforcement or criminal proceedings, but only to the extent disclosure could reasonably be expected to interfere with the institution of such proceedings.

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

(c) Except as provided in subsection (b) of this section or as otherwise provided by law, any officer or employee of the State who knowingly discloses information designated as confidential under this section shall be guilty of a Class 1 misdemeanor and shall be removed from office or discharged from employment.

Right of Entry

N.C.G.S. 130A-17

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

(b) The Secretary of Environmental Quality and a local health director shall have the same rights enumerated in subsection (a) of this section to enforce the provisions of Articles 9 and 10 of this Chapter.

Record Review

All of the documents your facility is required to keep on-site under the Hazardous Waste Rules may be reviewed by the inspector. All records relating to hazardous waste must be kept on-site for at least three years with the exception of training records. This exception will be discussed in the LQG Training Record section.

Waste Determination Records
SQG and LQG: 40 CFR 262.11(f)

The generator is solely responsible for the accurate characterization of your hazardous waste and its proper disposal. Included in this manual are Decision Diagrams to guide you in making a correct waste determination in Appendix J.

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

There are two methods for determining whether a waste is or is not a hazardous waste: 1) the material can be tested; or 2) by using a thorough knowledge of the process generating the waste and its characteristics. Whichever method is used, documentation supporting the waste determination must be maintained on-site at least 3 years from the date the waste was last sent to the on-site or off-site treatment, storage, or disposal. This documentation must include (but is not limited to):

- Records supporting waste determinations, including records that identify whether a solid waste is a hazardous waste as defined in 40 CFR 261.3;
- Documentation of claims that waste is not a solid waste or is conditionally exempt from regulation (required by 40 CFR 261.2(f));
- An explanation of the generator's knowledge used to make the waste determination and supporting documentation for determining if the waste is listed or characteristic;
- The results of any tests, sampling, waste analyses, or other determinations made;
- Records documenting the tests, sampling and analytical methods used to demonstrate the validity and relevance of such tests; and
- Records consulted to determine the process by which the waste was generated, the composition of the waste and the properties of the waste.

Remember that a listed hazardous waste is always a hazardous waste and is fully regulated unless the specific listed waste has been formally delisted. EPA delistings are for a specific waste at a specific facility only and are memorialized in a published Federal Register.

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

- Assuming materials recycled are not hazardous wastes (examples: nickel-cadmium batteries, mercury from broken thermometers).
- Assuming a waste is hazardous when it is not. Example: determining a chemical base such as sodium hydroxide, with a pH less than 12.5 is hazardous.
- Contamination of a non-hazardous waste with a listed waste but disposed as a non-hazardous waste. Example: used oil contaminated with a listed hazardous waste.
- Disposal of containers as non-hazardous waste after they held acutely hazardous wastes and had not been triple rinsed.
- Disposal of containers that are not empty as non-hazardous**.**
- Relying on non-expert advice. Call your Environmental Specialist for assistance.

Manifests
SQG and LQG: 40 CFR 262.20-262.25

All hazardous wastes shipped off-site must be accompanied by a hazardous waste manifest for SQG and LQG. Although not required, it is highly recommended that a VSQG use and maintain a hazardous waste manifest when shipping hazardous waste off-site.

NOTE: The use of electronic manifests is now considered the legal equivalence to paper manifests when a generator adheres to the requirements stated at 40 CFR 262.24.

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

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

Each shipment of hazardous waste must have an accompanying manifest. This document travels with the waste from generator, with the transporter, to the designated TSD facility, and back to the generator. Each entity retains a copy along the way. This acts as a chain-of-custody document and allows the generator to assure that its waste is disposed of properly. The TSD sends a signed copy back to the generator completing the chain of custody.

During an inspection, hazardous waste manifests will be reviewed usually from the date of the last inspection. The inspectors may, however, want to see the last three years of your manifests,

or just those for the last year. Manifests are reviewed to determine whether they are completed out correctly. They are also checked to confirm that the wastes shipped off-site match the wastes generated by your facility, that the quantities shipped match the quantities of waste generated, and the TSD facilities and transporters used by the generator are valid facilities.

The inspectors are also checking that the manifests have been signed by the generator, the transporter(s) and the TSD facility. A SQG or LQG that has not received a signed manifest, must file an exception report (in compliance with 40 CFR 262.42) within 45 days (for LQGs) and 60 days (for SQGs) of the date the waste was shipped. The exception report (as described in 40 CFR 262.42) must be sent to the HWS and a copy kept on-site.

Remember, by signing the manifest you are certifying that all of the information is correct, including facility waste minimization information (required by 40 CFR 262.27). If you do not fill out the manifest yourself, REVIEW IT CAREFULLY. Any mistakes made may be violations for your facility.

It is also important to remember that the hazardous waste laws mandate that the generator of a hazardous waste is responsible for the hazardous waste from the "cradle to the grave," -- that is from the time of generation and even after it has been properly treated or disposed. This ownership of the hazardous waste was mandated by Congress, not the EPA. The manifest is the one official document that describes the amount and type of hazardous waste, the date of shipment and the TSD that accepts the hazardous waste. The information documented on the manifest may prove to be very valuable if a facility finds themselves as a "responsible party" when a TSD goes bankrupt or is required to conduct remediation for on-site contamination. The manifests will document how much waste has been sent to the TSD in question and it may be possible to avoid paying an inflated amount based on speculation. For this reason, it is recommended that all manifest be saved -- never throw away a hazardous waste manifest.

A copy of a manifest and the instructions for filling out the manifest are in Appendix K.

The inspector may also request information on shipments of non-hazardous waste, hazardous secondary materials that are recycled, or non-RCRA regulated waste streams. This information is helpful in understanding the waste generated at a facility, but also is a way to determine whether any non-hazardous waste has been mischaracterized.

Common problems and violations found during manifest review:

- Not using the appropriate waste codes for the hazardous waste shipped,

- Not using the correct DOT description for the waste,
- Not describing the waste appropriately,
- Not having a signed copy from the TSD facility and/or not having an exception report; and
- Failure to provide "land ban" notifications/ certifications (see the Land Ban Notification section).

Land Ban Notification

SQG: 40 CFR 262.16(b)(7)

LQG: 40 CFR 262.17(a)(9)

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

When a SQG or LQG first ships a hazardous waste to a TSD facility, the generator may supply a one-time notification. This notification tells the TSDF that the waste either does or does not meet a specific treatment standard. If the waste stream, generation processes or the receiving facility changes, the generator is required to send a new notice to the receiving facility. This new notice must also be kept in the files at the generator's site.

However, a generator may choose not to determine if their hazardous waste requires treatment prior to land disposal. If the generator chooses this approach, they must manifest the waste to a RCRA permitted TSD facility. The TSD facility will then have the responsibility to make the determination if the waste must be treated to meet the land disposal requirements. The notification must include the EPA Hazardous Waste Numbers and Manifest Number of the first shipment and must state "This hazardous waste may or may not be subject to the Land Disposal Restrictions treatment standards. The treatment facility must make the determination."
The notice must include:

- The EPA Hazardous Waste Number and the associated manifest number;
- The constituents of concern for F001-F005, and F039 wastes, and the underlying hazardous constituents (for all wastes), unless the waste will be treated and monitored for all constituents;
- The applicable wastewater/non-wastewater category and subdivisions made within a waste code (such as D003, reactive cyanide);
- Waste analysis data if available;
- For hazardous debris, when treating with the alternative treatment technologies provided by 40 CFR 268.45: the contaminants subject to treatment and an indication that these contaminants are being treated to comply with 40 CFR 268.45; and
- Generator signature when certifying that the waste meets the treatment standards.

A copy of the notices must be kept on-site for three years. Electronic filing is allowed, however, there are no standards set for electronic filing at this time. If you use electronic filing, make sure you access to the documents for inspection and have adequate back up procedures.

Many hazardous waste vendors have developed excellent notification forms. Remember that the generator is ultimately responsible for the correctness of the notification and the resulting violations if the forms are filled out incorrectly.
Common errors made on the notification/certification forms include:

- Failing to list the constituents of concern for F001-F005 wastes and underlying hazardous constituents,
- Failing to identify wastewater or non-wastewater,
- Failing to retain a copy on-site and
- Failing to sign the certification when certifying that the treatment standards are met.

Please note that individual notifications are necessary with lab-packed waste shipments. They must be attached to the manifest and a copy retained on-site. There is no distinction between wastewater, non-wastewater or hazardous debris for lab-packed wastes. Requirements are stated at 40 CFR 268.7(a)(9) for a generator who is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standards for lab packs.

Training Records

LQG: 40 CFR 262.17(a)(7)

RCRA Training Content

Because there are so many different types of processes and jobs related to hazardous waste, there is no approved training course specified in the regulations. It is the facility's responsibility to determine the content of the employees training to ensure the facility's compliance with the regulations and to ensure personal safety. Each employee who has a job that causes them to contact or manage hazardous waste must be trained. The training must be for their actual duties handling hazardous waste or, as the regulation state: "relevant to the position in which they are employed." The employees must also be trained in emergency procedures, so they are able to respond effectively to emergencies. The training must include a review of your site-specific contingency plan. RCRA training may be combined with training required under OSHA 1910.120 in one course as long as all of the specific requirements under RCRA are met.

Who Conducts RCRA Training

The person conducting the employee training must be trained in hazardous waste management. Notice, there is no EPA approved training program for instructors. A facility should maintain documentation showing that the person conducting the training is qualified to do so.

Which Employees to Train

All employees who have hazardous waste management duties, handle hazardous wastes, or have the potential to handle hazardous waste must be trained. This includes all personnel who actually handle hazardous wastes, emergency response crews and emergency coordinators. If an employee's only hazardous waste duty is to place hazardous wastes into a satellite container, and they would not respond if the container leaked or ruptured, that employee is not required to have RCRA training. The HWS, however, recommends that all employees receive awareness training. New employees (new employees to the facility and employees that are new to a position) have a "grace" period of six months to attend training. During this time, they perform hazardous waste management duties or work unsupervised around hazardous wastes until they receive RCRA training.

Training Documentation

The following documents are required to be present at the facility:

- Job titles and job descriptions for positions that include hazardous waste responsibilities and the name of each employee filling that position. The description must include the requisite skill, education, or other qualifications and duties of facility personnel assigned to each position. This job description must describe the employee's duties specific to hazardous waste activities that are expected of that employee.
- The type and amount of both introductory and continuing training conducted, i.e., the content of what you used to train the employees.
- Records documenting that training has been given.

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

Frequency of Training

RCRA training must be conducted annually, on or prior to the anniversary date of the previous training, not once per calendar year. This means that, if you trained employees on January 22, they must have their annual update on or before January 22 of the next year.
Common errors found in training programs include:

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

SAMPLE training documents are illustrated on the next pages.

Sample Training Documents

Hard Chrome Plating Company
Job Description

Name: Dewayne Johnson
Job Title: Plating Chemist

Summary: Plating Scientist is the level for very experience and/or advanced technical chemists. Must have the ability to effectively determine proper plating processes.

Minimum Requirements: Master's in chemistry with 5+ years of experience or Bachelor's degree with 10+ years of experience.

Responsibilities:
- Proposes and implements successful plating processes
- Designs experiments to address project goals based on interpretation of results, with limited guidance
- May train, supervise or direct other scientists at the associate level

Technical Skills:
- Expert understanding of applied theory of plating chemistry related to projects
- Broad knowledge of plating process reactions and their applications
- Basic understand of plating knowledge
- Effectively participates in development of project plan to meet goals and objectives

Communication Skills:
- Provides regular updates to colleagues
- Prepares written reports detailing plating processes
- Writes clear and concise entries in laboratory notebook

Safety:
- Accountable for maintaining safe working environment
- Observes Hard Chrome Plating Company safety policies and procedures
- Provides strong leadership by principle and by example

Hazardous Waste Management:
- Secondary Emergency Coordinator:
  - Remain familiar with the contingency plan and procedures set forth in the plan
  - Make appropriate communications in time of emergency with Fire/Police, Hard Chrome Plating executive staff as appropriate, with personnel in charge of environmental reporting, and environmental emergency response contractors as appropriate
  - Direct Emergency Personnel to appropriate locations
  - Act as liaison between emergency crews, response contractors and Hard Chrome Plating staff
- Hazardous Waste Handler
  - Awareness and satellite accumulation (including but not limited to) caps, labeling, dating
  - Periodically removing satellite waste containers and deliver to less than central accumulation area
  - Annual RCRA Training including Emergency Coordinator (secondary) refresher, Contingency Plan training, RCR hazardous waste training

JOB DESCRIPTION/TRAINING RECORD FOR HAZARDOUS WASTE MANAGEMENT/DISPOSAL POSITIONS PER 40 CFR 262.17(a)(7)

This record must be maintained at the facility.

FACILITY: *facility name* _____ UNIT: *Plant number* _____

ADDRESS: *address of facility* _____

PHONE: *000-000-0000* _____ DATE: _____

EMPLOYEE NAME: _____

JOB TITLE: _____

HAZARDOUS WASTE RELATED QUALIFICATIONS AND DUTIES (***INCLUDE REQUISITE SKILLS, EDUCATION, OR OTHER QUALIFICATIONS***).

The above person works with and handles hazardous materials and wastes at the work site located at _ _____, CITY, STATE. This person has the appropriate qualifications to read understand, apply, and communicate written and verbal information regarding handling and managing hazardous wastes. Training is required within six months of assuming duty and once a year thereafter. This employee is responsible for proper handling, documenting, inspecting, and transporting hazardous wastes. This employee is also responsible for responding to emergencies. The above individual commenced these duties on _____ 20_____.

DATE	DESCRIPTION OF TRAINING ENTER THE TITLE, A BRIEF DESCRIPTION AND THE NAME OF THE INSTRUCTORS. NOTE WHETHER THE TRAINING IS: CLASSROOM, ON-THE-JOB, OR COMPUTER BASED/ELECTRONIC	EMPLOYEE SIGNATURE

JOB DESCRIPTION/TRAINING RECORD FOR HAZARDOUS WASTE
40 CFR 262.17(a)(7)

Facility: _____

Address: _____

Phone: _____ Date: _____

Employee:_____

Job Title: _____

Job Description: **(This is an EXAMPLE. Do not use this as boiler plate!! Must include the requisite skill, education or other qualifications and duties of facility personnel assigned to each position.)**

"As the EH&S Supervisor, Mr. Johnson is responsible for managing all environmental and safety programs as the facility. Mr. Johnson is involved in every aspect of the hazardous waste program, to include: identifying and profiling hazardous waste at each facility; choosing and ordering proper containers, labels, placards, etc.; training associates who handle hazardous waste and preparing and offering hazardous material for transportation; performing weekly inspections of the central accumulation area and random follow-up inspections of hazardous accumulation areas; updating the Contingency Plan and distributing it to internal and external emergency response personnel; responding to leaks and spills as a member of the Haz-Mat Emergency Response Team loading waste on to transport vehicles; placarding transport vehicles; completing and managing Hazardous Waste Manifests; and managing universal waste and used oil programs. Mr. Johnson is also responsible for the administration of all Plant Contingency Plans, and assigning and training emergency response coordinators, alternates and the Spill Response Team in the Plan.

Introductory Training Required: **(This is an EXAMPLE. Do not use this as boiler plate!!)**

"Initial 8-hour Hazardous Waste/Used Oil Management Training per 40 CFR 262.17(a)(7) within six months after assigned to a position involving handing or management of hazardous waste."

Continuing Education Required: **(This is an EXAMPLE. Do not use this as boiler plate!!)**

"Annual 8-hour refresher training in Hazardous Waste/Used Oil Management."

Date	Description of Training (Enter the title, a brief description and the name of the instructor. Note whether the training is: Classroom, On-the-job, or Computer Based/Electronic	Employee Signature

Inspection Log

SQG: 40 CFR 262.16(b)(2)(iv) and 15A NCAC 13A .0107(d)
LQG: 40 CFR 262.17(a)(1)(v) and 15A NCAC 13A .0107(d)

SQGs and LQGs are required to inspect central accumulation area(s) least weekly. At a minimum, SQGs and LQGs must look for leaking containers and for deterioration caused by corrosion or other factors. These inspections must be documented and maintained on-site for at least three years. There is no set format for the documentation of the inspection. The inspection form should note specific items and the areas inspected, the name of the inspector, and the date the inspection was conducted. Any issues encountered during the inspection and what actions were taken to correct them should also be noted on the inspection form.

Although not required, it is highly recommended to document the inspection of all satellite accumulation areas as well as the testing and maintenance of emergency equipment (that is specified in 40 CFR 262.253 for LQGs and 40 CFR 262.16(b)(8)(iii) for SQGs).

When issues in the central accumulation area are noted and corrected in the inspection log, it does not indicate a violation. Rather, it shows that inspections are being conscientiously conducted. On the other hand, if problems are noted by the inspectors in your central accumulation areas, but your inspection log notes that everything is okay, it shows that inspections are not being conducted appropriately.

Inspections must be conducted weekly. This means at least every seven days to the HWS. If inspections are conducted on a Tuesday, then they need to be conducted every Tuesday or the facility may opt to conduct inspections twice weekly, so they never exceed the seven-day time period.

If the primary inspector is on vacation or your plant is closed, arrangements must be made to ensure that the central accumulation area(s) are inspected weekly and documented in your inspection log. It is highly recommended that a back-up be assigned to conduct the central accumulation area inspection in the event the main inspector is not available.

SAMPLE inspection logs are illustrated on the next pages.

Sample Weekly Inspection Records

HAZARDOUS WASTE CENTRAL ACCUMULATION AREA - WEEKLY INSPECTIONS					
Month:	**Date:**	**Date:**	**Date:**	**Date:**	**Date:**
Central Accumulation Area:	**Inspector:**	**Inspector:**	**Inspector:**	**Inspector:**	**Inspector:**
Containers are not leaking and in good condition (No corrosion, dents, deterioration, etc.):					
Containers Closed:					
Containers Labeled: (including hazardous characteristics)					
Containers Dated:					
Oldest Accumulation Start Date:					
Number of Hazardous Waste Containers:					
Spills on Outside of Containers:					
Proper Aisle Space (minimum of 2 feet is required):					
Emergency Equipment (Fire Extinguisher, Spill Kit, Communication Device, Water					
Notes/Corrective Actions:					
Y= Yes; N=No; NA= Not Applicable					

Contingency Plan

LQG: 40 CFR 262.261 – 261.263

The purpose of a hazardous waste contingency plan is to describe the procedures that will be used to respond to emergencies related to hazardous waste (including fires, explosions and spills). As of March 1, 2018, the contingency plan is not only specific to Central Accumulation Area(s). The plan now must address and include areas where hazardous waste is generated and accumulated on-site. This includes both Satellite Accumulation Areas and Central Accumulation Areas.

Additionally, a contingency plan quick reference guide is a new requirement as of March 1, 2018. Refer to the quick reference guide section for additional information specific to the Quick Reference Guide.

A list of required hazardous waste contingency plan items cited in the regulations and an example of a generic plan are included in this section. This generic plan is an example only and should be used only as guidance. A hazardous waste contingency plan must be SPECIFIC TO YOUR FACILITY describing your facility, its wastes, emergency equipment, and procedures. These procedures are specified in 40 CFR 262.261. Under the new "Burden Reduction" updates to RCRA, you may combine other emergency plans.

Required Contingency Plan Items

- Every Large Quantity Generator must have a contingency plan.
- The applicability of the contingency plan includes areas where hazardous waste(s) are generated and accumulated (both satellite and central accumulation areas)
- The plan must be carried out immediately when there is a significant potential for hazardous waste constituents to be released, or they have already been released.
- The plan must describe actions personnel will take in the event of any release, fire or explosion of hazardous wastes or constituents.
- The plan must describe agreements made with local emergency response teams, fire departments, police, sheriff and hospitals. (See the Arrangements with Local Authorities section for samples of documents for these arrangements).
- The names of the emergency coordinators must be listed, as well as their phone number so they can be reached ANYTIME there is an emergency. The emergency coordinator is a person who has the authority to use the recourses of the company and who can respond in a timely manner to an emergency.
- All emergency equipment must be listed, including a brief description of the equipment, its location and its capabilities.
- An evacuation plan must be in the plan that includes the signals used to begin the evacuation.

- Both primary and secondary evacuation routes must be specified from all areas (including outside areas) where there is a possibility that an evacuation could be necessary.
- Copies of the contingency plan must be kept at the facility and sent to local emergency authorities and hospitals.

A contingency plan must be updated IMMEDIATELY when:

- The applicable regulations are changed;
- The plan fails in an emergency;
- The facility changes in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- Emergency coordinators change (including phone number changes); or
- Emergency equipment changes.

Generators should review their contingency plan often to determine if any changes need to be made and, if necessary, update the contingency plan promptly.

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

- Description, capabilities and location of all emergency equipment within the facility.
- Description of alarms or signals used to evacuate the facility (e.g., horn, siren, buzzer, etc.).
- Description of the response to be taken in the event of an explosion involving hazardous waste.
- Failure to amend the plan when the emergency coordinator information changes or the facility changes.
- Failure to send the plan to emergency responders or not documenting the submittal, and
- Not showing both primary and secondary evacuation routes.

The contingency plan is your guide and an assurance to fellow workers, emergency responders and the public that your company will respond in the most effective way to emergencies. The regulations also specify procedures you must take when your plan is used in an emergency.

It is not a violation to combine this plan with emergency plans required by other regulations (e.g. SPCC plans), as long as all requirements for both plans are met. If you are combining plans, the EPA suggests that you use the National Response Team’s "Integrated Contingency Plan guidance" as a template.

Suggested Outline - Hazardous Waste Management Facility Contingency Plan

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

Sample Contingency Plan

HARD CHROME PLATING & PAINTING COMPANY

1. General Information:
   * Hard Chrome Plating & Painting Company
   * Location: 1997 Dismal Lane, Bacon, NC 29898
   * Contact: George Washington - Home: (123)456-7890; Office: (123)654-0987
   * Emergency Coordinator: Flash Gordon - Home: (123) 455-9836
     Work: (123) 737-9875
   * Type of facility: Chrome plating and painting of machine parts primarily for the movie industry.
   * Description of wastes:
     - Waste water containing cyanide from plating tanks (F007)
     - Wastewater treatment sludge from the treatment of plating waste, contains cyanide and chrome (F006)
     - Waste Paint (D001)
     - Paint related waste from cleaning of spray guns with solvent (D001, F003, F005)

2. Emergency Coordinators:
   * Primary: Flash Gordon
     Home:(123) 456-1234 Work: (123) 737-1234
   * Second: Bruce Batman Wayne
     Home: (123) 668-1234
   * The emergency coordinators can deputize other employees to assist them in the event of an emergency.
   * The emergency coordinator has full authority to commit resources needed to respond to emergencies at this facility.

3. Implementation of the Contingency Plan

   The contingency plan will be implemented if an incident might threaten human health or the environment. The emergency coordinator has the full authority to make this determination. Examples of emergencies that may call for the implementation of the plan are: Release of plating bath solutions; formation of hydrogen cyanide gas; release from bulk storage containers, fire and explosion.

4. Emergency Response Procedures

   * Notification
   - Any employee discovering a fire, hazardous waste release, or potential for explosion that is not readily controllable with equipment and materials at hand must activate the emergency alarm system. This system automatically pages both the primary and secondary emergency coordinators and contacts the local police and fire department.
   - All employees hearing the alarm must close down and secure equipment (if it is safe to do so) and evacuate the building.
   - Evacuation routes (both primary and secondary) are specified in the map in section seven.
   - The Emergency Coordinator will contact the National Response Center if appropriate.

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

* Containment and Control
- Evacuate the facility in the event of a release of cyanide gas.
- In the event of a spill or release, absorbent material will be used to contain the flow.
- Portable pumps will be used to clean up the spill. Recovered material will be declared a hazardous waste if it cannot be used as is.
- In the event of a fire, explosion or potential for explosion, facility personnel will be evacuated, and control of the site turned over to the fire department upon its arrival.

* Follow-up Actions
- All hazardous wastes generated during the emergency will be managed and disposed of properly.
- All emergency equipment will be replaced or restored to full working order.
- The cause of the emergency will be investigated by the Emergency Coordinator.
- Necessary steps will be taken to ensure that the incident cannot recur.

5. Emergency Equipment
* Each work unit is supplied with a chemical fire extinguisher (5 lb., ABC type) and a shower/eye fountain for spills.
* Each workstation is supplied with bags of absorbent for solvent cleanup (50 lb. bag).
* In plating area, bags of absorbent (25 lb. bag) for cleanup of acid spills
* There are two fire hydrants that supply the facility.
* The central accumulation areas, satellite accumulation areas, and the bulk chemical storage areas are supplied with two spill kits, squeegees, additional absorbent materials and plastic shovels for spill cleanup.
* The entire facility is equipped with an alarm system with pulls at each workstation.
* Alarms can be heard at all areas in and around the facility.

6. Coordination Agreements

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

Phone numbers and description of arrangements made with local emergency authorities:

- Sparky Fire Department and Ambulance Service (911) or (123)-456-9911
  Primary responders in the event of a fire, explosion or spill.
- So Sorry Hospital (123) 777-7777
  Receive accident victims.
- Hero Police Department (911) or (123) 777-2222
  Provide crowd control and help with evacuation in the event of an emergency.

7. Evacuation Plan

Attached map showing primary and secondary routes and congregation points.

Alarm (long, low pitched whooping sound) will sound continuously to alert evacuation.

Sample Emergency Equipment List

LIST OF EMERGENCY EQUIPMENT - 40 CFR 262.261(e)		
EQUIPMENT	**CAPABILITIES/FUNCTIONS**	**LOCATION(S)**
Absorbent Socks	Absorbs hazardous waste liquid spills found at the facility for proper cleanup/disposal.	At all satellite areas, central accumulation areas, and strategically placed throughout the facility.*
Boots	Solvent resistant boots are large enough for personnel to wear over regular footwear. Prevents cleanup personnel from contaminating footwear in the event of a liquid spill.	Hazardous Material storage room*
Broom	Long handle and flat brush surface have the ability to collect absorbent materials or other dry materials.	At the central accumulation areas*
Face Mask	Breathing apparatus is designed to fit over the nose/mouth. Apparatus filters air by means of duel replaceable carbon cartridges. To be used when solvent vapors in confined areas might cause breathing difficulties or hazards to cleanup personnel.	Near all satellite areas and central accumulation areas*
Fire Extinguisher	Multi-purpose (ABC) portable extinguisher is available to fight a fire which might occur during spill containment or collection.	Satellite and central accumulation areas*
Floor Dry	Standard clay based industrial absorbent material used to absorb a spill and provide a temporary dike for spilled liquids.	At all satellite and central accumulation areas*
Gloves	Solvent-resistant gloves protect to the forearm and are used to minimize exposure to hazardous materials.	At all satellite areas, central accumulation areas, and strategically placed throughout the facility*
Goggles	Protects eyes/face from potential splashes and contact with materials, while allowing full visibility for working.	At all satellite areas, central accumulation areas, and strategically placed throughout the facility*
Protective Suit	Suit covers body (excluding hands/feet/face) from contamination. Suit is disposable and resistant to liquids and solvents.	Hazardous Materials Storage Room*
Rubber Floor Squeegee	Long handle and rubber blade for moving liquid material along an impermeable smooth surface.	Central accumulation areas*
Shovel	Long handle and flat blade for removing dry material from a surface or moving liquid toward a location.	Hazardous Materials Storage Room*

*Map included to show specific locations of emergency equipment.

Quick Reference Guide

A contingency plan quick reference guide is required for any new LQGs as of March 1, 2018. Existing LQGs (that have operated as a LQG prior to March 1, 2018) must create and submit to the local emergency authorities a quick reference guide only if the facility's contingency must be updated for the following reasons:

- The contingency plan failed in an emergency;
- The facility changed in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- The Emergency Coordinator(s) changed (including phone number changes); or
- The emergency equipment changed.

A Quick Reference Guide is required to have the following:

- The types/names of hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid);
- The estimated maximum amount of each hazardous waste that may be present at any one time;
- The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff;
- A map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes;
- A street map of the facility in relation to surrounding businesses, schools and residential areas to understand how best to get to the facility and also evacuate citizens and workers;
- The locations of water supply (e.g., fire hydrant and its flow rate);
- The identification of on-site notification systems (e.g., a fire alarm that rings off site, smoke alarms); and
- The name of the emergency coordinator(s) and 7/24-hour emergency telephone number(s) or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

A quick reference guide must be updated by the LQG whenever the contingency plan is amended, and both documents must be submitted to the local emergency responders as identified in 40 CFR 262.262(a).

The intent of requiring a quick reference guide is to provide emergency responders an executive summary of the contingency plan that would allow a more efficient and effective initial response

to an incident at a facility. Therefore, it is intended that the quick reference guide be a separate document from the contingency plan. However, a generator may choose to incorporate the items of the quick reference guide within the contingency plan. If doing so, it is recommended to put the quick reference guide information at the front of your contingency plan.

Arrangements with Local Authorities

SQG: 40 CFR 262.16(b)(8)(vi)

LQG: 40 CFR 262.256

SQGs and LQGs are required to document arrangements with the local emergency authorities that will respond to their facility in the event of an emergency. This includes hospitals, fire departments, police/sheriff departments, hazardous material responders and other agencies that may be involved in response to an emergency. Arrangements may be made with the Local Emergency Planning Committee (LEPC), if the LEPC is determined to be the appropriate organization with which to make arrangements.

As part of the coordination, the SQG and LQG must attempt to familiarize local emergency authorities with the:

- Layout of the facility,
- Properties of hazardous waste handled at the facility and associated hazards,
- Description of the types and quantities of hazardous waste handled at the facility,
- Places where facility personnel would normally be working,
- Entrances to roads inside the facility,
- Possible evacuation routes,
- Possible injuries or illnesses that could result from fires, explosions, or releases at the facility.

Alternatively, a facility possessing 24-hour response capabilities may seek a waiver from the authority having jurisdiction (AHJ) over the fire code within the facility's state or locality as far as needing to make arrangements with the local fire department as well as any other organization necessary to respond to an emergency, provided the waiver is documented in the operating record.

The HWS has found that many facilities do not have adequate arrangements with local emergency agencies as required by 40 CFR 262.16(b)(8)(vi) (for SQGs) and 40 CFR 262.17(a)(6) references 40 CFR 262 subpart M -- specifically 40 CFR 262.256 (for LQGs). The HWS has drafted example letters to assist with making the arrangements with the local emergency authorities. These letters <u>must</u> be customized to meet your facility’s needs. Using these letters will help achieve compliance with 40 CFR 262.16(b)(8)(vi) (for SQGs) and 40 CFR 262.256 (for LQGs). Examples of these letters are on the following pages.

SAMPLE Emergency Agreement Letters

A. Hospital
B. Fire Department
C. Police
D. Emergency Response Contractor
E. Emergency Authority back to the Generator

EXAMPLE

(Letters to assist with making Arrangements with local Emergency Authorities (for SQG and LQG) For Hospital)

(Insert Company Letterhead)

(Date)

(Name of Hospital)
Attn: (Hospital Contact)
Street
City, State, Zip code

Dear (Hospital Contact):

This letter is written as a requirement of the Hazardous Waste Rules adopted by the State of North Carolina. The purpose of this letter is to document arrangements to familiarize (Name of Hospital) with the layout of the facility, types, quantities, and 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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(Name of Facility) is located at (Address of Facility). (Name of the Facility) (include a description of the activities/processes that occur at the site). Hazardous waste is generated as a result of (describe the process generating hazardous waste), and is accumulated at this facility. In accordance with (**select which applies:** 40 CFR 262.16(b)(8)(vi) **[for SQGs]** or 40 CFR 262.256 **[for LQGs]**), we are providing your facility with the following information:

1) A layout of the facility showing areas where hazardous waste is generated and accumulated, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes. (**Attach information)**

2) A description of the types, quantities, and properties of hazardous waste handled at the facility and the associated hazards. (**Attach information or describe here**)

3) A description of the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. (**Attach information or describe here**).

We are requesting that your facility provide the following services in the event of an emergency regarding hazardous waste generation and accumulation at the facility:

- **(Describe/Specify the requested Services)**

If you do not agree with the arrangements, have questions, or need additional information please call me at (Phone Number of Facility).

Sincerely,

(Facility Contact Signature)
(Facility Contact Name)

EXAMPLE

(Letters to assist with making Arrangements with local Emergency Authorities (for SQG and LQG) For Fire Department)

(Insert Company Letterhead)

(Date)

(Name of Fire Department)
Attn: (Fire Department Contact)
Street
City, State, Zip code

Dear (Fire Department Contact):

This letter is written as a requirement of the Hazardous Waste Rules adopted by the State of North Carolina. The purpose of this letter is to document arrangements to familiarize the fire department with the layout of the facility, types, quantities, and 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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(Name of Facility) is located at (Address of Facility). (Name of the Facility) (include a description of the activities/processes that occur at the site). Hazardous waste is generated as a result of (describe the process generating hazardous waste), and is accumulated at this facility. In accordance with (**select which applies:** 40 CFR 262.16(b)(8)(vi) **[for SQGs] or** 40 CFR 262.256 **[for LQGs]**), we are providing your agency with the following information:

1) A layout of the facility showing areas where hazardous waste is generated and accumulated, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes. (**Attach information)**

2) A description of the types, quantities, and properties of hazardous waste handled at the facility and the associated hazards. (**Attach information or describe here**)

3) A description of the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. (**Attach information or describe here**).

We are requesting that your agency provide the following services in the event of an emergency regarding hazardous waste generation and accumulation at the facility:

- **(Describe/Specify the requested Fire Fighting Services)** *(Where more than one fire department might respond, facility must have agreements designating primary emergency authority to a specific fire department, and agreements with any others to provide support to the primary emergency authority)*

If you do not agree with the arrangements, have questions, or need additional information please call me at (Phone Number of Facility).

Sincerely,
(Facility Contact Signature)
(Facility Contact Name)

EXAMPLE

(Letters to assist with making Arrangements with the local Emergency Authorities (for SQG and LQG) For Police Department)

(Insert Company Letterhead)

(Date)
(Name of Police Department)
Attn: (Police Department Contact)
Street
City, State, Zip code

Dear (Police Department Contact):

This letter is written as a requirement of the Hazardous Waste Rules adopted by the State of North Carolina. The purpose of this letter is to document arrangements to familiarize the police department with the layout of the facility, types, quantities, and 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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(Name of Facility) is located at (Address of Facility). (Name of the Facility) (include a description of the activities/processes that occur at the site). Hazardous waste is generated as a result of (describe the process generating hazardous waste), and is accumulated at this facility. In accordance with (**select which applies:** 40 CFR 262.16(b)(8)(vi) **[for SQGs]** or 40 CFR 262.256 **[for LQGs]**), we are providing your agency with the following information:

1) A layout of the facility showing areas where hazardous waste is generated and accumulated, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes. (**Attach information)**

2) A description of the types, quantities, and properties of hazardous waste handled at the facility and the associated hazards. (**Attach information or describe here**)

3) A description of the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. (**Attach information or describe here**).

We are requesting that your agency provide the following services in the event of an emergency regarding hazardous waste generation and accumulation at the facility:

- **(Describe/Specify the requested Law Enforcement Services)** *(Where more than one police department might respond, facility must have agreements designating primary emergency authority to a specific police department, and agreements with any others to provide support to the primary emergency authority)*

If you do not agree with the arrangements, have questions, or need additional information please call me at (Phone Number of Facility).

Sincerely,
(Facility Contact Signature)
(Facility Contact Name)

EXAMPLE

(Letters to assist with making Arrangements with the local Emergency Authorities (for SQG and LQG) For Emergency Response Contractor / Other Emergency Response Teams / Equipment Suppliers)

(Insert Company Letterhead)

(Date)
(Name of Emergency Response Contractor, Other Emergency Response Teams and/or Equipment Suppliers)
Attn: Name of Contact
Street
City, State, Zip code

Dear (Name of Contact):

This letter is written as a requirement of the Hazardous Waste Rules adopted by the State of North Carolina. The purpose of this letter is to document arrangements to familiarize your (Name of Company/Agency/Organization) with the layout of the facility, types, quantities, and 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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(Name of Facility) is located at (Address of Facility). (Name of the Facility) (include a description of the activities/processes that occur at the site). Hazardous waste is generated as a result of (describe the process generating hazardous waste), and is accumulated at this facility. In accordance with (**select which applies:** 40 CFR 262.16(b)(8)(vi) **[for SQGs]** or 40 CFR 262.256 **[for LQGs]**), we are providing your (company/agency/organization) with the following information:

1) A layout of the facility showing areas where hazardous waste is generated and accumulated, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes. (**Attach information)**

2) A description of the types, quantities, and properties of hazardous waste handled at the facility and the associated hazards. (**Attach information or describe here**)

3) A description of the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. (**Attach information or describe here**).

We are requesting that your (company/agency/organization) provide the following services in the event of an emergency regarding hazardous waste generation and accumulation at the facility:

- **(Describe/Specify the requested Services)**

If you do not agree with the arrangements, have questions, or need additional information please call me at (Phone Number of Facility).

Sincerely,

(Facility Contact Signature)
(Facility Contact Name)

EXAMPLE

(Letters to assist with making Arrangements with the local Emergency Authorities (for SQG and LQG) Response Letter from Emergency Authority to Facility)

(Facility Name)
(Attn: Facility Contact Name)
(Address of the Facility)

Subject: Emergency Arrangements Response

Dear (Facility Contact Name):

I have received the information submitted by (Name of the Facility) to this office concerning hazardous waste generated and accumulated at your facility. Our agency is capable of providing the services indicated in the submitted information. I am also aware of the types, quantities, and properties of hazardous wastes generated and accumulated at the facility and the possible hazards associated with such materials, as described in the information that was submitted to this agency.

Sincerely,

Emergency Authority Contact (e.g. Fire Department, Police Department or Local Hospital)

Date Reviewed:(by Emergency Authority Contact) _____

Biennial Report

LQG: 40 CFR 262.41

A copy of biennial reports that have been submitted to the HWS must be kept on-site for at least three years. Inspectors will check to see if the reports are on-site and may also check to determine whether they have been filled out accurately and reflect the facility manifests, generation and accumulation records. The biennial report will also be used when the inspectors are checking your facility's waste minimization efforts.

Waste Minimization

SQG and LQG: 40 CFR 262.27

SQGs are required to have waste minimization efforts in place. LQGs are required to have a program in place to reduce the volume and toxicity of waste generated. It is recommended that the waste minimization efforts (for SQGs) or waste minimization program (for LQGs) are described in a written plan. During an inspection, the Environmental Specialist will ask about the facility's waste minimization efforts or program. It will be considered a violation for failure to comply with the certification on the manifest (40 CFR 272.27) if the owner/operator cannot describe a waste minimization program or cannot demonstrate evidence of a program. The inspection will include a visual check of the waste minimization "efforts" (for SQG) or "program in place" (for LQG). Any contradictions between efforts, plans, reports and other waste minimization activity on-site will be noted in the inspection report as potential violations.

FACILITY WALK-THROUGH

If inspectors have not been to your business before, they will want to walk through your entire process to become familiar with it. If the site has multiple buildings, the inspector may request to walk through all buildings, even those that are thought not to generate hazardous waste. If the inspector has been there before, they will want, at a minimum, to see areas where hazardous wastes are being generated and accumulated (both satellite accumulation areas and central accumulation areas).

Maintenance and Operation of Facility

SQG: 40 CFR 262.16(b)(8)(i)
LQG: 40 CFR 262.251

All areas where hazardous wastes are being generated, areas where hazardous wastes may be generated, and areas where they are being accumulated will be inspected. Generation points are evaluated to determine that hazardous wastes are being handled correctly to minimize the possibility of a fire, explosion, or any releases of hazardous waste. See the Discharges and Releases section, below. Generation points are often the same areas as the satellite accumulation areas, which the inspectors will also evaluate.

Discharges and Releases (Spills)

A release is any amount of hazardous waste that is not in a container or tank. There is no size or quantity limit. 40 CFR 262.16(b)(8)(i) (for SQGs) and 40 CFR 262.251 (for LQGs) requires generators to maintain their facility in a manner to prevents releases. This means any amount of hazardous wastes that is on top of containers or tanks, on the floor or walls, etc., of the facility is in violation of this regulation.

A discharge is a release or spill of hazardous waste to any land or water. Disposal is defined under RCRA as "the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste or hazardous waste into or on any land or water so that any constituent thereof may enter the environment of be emitted into the air or discharged into any waters, including groundwater." Therefore, a release to the environment is a discharge of hazardous waste and is defined as the disposal of hazardous waste. A generator may not dispose of hazardous waste without first obtaining a permit under RCRA. If disposal has occurred at a generator facility, the generator is in violation of the full set of applicable permit regulations in 40 CFR 264 or 265 and 270.

If a release occurs at your facility on the container or floor, etc., it must be cleaned up immediately. If a discharge occurs, the contingency plan must be immediately implemented, including emergency notification to the Department and other applicable emergency contacts.

Satellite Accumulation Areas
SQG and LQG: 40 CFR 262.15

The purpose of these regulations is to give generators relief from the 180-day (for SQGs) or 90-day (for LQGs) accumulation time limit so partially full containers will not have to be shipped off-site. These regulations are meant for waste streams generated either slowly or in small quantities.

To accumulate waste without a permit for greater than 90-days (for LQGs) or 180-days (for SQGs), all of the following must be met:

- "**Must be in containers":** Hazardous wastes may be accumulated in any type of container as long as it meets the requirements of the container regulations. Tanks, regardless of the size, may not be satellite accumulation areas.
- **Total of 55-gallons**: You may accumulate a total of 55-gallons of non-acute hazardous waste at a satellite accumulation area; not 55-gallons from each waste stream.
- **Limit for Acute Hazardous Waste:** You may accumulate 2.2 pounds of solid acute hazardous waste or 1-quart of liquid acute hazardous waste at a satellite accumulation area.

If you accumulate more than 55-gallons of non-acute hazardous waste at a satellite accumulation area (or more than 2.2 pounds of solid or 1 quart of liquid acute hazardous waste), the excess amount must be marked/labeled with the date the excess began accumulating. You have three calendar days to either remove the amount in excess or comply with all of the central accumulation area regulations. If the exceedance is not removed within three days, the area then becomes a central accumulation area and must be indicated as such on your contingency plan and inspected weekly.

- "**At or near the point of generation and under the control of the operator":** To meet the definition of less than 55-gallons of non-acute hazardous waste (or 2.2 pounds of solid or 1 quart of liquid acute hazardous waste), many generators attempt to separate the containers of waste. The requirement of "at or near the point of generation" and "under the control of the operator" must be met. "At or near" is deliberately vague to allow for a variety of manufacturing processes. If you are unclear on what would be considered a satellite accumulation area as defined by the rules, contact your Environmental Specialist. You may not have containers placed at random locations in the facility, in areas of high hazard, or out of plain view. Usually, designated satellite accumulation areas are established by agreement between the inspector and the facility.
- **Labeled**: Containers at satellite accumulation areas must be labeled with the words "Hazardous Waste" and an indication of the hazards of the waste in the container.

- **Closed**: The containers must be closed except when adding, removing, or consolidating wastes; or when temporary venting of a container is necessary for the proper operation of equipment or to prevent dangerous build-up of extreme pressure. Closed means all bungs are closed and lids are secured to ensure that if the container were tipped over, the waste would not spill out.
- **Funnel use in satellite accumulation areas**: Safety funnels may be used in satellite accumulation areas and will meet the definition of "closed" when the following requirements are met:
  1) The funnel is securely fitted to the container (i.e., screwed tightly to the bung opening and the funnel is not damaged); AND
  2) The funnel is fitted with a gasket to firmly seal the funnel lid when closed AND the funnel is fitted with a locking mechanism on the lid and the lid is maintained in the closed position unless necessary to add or remove waste,
     OR
  3) The funnel is fitted with a one-way valve to allow waste to enter the container but prohibits waste/emissions from exiting the container and the lid is maintained in a closed position unless necessary to add or remove waste.
- **Aisle space in satellite accumulation areas**: There must be aisle space adequate to get spill control, fire, and other emergency equipment to each container of waste. (SQG satellite accumulation area aisle space: 40 CFR 262.15(a)(7) reference to 40 CFR 262.16(b)(8)(v); LQG satellite accumulation area aisle space: 40 CFR 262.15(a)(8) reference to 40 CFR 262.255)
- **Emergency Preparedness, Prevention and Emergency Procedures for Satellite Accumulation Areas**:
  - All satellite accumulation areas at the SQG must meet the preparedness and prevention requirements of 40 CFR 262.16(b)(8) and emergency procedures of 40 CFR 262.16(b)(9).
  - All satellite accumulation areas at the LQG must meet the requirements of Preparedness, Prevention and Emergency Procedures in 40 CFR 262 Subpart M.

Containers meeting the satellite accumulation requirements do not have to be dated until greater than 55-gallons of non-acute hazardous waste (or 2.2 pounds of solid or 1 quart of liquid acute hazardous waste) is accumulated. The inspectors will also be checking for the following: the condition of containers; compatibility between waste and container; compliance with emergency preparedness and prevention requirements; housekeeping of the area; and any signs of releases (which includes spills on or around containers) or potential releases of hazardous wastes.

Common violations and problems found at satellite accumulation areas are:

- Not keeping the containers closed;
- Not labeling the containers with the words "Hazardous Waste";
- Not labeling the containers with an indication of the hazards of the contents;
- Not dating the container(s) when accumulating excess of 55-gallons of non-acute hazardous waste, or 2.2 lbs. of solid, or 1 quart of liquid acute hazardous waste;
- Having containers that are in poor condition or with evidence of releases, and
- Placing the containers in high hazard areas or not "at or near the point of generation and under the control of the operator."

Central Accumulation Areas

LQG: 40 CFR 262.17

SQG: 40 CFR 262.16

In this manual, we are discussing areas where hazardous wastes are accumulated for up to 90-days (for LQGs) or up to 180-days (for SQGs) (generator accumulation), not facilities with a permit to store waste (TSD facilities). The generator accumulation regulations are deliberately vague to allow for individual facility variations. The requirements for accumulating waste are listed first in this section. A few of the Section's recommendations are also included.

Requirements for Central Accumulation Areas

- All containers must be marked/labeled with the date when hazardous waste was first placed in that container (or the date the satellite container was filled). These dates must not exceed 90-days (for LQGs) or 180-days (for SQGs) and all dates must be visible for inspection. If you accumulate hazardous waste for more than 90-days (for LQGs) or more than 180-days (for SQGs), your facility is operating as a non-permitted TSD facility.
- All containers must be labeled with the words "Hazardous Waste" and an indication of the hazards of the contents of the container (e.g. ignitable, corrosive, toxic, or reactive). The labels should be visible for inspection.
- All containers must be closed. (If the waste has a VOC concentration > 500 pp, the 40 CFR 265 Subpart CC regulations require all containers are DOT approved for the waste they contain and are closed with bungs, lids, or other closures to be completely tightened. See APPENDIX I - SUBPART AA, BB and CC RULES for more information).
- There must be aisle space adequate to get spill control, fire, and other emergency equipment to each container of waste. In North Carolina, the minimum aisle space is defined as two feet (15A NCAC 13A .0107(a) for SQGs and 15A NCAC 13A .0107(i) for LQGs). There must be enough room to safely inspect all containers and to see all labels/markings.
- Weekly inspections must be conducted (at least every 7 days) and the inspection log maintained on-site;
- The facility must have the required spill and fire control equipment at the central accumulation area. You must also have a device available for summoning outside emergency help at your central accumulation area.
- There are no specific RCRA regulations or restrictions for how high, or in what manner, you accumulate wastes in containers. However, you must operate your facility in a manner to reduce the threat of a hazardous waste release, a fire or explosion (40 CFR 262.16(b)(8)(i) for SQGs and 40 CFR 262.250 for LQGs). This includes eliminating mismanagement practices such as nearby smoking, central accumulation located near heavy traffic, unstable stacking of

containers, etc.

- The containers must be in good condition, which includes: no leaks, not severe rust, no severe dents, no deterioration by other means, and
- If the hazardous waste is ignitable or reactive, "No Smoking" signs must be conspicuously posted, and the waste must be located at least 50 feet from your property line unless a written approval is obtained from the authority having jurisdiction over the local fire code allowing hazardous waste accumulation to occur within this restricted area. The "No Smoking" sign is required even when the site does not permit smoking on the property. A record of the written approval must be maintained as long as ignitable or reactive hazardous waste is accumulated in this area.

Special use of Funnels in the Central Accumulation Areas

When the 40 CFR 265 Subpart CC regulations became applicable to LQGs, the HWS became concerned about the practice of many generators' use of funnels in central accumulation areas to facilitate the accumulation of wastes. Under the Subpart CC regulations, these funnels would not be allowed if the waste contains greater than 500 ppm volatile organic constituents. (Wastes with no VOCs or a VOC concentration less than 500 ppm are not affected by these regulations.) The NC HWS asked EPA Region 4 for an interpretation on this issue. EPA determined that funnels may be used in central accumulation areas for wastes with a VOC concentration of greater than 500 ppm as long as the following conditions are met:

- The funnel is securely fitted to the container (i.e., screwed tightly to the bung opening) AND
- The funnel is fitted with a one-way valve to allow material/ waste to enter the container but prohibits waste/emissions from exiting the container, OR
- The funnel is fitted with a gasket to firmly seal the funnel lid when closed, AND
- The funnel is fitted with a locking mechanism on the lid and the lid is maintained in the closed position unless necessary to add or remove waste. The time limit is 15 minutes between these operations.

If these funnel requirements are not met, the container will be cited as being an open container.

NOTE: If you are required to comply with Subpart CC (waste with VOC concentration > 500 ppm), and you are using a gasket and locking mechanism, the funnel may NOT be vapor tight. The slot for the hinge is usually open and vapors can escape. If you must comply with Subpart CC and you wish to use funnels, you should use a funnel with a one-way valve.

Recommendations for Central Accumulation Areas

To ensure that your wastes are stored safely, the HWS suggests the following:

- Place containers on an impervious surface;
- Post signs indicating that hazardous wastes are stored in that area;
- Secure the area (e.g., fenced and locked);
- Restrict access to only designated people, and
- Dike and cover the central accumulation area.

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

Common central accumulation area violations found during inspections include:

- Dates older than (exceeding) 90-days;
- Inadequate or no aisle space;
- The words "Hazardous Waste" and the indication of the hazards of the contents are not present, or accumulation start dates are not present;
- Labels and dates not visible for inspection;
- Containers not closed properly
- Containers in poor condition and containers with evidence of releases.

Emergency Preparedness and Prevention

SQG: 40 CFR 262.16(b)(8)

LQG: 40 CFR 262.250 – 262.255

The inspectors will review preparedness and prevention measures to ensure the facility has the required procedures and equipment necessary to protect employees and the public if an emergency should occur. These requirements include:

- Ensuring that your business is operated and maintained in a manner that prevents releases of hazardous wastes or their constituents;
- Adequate alarms or procedures must be available to alert facility personnel to evacuate,
- Adequate communications to summon outside emergency assistance;
- Emergency response equipment adequate for your type of waste and the type of emergencies expected;
- Adequate water volume for fire suppression;
- Adequate aisle space between containers of waste to allow access to the containers;
- Employees must have immediate access to an alarm or a communication device when mixing or pouring hazardous waste;

- All emergency equipment must be tested and maintained to ensure that it is functioning in the event of an emergency, and
- Arrangements must be made with local emergency responders (police, sheriff, fire and other emergency response agencies) and local hospitals. These arrangements must include information on the types and quantities of hazardous wastes handled at the facility with the associated properties, the layouts of the facility, the places personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes as well as injuries and illnesses that could result from fires, explosions, or releases at the facility. These coordination agreements must be documented, and the documentation kept on-site. To ensure that you have adequate documentation on-site, we suggest you send all correspondence by certified mail, return-receipt. Some local emergency authorities are accepting emergency arrangements via electronic filing (e.g., E-Plan). If your local emergency authority prefers to have arrangements made electronically, check with your Environmental Specialist to ensure this will be adequate to meet the requirements. (See the Arrangements with Local Authorities. Section in the Paperwork Review).

When any of the procedures or items listed above are not used, a detailed explanation must be given as to why it is not needed.

Raw Product Storage Areas and General Facility Condition

SQG: 40 CFR 262.16(b)(8)(i)

LQG: 40 CFR 262.250

Areas where raw products are stored at the facility will be evaluated by the inspectors to determine if any releases of these materials have occurred. Often these materials can be classified as hazardous wastes when released and must be handled appropriately. For the same reason, we will also check the condition of work areas where chemicals are used and areas outside the facility.

Other RCRA Units

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

Used Oil
40 CFR 279

If used oil is generated at the facility, areas where used oil is generated and stored will be reviewed during the inspection. A summary of the used oil requirements can be found in Appendix G of this manual.

Universal Waste
40 CFR 273

If universal waste is handled at the facility, the universal waste will be reviewed during the inspection. A summary of the universal waste requirements can be found in Appendix H of this manual.

Other Regulations

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

Exit Interview

When inspectors finish the inspection, they will review their findings with you. They will always let you know at the end of the inspection of any violations or potential violations found. You will receive a report of the inspection, either at the end of the inspection or by mail, shortly after the inspection occurs.

ENFORCEMENT ACTIONS FOR HAZARDOUS WASTE VIOLATIONS

This section describes the enforcement tools used by the HWS when violations of the regulations are discovered at a facility. These enforcement documents are intended to ensure that facilities are notified of the violations found and what actions are they required to take to come into compliance with the regulations. Some enforcement documents are intended to ensure an "even playing field" between those facilities that are in compliance with the regulations and those that are not. The Section achieves this by assessing penalties to those facilities that are economically benefiting from being out of compliance.

If violations are found or you receive an enforcement document after an inspection, make the corrections necessary to come into compliance before the follow-up inspection date shown in the enforcement action. If you have questions about what is required, ask the inspector before the follow-up inspection date. Follow-up inspections are conducted for all enforcement actions.

Technical Assistance Recommendations

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

U.S. EPA Region 4 Hazardous Waste Enforcement Policy

The HWS uses the U.S. EPA's Region 4 Hazardous Waste Enforcement Policy to provide consistent enforcement and determination of the severity of RCRA violations. Under this policy there are two categories of facilities that have violations. These two categories are Significant Non-Compiler (SNC) and Secondary Violators (SV).

Significant Non-Compliers are those facilities that caused actual exposure, or a substantial likelihood of exposure, are chronic or recalcitrant violators, or those that deviate substantially from the terms of a permit, order, agreement, or from RCRA requirements. The determination that a violation causes a substantial likelihood of exposure depends on the many factors. They include the type and severity of the violation, the characteristics of the hazardous waste; the receptors involved (e.g., worker or environmental exposure), and the location of the violation (e.g., industrial area or residential area). Facilities are deemed chronic or recalcitrant violators if

the facility has the same violation over a period of years. This could include the same company operating in different locations that all have the same violation in the past. This indicates corporate non-compliance. Record reviews can be conducted to determine multiple violations of other environmental areas, such as recurring air and water regulation violations. The determination of "substantial deviation from the requirements" does not have a strict definition or limits. It must be interpreted in the terms of each situation. Any violation that causes exposures or severe potential exposures is especially considered in this category. If a violator is determined to be a SNC, a Compliance Order with penalty is issued to the facility.

Secondary Violators are those that do not meet the above category as a SNC. These can be first time violators with no history of recalcitrance, facilities with violations that may be corrected easily and quickly, and violations that pose no actual or a low threat to human health or the environment. If a violator is determined to be a SV, a Notice of Deficiency or a Notice of Violation is issued to the facility.

Notices of Deficiency (NOD)

In October of 2011, to be consistent with the Departments three-tiered approach to enforcement, the HWS added a new type of enforcement document. The Notice of Deficiency (NOD) was developed, which is an enforcement document for minor violations that result in little or no harm to human health or the environment. The violation must be "of minor gravity and duration" and not been committed willfully or intentionally. The HWS typically issues a NOD for first time violators, if the conditions above are met. Previously, the NOV was used for this purpose.

Notices of Violation (NOV)

Notices of Violation are issued to businesses that are in violation of the regulations that exceed the conditions for a NOD. There are no penalties associated with the NOV. There is one exception to this, if the NOV cites Rule 15A NCAC 13A .0109 (Storing, disposing or treating of hazardous waste without a permit), the facility will be charged the fee of $1,680 for operating as a TSD facility. There are three types of NOVs issued:

- **Ticket NOVs** are issued by the Environmental Specialist, normally if there are only six or fewer violations. A compliance schedule is indicated, typically for 30 days after the inspection, at the discretion of the inspector.

- **Standard NOVs** are developed by the Environmental Specialist and issued by the HWS Chief usually for facilities with more than six violations, repeat violations, or those that have posed

a significant, potential threat to human health and the environment. Again, a compliance schedule is indicated, usually for 30 days after the NOV.

- **Immediate Action NOVs** are developed by the Environmental Specialist and issued by the HWS Chief for violations that pose potential immediate health or environmental threats. They are used in cases involving management of unknowns, spills that have not been controlled or other situations that can immediately threaten human health or the environment. The compliance schedule will specify steps that must be taken to assess and remediate any environmental contamination

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

Compliance Orders with Administrative Penalty

- **Short form** Orders are issued to facilities that have not complied with a NOV or have not violated the rules in a way that creates an imminent potential threat to human health or the environment. A maximum penalty of $5,000 per violation can be assessed. Examples include violations for record-keeping and minor errors on a manifest or land ban forms, and others.
- **Standard orders** are issued to facilities that have significant violations, have not complied with a NOV, have repeat violations, and/or are cited for a violation that can create an immediate threat to human health or the environment. A maximum penalty of $32,500 per day, per violation, can be assessed. Examples include violations for not having proper waste determinations or treating or disposing of hazardous waste without a permit among others.

Penalties are assessed according to the civil penalty procedures in N.C.G.S. 130A-22(d). They are based on the nature of the violation, the cost of rectifying any damage, and the violator's previous compliance record. The following factors will be considered when assessing penalties: the type of violation and waste involved; the duration of the violation; the cause (whether resulting from negligence, recklessness, intentional act, or omission); the potential effect on human health and the environment; the effectiveness of the responsive measures taken by the violator; damage to private property; the degree and extent of harm caused by the violation; the cost of rectifying any damage; the amount of money the violator saved by noncompliance; and the violator's previous record in complying or not complying with the hazardous waste requirements.

A facility can appeal a Compliance Order by filing an appeal with the Office of Administrative Hearings (OAH) within 30 days of receipt of an order. The HWS will discuss the order with the facility and try to resolve any issue relating to the violations or the penalty. If the differences cannot be resolved, the HWS is represented at the hearing by the Attorney General's staff.

The department posts on their web site information on all penalties assessed. The data identifies the facility, summarizes the violations found and the total penalty assessed. This information is available for the media and citizens to review.

Other Enforcement Actions

- **A Consent Order** is entered into by both the division and a facility based on a resolution to an order or it can also result from the voluntary action of a facility identifying a problem and proposing a remedy to the situation. Typically, a stipulated penalty is included.
- **A Civil Injunction** may be obtained by the HWS to immediately address a violation of the rules. This action may be used if a facility fails to respond to earlier enforcement actions or if human health or the environment is immediately threatened.
- **Criminal Investigations** are conducted on those facilities that knowingly and willingly violate the rules. These investigations may be conducted in cooperation with the State and/or Federal Bureau(s) of Investigation or EPA criminal investigation teams. Other environmental agencies such as air and/or water quality may also be involved as multimedia cases.

Self-Confessor Policy

The Department established an enforcement penalty policy ("Enforcement Policy for Self-Reported Violations" which the HWS often refers to as the "Self Confessor Policy") for self-reported violations on September 1, 1995 and subsequently revised the policy on July 10, 2000. The Self Confessor Policy describes five conditions a facility must meet in order to be considered for a penalty waiver. A facility wishing to use the Self Confessor Policy, must submit, in writing, information on how all five conditions are met in order to be considered for a penalty waiver. If a company meets the five conditions set forth in the policy, the Department will not seek administrative or civil penalties beyond the economic benefit the company received by non-compliance. When any or all of the five conditions are not met, the Department may consider the nature and extent of any audit or compliance system in deciding the appropriate enforcement response. The Department may elect to mitigate civil penalties if one or more of the conditions have been met. The current policy for the HWS is on the following pages.

During the 2015 session, the General Assembly enacted legislation establishing an

"Environmental Audit Privilege and Limited Immunity program." This legislation was codified in the N.C.G.S. at Chapter 8 Articles 58.50 through 63. This legislation replaced the "Enforcement Policy for Self-Reported Violations" (revised July 10, 2000) for all programs in NCDEQ **except** for those NCDEQ Divisions/Sections that administer federal programs. The HWS administers the federal RCRA hazardous waste management program in lieu of EPA. For any NCDEQ Divisions/Sections that administer federal programs, the 2015 audit policy is effective on the date approval is received by EPA. To date the 2015 Audit Policy has not been reviewed by EPA. Which means that the July 2000 Enforcement Policy for Self-Reported Violations (or Self Confessor Policy) is still in effect for the HWS.

NCDEQ Enforcement Policy for Self-Reported Violations

Eff. Date: Sept 1, 1995
Revised: July 10, 2000

Background

The former Department of Environment, Health, and Natural Resources (DEHNR), now the Department of Environment and Natural Resources (DENR), issued a policy statement, effective September 1, 1995, with the intent of enhancing environmental self-regulation and at the recommendation of the Pollution Prevention Advisory Committee.

This statement is not intended nor, should it be interpreted to be a rule as defined in the Administrative Procedures Act. It is a non-binding interpretive statement within the delegated enforcement authority of the Department that also sets forth criteria and guidelines to be used by the Department staff in settlement of enforcement cases. It does not confer any legal rights. This policy does not apply to resource damage assessments, costs associated with clean-up efforts, or costs incurred in response to an environmental emergency. The Department intends to evaluate result of its use over the year following adoption.

Purpose

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

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

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

Policy

A. Conditions for penalty waiver

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

1. The deficiency was not due to a lack of good faith efforts to understand or comply with applicable environmental, health or safety laws, or a lack of good faith efforts to correct past deficiencies.
2. The deficiency was not done knowingly and willfully.
3. The deficiency did not cause a significant harm to the environment or risk to public health.
4. The regulated person or entity voluntarily and promptly notifies the Department of the deficiency before the Department learns of it and completely discloses the deficiency to the Department in writing. (A disclosure is not considered to be "voluntary" if (i) that disclosure is required by law, regulation or permit and if (ii) self-monitoring for such deficiency is required of a facility or part of a facility),
5. The regulated person or entity, upon discovery of the deficiency, takes immediate and effective action under appropriate technical supervision to cease or remediate any continuing violation, avoid repeated violations, and remediate the deficiency or where appropriate, agrees in writing with the Department to take those steps needed to address the deficiency in a manner that is acceptable to the Department.

B. Conditions for penalty reduction

In those cases, where any of the above conditions have hot been met, the Department may consider the nature and extent of any internal audit or compliance system in deciding the appropriate enforcement response and may elect to mitigate any civil penalties based on a showing that one or more conditions have been met.

C. Recovery of economic benefit

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

D. Burden of persuasion; documentation

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

APPENDIX A - LIST OF ACRONYMS, ABBREVIATIONS AND USEFUL DEFINITIONS

Acute Hazardous Waste – Hazardous wastes have been listed in accordance with the criteria of 40 CFR 262.11(a)(2) are considered "Acute Hazardous Waste". Acute hazardous wastes are either listed in 40 CFR 261.31 (F-listed wastes) with the assigned hazard code of (H) [dioxin-bearing waste - i.e., F020, F021, F023, F026 and F027] or are listed in 40 CFR 261.33(e) (P-listed wastes).

"At or Near" - This phrase is used in 40 CFR 262.15(a). "A generator may accumulate... hazardous waste... in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste..." At or near means that the containers are in the area where the waste is generated; not outside the building or room where the waste is generated, and that the supervisor of the generating process can see the containers in the course of performing his or her job.

AHJ – Authority Having Jurisdiction

Biennial Report – Large quantity generators are required to submit a report every two years regarding the nature, quantities and disposition of hazardous waste generated at their facility. This report is reference to as the National Biennial RCRA Hazardous Waste Report or Biennial Report. The report is due March 1 of every even numbered year summarizing the previous year.

CAA - Clean Air Act

CAA – Central Accumulation Area (previously known as the 90-day or 180-day storage area)

CEI - Compliance Evaluation Inspection

CFC - Chlorofluorocarbon

CFR - Code of Federal Regulations

Closed Container - Containers are required to be closed during accumulation in a central accumulation area (40 CFR 262.16(b)(2)(iii) for SQGs and 40 CFR 262.17(a)(iv) for LQGs) and while in satellite accumulation areas except when it is necessary to add or remove waste (40 CFR 262.15(a)(4)). A satellite accumulation container may also be open when temporary venting of a container is necessary for the proper operation of equipment or to prevent dangerous situations such as build-up of extreme pressure. As a rule of thumb, a closed container is leak proof and vapor tight.

"Contained In" - Contaminated environmental media must be managed as if they were hazardous wastes until media no longer contains the listed waste, or no longer exhibits a characteristic.

Container Any portable device into which waste is placed for storage, transportation, treatment, disposal, or other handling, and includes the first enclosure which encompasses the waste.

(N.C.G.S. 130A-295.03)

CWA - Clean Water Act

DEACS – Division of Environmental Assistance and Customer Service

Department - Department of Environmental Quality or **DEQ**

D list (D waste) – This is a waste that exhibits a characteristic of hazardous waste.

Discharge or Hazardous Waste Discharge - The accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous waste onto any land or water.

Disposal - The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwater.

Division – Division of Waste Management or **DWM**

DOT - Department of Transportation

DWR – North Carolina Division of Water Resources

Empty Container - The definition of an empty container is found at 40 CFR 261.7(b), which reads as follows:

(1) A container or an inner liner that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in 40 CFR 261.31, 261.32, or 261.33(e) of this chapter is empty if:
   - (i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, <u>and</u>
   - (ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, <u>or</u>
   - (iii) (A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or
     - (B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric pressure.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in Sections 261.31, 261.32, or 261.33(e) is empty if:
   - (i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
   - (ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
   - (iii) In the case of a container, the inner liner that prevented contact of the commercial

chemical product or manufacturing intermediate with the container, has been removed.

EPA - Environmental Protection Agency

Episodic Event - Episodic event means an activity or activities, either planned or unplanned, that does not normally occur during generator operations, resulting in an increase in the generation of hazardous wastes that exceeds the calendar month quantity limits for the generator's usual category. See also: Planned Episodic Event and Unplanned Episodic Event.

Equipment - Any valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or control device or system.

Facility - All contiguous land, structures, other appurtenances and improvements on the land used for generating, treating, storing or disposing of hazardous waste.

FBI - Federal Bureau of Investigation

FIFRA – Federal Insecticide, Fungicide and Rodenticide Act

F list (F waste) - The F-list, found at 40 CFR section 261.31, identifies wastes from common manufacturing and industrial processes as hazardous. Because the processes generating these wastes can occur in different sectors of industry, the F list wastes are known as wastes from non-specific sources. They can be divided into seven groups depending on the type of manufacturing or industrial operation that creates them: spent solvent wastes, electroplating and other metal finishing wastes, dioxin-bearing wastes, chlorinated aliphatic hydrocarbons production, wood preserving wastes, petroleum refinery wastewater treatment sludge, and multisource leachate.

FR – Federal Register

Generator - Any owner or operator who first creates a hazardous waste or any person who first makes the waste subject to the RCRA Subtitle C regulations.

Groundwater – The water occurring in the subsurface under saturated conditions.

Hazardous Waste (40 CFR 261.3) – Basically defined as waste that because of its quantity, concentration or physical, chemical or infectious characteristics may cause or significantly contribute to an increase in mortality or serious illness or pose a substantial present or potential hazard to human health or the environment when improperly managed.

Hazardous Waste Code – The numbers assigned by EPA to each hazardous waste listed in 40 CFR 261 Subpart D, and to each characteristic waste identified in 40 CFR 261 Subpart C.

HSWA - Hazardous and Solid Waste Amendments

HW – Hazardous Waste

HWGIR – Hazardous Waste Generator Improvements Rule

HWS - Hazardous Waste Section

ID Number - Identification Number, typically refers to EPA Identification number for a facility.

Impervious - The term used in the regulations to refer to floors and vaults near hazardous waste tanks. Concrete is not an impervious material, and requires coating, usually of a chemically resistant epoxy material, to be considered impervious.

K list (K waste) - The K-list identifies hazardous wastes from specific sectors of industry and manufacturing and are considered source-specific wastes. To qualify as a K-listed hazardous waste, a waste must fit into one of the 13 categories on the list and the waste must match one of the detailed K list waste descriptions in 40 CFR 261.32. The 13 industries that generate K list wastes are: wood preservation, organic chemicals manufacturing, pesticides manufacturing, petroleum refining, veterinary pharmaceuticals manufacturing, inorganic pigment manufacturing, inorganic chemicals manufacturing, explosives manufacturing, iron and steel production, primary aluminum production, secondary lead processing, ink formulation, and coking (processing of coal to produce coke).

Lab Pack Wastes – A lab pack waste is an over pack container, usually a steel or fiber drum, and containing small quantities of chemicals of the same hazard class, packed with vermiculite or some other absorptive material.

LCM - Lights Containing Mercury

LEPC – Local Emergency Planning Committee

LDR – Land disposal restrictions, also known as "land ban".

Liquid - A hazardous waste is considered a liquid if it does not pass the Paint Filter Liquids Test (Method 9095B) as described in EPA Publication No. SW-846, *Test Methods for Evaluating Solid Wastes. Physical/Chemical Methods*.

LQG - Large Quantity Generator

LQHUW - Large Quantity Handler of Universal Waste

Manifest – The shipping document, EPA form 8700-22, used for identifying the quantity, composition, origin, routing and designation of hazardous waste during its transportation from the point of generation to the point of treatment, storage or disposal.

NCAC – North Carolina Administrative Code

NOD – Notice of Deficiency

NOV - Notice of Violation

OAH - Office of Administrative Hearings

Onsite - Means the same or geographically contiguous property. The property may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads or intersection, and access is by crossing as opposed to going along the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way that the person controls and to which the public does not have access, is also considered onsite property.

Operator - The person responsible for the overall operation of a facility.

Owner - The person who owns a facility or part of a facility.

OSHA - Occupational Safety and Health Administration

PBT – Persistent Bio Accumulative Toxin

Person - Is an individual, corporation, company, association, partnership, or unit of local government, State agency, federal agency, or other legal entity.

Planned Episodic Event - Planned episodic event means an episodic event that the generator planned and prepared for, including regular maintenance, tank cleanouts, short-term projects, and removal of excess chemical inventory

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

POTW - Publicly Owned Treatment Works

Process Vent - Any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or a tank associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping.

RCRA - Resource Conservation and Recovery Act

SAA – Satellite Accumulation Area

SBI - State Bureau of Investigation

SDS - Safety Data Sheet (previously known as Material Safety Data Sheet or MSDS)

Sham Recycling – A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in 260.43.

SNC – Significant Non-complier

Solid Waste – As defined by RCRA, the term "solid waste" means any garbage, refuse or sludge from a waste treatment plan, water supply treatment plant or air pollution control facility and other discarded material including solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, agricultural operations and from community activities.

Spill – A release.

SQG - Small Quantity Generator

SQHUW - Small Quantity Handler of Universal Waste

Storage - The containment of solid waste, either on a temporary basis or for a period of years, in a manner that does not constitute disposal. (N.C.G.S. 130A-290(a)(41)

Surface Impoundment - A facility or part of a facility which is a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials which is designated to hold an accumulation of liquid wastes or wastes containing free liquids and which is not an injection well. A sump is considered a surface impoundment if it is thought it would not be self-supporting if placed on a flat surface. See entry under "Tank."

Tank - A stationary device designed to contain an accumulation of hazardous waste and that is constructed primarily of non-earthen material that provides structural support. Sumps are considered tanks under RCRA if it is thought that the sump would be self-supporting if placed on a flat surface. See entry under "Surface Impoundment."

TC - Toxicity Characteristic

TCLP - Toxicity Characteristic Leaching Procedure

TSCA – Toxic Substances Control Act

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

Tolling Arrangement – A tolling arrangement describes a particular type of recycling contract between two companies. Specifically, the 'tolling' company certifies that it has a contract with a manufacturer to produce a product, and that manufacturing process generates a residual material that can be recycled by the tolling company. If the tolling company certifies that the contract specifies that the tolling company owns and has responsibility for the recyclable material once it is generated, and the material is returned to the tolling company for reclamation, and subsequently recycled, the material is excluded from regulation (under 40 CFR 261.2(a)(2)(ii) or 261.4(a)(23)), provided certain requirements are met. "Tolling arrangement" is also used in the 40 CFR 279.24(c) regulations when referring to off-site shipments of used oil.

Transfer Facility - Any transportation-related facility, including loading docks, parking areas, storage areas and other similar areas, where shipments of hazardous waste are held during the

normal course of transportation.

Treatment - Any method, technique or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to: neutralize it or render it nonhazardous or less hazardous; to recover it; make it safer to transport, store or dispose of; or amenable for recovery, storage or volume reduction. "Treatment" includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it non-hazardous.

U list (U waste) - Listed hazardous wastes from discarded commercial chemical products or are off-specification materials. The U-list wastes can be found at 40 CFR 261.33.

Universal Waste – Universal waste means any of the following hazardous wastes that are managed under the universal waste requirements of 40 CFR 273:

(1) Batteries as described in 40 CFR 273.2;
(2) Pesticides as described in 40 CFR 273.3;
(3) Mercury-containing equipment as described in 40 CFR 273.4; and
(4) Lamps as described in 40 CFR 273.5
(5) Aerosol Cans as described on 40 CFR 273.6

Unplanned Episodic Event - Unplanned episodic event means an episodic event that the generator did not plan or reasonably did not expect to occur, including production process upsets, product recalls, accidental spills, or "acts of nature," such as tornado, hurricane, or flood.

UST – Underground Storage Tank

Used Oil - Any oil which has been refined from crude oil or any synthetic oil, and as a result of use, storage, or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and is economically recyclable. (N.C.G.S. 130A-290(b)(5))

VOC - Volatile Organic Compound

VSQG - Very Small Quantity Generator

Waste Pile - An accumulation of solid hazardous waste managed in a pile. Requires a hazardous waste permit and must comply with Subpart L of 40 CFR 264.

Waste Oil – This term is not synonymous with the term "Used Oil." The term waste oil is applied to oils that do not meet the criteria to be considered used oil (e.g., they are disposed of instead of recycled or have not been used) or waste oils may have been determined to be non-hazardous. Waste oils or oily wastes include bottom clean out waste from virgin fuel storage tanks, virgin oil spill cleanup or other oil waste that has not been used.

APPENDIX B - USEFUL AGENCY NAMES AND NUMBERS

Air Quality
NCDEQ Division of Air Quality
919-707-8400
https://deq.nc.gov/about/divisions/air-quality

Asbestos
NC Department of Health and Human Services
Occupational and Environmental Epidemiology
919-707-5950
http://epi.publichealth.nc.gov/asbestos/ahmp.html

Customer Service Center (NCDEQ)
NCDEQ Division of Environmental Assistance and Customer Service
1-877-623-6748
http://deq.nc.gov/about/divisions/environmental-assistance-customer-service

Drinking Water
NCDEQ Division of Water Resources, Public Water Supply
919-707-9100
https://deq.nc.gov/about/divisions/water-resources/drinking-water

NC Department of Health and Human Services
Environmental Health Section
919-707-5854
http://ehs.ncpublichealth.com/

Safe Drinking Water Hotline (EPA)
1-800-426-4791
http://www.epa.gov/safewater/

Environmental Emergencies (24 hour)
NC Department of Public Safety, Emergency Management
1-800-858-0368

Environmental Crimes
NC State Bureau of Investigation
919-662-4500
http://www.ncsbi.gov/Divisions/Field-Operations/Diversion-and-Environmental-Crimes.aspx

EPA Criminal Investigation Division
https://www.epa.gov/enforcement/criminal-enforcement-special-agents

Environmental Education
NCDEQ, Office of Environmental Education and Public Affairs
919-707-8125
http://www.eenorthcarolina.org/

Federal Registers

US Government Publishing Office Bookstore (printed copies)
866-512-1800
https://bookstore.gpo.gov/catalog/code-federal-regulations-cfrs-print

US Government Publishing Office (on-line)
202-512-1800
https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR

Fluorescent Lights

EPA Energy Star
https://www.energystar.gov/

Freon

NCDEQ Division of Air Quality
919-707-8400
https://deq.nc.gov/about/divisions/air-quality

Groundwater

NCDEQ Division of Water Resources
919-707-9000
http://deq.nc.gov/about/divisions/water-resources

Hazardous Waste

NCDEQ Hazardous Waste Section
919-707-8200
http://deq.nc.gov/about/divisions/waste-management/hazardous-waste-section

Household Hazardous Waste

NCDEQ Solid Waste Section
(919) 707-8200
http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/solid-waste-section/household-hazardous-waste

Lead Abatement

NC Department of Health and Human Services
Occupational and Environmental Epidemiology
919-707-5950
http://www.epi.state.nc.us/epi/lead.html

Medical Waste

NCDEQ Solid Waste Section
919-707-8200
http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/solid-waste-section/medical-waste

NC Cooperative Extension Service

NCSU
919-515-2813
http://www.ces.ncsu.edu/

OSHA Assistance

NC Department of Labor
800-NCLABOR
http://www.nclabor.com/osha/osh.htm

Polychlorinated Biphenyl (PCB)
Toxic Substance Control Act, EPA Region 4
404-562-8512
https://www.epa.gov/pcbs

Pesticides
NC Department of Agriculture and Consumer Services
Structural Pest Control and Pesticides Division
919-733-6100
http://www.ncagr.gov/SPCAP/pesticides/contact.htm

Radioactive Materials
NC Department of Health and Human Services
Radiation Protection Section
919-571-4141
http://www.ncradiation.net/

Run-off / Stormwater
NCDEQ Division of Energy, Mineral, and Land Resources – Stormwater Section
919-807-6300
https://deq.nc.gov/about/divisions/energy-mineral-land-resources/stormwater

Solid Waste Disposal and Landfills
NCDEQ Solid Waste Section
919-707-8200
http://deq.nc.gov/about/divisions/waste-management/solid-waste-section

Transportation of Hazardous Materials
NC Division of Motor Vehicles
919-715-7000
https://www.ncdot.gov/dmv/contact/

NC Department of Public Safety, State Highway Patrol
Commercial Motor Vehicle Enforcement
919-715-8683
https://www.ncdps.gov/our-organization/law-enforcement/state-highway-patrol/commercial-motor-vehicle-enforcement

TSCA Hotline
1-202-554-1404
Email: tsca-hotline@epamail.epa.gov

Underground Storage Tanks
NCDEQ Underground Storage Tank (UST) Section
919-707-8171
http://deq.nc.gov/about/divisions/waste-management/underground-storage-tanks-section

Waste Minimization
NCDEQ Division of Environmental Assistance and Customer Service
919-707-8100
http://deq.nc.gov/about/divisions/environmental-assistance-customer-service

APPENDIX C - GUIDANCE DOCUMENTS

Guidance Documents are added and updated on a regular basis and as rules change. The following documents can be found on the HWS webpage at the following link:
http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/hazardous-waste-section-technical-assistance-education-guidance/guidance-documents

Category	Document
Closure / Post Closure	Generator Closure Guidelines for Cleanup of Soil or Debris at Generator Sites Where Groundwater has not been Affected
	Requirements of the Use of Thermal Desorption for Generators Closure
	Guidance on Post-Closure & Corrective Action Financial Assurance
Electronic Waste	Management of Cathode Ray Tubes (CRTs) from Computer Monitors and Televisions
Compliance Manual	Hazardous Waste Generator Compliance Manual
Contained-in Policy	"Contained-in" Policy for Soil Contaminated with Listed Hazardous Waste**. This document has been temporarily removed from the website for review and updates.**
Groundwater Monitoring	North Carolina Hazardous Waste Section Guidelines for Groundwater Monitoring Reports
Hazardous Secondary Material	Template for Documenting Legitimacy Factors for HSM
	Generator Controlled Exclusion for HSM Guidance
	Transfer Based Exclusion for HSM Guidance
Hazardous Waste Generator	Summary of Generator Requirements
	Generator Category Guidance
	Very Small Quantity Generator Checklist
	Small Quantity Generator Checklist
	Large Quantity Generator Checklist
	Generator Improvements Rule Crosswalk
	Federal and State Rule Crosswalk
	Waste Determination and Category Determination – Comparison of Old and New Requirements
	Subpart M – Comparison of Old and New Requirements for Large Quantity Generator Emergency Preparedness and Prevention
	Emergency Arrangements – Comparison of Old and New Requirements for Small and Large Quantity Generators
	Satellite Accumulation – Comparison of Old and New Requirements for Small and Large Quantity Generators
	Subpart K – Comparison of Old and New Requirements for Academic Laboratories
	Other Changes – Comparison of Old and New Requirements
	Episodic Generator Guidance
	Consolidation Provision Guidance
	Example Small and Large Quantity Generator Emergency Arrangement Letters
	Container Marking/Labeling Guidance for Indication of Hazards

Category	Document
Land Use Restrictions	Instructions for Preparing a Notice of Contaminated Site for Hazardous Waste / Solid Waste Management Unit Disposal Site for Recordation
Lead Waste	Sandblasting of Lead Based Paint
	Flowchart on Lead Waste Identification and Disposal
	Lead Scrap Metal
Remediation	North Carolina Hazardous Waste Section Guidelines for Establishing Remediation Goals at RCRA Hazardous Waste Sites, December 2013
	Inactive Hazardous Sites Branch Preliminary Soil Remediation Goals (PSRG) Table
	Establishing Groundwater Protection Standards in RCRA Permits per 264.92 and 264.94
	DWM Residential Vapor Intrusion Screening Levels
	DWM Non-residential vapor Intrusion Screening Levels
	Guidance on Developing a Monitored Natural Attenuation Remedial Proposal for Chlorinated Organics in Ground Water
	Persistent, Bio accumulative and Toxic Chemical Fact-sheet
Risk Assessment	North Carolina Protocol for Performing Indirect Exposure Risk Assessments for Hazardous Waste Combustion Units, January 1997.
	North Carolina Protocol for Performing Indirect Exposure Risk Assessments for Hazardous Waste Combustion Units, January 1997. Appendices
Subpart K – Hazardous Waste Management at Academic Laboratories	Subpart K Presentation
	Subpart K – Comparison of Old and New Requirements for Academic Laboratories
	Subpart K Guidance
Universal Waste	Fluorescent Lights Guidelines – DPPEA
	Lights Containing Mercury (LCMs) - Frequently Asked Questions
	Universal Waste Management
	What Never to Do with a Mercury Spill (CFLs & more)
	Spent Lead Acid Battery Management
Used Oil	Used Motor Oil Guidance
Wipes	Guidance on Handling Contaminated Wipes
	Solvent-Contaminated Wipes Rule (link to EPA website for more information)
Wood Treating	CCA Wood Treating Plant Conversion to non-CCA

APPENDIX D - TANK REGULATIONS

A tank is defined in 40 CFR 260.10 as "a stationary device, designed to contain an accumulation of hazardous waste, which is constructed, primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide support." A tank system is defined in 40 CFR 260.10 as "a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system." If your facility uses a tank or tank system to accumulate hazardous waste(s), you must comply with 40 CFR 262.16(b)(3) (for SQGs) or 40 CFR 262.17(a)(2) (for LQGs). The requirements for SQG Accumulation Requirements for Tanks are described below. The requirements for LQG Accumulation Requirements for Tanks are on subsequent pages in this Appendix.

SQG Accumulation Requirements for Tanks

40 CFR 262.16(b)(3)

General Operating Conditions

40 CFR 262.16(b)(3)(ii)

Controls and practices must be employed to prevent spills and overflows from the tank and the secondary containment. These include, at a minimum: spill prevention controls, overfill prevention controls and the maintenance of sufficient freeboard on uncovered tanks to prevent releases. Hazardous wastes or treatment reagents that could cause the tank to corrode, rupture or otherwise fail must not be placed into a tank. Uncovered tanks must be operated to ensure at least 2 feet of freeboard unless the tank is equipped with a containment structure, a drainage control system, or a diversion structure with a capacity that equals or exceeds the volume of the top 2 feet of 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 cutoff system or by-pass system to a stand-by tank). The treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not create a hazard or threaten human health, or the environment as described in 40 CFR 265.17(b).

Required Inspections

40 CFR 262.16(b)(3)(iii) and (iv)

A SQG must inspect at least once each operating day, where present:

- Discharge control equipment (*e.g.*, waste feed cutoff systems, by-pass systems, and drainage systems) to ensure that it is in good working order;
- Data gathered from monitoring equipment (*e.g.*, pressure and temperature gauges) to ensure that the tank is being operated according to its design;
- The level of waste in the tank to ensure uncovered tanks have at least 2 feet of freeboard.

Alternative Inspection Schedule: Tanks or tank systems that have full secondary containment and that either use leak detection equipment to alert personnel to leaks or implement established

workplace practices to ensure leaks are promptly identified, must inspect at least weekly. Use of the alternate inspection schedule must be documented in the generator's operating record. This documentation must include a description of the established workplace practices at the generator.

At least weekly, the following must be inspected:

- The construction materials of the tank to detect corrosion or leaking of fixtures or seams; and
- The construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes) to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).
  - The generator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

Closure
40 CFR 262.16(b)(3)(vi)

Upon closure of the facility, the SQG must removal all hazardous waste from the tanks, discharge control equipment, and discharge confinement structures. Unless the SQG can demonstrate that any solid waste removed from its tank is not a hazardous waste, then it must manage the waste by the applicable hazardous waste provisions of 40 CFR 262, 263, 265, and 268.

Accumulation of Ignitable, Reactive Waste, and Incompatible Wastes
40 CFR 262.16(b)(3)(vii)

Reactive and ignitable wastes may not be placed into a tank unless certain provisions are met or if the tank is used solely for emergencies. These wastes must be treated, rendered, or mixed before or immediately after placement in a tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste. The waste must be accumulated or treated in a such a way that it is protected from any material or conditions that may cause the waste to ignite or react. An SQG that treats or accumulates ignitable or reactive waste in covered tanks must comply with the buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981) (incorporated by reference, see 40 CFR 260.11).

Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank or in an unwashed tank that previously held an incompatible waste or material.

Labeling and Marking
40 CFR 262.16(b)(6)(ii)

Tanks must be marked or labeled with the words "Hazardous Waste" and an indication of the hazards of the contents of the containers. The tank must not hold the waste for more than 180-days or the facility becomes a storage facility subject to the requirements in 40 CFR 264 and 265 and the permit requirements in 40 CFR 270 (40 CFR 262.16(b)). An inventory log, monitoring equipment, or other records may be used to demonstrate the hazardous waste has been emptied within 180 days of first entering the tank if using a batch process, or in the case of a tank with continuous flow process, demonstrate that estimated volumes of hazardous waste entering the tank daily exit the tank within 180 days of first entering the tank. Inventory logs must be maintained on site and readily available for inspection.

LQG Accumulation Requirements for Tanks
40 CFR 262.17(a)(2) reference to 40 CFR 265 Subpart J, AA, BB, CC

If the hazardous waste is placed in tanks, the large quantity generator must comply with the applicable requirements of subparts J, except 40 CFR 265.197(c) of Closure and post-closure care and 40 CFR 265.200 - Waste analysis and trial tests, as well as the applicable requirements of AA, BB, and CC of 40 CFR part 265.

Assessment of Integrity
40 CFR 265.191 and 265.192

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

Containment and Detection of Releases
40 CFR 265.193

To prevent releases of hazardous wastes to the environment, secondary containment must be provided for all new tank systems prior to their being put into service. All tank systems must have secondary containment except tank systems that store waste that contains no free-liquids and are inside a building with an impermeable floor (40 CFR 265.190).

The secondary containment must be capable of collecting and detecting releases and accumulated liquids. It must also ensure that releases are prevented from entering the environment. It must

include one (or more) of the following devices: a liner, a vault or a double-walled tank. It must be provided with leak detection equipment. Detailed specifications for each of these secondary containment devices are outlined in 40 CFR 265.193(e).

All ancillary equipment must also be supplied with secondary containment and leak detection devices. The only exception is certain equipment that is inspected on a daily basis. These exceptions are found in 40 CFR 265.193(f).

General Operating Requirements
40 CFR 265.194

Controls and practices must be employed to prevent spills and overflows from the tank and the secondary containment. These include, at a minimum: spill prevention controls, overfill prevention controls and the maintenance of sufficient freeboard on uncovered tanks to prevent releases. Hazardous wastes that could cause the tank to corrode, rupture or otherwise fail must not be placed into a tank.

Inspections
40 CFR 265.195

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

- Overfill and spill control equipment;
- The above ground portion of the tank looking for releases or corrosion;
- Data gathered from monitoring and leak-detection equipment, and
- The construction materials and the area immediately around the tank to check for evidence or signs of releases of hazardous waste.
- Ancillary equipment must be inspected at least once a week if it is provided with secondary containment. If there is no secondary containment, it must be inspected at least once each operating day.

Response to Leaks or Spills
40 CFR 265.196

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

Closure
40 CFR 265.197 except for 40 CFR 265.197(c)

When a tank system is closed, all waste residues, contaminated containment components, soils, and structures must be collected and managed as hazardous wastes. If all the contaminated soils cannot be removed or decontaminated, the tank must be closed as a landfill and a permit must be obtained to meet all of the closure and post-closure requirements of a landfill outlined in 40 CFR 265.310 and Subparts G and H**.**

Special Requirements for Ignitable, Reactive and Incompatible Wastes
40 CFR 265.198

Reactive and ignitable wastes may not be placed into a tank unless certain provisions are met or if the tank is used solely for emergencies. These wastes must be treated, rendered, or mixed before or immediately after placement in a tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste. The waste must be accumulated or treated in a such a way that it is protected from any material or conditions that may cause the waste to ignite or react. An LQG that treats or accumulates ignitable or reactive waste in covered tanks must comply with the buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981) (incorporated by reference, see 40 CFR 260.11).

Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank or in an unwashed tank that previously held an incompatible waste or material.

Special Requirements for Incompatible Wastes
40 CFR 265.199

Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank or in an unwashed tank that previously held an incompatible waste or material.

Labeling and Marking
40 CFR 262.17(a)(5)(ii)

Tanks must be marked or labeled with the words "Hazardous Waste" and an indication of the hazards of the contents of the containers. If the hazardous waste remains in the tank for more than 90 days, the facility becomes a storage facility subject to the requirements in 40 CFR 264 and 265 and the permit requirements in 40 CFR 270 (40 CFR 262.17(a)). An inventory log, monitoring equipment, or other records may be used to demonstrate the hazardous waste has been emptied within 90 days of first entering the tank if using a batch process, or in the case of a tank with continuous flow process, demonstrate that estimated volumes of hazardous waste entering the tank daily exit the tank within 90 days of first entering the tank. Inventory logs must be maintained on

site and readily available for inspection.

APPENDIX E - CONTAINMENT BUILDINGS

40 CFR 265.1100 - 1102 (Subpart DD)

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

Containment buildings must be specifically engineered and designed to keep wastes from entering the environment while being accumulated depending on the type of waste being stored. The design specifications for these buildings are outlined in 40 CFR 265.1101. Prior to operation, a qualified professional engineer must certify that the building meets those specifications. This certification must be maintained at the facility.

These units must be operated safely. That means not placing any waste into the building that would cause it to fail in any way, taking adequate measures to not track waste out of the building, and controlling fugitive emissions from the building. The building and monitoring equipment must be inspected at least once every seven days. The record of the inspections must be maintained in a log at the facility.

If the containment building fails in any way causing wastes to be released, the impaired portion must be removed from service and promptly repaired. A verbal notice to the HWS must be made within seven days followed by a written notice within 14 days. When repairs are made, a certification must be sent to the HWS by a qualified professional engineer.

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

APPENDIX F - DRIP PADS

SQG 40 CFR 262.16(b)(4) reference 265 Subpart W

LQG 40 CFR 262.17(a)(3) reference 265 Subpart W

Definition

40 CFR 260.10

A drip pad is defined in 40 CFR 260.10 as "an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials. It is designed to convey preservative kickback or drippage from treated wood, precipitation and surface water run-on to an associated collection system at wood preserving facilities."

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

Assessment of Existing Drip Pad Integrity

40 CFR 265.441

A drip pad must be evaluated to determine that it meets all of the requirements of this section. This assessment must be reviewed and certified by a qualified professional engineer. All documentation and certifications must be maintained at the facility.

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

Design and Operating Requirements

40 CFR 265.443

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

The regulations in 40 CFR 265.442(b) require that drip pads have a synthetic liner that will keep the drip pad from leaking over the entire life of the pad. The liner must be chemically resistant to the waste. It must be installed to prevent rupture due to stresses, and to cover the surrounding earth that may contact the waste. A leak detection and collection system must be provided. It must detect

failure or leakage from the drip pad at the earliest possible time and allow for the recovery of leakage.

Management Practices

40 CFR 265.443(c)

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

Drip pads must be cleaned, and waste removed to allow weekly inspections of the integrity of the unit. A log of inspections must be maintained that notes the date and time of each cleaning. The pad must be managed to minimize the tracking of waste from the pad by personnel or equipment. Treated wood must not be removed from the pad until it has stopped dripping. The regulations in 40 CFR 262.16(b)(4) (for SQGs) and 40 CFR 262.17(a)(3) (for LQGs) require that the waste be removed from the drip pad every 90-days (even for SQGs) and a record of each removal is maintained on-site.

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

Inspections

40 CFR 265.444

In addition to the inspection requirements previously discussed, a facility is required to inspect the pad weekly and after storms. Inspections should detect any deterioration, malfunctions or improper operation of the run-on or run-off control systems. The proper functioning of and/or the presence of material in the leak detection systems and the condition of the pad surface must also be checked. During construction, all phases of work must be inspected and certified by a qualified professional engineer.

Closure

40 CFR 265.445

When drip pads are closed, all contaminated residues, components and soil must be managed as hazardous waste. If all the contaminated soils cannot be removed or decontaminated, the drip pad must be closed as a landfill. To do so, you must obtain a permit that meets all of the closure and post-closure requirements for a landfill as outlined in 40 CFR 265.310 and Subparts G and H.

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

The Hazardous Waste Section has a policy detailing the requirements that must be met when "closing" a drip pad when converting to a non-hazardous treatment process. This guidance can be found on the internet at this link:
https://ncdenr.s3.amazonaws.com/s3fs-public/Waste%20Management/DWM/HW/Guidance%20Document%20table%20documents/2014/CCA%20Conversion%20Guidance%20Wood%20Treat%208-19-14.pdf

APPENDIX G - USED OIL REGULATIONS

40 CFR 279 and N.C.G.S 130A-290(b) and 309.15-24

Used oil and the burning of used oil for energy recovery are regulated under federal regulations 40 CFR 279 incorporated by reference at 15A NCAC 13A .0118. The HWS also regulates used oil under state law: N.C.G.S. 130A-290(b) and 309.15-24. These regulations apply in addition to any other regulations affecting used oil management. Some of these other regulations are: underground storage tank regulations, the Clean Water Act, the Oil Pollution Act, and the Spill Prevention Control and Countermeasures Act. You may get information on these regulations from the agencies listed in Appendix B.

Definition of "Used Oil"

N.C.G.S. 130A-290(b)

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

EPA presumes that all waste oil is to be recycled, if possible. For example, burning for energy recovery is considered recycling. If the used oil is to be disposed instead of being recycled, a hazardous waste determination must be made before disposal. All generators and handlers of used oil must meet the requirements listed in this section.

Prohibitions

40 CFR 279.12 and N.C.G.S. 130A-290(b) and N.C.G.S. 130A-309.15

Used oil cannot:

- Be knowingly collected, transported, stored, recycled, used or disposed of in any manner that could endanger the public health or welfare;
- Be discharged into sewers, drainage systems, septic tanks, surface waters or groundwater;
- Be disposed of in landfills;
- Mixed with solid waste that is to be disposed of in landfills;
- Mixed with hazardous substances that cause it to be unsuitable for recycling;
- Be managed in surface impoundments or waste piles unless they have a hazardous waste permit as required under 40 CFR 264 and 270;
- Be used as a dust suppressant, road oiling, weed abatement or other purposes that cause used oil to be released to the environment;
- Be burned for energy recovery in units other than:

- Industrial furnaces,
- Boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products,
- Utility boilers used to produce electric power, steam, or heated or cooled air, and
- Used oil-fired space heaters, if the burner meets the provisions of 40 CFR 279.23.

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

All used oil is classified as either "on-specification" (on-spec) or "off-specification" (off-spec) according to the criteria below. Used oil is considered to be off-spec if it exceeds the following levels:

Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
Flash Point	100 degrees F
Total Halogens	4,000 ppm [2]

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

Mixtures of Used Oil

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

If used oil is mixed with or is part of a solid waste (as in oil filters), all free-flowing used oil must be removed. If all visible signs of free-flowing used oil are gone, the material is regulated as solid waste. However, it is regulated under 40 CFR 279 before the separation. If these materials are to be burned, all of the burner regulations apply, even if all of the oil is removed. For information specific to oil filters, see the Management of Used Oil Filters section in this Appendix.

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

Disposal of Waste Oil

Placement of used oil onto the ground in any manner, is considered disposal. If used oil is disposed instead of being recycled, a hazardous waste determination is required to prove that it is not a hazardous waste. For more details, see the Prohibitions section in this Appendix. Used oil that exhibits the characteristic of a hazardous waste must be managed as a hazardous waste when disposed. Any liquid, including used oil, is banned from being disposed of in a Municipal landfill.

Standards for Used Oil Generators

40 CFR 279.20 – 279.24

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

Storage

40 CFR 279.22

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

If a container or tank holding used oil leaks, the generator must, at a minimum, stop and contain the release. Any contaminated material generated from the clean-up of the release must be properly managed, and any damage must be repaired to prevent further releases. We recommended that secondary containment is provided for both tanks and containers that store used oil to prevent accidental releases.

On-site Burning in Space Heaters

40 CFR 279.23

A used oil generator may burn used oil in space heaters provided the following conditions are met:

- The heater must burn only used oil that the facility generates, or used oil received from household do-it-yourself generators.
- The heater must also be designed to have no more than 0.5 million Btu per hour; and
- The gasses must be vented to the ambient air.

This type of activity does not classify the used oil generator as a used oil burner.

Off-site Shipments

Used oil generators may use their own vehicle to transport up to 55-gallons of their own used oil to an approved collection center. If more than 55-gallons is transported, the generator must obtain a used oil transporter EPA ID number. Used oil may also be transported without an ID number if the used oil is reclaimed under a contractual tolling agreement, and the reclaimed oil is returned to the generator. If either of these two exemptions is not met, the used oil generator must ensure that the used oil is transported exclusively by transporters with an EPA identification number.

A used oil generator is not required to notify the HWS of used oil activities or get an EPA ID number unless the generator is the first to claim "on-spec" used oil. This is true whether the used oil is burned for energy recovery on-site or off-site.

Used oil generators who burn "off-spec" used oil (not including burning in on-site space heaters) must also comply with the standards for burners. If the used oil is sent directly to a burner, then the generator must comply with the used oil marketer regulations. For more information, see the Used Oil Regulations for Other Management Practices section, below.

Used Oil Regulations for Other Management Practices

There are specific regulations for used oil collection facilities, transporters, burners, marketers, and processors that have not been discussed in this manual. The applicable regulations are found at the following regulatory citations: Used Oil Collection Centers: 40 CFR 279.30 – 279.32, Used Oil Transporters and Transfer Facilities: CFR 279.40 – 279.47; Used Oil Processors and Re-refiners: CFR 279.50 – 270.57; Used Oil Burners: CFR 279.60 – 279.67 and Used Oil Marketers: CFR 279.70 – 279.75. If you have questions concerning these regulations, contact your Environmental Specialist.

Procedure for Notification of Used Oil Activities

Used Oil Transporters, Processor/Re-refiners, Burners, Marketers, or the first to claim used oil to be burned is on-specification used oil are required to notify the HWS of this used oil activity. These activities require an EPA Identification (ID) number be assigned to the site to be able to operate in compliance. The RCRAInfo Industry User Application myRCRAid is used to apply for a new EPA ID number (if your site does not already have one) or update your used oil handler information (except for EPA ID which remains with the site). MyRCRAid may be accessed via this website link for registration (for new users) or for log-in (for users already registered):
https://rcrainfo.epa.gov/rcrainfoprod/action/secured/login
Or contact your Environmental Specialist for assistance.

Management of Used Oil Filters

Used oil filters must be drained of all free-flowing oil before being disposed. If the filter is hot drained for 24 hours, punctured and drained until all oil is removed, or crushed and drained, it may be disposed. This does not apply to terne-plated oil filters. (Terne plating is an alloy of tin and lead). These filters and the contained oil are classified as hazardous waste for lead (D008).

The disposal of motor vehicle oil filters has been banned from disposal in landfills in North Carolina, per Solid Waste Rules.

Drained used oil filters may be recycled. The HWS has listings for facilities that will accept crushed and/or drained oil filters. Contact your Environmental Specialist for a list.

Management of CFCs (Chlorofluorocarbons)

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

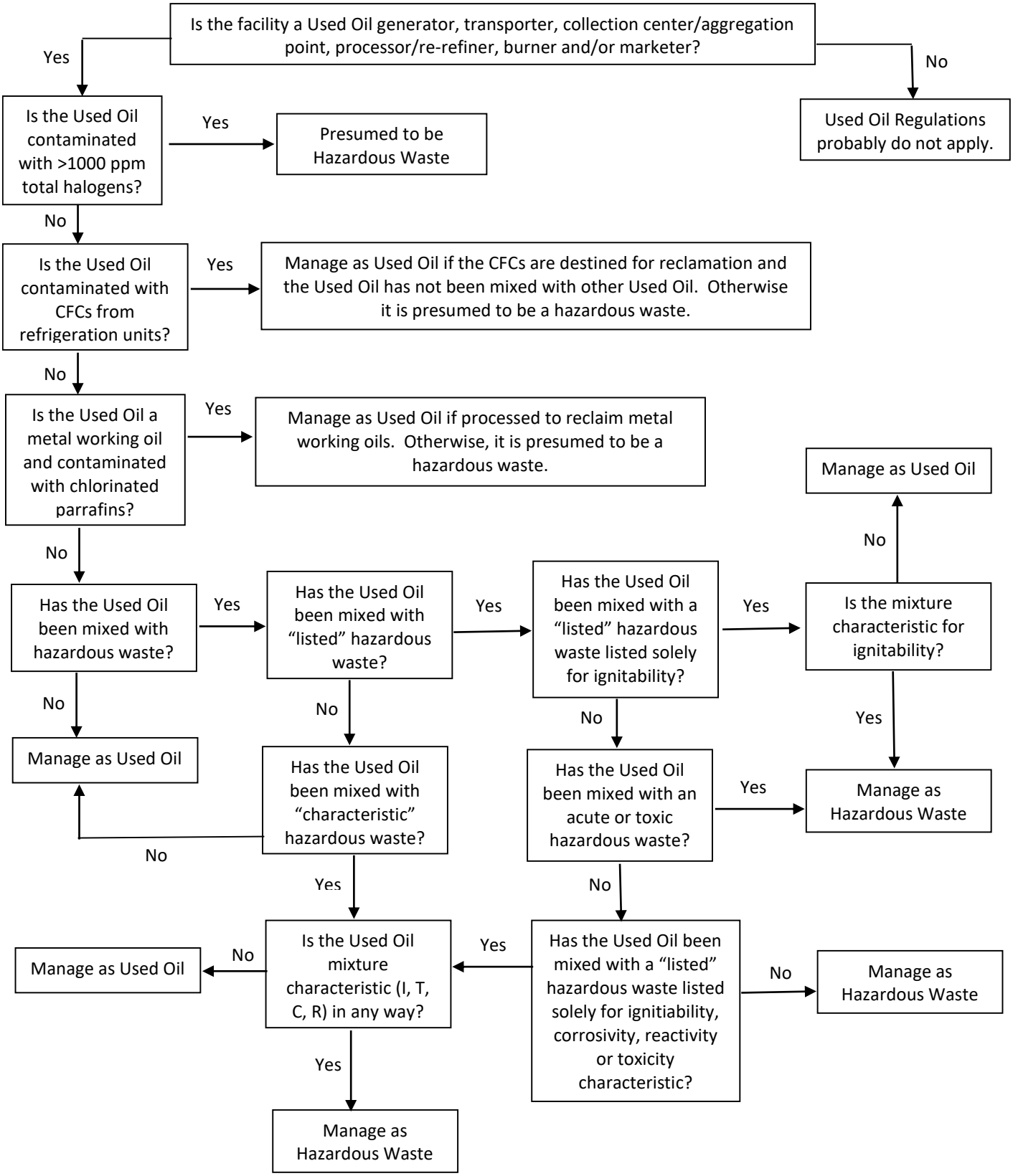
Table 6: Used Oil Handler Regulation Summary

Used Oil Handler Regulation Summary – 40 CFR 279					
	Generator [3] Subparts C and D	**Transporter/ Transfer Facility Subpart E**	**Processor/ Re-Refiner Subpart F**	**Off-Spec Burner Subpart G**	**Marketer [4] Subpart H**
Storage in containers and Aboveground Tanks	Good condition	Good Condition	Good condition	Good condition	NA
Labels for Tanks and Containers	Yes	Yes	Yes	Yes	NA
Secondary Containment System	No	Yes, for transfer facilities; NA for transporters	Yes	Yes	NA
Environmental Release Cleanup	Yes	Yes	Yes	Yes	NA
EPA Identification Number and Notification	No	Yes	Yes	Yes	Yes
Tracking	No	Yes, acceptance and delivery	Yes, acceptance and delivery	Yes, acceptance records	Yes, on-specification or off spec delivery records
Analysis	No	Yes, information or testing that shows that the total halogen content is above or below 1000 ppm	Yes, create and follow an analysis plan that includes determining total halogen content	Yes, information or testing that shows that the total halogen content is above or below 1000ppm	Yes, Information or testing to determine specification type
Recordkeeping	No	Yes, copies of information or test data of total halogen content for rebuttal presumption; acceptance and delivery records	Yes, copies of information or test data of total halogen content for rebuttal presumption; acceptance and delivery records	Yes, copies of information or test data of total halogen content for rebuttal presumption; acceptance and delivery records	Yes, Information or testing to determine specification type, If off-spec- burner certification.
Preparedness and Contingency Plan	No	No	Yes	No	NA
Biennial Reporting	No	No	Yes	No	NA
Closure	No	No	Yes	No	NA
Dust Suppression Ban	Yes	Yes	Yes	Yes	NA
Surface Impoundment Ban	Yes	Yes	Yes	Yes	NA

[3] Generator requirements apply to aggregation points and collection centers.

[4] Marketers also come under regulation as generator, transporter, and/or processor or re- refiners. No used oil handler can be solely a marketer.

Flow Chart: Is your Used Oil Actually Hazardous Waste?



APPENDIX H - UNIVERSAL WASTE

On May 11, 1995, EPA finalized the Universal Waste Rule. This rule established simplified guidelines for the accumulation and transportation of waste that otherwise would have to be managed under the full hazardous waste standards. The goal of the universal waste rules is to encourage companies and organizations to efficiently and effectively collect these wastes and keep them from being sent to municipal landfills. These items would otherwise be classified as hazardous wastes.

EPA revised these regulations in 1999 to include lights containing mercury, in 2005 to include mercury containing equipment, and in 2020 to include aerosol cans. Currently, the federal regulations allow the following hazardous wastes to be managed as universal waste: batteries, mercury containing equipment, pesticides recalled under FIFRA or collected in a waste pesticide collection program, lamps containing mercury and aerosol cans. North Carolina adopted the federal universal waste provisions (40 CFR 273) by incorporating them by reference at 15A NCAC 13A .0119.

These wastes are commonly generated and come from a wide variety of generators in large volumes. Compared with other types of hazardous wastes the risk of managing these wastes under the streamlined universal waste program is relatively low. Under the universal waste program, collection systems for these wastes should ensure close stewardship of the waste and should also increase the likelihood that the waste will be diverted from non-hazardous waste systems (municipal landfills, storm sewers, etc.) to recycling, treatment or disposal options in compliance with hazardous waste provisions.

Different categories of universal waste managers are designated based on the volume of universal waste managed and/or the activity performed. These groupings are similar to, but not the same as, hazardous waste generator categories. The term "handler" is used as a broader term to avoid confusion with the term "generator."

Categories of Universal Waste Handlers

Small Quantity Handlers of Universal Waste (SQHUW)

A small quantity handler of universal waste is any site that generates (including contractors who take components out of service), collects, accumulates (but does not treat/dispose) less than 5,000 kg of universal waste at any one time. The total quantity includes of all types of universal waste.

Large Quantity Handlers of Universal Waste (LQHUW)

A large quantity handler of universal waste is any site that generates collects, accumulates (but does not treat/dispose) greater than 5,000 kg of universal waste at any one time.

Universal Waste Transporter

A universal waste transporter is a person who transports universal waste off site. This category includes companies transporting their own universal wastes to another plant location in any quantity.

Destination Facility

A universal waste destination facility is a facility that treats, disposes of, or recycles a particular category of universal waste. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

Requirements for All Universal Waste Handlers

Universal waste must be managed to prevent releases by keeping containers closed and using structurally sound and compatible containers. Transport vehicles must be closed, structurally sound, and compatible with the materials being transported. If there is a release, it must be immediately contained. If it is not immediately contained, it must be managed in compliance with the hazardous waste generator regulations (40 CFR 262). The following requirements also apply to all Universal Waste Handlers:

- Containers holding lamps, batteries, mercury thermostats, or aerosol cans must be labeled with the words "Universal Waste ____", "Waste _____" or "Used _____".
- Containers holding universal waste pesticides must be labeled with the words "Universal Waste pesticide(s)" or "Waste pesticide(s)".
- A container holding mercury containing equipment must be labeled "Universal Waste - mercury containing equipment" or "Waste mercury containing equipment" or "Used mercury containing equipment".
- Waste may be accumulated up to one year. An inventory management or labeling system must be in place to document the accumulation time.
- Waste must be shipped only to another handler or a destination facility and DOT shipping procedures for hazardous materials must be followed.

Requirements for Small Quantity Universal Waste Handlers

- No notification to the HWS is required unless more than 5,000 kg of universal waste is

accumulated (total amount of batteries, pesticides, mercury containing equipment, lamps, and/or aerosol cans at any time). If this occurs, the facility immediately becomes a LQHUW.

- Employees must be informed of proper handling and emergency procedures appropriate for the universal waste managed.
- Shipping records are not required to be maintained (however, this is recommended).

Requirements for Large Quantity Universal Waste Handlers

- Must notify the HWS of the wastes they are managing under the universal waste program. If they already have an EPA ID number, they are not required to re-notify.
- Employees must be thoroughly familiar with proper handling and emergency procedures appropriate for the universal waste managed.
- Shipping records (bill of lading, invoices, etc.) must be maintained for at least three years from the date the waste left the facility.

Requirements for Universal Waste Transporters

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

Requirements for a Destination Facility

Destination facilities are subject to the full set of hazardous waste TSD regulations. They may only send universal waste to another handler or destination facility. If a destination facility rejects a shipment, they must send the universal waste back to the original shipper. If hazardous waste is received that is not a universal waste, the destination facility must immediately notify the HWS (or if not in North Carolina, the EPA or state agency if in an EPA authorized state). If a non-hazardous/non-universal waste is received, the destination facility must manage the waste in compliance with any applicable waste regulations. Shipping records must be maintained for at least three years from the time the waste is received.

APPENDIX I - SUBPART AA, BB AND CC RULES

AIR EMISSIONS CONTROLS AT WASTE MANAGEMENT FACILITIES

History and Background of Air Emission Regulations under RCRA

In 1984, EPA implemented the RCRA Land Disposal Restriction regulations, which requires the treatment of hazardous wastes before their disposal on the land. These regulations significantly increased the volume of hazardous wastes that were being treated. After these regulations were implemented, an air emission survey was conducted. EPA found that 8% of the volatile organic emission in the United States are produced from the treatment, storage and disposal of hazardous wastes. As TSD facilities are regulated under RCRA, these emissions are not regulated by the Clean Air Act. For this reason, EPA developed air emission regulations aimed at volatile organic emissions as part of RCRA. To avoid regulation duplication, these air emission regulations do not apply to any operations already covered by an existing Clean Air Act permit.

EPA added the air emission regulations in phases. The first phase was the Subparts AA and BB regulations that cover emissions from process vents and equipment leaks. Initially, these Subparts only applied to TSD facilities. In the second phase, in 1995, EPA made Subparts AA and BB effective at LQG facilities. They also developed Subpart CC regulations to cover volatile organic air emissions from containers, tanks and surface impoundments. LQGs had to comply with these regulations no later than June 8,1999.

Each of the Subparts is independent of each other. Each unit and process must be scrutinized separately for each regulation to determine if the applicability. If one Subpart does not apply to your facility, you cannot assume that the others do not.

Subpart AA- Air Emission Standards for Process Vents

40 CFR 264/265.1030-1035

Applicability

This Subpart regulates organic emissions from the process vents for six specific types of hazardous waste units. To determine if Subpart AA applies to your facility, answer the questions listed below:

1) Is the unit
   - A permitted or interim status unit? (Does it have a RCRA permit)?
   - A recycling unit at a permitted or interim status facility?
   - At a LQG?

If you answered **yes** to any question, move to the next question. If you answered **no**, Subpart AA does not apply.

2) Is the unit a
   - Distillation unit?
   - Fractionation unit?
   - Thin-film evaporation unit?
   - Solvent extractor?
   - Air stripper?
   - Steam stripper?

If you answered **yes** to any question, move to the next question. If you answered **no**, Subpart AA does not apply.

3) Is the unit exempt from 264/265.1? In other words, is it exempt from having a RCRA permit? Some exemptions are:
   - wastewater treatment units,
   - elementary neutralization units,
   - municipal solid waste facilities, and
   - Universal Waste handlers and transporters.

If you answered **no**, move to the next question. If you answered **yes**, Subpart AA does not apply.

4) Is the unit associated with a process vent? The definition for a process vent is: "any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or a tank associated with distillation, fractionation, thin-film evaporation, solvent extraction, or

air or steam stripping". This definition is located at 40 CFR 264.1031.

If you answered **yes**, move to the next question. If you answered **no**, Subpart AA does not apply.

5) Does the unit manage waste that has an organic concentration of greater than, or equal to, 10 parts per million by weight? (NOTE: This is 10 parts per million, not 10 percent by weight.)

If you answered **yes**, move to the next question. If you answered **no**, Subpart AA does not apply.

6) Is the vent on a recycling unit at a 90-day generator facility (LQG)?

If you answered **no**, Subpart AA applies to your unit/facility. If you answered **yes**, Subpart AA does not apply.

Therefore, for LQGs, Subpart AA applies only to process vents on containers or tanks that are associated with the subject recycling systems. Process vents on the recycling system itself are not regulated. One example would be, if you operate a distillation unit at a facility where waste is collected and then poured into the distillation unit. If the distillation unit has no connected container or tank, or if a connected container or tank does not have a process vent, Subpart AA does not apply. If your facility has a tank system that feeds into a distillation unit, Subpart AA applies to any process vent on the tank. In both instances, Subpart AA does not apply to any process vent on the distillation unit itself.

Requirements

If you have regulated process vents at your facility, you are required to reduce the organic emissions from the vents to 3.0 pounds per hour and 3.1 tons per year OR reduce the organic air emissions from all of the affected vents by 95%. These figures are based on the aggregated emissions from all vents subject to Subpart AA at the facility. The steps to take if you have process vents subject to Subpart AA is to first identify all of the affected vents at the facility, determine the emission rates, then sum the rates and compare them to the rate limits above.

Control Devices

If your emission rates are above the limits, a control device must be installed to remove or destroy emissions levels to below the listed rates. The facility has the option of choosing which vents to reduce emissions. In this way, the facility can optimize the costs of complying with the regulations. They can choose to reduce emissions on all the vents or simply those vents causing the most problem. The regulations do not dictate which types of control devices must be used. However, performance requirements are specified for some types of devices. Some examples include vapor recovery systems, carbon absorption, flares and others. A closed-vent system is required to conduct organic emissions to a control device designed to operate with no detectable emissions. No detectable emissions are defined as less than 500 parts per million above background and none by visual inspection. The closed-vent system and the control device are required to be operable at all times when emissions may be vented.

Inspection and Monitoring

The control device must be inspected once each operating day. The closed-vent system must be monitored for emissions annually and the control device monitored based on the type of device used. Operational problems with the control device or emissions must be corrected immediately. With the closed-vent system, they must be reported within 15 days of detection.

Record Keeping

The facility must keep records for at least three years for waste determination information. They must also keep identification of affected vents, emission rate determinations, monitoring data and inspection records for at least three years.

Subpart BB-Air Emission Standards from Equipment Leaks

40 CFR 264/265.1050-1064

Applicability

This subpart regulates the volatile organic emission from equipment leaks associated with hazardous waste management units. This regulation requires preventative maintenance and repair procedures to ensure that equipment is operating properly to reduce emissions. To determine if Subpart BB applies to your facility, answer the questions listed below:

1) Is the unit
   - A permitted or interim status unit? (Does the unit have a RCRA permit)?
   - A recycling unit at a permitted or interim status facility?
   - A container, a tank or a tank system at a LQG?

If you answered **yes** to any question, move to the next question. If you answered **no**, Subpart BB does not apply.

2) Does the unit have equipment as defined in 264.1031? Equipment is defined as "any valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or control device or system."

If you answered **yes**, move to the next question. If you answered **no**, Subpart BB does not apply.

3) Is the unit exempt from 264/265.1? In other words, is it exempt from having a RCRA permit? Some exemptions are:
   - wastewater treatment units,
   - elementary neutralization units,
   - municipal solid waste facilities, and
   - Universal Waste handlers and transporters.

If you answered **no**, move to the next question. If you answered **yes**, Subpart BB does not apply.

4) Does the equipment come in contact with hazardous waste that has an organic content of at least 10% by weight? Please note that this is different from the Subpart AA requirements, which specify an organic content of 10 ppmw.

If you answer **yes**, move to the next question. If you answer **no**, Subpart BB does not apply.

5) Does the equipment contact the hazardous waste for at least 300 hours per year?

If you answered **yes**, move to the next question. If you answered **no**, Subpart BB does not apply.

6) Is the equipment in vacuum service?

If you answered **no**, Subpart BB applies to your equipment. If you answered **yes**, Subpart BB does not apply.

As you can see, for LQGs, Subpart BB applies to all "equipment" associated with containers, tanks or tank systems that accumulate or store hazardous waste for less than 90-days. Subpart BB applies to all containers and tanks that manage hazardous waste at a site, not just units that are subject to Subpart AA. For example, if you have a compressor or other "equipment" on a container or tank, subpart BB would apply.

Requirements

Each piece of equipment affected by Subpart BB must be marked in a way that allows it to be distinguished from other equipment at the facility. Each type of equipment has specific design and operating standards specified. The standards vary depending upon the type of "service" the equipment is used for. These types of service are light liquid, heavy liquid, or gas/vapor service. Light liquid service is defined as equipment that contains compound(s) with a vapor pressure of greater than 0.3 kilopascals at 20 degrees Celsius. Gas/vapor service is a piece of equipment that contains or contacts a hazardous waste in gas or vapor state at operating conditions. Heavy liquid is a piece of equipment that is not in light liquid or gas/vapor service. Each piece of equipment defined in the regulations has standards specific to the type of service it is used for. For example, pumps in light liquid service have standards in 265.1052; valves in gas/vapor or light liquid service have standards in 264.1057.

Inspection and Monitoring

Each piece of equipment has specific monitoring and inspection requirements. These requirements depend on the type of service it is used for.

Leak Detection

Leak detection and repair programs are proscribed for each type of equipment. These programs are different for each type of service and each type of equipment.

Record Keeping

The facility is required to maintain waste determination records. It must also maintain design documentation, monitoring, and operation and inspection records for each piece of affected equipment. All records must be maintained for at least three years.

Subpart CC- Air Emission Controls for Containers and Tanks

40 CFR 264/265.1080 – 1091

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

Applicability

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

- Are at TSDs or Large Quantity Generators (SQGs are exempt),
- In Central Accumulation Areas (satellite accumulation is exempt), and
- In containers, tanks or surface impoundments, or in Subpart X units.

Exemptions and Exclusions from CC Rules

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

Waste Determination

A determination of volatile organic concentration is made at the point of generation of the waste. For LQGs, this is before entering the unit (container or tank). For TSDs, it occurs at the point where the owner/operator accepts delivery or takes possession of the waste. When the facility accepts the manifest is an example. Generator knowledge or testing may be used.

Documentation for the waste determination must be kept on-site whether generator knowledge or testing is used to make the waste determination.

If testing is used, the owner/operator must collect a minimum of four individual samples, without mixing them, for an averaging period of up to one year. Sampling and collection methods must be in accordance with SW-846. Analytical methods can be EPA methods 25D, 624, 625, 1624 and 1625.

Information on these test methods is available from your Environmental Specialist or can be found on the Internet at: https://www.epa.gov/hw-sw846

Both LQGs and TSDs must update the waste determination annually. The update can be an assertion that nothing has changed in the generating process or constituents of the waste. For TSD facilities, these procedures must be part of the written sampling plan.

Compliance Options for Containers

Containers are regulated according to size and organic content.

- **Level 1 container**- greater than 26.4 gallons but less than 122 gallons, or greater than 122 gallons **and not** managing waste "in light material service." [5]
- **Level 2 container**- greater than 122 gallons and managing waste in light material service.
- **Level 3 container**- greater than 26.4 gallons and it is used to stabilize waste that has an average volatile organic concentration of greater than 500 ppm. These containers can only be at TSD facilities.

Level 1 Container Controls

There are three options available to comply with Subpart CC for level 1 containers.

- Use a container that meets DOT regulations under parts 172, 173, 178, 179 and 180. No

[5] "***In light material service"*** *the hazardous waste in the container meets both of these conditions:*

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

exceptions are allowed under DOT except for lab packs as specified in 49 CFR 173.12(b).

- Use a cover and control device on the container to ensure there are no visible gaps.
- Tighten bungs and rings. Conservation vents may be used.
- Use organic vapor suppression barriers on or above the hazardous waste in the container so that no waste is exposed to the atmosphere. One example is organic vapor-suppressing foam.

Other Level 1 Container Requirements

- The container must be kept closed except when transferring waste into or out of the container. The container must be closed between batch transfers that exceed 15 minutes.
- Repair requirements require you to attempt to make repairs within 24 hours, with a maximum five days. If repairs cannot be made within five days, the container must be emptied and removed from service.
- Inspections are required when transferring waste into a container to ensure that the container is closed when the transfer is complete. Containers must be inspected when they initially arrive at the facility. They must be inspected annually if the container remains at the facility for more than one year. (The weekly inspections required of LQGs meets this requirement).
- Inspection records must be maintained on-site for at least three years.

Special use of Funnels for Level 1 Containers in Central Accumulation Areas

When the Subpart CC regulations became applicable to generators, the NC HWS became concerned that many generators using funnels in hazardous waste central accumulation areas would no longer be able to do so. Funnels can facilitate the accumulation of wastes in these areas. However, under the Subpart CC regulations, the use of funnels would not be allowed if the waste had greater than 500 ppm volatile organic constituents. The reason is because the container would not meet DOT requirements or would not meet the definition of "closed." (Hazardous wastes with no VOCs or a VOC concentration less than 500 ppm are not affected by these regulations).

The NC HWS asked EPA Region 4 for an interpretation on this issue. EPA determined that funnels may be used in central accumulation areas for wastes with a VOC concentration of greater than 500 ppm as long as the following conditions are met:

- The funnel is securely fitted to the container (i.e., screwed tightly to the bung opening)
  AND
- The funnel is fitted with a one-way valve to allow material/ waste to enter the container but prohibits waste/emissions from exiting the container; or the funnel is fitted with a gasket to firmly seal the funnel lid when closed
  AND
- The funnel is fitted with a locking mechanism on the lid and the lid is maintained in the closed

position unless it is necessary to add or remove waste. The time limit is 15 minutes between operations.

Level 2 Container Controls

There are three options for complying with the Level 2 Container Regulations.

- Use a container that meets DOT regulations under parts 172, 173, 178, 179 and 180. No
- DOT exceptions are allowed, except for lab packs as specified in 49 CFR 173.12(b).
- Use a container that operates with no detectable organic emissions using the Method 21 test. There must be no emissions above 500 ppm. Monitoring is required when the container is filled.
- Use a container demonstrated to be vapor tight within the last 12 months. Use the Method 27 test.

Other Level 2 Container Requirements

- Waste must be transferred into or out of the container in a way that minimizes the exposure of the waste to the atmosphere. Examples include the use of submerged-fill pipes, vapor-balancing systems, or vapor recovery systems.
- All covers and closure devices must be secured and kept closed, except during filling and removal operations.
- Repair requirements state that you must attempt to make repairs within 24 hours, with a maximum five days. If repairs cannot be made within five days, the container must be emptied and removed from service.
- Inspections are required when transferring waste into a container to ensure that the container is closed when the transfer is complete. Containers must be inspected when they initially arrive at the facility. Inspect them annually if the container remains at the facility for more than one year. (The weekly inspections required of LQGs meets this requirement).
- Maintain inspection records on-site for at least three years

Level 3 Container Controls

The options for complying with Level 3 containers are not discussed in this manual. These containers are only found at TSD facilities.

Table 7: Compliance Summary for Containers

Container Level	Conditions to Meet	Controls/Requirements
1	Less than 122 gallons. Or Greater than 122 gallons and not in light service. No waste stabilization.	1- Use a container that meets DOT regulations, or 2- Use organic suppression barrier, or 3- Use a cover and a control device.
2	Greater than 122 gallons in light service.	1- Use a container that meets DOT regulations, or 2- Use a container that operates with no detectable organic emissions (Method 21), or 3- Use a container that is vapor tight by Method 27.

Hazardous Waste Tanks

Subpart CC applies to tanks that hold hazardous wastes with a volatile organic concentration of greater than 500 parts per million by weight. The regulations specify two types, or levels of tanks.

Level 1 Tank A level 1 tank must meet ALL three conditions described here.

1. There is no heating to temperatures greater than the temperature at which the vapor pressure is determined.
2. No waste stabilization occurs in the tank.
3. The maximum organic vapor pressure of the waste is less than the cut-off for the tank design capacity as specified in the table here.

Tank Size	Maximum Vapor Pressure
40,000 gallons	5.2 kPa or 0.54 PSI
20,000 to 40,000 gallons	27.6 kPa or 4.0 PSI
20,000 gallons or less	76.6 kPa or 11.1 PSI

Level 2 Tank A Level 2 tank is one that exceeds any of the Level 1 conditions. In other words, the waste is heated, or the vapor pressure of the waste is greater than the limits for the tank.

Level 1 Tank Controls

The emission-control device specified for Level 1 tank consists of a stationary fixed-roof. This is a roof that does not fluctuate with the level of the material in the tank. The roof may separate from the rest of the tank, but it cannot have visible cracks, holes, gaps or other open spaces in the seams and mountings. It must be maintained in a closed position, except to access the waste. A pressure relief device is allowed.

Other Level 1 Tank Requirements

The generator must determine the initial vapor pressure of the waste in the tank and again if the composition of the waste changes to cause a different vapor pressure. The fixed-roof must be inspected when it first is subject to Subpart CC rules and at least once per year thereafter. Inspection records and waste determination records must be maintained on-site for at least three years.

Level 2 Controls there are five options for complying with the Level 2 tank requirements.

1. Fixed roof with an internal floating roof,
2. External floating roof,
3. Cover vented to a control device,
4. Pressure tank,
5. Tank inside enclosure vented to a combustion control device.

Each of these options has detailed inspection, record keeping, waste transfer, repair and operation requirements, as well as safety device requirements. As LQGs usually do not operate Level 2 tanks, these compliance options will not be discussed in this manual. Information about these requirements is available through your Environmental Specialist.

Other Units

Subpart CC also regulates surface impoundments and specifies requirements for emission control devices such as closed vent systems, incinerators, flares, etc. These regulations will not be discussed in this manual as these units are only found at TSD facilities. Information about these requirements is available through your Environmental Specialist.

Table 8: Compliance Summary for Tanks

Tank Level	Conditions to meet	Requirements
1	1- Maximum organic vapor pressure less than cut-off for the tank capacity 2- No heating 3- No waste stabilization	Tank must be equipped with a fixed roof with no visible cracks, holes, gaps or other open spaces in roof seams and mountings, and Tank size and vapor limits consistent with existing CAA- NSPS standards for volatile organic liquid storage, and Closure devices must be maintained in a closed - position. Initial inspections and annually thereafter. Records of inspections and waste determinations maintained.
2	Exceed any of the Level 1 conditions.	1- Fixed roof with floating roof, or 2- Floating roof, or 3- Cover vented to control device, or 4- Pressure tank, or 5- Tank inside closure vented to combustion control device.

APPENDIX J - DECISION DIAGRAMS

Decision Diagram A - Determining if Your Waste Is Regulated

Is the material to be discarded? —**No**→ **Not a Solid Waste.**

Yes

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

No

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

No

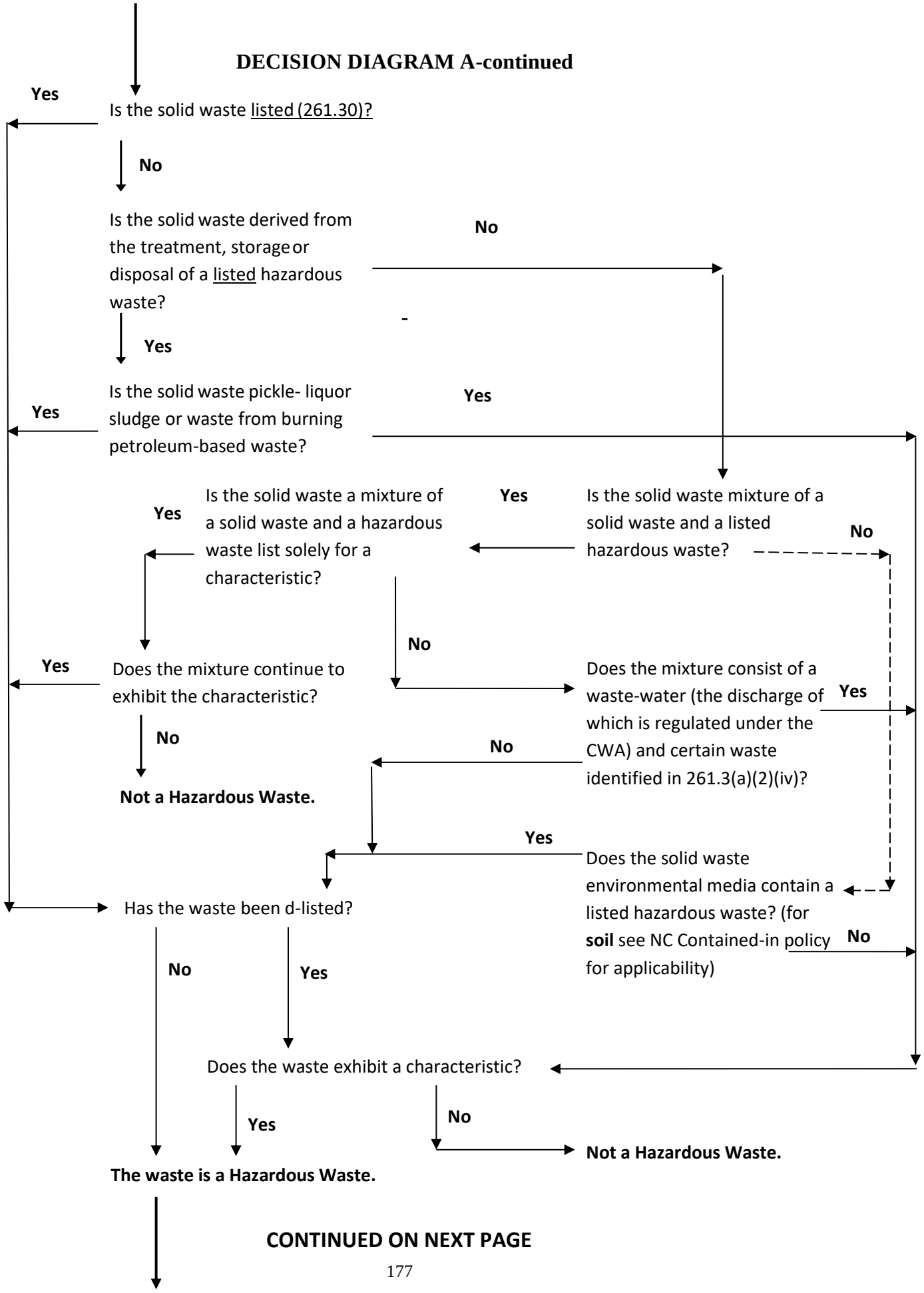
Material is a Solid Waste.
Continue with Decision Diagram to determine if the material is a hazardous waste.

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

No

CONTINUED ON NEXT PAGE

DECISION DIAGRAM A-continued



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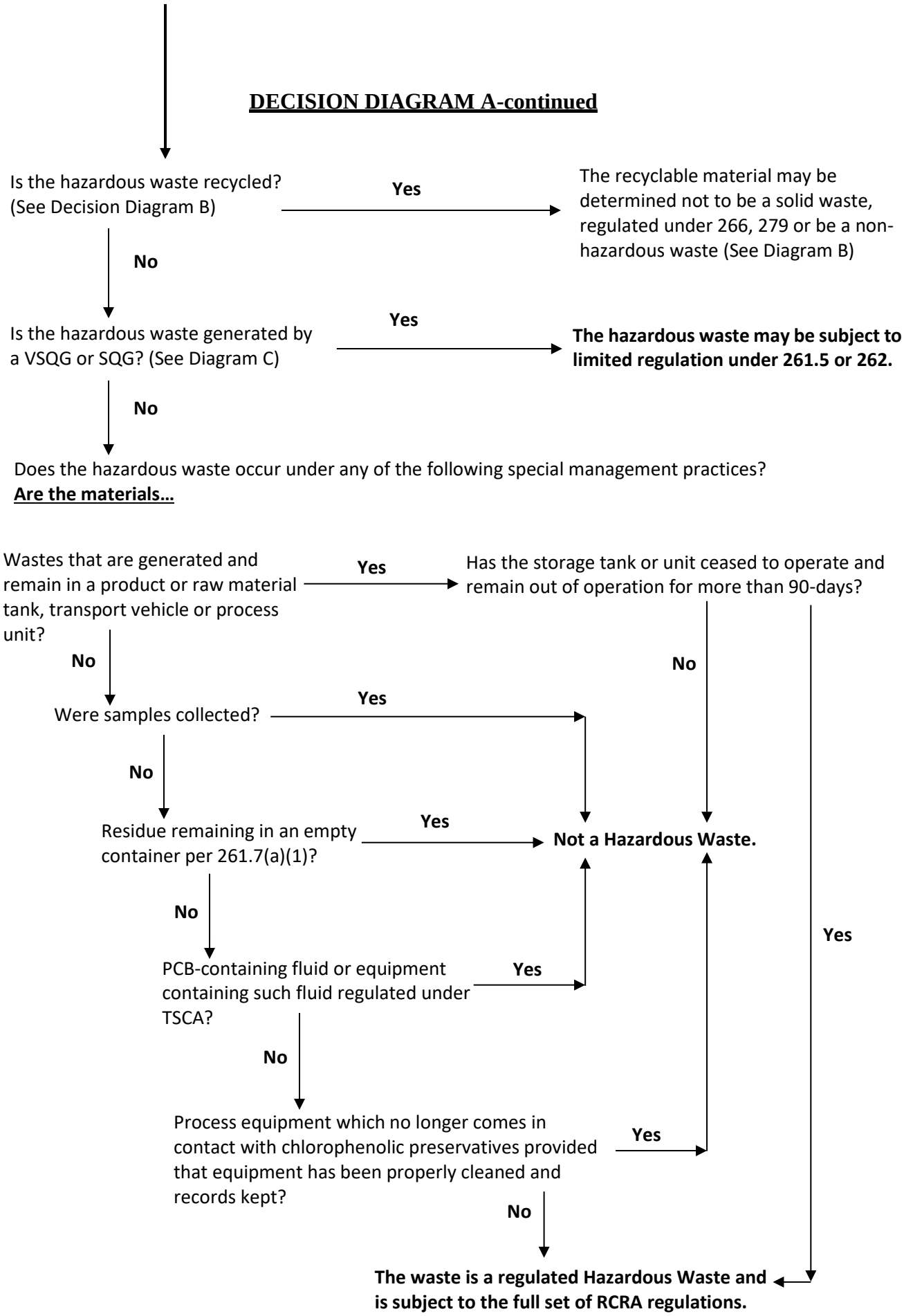
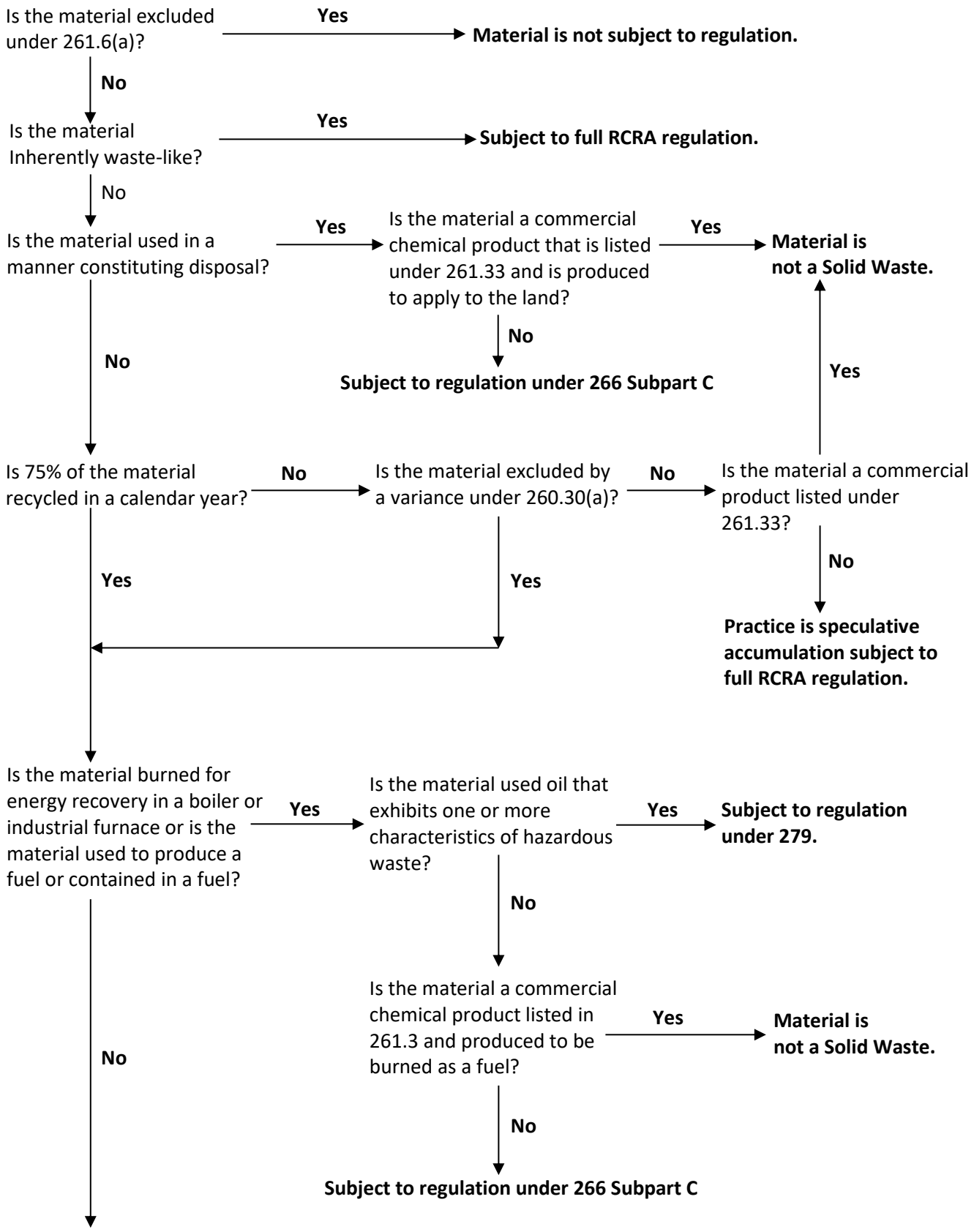
DECISION DIAGRAM A-continued



Decision Diagram B - Hazardous Waste Recycling



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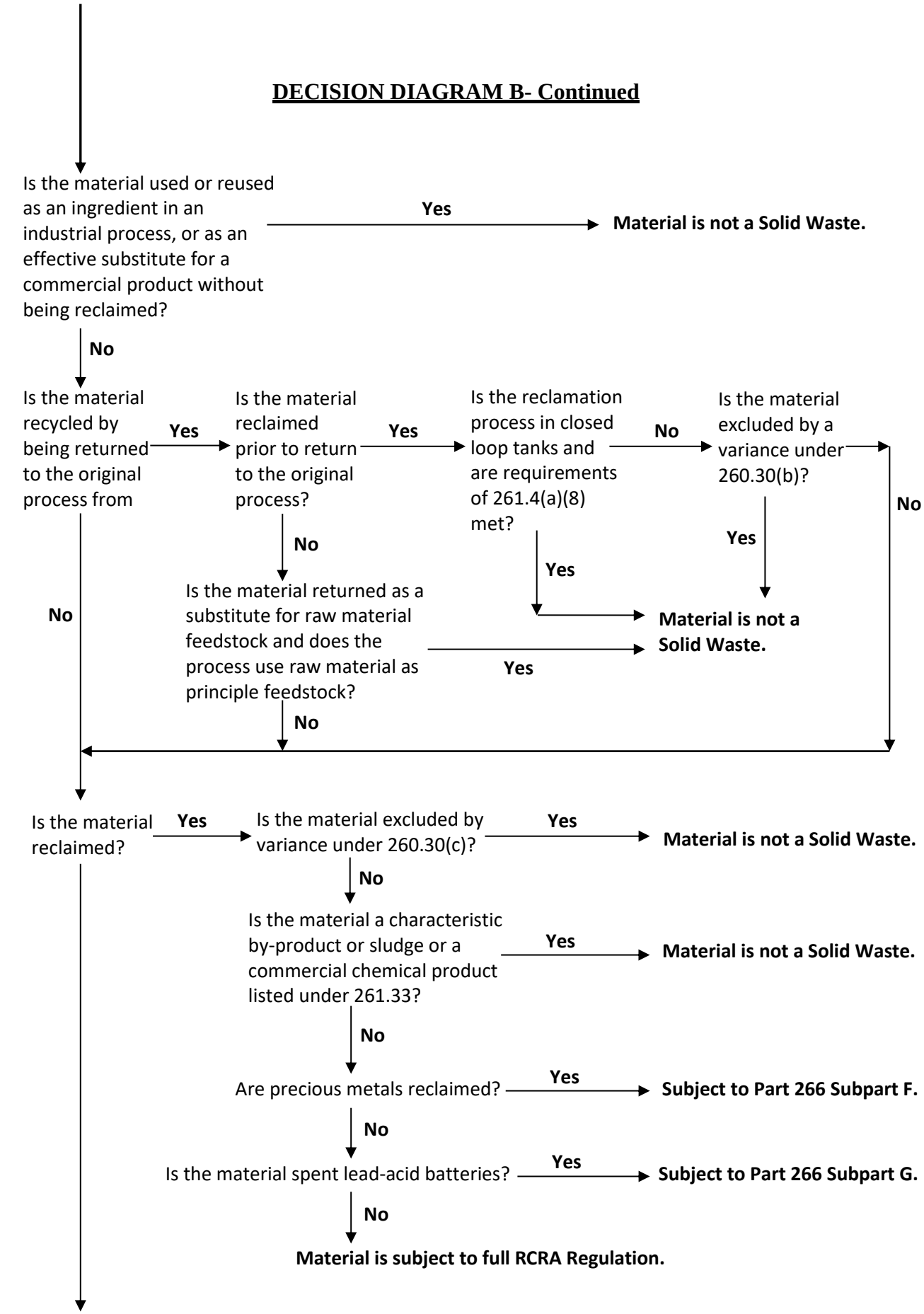
DECISION DIAGRAM B- Continued



Material is not recycled, return to Decision Diagram A.

Decision Diagram C - Determining Your Generator Status

Is the facility a potential small quantity generator?

No → **Subject to Regulation as a LQG.**

Yes ↓

Determine for each waste stream:
Is the hazardous waste generated subject to RCRA regulation?

No → **The waste is not included in quantity determination.**

Yes ↓

Is the hazardous waste subject to quantity determination requirements of 262.13(c)?

No → **The waste is not included in quantity determination.**

Yes ↓

Is the hazardous waste removed from on-site storage and has been previously included in quantity determination?

Or produced by on-site treatment (including reclamation) of waste already included in quantity determination?

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

Yes → **The waste is not included in the quantity determination.**

No ↓

Is the waste an acutely hazardous waste?

No ↓

Yes ↓

Is the acute hazardous waste generated in quantities greater than:

- 2.2 lbs. per calendar month, or
- 220 lbs. or any contaminated soil residue waste, or other debris resulting from a clean-up of a spill of any acute hazardous waste?

Yes → **Subject to full RCRA Regulation.**

No ↓

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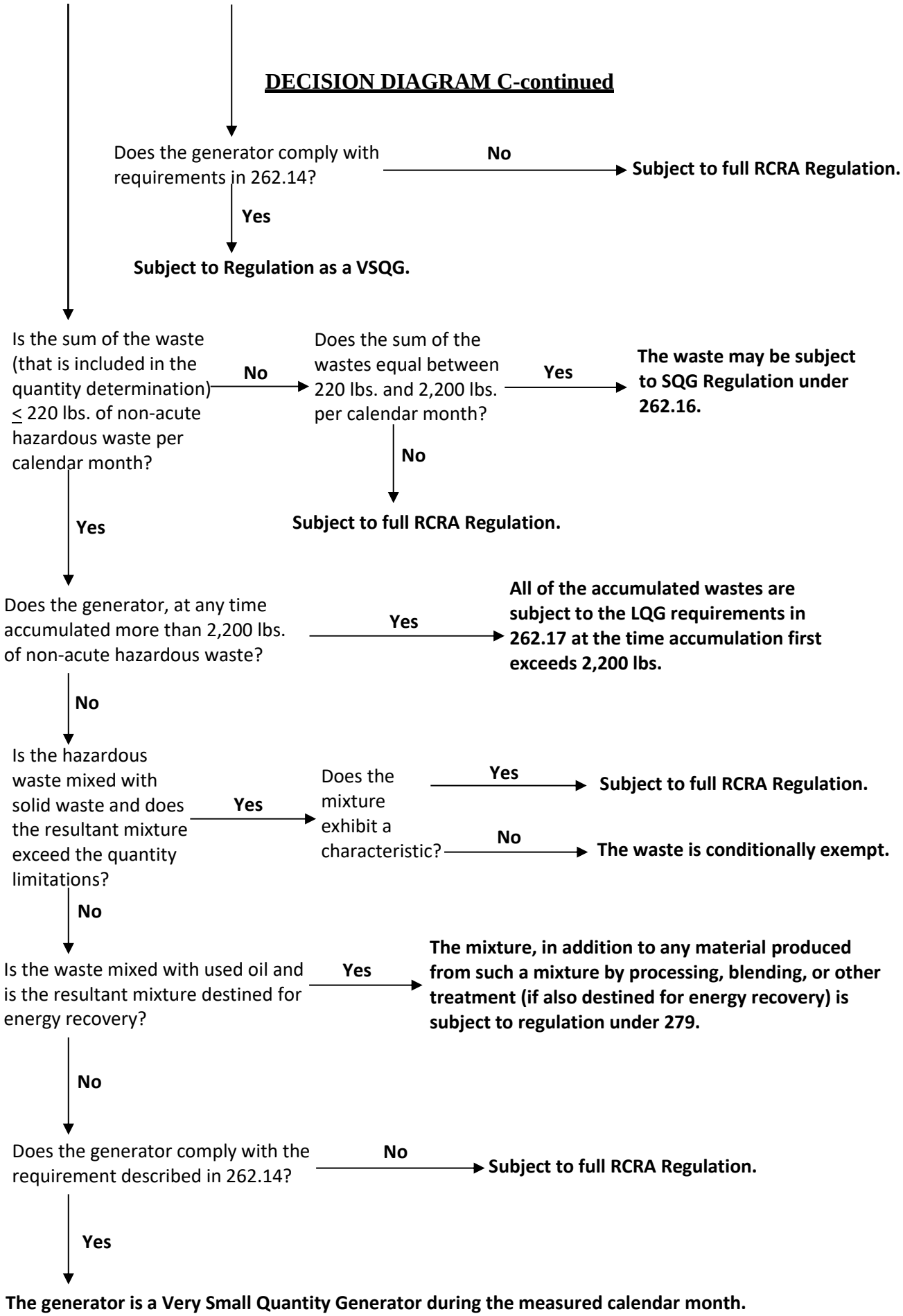
DECISION DIAGRAM C-continued



APPENDIX K - MANIFEST AND INSTRUCTIONS
Manifest 8700–22

What are the instructions for completing the manifest form (EPA Form 8700-22)?
Read all instructions before completing the form.

1. Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to complete this form (EPA Form 8700–22) and, if necessary, the continuation sheet (EPA Form 8700–22A) for both inter- and intrastate transportation of hazardous waste.
2. This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.
3. This form must be purchased from a registered printer (https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifestregistry#how) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed electronically in EPA's e-Manifest system.

I. Instructions for Generators

Item 1. 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.

Item 2. Page 1 of _
Enter the total number of pages used to complete this Manifest (*i.e.*, the first page (EPA Form 8700–22) plus the number of continuation sheets (EPA Form 8700–22A), if any).

Item 3. Emergency Response Phone Number
Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of 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 (including transportation related storage); 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 the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (*e.g.*, consolidated

shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number
This unique tracking number must be pre-printed on the manifest by the forms printer.

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 designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) 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, and 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 and U.S. EPA ID Number
If applicable, 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, and U.S. EPA ID Number
Enter the company name and site address of the facility designated to receive the waste listed on this 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 Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

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

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

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the Continuation Sheet (EPA Form 8700–22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those Items.

Item 10. Containers (Number and 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, cases.
CM = Metal boxes, cartons, cases (including roll-
CW = Wooden boxes, cartons, cases.
CY = Cylinders.
DF = Fiberboard or plastic drums, barrels, kegs.
DM = Metal drums, barrels, kegs.
DT = Dump truck.
DW = Wooden drums, barrels, 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 the 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 which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information.

1. 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, container codes, bar codes, or response guide numbers. Generators also may 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.
2. 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 any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of PCB waste descriptions and PCB 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 Certifications

1. 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 (the shipper's certification). The content of the shipper's certification statement is as follows: "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 by highway 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." 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.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All the above information except the handwritten signature required in Item 15 may be pre-printed.

II. Instructions for International Shipment Block

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. For import shipments, the importer must check the import box and enter the point of entry (city and state) into the United States. For exports, the transporter must sign and date the manifest to indicate the day the shipment left the United States. 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.

III. Instructions for Transporters

Item 17. Transporters' Acknowledgments 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 carrying imports, who are acting as importers, may have responsibilities to enter information in the International Shipments Block. Transporters carrying exports may also have responsibilities to enter information in the International Shipments Block. See above instructions for Item 16.

This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.

IV. Instructions for Owners and Operators of Treatment, Storage, and Disposal Facilities

Item 18. Discrepancy

Item 18a. Discrepancy Indication Space

1. The authorized representative of the designated (or alternate) 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: significant differences (as defined by §§264.72(b) and 265.72(b)) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives, rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF cannot accept, or container residues, which are residues that exceed the quantity limits for "empty" containers set forth in 40 CFR 261.7(b).
2. For rejected loads and residues (40 CFR 264.72(d), (e), and (f), or 40 CFR 265.72(d), (e), or (f)), check the appropriate box if the shipment is a rejected load (*i.e.*, rejected by the designated and/or alternate facility and is sent to an alternate facility or returned to the generator) 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 on the original manifest. Indicate the original manifest tracking number in Item 14, the Special Handling Block and Additional Information Block of the additional manifests.

3. Owners or operators of facilities located in unauthorized States (*i.e.*, states in which the U.S. EPA administers the hazardous waste management program) who cannot resolve significant differences in quantity or type within 15 days of receiving the waste must submit to their Regional Administrator a letter with a copy of the Manifest at issue describing the discrepancy and attempts to reconcile it (40 CFR 264.72(c) and 265.72(c)).

4. Owners or operators of facilities located in authorized States (*i.e.*, those States that have received authorization from the U.S. EPA to administer the hazardous waste management program) should contact their State agency for information on where to report discrepancies involving "significant differences" to state officials.

Item 18b. Alternate Facility (or Generator) for Receipt of Full Load Rejections
Enter the name, address, phone number, and EPA Identification Number of the Alternate 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 TSDF 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. Alternate 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 of the form to acknowledge receipt of the fully rejected wastes or residues identified by the initial TSDF.

Item 19. Hazardous Waste Report Management Method Codes
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 treatment, storage, or disposal facility (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.

Item 20. Designated Facility Owner or Operator Certification of Receipt (Except As Noted in Item 18a)
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 the 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.

Fully rejected wastes may be forwarded or returned using Item 18b after consultation with the generator. Enter the name of the person accepting the waste on behalf of the owner or operator of the alternate facility or the original generator. That person must acknowledge receipt or rejection of the waste described on the Manifest by signing and entering the date they received or rejected the waste in Item 18c. Partially rejected wastes and residues must be re-shipped under a new manifest, to be initiated and signed by the rejecting TSDF as offeror of the shipment.

Note: The e-Manifest Act mandates several changes to the federal manifest program. Beginning on June 30, 2018:

- This manifest (Revision 12-17) must be used and all previous editions are prohibited.
- Any facility (e.g., a RCRA-permitted facility, Subtitle D facility) that receives a manifest accompanying a state-only regulated waste must comply with 40 CFR 264.71 or 265.71 (use of the manifest) and 40 CFR 264.72 or 265.72 (manifest discrepancies).
- Any facility that receives a paper manifest accompanying a federally regulated hazardous waste or state-only regulated waste must submit the top copy (Page 1) of the manifest and any continuation sheets to the U.S. EPA's e-Manifest system within 30 days. The copies must be submitted in an acceptable format. Submissions must be made at the mailing address or electronic mail/submission address specified at the e-Manifest program website's directory of services (see www.epa.gov/e-manifest)
- The facility will be assessed a fee for each manifest copy submitted.
- Go to www.epa.gov/e-manifest for the directory of services and additional information.

Please print or type. 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**

GENERATOR

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name | U.S. EPA ID Number

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

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Facility's Phone:

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
	1.					
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

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 | 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 | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

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

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete. **DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM**

VOID

Manifest Continuation Sheet

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number

22. Page

23. Manifest Tracking Number

24. Generator's Name

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		

32. Special Handling Instructions and Additional Information

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)

VOID

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

What are the instructions for completing the continuation sheet (EPA Form 8700-22A)?
Read all instructions before completing this form.

Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use the uniform hazardous waste manifest (EPA Form 8700–22) and, if necessary, this continuation sheet (EPA Form 8700–22A) for both interstate and intrastate transportation.

- More than two transporters are to be used to transport the waste; or
- More space is required for the U.S. DOT descriptions and related information in Item 9 of U.S. EPA Form 8700-22.

This continuation sheet reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this continuation sheet (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.

This form must be purchased from a registered printer (https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifest-registry#how) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed

I. Generators

Item 21. Generator's ID 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.

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 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 order of the transporter. For example, Transporter 4 Company Name. Each Continuation Sheet can record the names of two additional transporters. Also enter the U.S. EPA twelve-digit identification number of the transporter named in Item 26.

Item 27. U.S. D.O.T. Description Including Proper Shipping Name, Hazardous Class, and ID Number (UN/NA) 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. Refer to instructions for Item 9 of the manifest for the information to be entered.

Item 28. Containers (No. And 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 form.

Item 30. Units of Measure (Weight/Volume)
Refer to the instructions for Item 12 of the manifest form.

Item 31. Waste Codes
Refer to the instructions for Item 13 of the manifest form.

Item 32. Special Handling Instructions and Additional Information
Refer to the instructions for Item 14 of the manifest form. Transporters

II. Transporters
Item 33. Transporter—Acknowledgment of Receipt of Materials
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 (Company Name) 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—Acknowledgment of Receipt of Materials
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 (Company Name) identified in Item 26. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

II. Owner and Operators of Treatment, Storage, or 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 Codes

For each field here, enter the sequential number that corresponds to the waste materials described under Item 27, and enter the appropriate process code that describes how the materials will be processed when received. If additional continuation sheets are attached, continue numbering the waste materials and process code fields sequentially, and enter on each sheet the process codes corresponding to the waste materials identified on that sheet.

What is the public reporting burden associated with the manifest?

The public burden related to the Uniform Hazardous Waste Manifest, which is approved under OMB 2050-0039, is estimated to average (per manifest) 60 minutes for generators; 20 minutes for transporters; and 30 minutes for owners and operators of receiving facilities designated on the manifest. This is a mandatory collection under 40 CFR Part 262, Subpart B, 40 CFR Part 263, Subpart B, and 40 CFR Parts 264 and 265, Subpart E. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The completed form should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulation. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of e-Manifest, to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Please include the OMB control number in any correspondence. **Do NOT send the completed manifest forms to this address.** Privacy Act Statement - *None of the information collected under the Manifest Program is considered Personally Identifiable Information (PII) or Confidential Business Information (CBI).*

APPENDIX L – CONSOLIDATION PROVISION

40 CFR 262.14(a)(5)(viii) and 40 CFR 262.17(f)

- **Applicability:** A large quantity generator (LQG) may accumulate/consolidate, on-site, hazardous waste received from a very small quantity generator (VSQG) provided the two generators are under the *control* of the same *person* and the VSQG and LQG meet specific conditions described below.

- **Definitions:**
  - "*Control*" means the power to direct the policies of the generator, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate generator facilities on behalf of a different person as defined in 40 CFR 260.10 shall not be deemed to "control" such generators.
  - "*Person*" (as defined in N.C.G.S. 130A-290 - substituted for 40 CFR 260.10) means an individual, corporation, company, association, partnership, unit of local government, State agency, federal agency, or other legal entity.

- **Conditions:**
  - The **VSQG(s)** must mark/label containers to be consolidated at a LQG with the following (40 CFR 262.14(a)(5)(viii)):
    - The words "Hazardous Waste" and
    - An indication of the hazards of the contents
      Examples include, but are not limited to,
      - The applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic);
      - Hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding);
      - A hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or
      - A chemical hazard label consistent with the National Fire Protection Association code 704.

  - The **LQG** that accumulates/consolidates VSQG hazardous waste must comply with the following (40 CFR 262.17(f)):
    - Notify of the accumulation/consolidation activity:
      - Notify the Hazardous Waste Section (electronically using the RCRAInfo, Industry User Application - myRCRAid) at least 30 days prior to receiving the first shipment from a VSQG(s); and
      - Identify on the form the name(s) and site address(es) for each VSQG, and the name and business telephone number for a contact person for each VSQG; and
      - Update the facility information using RCRAInfo, Industry User Application - myRCRAid within 30 days after a change in the name or site address for the VSQG.
  - Maintain records of shipments for 3 years from the date the hazardous waste was received from the VSQG.

- Records must identify the name, site address, and contact information for the VSQG and include a description of the hazardous waste received, including the quantity and the date the waste was received.

- Comply with all the LQG requirements for all hazardous waste received from a VSQG.
  - The LQG must comply with the independent requirements of 40 CFR 262.10(a)(1)(iii) and the conditions for exemption in 40 CFR 262.17 for all hazardous waste received from the VSQG(s).
  - For purposes of the accumulation start date: Each container or hazardous waste management unit must be marked with the date accumulation started (i.e., the date the hazardous waste was received from the VSQG). If the LQG is consolidating incoming hazardous waste from a VSQG with either its own hazardous waste or with hazardous waste from other VSQGs, the LQG must label each container or unit with the earliest date any hazardous waste in the container was accumulated on site.
  - The LQG must ensure the hazardous waste received from VSQG(s) is reported on the biennial report.

APPENDIX M – ALTERNATIVE STANDARDS FOR EPISODIC GENERATION

40 CFR 262 Subpart L

- **Applicability** (40 CFR 262.230)

  The Episodic Generator provision is applicable to very small quantity generators (VSQGs) and small quantity generators (SQGs) as defined in 40 CFR 260.10.

- **Definitions** (40 CFR 262.231)

  Episodic event means an activity or activities, either planned or unplanned, that does not normally occur during generator operations, resulting in an increase in the generation of hazardous wastes that exceeds the calendar month quantity limits for the generator's usual category.

  Planned episodic event means an episodic event that the generator planned and prepared for, including regular maintenance, tank cleanouts, short-term projects, and removal of excess chemical inventory

  Unplanned episodic event means an episodic event that the generator did not plan or reasonably did not expect to occur, including production process upsets, product recalls, accidental spills, or "acts of nature," such as tornado, hurricane, or flood.

- **Conditions for a generator managing hazardous waste from an episodic event** (40 CFR 262.232)

  VSQGs and SQGs may maintain their existing generator category for hazardous waste generated during an episodic event provided that the generator complies with the following conditions:

  (1) The VSQG/SQG are limited to one episodic event per calendar year, unless a petition is granted from the Hazardous Waste Section for a second event under 40 CFR 262.233;

  (2) Notification.
  - VSQG/SQG must notify electronically no later than thirty (30) calendar days prior to initiating a *planned* episodic event using RCRAInfo, Industry User Application - myRCRAid.
  - In the event is an *unplanned* episodic event, the generator must notify within 72 hours of the unplanned event via phone, email, or fax and subsequently notify electronically using RCRAInfo, Industry User Application - myRCRAid.
  - The generator shall include:
    - the start date and end date of the episodic event,
    - the reason(s) for the event,
    - types and estimated quantities of hazardous waste expected to be generated as a result of the episodic event, and
    - shall identify a facility contact and emergency coordinator with 24-hour telephone access to discuss the notification submittal or respond to an emergency in compliance with SQG emergency procedures (40 CFR 262.16(b)(9)(i));

(3) EPA ID Number. The VSQG/SQG must have an EPA identification (ID) number or obtain an EPA ID number by registering electronically on the RCRAInfo, Industry User Application - myRCRAid;

(4) Accumulation. A VSQG/SQG are prohibited from accumulating hazardous waste generated from an episodic event on drip pads and in containment buildings. When accumulating hazardous waste in containers and tanks the following conditions apply:

- *Containers.* A VSQG/SQG accumulating in containers must mark or label its containers with the following:
  - The words "Episodic Hazardous Waste";
  - An indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (*i.e.*, ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704); and
  - The date upon which the episodic event began, clearly visible for inspection on each container.
- *Tanks.* A VSQG/SQG accumulating episodic hazardous waste in tanks must do the following:
  - Mark or label the tank with the words "Episodic Hazardous Waste";
  - Mark or label its tanks with an indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (*i.e.*, ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704);
  - Use inventory logs, monitoring equipment or other records to identify the date upon which each episodic event begins; and
  - Keep inventory logs or records with the above information on site and readily available for inspection.

(5) Hazardous waste must be managed by a VSQG in a manner that minimizes the possibility of a fire, explosion, or release of hazardous waste or hazardous waste constituents to the air, soil, or water;

- *Containers* must be in good condition and compatible with the hazardous waste being accumulated therein. Containers must be kept closed except to add or remove waste; and.
- *Tanks* must be in good condition and compatible with the hazardous waste accumulated therein. Tanks must have procedures in place to prevent the overflow (*e.g.*, be equipped with a means to stop inflow with systems such as a waste feed cutoff system or bypass system to a standby tank when hazardous waste is continuously fed into the tank). Tanks must be inspected at least once each operating day to ensure all applicable discharge control

equipment, such as waste feed cutoff systems, bypass systems, and drainage systems are in good working order and to ensure the tank is operated according to its design by reviewing the data gathered from monitoring equipment such as pressure and temperature gauges from the inspection.

(6) The VSQG must ship episodic hazardous waste on a manifest in compliance with the hazardous waste manifest provisions of 40 CFR 262 subpart B when it sends its episodic event hazardous waste off site to a designated facility, as defined in 40 CFR 260.10.

(7) The VSQG/SQG has up to sixty (60) calendar days from the start of the episodic event to manifest and send the hazardous waste generated from the episodic event to a designated facility, as defined in 40 CFR 260.10.

(8) VSQGs/SQGs must maintain the following records for three (3) years from the end date of the episodic event:

- Beginning and end dates of the episodic event;
- A description of the episodic event;
- A description of the types and quantities of hazardous wastes generated during the event;
- A description of how the hazardous waste was managed as well as the name of the RCRA-designated facility that received the hazardous waste;
- Name(s) of hazardous waste transporters; and
- An approval letter from the Hazardous Waste Section if the generator petitioned to conduct one additional episodic event per calendar year.

(9) In addition to the conditions described, a SQG, must continue to comply with the management requirements for hazardous waste described at 40 CFR 262.16 (including but not limited to manifesting, preparedness and prevention, and management of incompatible wastes).

- **Petition to manage one additional episodic event per calendar year** (40 CFR 262.233)**:**

(1) A generator may petition the Hazardous Waste Section for a second episodic event in a calendar year without impacting its generator category under the following conditions:

- If a VSQG/SQG has already held a *planned* episodic event in a calendar year, the generator may petition the Hazardous Waste Section for an additional *unplanned* episodic event in that calendar year within 72 hours of the unplanned event.
- If a VSQG/SQG has already held an *unplanned* episodic event in a calendar year, the generator may petition the Hazardous Waste Section for an additional planned episodic event in that calendar year.

(2) The petition for one additional episodic event per calendar year must include the following:

- The reason(s) why an additional episodic event is needed and the nature of the episodic event;
- The estimated amount of hazardous waste to be managed from the event;
- How the hazardous waste is to be managed;
- The estimated length of time needed to complete management of the hazardous waste generated from the episodic event—not to exceed sixty (60) days; and

- Information regarding the previous episodic event managed by the generator, including the nature of the event, whether it was a planned or unplanned event, and how the generator complied with the conditions.

(3) The petition must be made to the Hazardous Waste Section in writing, either on paper or electronically.

(4) The generator must retain written approval in its records for three (3) years from the date the episodic event ended.

- **Fees** (North Carolina General Statute [N.C.G.S.] 130A-294.1(e) and (f)): Depending on the weight of hazardous waste generated during the episodic event, the generator may be subject to the following annual fees or the difference in an annual fee if the generator has already paid an annual fee as a SQG:
  - A person who generates either one kilogram or more of any acute hazardous waste (as listed in 40 CFR 261.30(d) or 261.33(e)), or 1,000 kilograms or more of non-acute hazardous waste, in any calendar month during the year beginning 1 July and ending 30 June shall pay an annual fee of $1,400.
  - A person who generates 100 kilograms or more of non-acute hazardous waste in any calendar month during the year beginning 1 July and ending 30 June but less than 1,000 kilograms of non-acute hazardous waste in each calendar month during that year shall pay an annual fee of $175.00.

- **Episodic Generator Examples**

Example 1:

A University typically operates as a SQG. However, in February the site generates 2,201 lbs. of hazardous waste. The University must then comply with all the requirements applicable to an LQG for the remainder of February. Since the University is now a LQG it may accumulate hazardous waste on-site for no more than 90 days. In March they generate 2,000 lbs. of hazardous waste and returns to SQG status. The 2,201 lbs. of hazardous waste generated in February must continue to be managed in compliance with LQG regulations if it remains on-site in March. Waste generated after March as a SQG may be managed subject to the SQG regulations.

The Episodic Generator Provision would allow the generator to maintain SQG status as long as the conditions of the provision are met. By utilizing the Episodic Generator Provision, the facility would remain a SQG and would not be required to achieve compliance with the additional LQG regulations just for the one or two events in a calendar year.

Example 2:

Planned episodic event ***means an episodic event that a generator planned and prepared for, including regular maintenance, tank cleanouts, disposal of off-spec hazardous materials, short-term projects, and removal of excess chemical inventory.***

A professor at BMF University is retiring and his research laboratory will be closing. BMFU operates as a SQG; however, the professor's chemical inventory includes at least 5 lbs. of nicotine that will no

longer be needed, which will become an acute hazardous. Thirty (30) days prior to the professor's retirement the HSE manager at the university was planning on the disposal of all of the professor's laboratory waste. The HSE Manager notified the generator status change as a Planned episodic event online at RCRAInfo. The notification alerted NCDEQ Hazardous Waste Section and an inspector will confirm the event. Once BMFU's episodic event is approved, the event must be initiated and completed within 60 days that were provided in the notification. In addition to continuing to meet compliance with the SQG regulations, the University will label episodic waste containers with "episodic hazardous waste," an indication of the hazards, and the date the event began. The University will also maintain records of the episodic event. The episodic waste will be managed on a 60-day time frame; whereas, the regularly generated hazardous waste at the university will be subject to 180/270-day time limitation. Because the BMFU utilized the Episodic Generator Provision, they were not required to achieve compliance with the LQG regulations for the month that the laboratory was cleaned out, which includes but is not limited to a Contingency Plan, Documented RCRA Training, and 90-day accumulation limit. The University will receive an invoice based on the amount of hazardous waste that was generated with consideration of hazardous waste fees already paid previously for the State Fiscal Year (July 1 – June 30).

Example 3:

Unplanned episodic event ***means an episodic event that the generator did not plan or reasonably did not expect to occur, including production process upsets, product recalls, accidental spills, or "acts of nature," such as tornado, hurricane, or flood.***

Later in the year, students at BMF University were conducting research in a different laboratory. The regularly generated hazardous waste from this research is calculated as part of SQG category status for the university. One of the students inadvertently combined a small amount of P-Listed waste into a 55-gallon container of nonhazardous waste. The student changed the label on the 55-gallon container to Hazardous Waste and alerted the HSE Manager to the exceedance of 2.2 pounds of P-listed waste in a calendar month. Within the three days (72-hours) of the generation of the hazardous waste, the manager emailed and called the NCDEQ Hazardous Waste Inspector assigned to the county. The manager alerted the inspector of the unplanned episodic event and petitioned for the second episodic event within the same calendar year. The NCDEQ Hazardous Waste Supervisors approved the second event because it was an Unplanned Episodic event that proceeded a Planned Episodic event. The HSE Manager followed up with formal notification of the event on RCRAInfo before the end of the event (60 days). The inspector assigned to the university will confirm that all the conditions of the provision are met during an inspection and request documentation. The University will continue compliance with all applicable SQG requirements during the episodic event. The University will receive an invoice based on the amount of hazardous waste that was generated with consideration of hazardous waste fees already paid previously for the State Fiscal Year (July 1 – June 30).

APPENDIX N - BRIEF SUMMARY OF HAZARDOUS SECONDARY MATERIAL RECLAMATION EXCLUSIONS

HSM = Hazardous Secondary Materials

I. HSM generated and reclaimed under the control of the generator (Generator Controlled Exclusion) - 40 CFR 261.4(a)(23):

- Includes on-site recycling at generating facility, off-site by facility controlled by the generator, and between a tolling contractor.
  - HSM must be contained as defined in 15A NCAC 13A .0102(c).
  - HSM must not be speculatively accumulated as defined in 40 CFR 261.1(c)(8).
  - Provide notification (40 CFR 260.42) prior to managing HSM and by March 1 of each even numbered year thereafter or when the facility stops managing HSM.
  - Must maintain documentation of meeting the three factors of legitimacy described in 40 CFR 260.43(a) and how the requirements described in 40 CFR 260.43(b) were considered. Must be maintained for three years after recycling has ceased.
  - Must meet emergency preparedness and response requirements
    - ~ Accumulates 6,000 kg or less HSM - must comply with 40 CFR 261.410 and 261.411 (essentially equivalent to SQG of HW requirements for emergency preparedness and prevention)
    - ~ Accumulates more than 6,000 kg of HSM – must comply with 40 CFR 261.410 and 261.420 (essentially equivalent to LQG of HW requirements for contingency plan and emergency preparedness and prevention)
  - If HSM is recycled off-site at a facility controlled by the generator or through tolling contractor:
    - ~ Certification statement required (40 CFR 261.4(a)(23)(i)(B)) if recycled off-site by facility controlled by generator or through tolling contractor.
    - ~ Documentation must be maintained by generator and off-site facility controlled by generator (or tolling contractor) including: name of transporter, date of shipment, type and quantity of HSM shipped and received.

II. HSM generated and transferred to another person (Transfer Based Exclusion) – 40 CFR 261.4(a)(24):

- HSM must not be speculatively accumulated as defined in 40 CFR 261.1(c)(8).
- HSM must be contained as defined in 15A NCAC 13A .0102(c).
- HSM may not be handled by persons/facilities other than the HSM generator, the transporter, an intermediate facility, or a reclaimer and may not be stored for more than 10 days at a transfer facility.
- Reclamation of the HSM must meet legitimacy criteria under 40 CFR 260.43.
- DOT requirements apply for packaging and shipping.

HSM generated and transferred to another person (continued):

- **HSM Generator must meet all these conditions**:
  - HSM must be contained as defined in 15A NCAC 13A .0102(c).
  - Reasonable Efforts must be made and documented by the HSM Generator (including affirmative responses to the five questions) as described in 40 CFR 261.4(a)(24)(v)(B) and (C).
  - Must maintain 3 years of records of:
    - ~ Off-site shipments of HSM (name of the transporter and date of the shipment; name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the HSM was sent; the type and quantity of HSM in the shipment.
    - ~ Confirmations of Receipt from the reclaimer/intermediate facility (if applicable) (name and address of the reclaimer (or intermediate facility); type and quantity of the HSM received; and date on which HSM was received).
  - Must meet emergency preparedness and response requirements:
    - ~ Accumulates 6,000 kg or less HSM - must comply with 40 CFR 261.410 and 261.411
    - ~ Accumulates more than 6,000 kg of HSM – must comply with 40 CFR 261.410 and 261.420
- **Reclaimers and Intermediate Facility of HSM must meet all these conditions:**
  - Must maintain 3 years of records of HSM shipments received at the facility and, if applicable, sent off for further reclamation (name of transporter, date of shipment, name and address of the HSM generator, name and address of the reclaimer(s) or intermediate facility(ies), type & quantity of HSM).
  - Intermediate facility must send HSM to reclaimer designated by the generator.
  - Confirmation of receipt must be sent to the HSM generator for all off-site shipments of HSM (name and address of reclaimer/intermediate facility, type and quantity of HSM, and date which HSM was received).
  - HSM must be managed in a manner that is at least as protective as that employed for analogous raw material and must be contained ("Contained" is defined in 15A NCAC 13A .0102(c)).
  - Any residuals from reclamation process must be managed in a manner protective of human health and the environment. If residuals are characteristic and/or listed, they must be managed by all applicable HW rules.
  - Must have financial assurance as required by 40 CFR 261 Subpart H.

III. HSM generated and transferred for Remanufacturing (Remanufacturing Exclusion) – 40 CFR 261.4(a)(27):

- HSM must consist of one or more of the following spent solvents: toluene, xylenes, ethylbenzene, 1,2,4-trimethylbenzene, chlorobenzene, n-hexane, cyclohexane, methyl tert-butyl ether, acetonitrile, chloroform, chloromethane, dichloromethane, methyl isobutyl ketone, NN-dimethylformamide, tetrahydrofuran, n-butyl alcohol, ethanol, and/or methanol

Remanufacturing Exclusion (continued):

~ That was used in a commercial grade for reacting, extracting, purifying, or blending chemicals (or rinsing out process lines associated with these functions) in manufacturing of: pharmaceuticals, basic organic chemicals, plastics and resins, and/or paint and coatings.

- Must send HSM to a remanufacturer in the manufacturing sector of pharmaceuticals, basic organic chemicals, plastics and resins, and/or paint and coatings.
- After remanufacturing one or more of the above solvents, the use of the remanufactured solvent must be limited to reacting, extracting, purifying, or blending chemicals (or rinsing out product lines associates with these functions) in the manufacturing sector of: pharmaceuticals, basic organic chemicals, plastics and resins, and/or paint and coatings.
- Remanufactured solvents must not be used for cleaning, degreasing oil, grease or similar material from textiles, glassware, metal surfaces or other articles.
- During remanufacturing and during storage of the HSM, the remanufacturer certifies operating air emission controls are in compliance with CAA or 40 CFR 261 Subpart AA, BB, CC.

– **HSM Generator must:**

- Notify initially and every two years per 40 CFR 260.42.
- Develop and maintain and up-to-date remanufacturing plan which identifies:
  ~ Name, address and EPA ID number of the generator(s) and the remanufacturer(s),
  ~ The types and estimated annual volumes of spent solvents to be remanufactured,
  ~ The processes and industry sectors that generate the spent solvents.
  ~ The specific uses and industry sectors for the remanufactured solvents.
- Maintain a certification from the remanufacturer with specific statement per 40 CFR 261.4(a)(27) (vi)(5).
- Maintain records of shipments and confirmation of receipts for 3 years.
- Prior to remanufacturing, store hazardous spent solvents in tanks or containers meeting 40 CFR 261 Subpart I and J technical standards.
- Meet requirements prohibiting speculative accumulation per 40 CFR 261.1(a)(8).

<u>Brief Definition of "Contained" for HSM:</u> Held in a unit (including a land-based unit) that meets the following criteria:

– Unit is in good condition (no leaks or other continuing or intermittent releases of HSM or hazardous constituents of HSM to the environment).
– Unit is properly labeled or has a system (such as a log) to immediately identify the HSM in the unit.
– Unit holds HSM that are compatible with the unit holding it and with other HSM in the unit.
– Presumptively contained when unit meets requirements for units in 40 CFR 264 and 265.

APPENDIX O - SOLVENT-CONTAMINATED WIPES CONDITIONAL EXCLUSION SUMMARY CHART

This chart summarizes the federal regulations in regards to managing solvent-contaminated wipes under 40 CFR 261.4(a)(26), which conditionally excludes from the definition of solid waste solvent-contaminated wipes that are cleaned and reused ("reusable wipes"), and under 40 CFR 261.4(b)(18), which conditionally excludes from the definition of hazardous waste solvent-contaminated wipes that are disposed ("disposable wipes").

This summary chart is a guidance document provided by the U.S. Environmental Protection Agency (EPA). The statements in this document are intended solely as guidance.

	Solvent-Contaminated Reusable	**Solvent-Contaminated Disposable Wipes**
Regulation Citation	40 CFR 261.4(a)(26) (Solid Waste Exclusion)	40 CFR 261.4(b)(18) (Hazardous Waste Exclusion)
Description	Solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes, provided the conditions of the exclusion are met.	Solvent-contaminated wipes that are sent for disposal are not hazardous wastes, provided the conditions of the exclusion are met.
Includes	• Wipes containing one or more F001-F005 listed solvents listed in § 261.31 or the corresponding P- or U- listed solvents found in § 261.33, including: - Acetone - Benzene - n-Butanol - Chlorobenzene - Creosols - Cyclohexanone - 1,2-Dichlorobenzene - Ethyl acetate - Ethyl benzene - 2-Ethoxyethanol - Isobutyl alcohol - Methanol - Methyl ethyl ketone - Methyl isobutyl ketone - Methylene chloride - Tetrachloroethylene - Toluene - 1,1,2- Trichloroethane - Trichloroethylene *(For reusable wipes only.)* - Xylenes • Wipes that exhibit a hazardous characteristic resulting from a solvent listed in part 261. • Wipes that exhibit only the hazardous characteristic of ignitability when containing one or more non-listed solvents.	
Does not include	• Wipes that contain listed hazardous waste other than solvents. • Wipes that exhibit the characteristic of toxicity, corrosivity, or reactivity due to non-listed solvents or contaminants other than solvents.	• Wipes that contain listed hazardous waste other than solvents. • Wipes that exhibit the characteristic of toxicity, corrosivity, or reactivity due to non-listed solvents or contaminants other than solvents. • Wipes that are hazardous waste due to the presence of trichloroethylene.

Storage Requirements	Wipes must be accumulated, stored, and transported in non-leaking, closed containers that can contain free liquids, should they occur.	
Labeling	Containers must be labeled "Excluded Solvent-Contaminated Wipes."	
Accumulation Time Limits	Generators may accumulate wipes up to 180-days from the start date of accumulation prior to being sent for cleaning or disposal.	
Recordkeeping	Generators must maintain documentation that includes: • Name and address of the laundry, dry cleaner, landfill, or combustor • Documentation that the 180-day accumulation time limit is being met • Description of the process the generator is using to meet the "no free liquids" condition.	
Condition of Wipes Prior to Transport	Wipes must contain no free liquids prior to being sent for cleaning or disposal and there may not be free liquid in the container holding the wipes. "No free liquids" condition is defined in 40 CFR 260.10 and is based on the EPA Methods Test 9095B (Paint Filter Liquids Test) or other authorized state standard.	
Management of Free Liquids	Free liquids removed from the wipes or from the wipes container must be managed according to applicable hazardous waste regulations in 40 CFR parts 260 through 273.	
Eligible Handling Facilities	Must go to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.	Must go to a combustor regulated under section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under 40 CFR parts 264, 265, or 266 subpart H. Must go to a municipal solid waste landfill regulated under 40 CFR part 258 (including §258.40) or to a hazardous waste landfill regulated under 40 CFR parts 264 or 265.
Storage at Handling Facilities	Must store wipes in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." Containers must be able to contain free liquids should they occur.	
Management of Free Liquids by Handling Facilities	Free liquids removed from the wipes or from the container holding the wipes must be managed according to applicable hazardous waste regulations in 40 CFR parts 260 through 273.	

APPENDIX P - WASTE COUNTING FOR ON-SITE SOLVENT RECYCLING

The purpose of this guidance is to assist the generator with how to count and calculate the amount of hazardous waste solvent generated in a calendar month to determine the facility's generator category (very small, small, or large quantity generator) when a solvent reclamation unit (distillation unit) is used on-site. 40 CFR 262.13(c) and (d) (below) defines which hazardous wastes are to be included or not included when calculating the monthly totals defining a facility's generator category.

40 CFR 262.13(c): When making the monthly quantity-based determinations required by this part, the generator must include all hazardous waste that it generates, except hazardous waste that:

(1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8;

(2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10;

(3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2);

(4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279;

(5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266 subpart G;

(6) Is universal waste managed under 40 CFR 261.9 and 40 CFR part 273;

(7) Is a hazardous waste that is an unused commercial chemical product (listed in 40 CFR part 261 subpart D or exhibiting one or more characteristics in 40 CFR part 261 subpart C) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to §262.213. For purposes of this provision, the term eligible academic entity shall have the meaning as defined in §262.200; or

(8) Is managed as part of an episodic event in compliance with the conditions of subpart L of this part.

40 CFR 262.13(d): In determining the quantity of hazardous waste generated in a calendar month, a generator need not include:

(1) Hazardous waste when it is removed from on-site accumulation, so long as the hazardous waste was previously counted once;

(2) Hazardous waste generated by on-site treatment (including reclamation) of the generator's hazardous waste, so long as the hazardous waste that is treated was previously counted once; and

(3) Hazardous waste spent materials that are generated, reclaimed, and subsequently reused on site, so long as such spent materials have been previously counted once.

It is important to remember that a generator category (very small, small, large) is determined by how much hazardous waste is generated in a given calendar month for the entire site. The hazardous waste generated in the scenarios are likely not the only hazardous waste generated at the facility. Three different solvent

recycling scenarios are provided for consideration:

Scenario #1:

Waste solvent is generated and IS NOT ACCUMULATED in containers or tanks prior to being placed into a distillation unit.

In this scenario, an individual has a container of solvent (e.g., acetone) which is being used to clean hand tools. Once the acetone becomes so dirty that it can no longer be used the worker takes the dirty acetone directly to the distillation unit and pours the dirty acetone directly into the still. Thus, there has been no prior accumulation of the dirty acetone prior to it being place into the distillation unit.

40 CFR 262.13(c)(3) states that when making the monthly quantity-based determinations of this part, the generator must include all hazardous waste that it generates, except hazardous waste that:

> Is recycled, without prior accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c) (2); or…

Given this scenario, the dirty acetone does not need to be counted towards the hazardous waste generator category determination. It is important to remember that the distillation unit will produce distillation "bottoms" from the distillation process. In this scenario the still bottoms, if regulated, need to be counted.

Scenario #2:

Waste solvent is generated and IS ACCUMULATED in containers or tanks prior to being placed into a distillation unit.

In this scenario, an individual has a container of solvent (e.g., acetone) that is used to clean hand tools. Once the acetone becomes so dirty that it can no longer be used for its intended purpose, the worker takes the dirty acetone directly a satellite accumulation area container or a container or tank located in the central accumulation area and pours the dirty acetone directly into the unit used for accumulation. Thus, there has been accumulation of the dirty acetone prior to it being place into the distillation unit and the amount must be counted.

Again, one must remember that the distillation process will produce "still bottoms." However, because the waste has already been counted the still bottoms, if regulated, DO NOT HAVE TO BE COUNTED as per 40 CFR 262.13(d)(2) which states: "In determining the quantity of hazardous waste generated in a calendar month, a generator need not include: hazardous waste generated by on-site treatment (including reclamation) of the generator's hazardous waste, so long as the hazardous waste that is treated was previously counted once;..."

Also, refer to EPA Guidance [August 1986 RCRA/Superfund Hotline Monthly Summary RO12699 found at

this link: https://rcrapublic.epa.gov/files/12699.pdf] that clarifies: 40 CFR 261.5(d)(3) [regulatory citation prior to the federal regulation reorganization. This guidance has not yet been updated but is still relevant. 40 CFR 261.5(d)(3) translates to 40 CFR 262.13(d)(3)] and states that a generator need not include spent materials that have been reclaimed and subsequently reused on-site in the quantity determination, provided they have already been counted once. The guidance adds the words: …provided they have already been counted once within that month.)

Scenario #3:

Week #1

In this scenario, the generator accumulates all the waste solvent (e.g., acetone) in one 55-gallon container prior to distillation. It generally takes a week to fill the 55-gallon container. On Friday morning, the distillation unit is filled from the 55-gallon container. At this point in time, the accumulated 55-gallons needs to be counted as outlined in scenario #2. The distillation process generates 5-gallons of "still bottoms." If regulated, the "still bottoms" do not need to be counted since they have already been counted as part of the original 55-gallons that was recycled. The reclaimed solvent is reused on site as a product.

Week #2

Of the original 55-gallons, the operator now has 50-gallons of reclaimed solvent and 5-gallons of "still bottoms." The reclaimed solvent is reused at the site for production processes. No new acetone (that has not been previously recycled has been added). At the end of week #2, there is now another 50-gallons of dirty solvent stored in the 55-gallon waste accumulation container.

40 CFR 262.13(d)(2) states: "In determining the quantity of hazardous waste generated in a calendar month, a generator need not include hazardous waste generated by on-site treatment (including reclamation) of the generators hazardous waste, so long as the hazardous waste that is treated was counted once;…"

The acetone the operator used during Week #2 has already been counted as waste for that month (it was counted at the end of Week #1). Thus, according to 40 CFR 261.5(d)(2) the generator did not generate any additional hazardous waste to be counted during Week #2.

The EPA Guidance (RO12699) referenced in Scenario #2 is also relevant for Scenario #3.